RFI Responses[1]

Response 1

Perspectives on the postdoc roles and responsibilities

Responsibilities: Produce papers, forge and maintain collaborations, attend scientific conferences, present my work in posters and talks, develop scientific independence, write grants and obtain funding, mentor junior scientists in the lab, promote the scientific mission of the PI, and prepare for faculty job interviews.

Fundamental issues and challenges

Main issues: Lack of appropriate compensation for education/work, uncertainty with respect to grant funding and academic job market, Relative inflexibility of K99/R00 timeline.

Existing NIH policies, programs, or resources

RAISE MINIMUM NIH STIPENDS FOR POSTDOCS. Allow for more flexibility on K99/R00 grants such that if individuals obtain faculty positions early they can still take their grant funding with them (and choose a new mentor at new institution). The required 1-2 years on the K99 funding does NOT adequately account for the slow pace of funding decisions and announcements from NIH and can hamper the timely progression to independent faculty positions.

Proven or promising external resources or approaches

No Response

Response 2

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions allow for extra time to develop your own independent research agenda, curate expertize in methods and analyses, gain experience in lab management and budgeting. Finally, at the end of a postdoc you should be set to enter a faculty position and be successful, with pilot data and anticipated publications.

Fundamental issues and challenges

Academic culture is toxic. Women, non-binary folks, non-white individuals, anyone who is not an American citizen are taken advantage of. Through visa instability, inabilities to apply for competitive training awards for foreign nationals (e.g. a Ph.D. And postdoc in the US, with full intention to get an academic job in the US are penalized compared to American peers due to visa status), non-competitive salaries, lack of postdoc support. Moving for short term positions. The temporary nature of postdocs makes it impossible to create a life somewhere, and lack of compensation makes that even harder. A salary of $54k for an individual with a PhD when undergraduates are taking entry level positions with starting salaries of $80k with annual raises just is not appealing for many, especially when adding in toxic culture.

Existing NIH policies, programs, or resources

Childcare supplements

Support for foreign nationals—even making eligible for an F32 in addition to K99 would make a big difference.

Increase postdoc minimum salaries

Relocation assistance for postdoc fellows

Proven or promising external resources or approaches

No Response

[1] Information has been redacted to maintain privacy and remove inappropriate language.

Response 3

Perspectives on the postdoc roles and responsibilities

The postdoc position should be a bridge role to accumulate the leadership, mentorship, and lab management skills necessary to conduct independent research.

Fundamental issues and challenges

There is minimal potential for vertical career growth from postdoc to faculty at most institutions. This is problematic because many postdocs are at a stage in life when they desire to start a family and settle in a physical location. Putting off family planning for several additional years (after 5-7 years of PhD and possible additional years before entering PhD programs) in order to complete a postdoc and then searching for an academic faculty position in a completely different part of the country (and then likely having to move again several years later to pursue the next promotion) is largely unappealing to most individuals. Moreover, many graduating PhDs are able to identify psotdoc positions at institutions located in places that are appealing to them, and would often welcome the opportunity to continue their career at the institution where they do their postdoc.

Elevated pay scales would alleviate much of the financial stress and improve the mental health of postdocs but is unlikely to significantly alleviate the root problem of too few faculty positions available in too few appealing locations.

Academic research has very little appeal to the majority of PhD trainees, as evidenced by the noted trends in biomedical research. Nepotism, favoritism, and privilege are rampant in academia and thus work ethic and intellectual rigor are rarely proportionally rewarded.

Existing NIH policies, programs, or resources

There are no objective measures of performance; although publication record can be purported as a semi objective measure, the publication process is rife with inequalities and proper attribution of credit is almost impossible to determine from a publication record.

Expanding resources to encourage non-academic jobs would be greatly beneficial to many postdocs. Many postdocs will leave academia with very little exposure to non-academic jobs and so will be at an initial disadvantage. There is likely very little that can be done to retain larger numbers of postdocs in academia but presenting non-academic jobs as an equal opportunity will foster better long term relationships across the biomedical research community.

Proven or promising external resources or approaches

Establishing postdoctoral programs aimed at non-academic careers are likely to be very popular; e.g. science policy and regulatory affairs, clinical diagnostic labs, biotech business development, etc.

Response 4

Perspectives on the postdoc roles and responsibilities

A Postdoc is a researcher with a higher degree of independence and responsibility than a graduate student, who may or may not receive some degree of training. In my field (plant biology), this position needs to last 2-5 years in order for the postdoc to publish a sufficiently high quality paper at the end of their research program. Though they have temporary positions, Postdocs contribute tremendous expertise, labor, and teaching/mentorship to the labs that they are part of, and should be compensated as experts rather than trainees.

Fundamental issues and challenges

Postdocs are experts in their fields, and industry positions that they are qualified for tend to pay 2-4x what the typical Postdoc fellowship pays and so we hemorrhage Postdocs to these positions, often long before they have completed the work they were hired to do in the lab. This is a huge waste of time and money. A person who wants to perform research that is not directly tied to corporate profit should not have to choose a life of poverty. Additionally, Postdocs are often at a stage of life where they are interested in having children, and the lack of childcare benefits that universities offer causes many Postdocs, especially women, to leave. Many other types of jobs provide free childcare; universities could do the same, if they were provided with funds to do so.

Existing NIH policies, programs, or resources

The NIH salary scale for Postdocs should be set to $70,000 minimum starting salary, with steps increasing at the current percentages. Though this salary does not approach the pay provided by industry positions, it would allow postdocs to live more comfortably and be able to focus on their research, rather than constantly looking for a next position. Childcare stipends would prevent Postdocs from choosing between their careers and starting a family.

Proven or promising external resources or approaches

No Response

Response 5

Perspectives on the postdoc roles and responsibilities

Interim/unstable position before an actual job either in academia or industry. If you can prove yourself with higher impact journal publication and/or fellowship, it will increase your chance to get a job in academia. However, there is no guarantee.

Fundamental issues and challenges

1. Salary and benefits: Salary is very low compared to an actual cost of living. Bare minimum of benefits provided by institutes, and once you accept NIH-funded fellowship or awards awardees will not br able for getting these benefits. No childcare guaranteed for pregnant women postdocs is extra.
2. No job stability or security: Getting a tenured track job in academia is not guaranteed no matter with your academic performance.
3. Visa issue for international postsocs: hard to obtain a visa as an internationl postdoc. Also, due to that reason and visa restriction, international postdocs are forced to endure with toxic PI and lab environment, as they cannot switch the lab freely.

In Summary, both #1 and #2 reasons are the main reasons for most of postdocs. However I would like to urge more these two reasons are not just boosting postdocs to leave the academia, but also ultimately these are the reasons hurting science integrity and DEI at the end.

Existing NIH policies, programs, or resources

Offer better health insurance, child care, and 401K to postdocs who are funded by NIH. And mandate the minimum salary with benefits for ALL institutes who are funded by NIH.

Proven or promising external resources or approaches

For annual NIH report, add the confidential report for their job satisfaxtion and mentoring.

Also for R01, emphasize their mentoring plan for their trainees. Counting numbers of trainnees who became an academic PIs should NOT be considered as a “strength” for PIs.

Response 6

Perspectives on the postdoc roles and responsibilities

Academic postdocs are a wonderful opportunity for a new scientist to gain additional skills and resources (e.g., connections, awards, grants, etc.) to further their careers in academia or otherwise after they are awarded with their PhD.

Fundamental issues and challenges

Pay. Solely pay. If you made it even close to competitive with a typical salary of an industry job, you would be flooded with postdocs. No graduate student after 6.5 years of study is going to work for 50% of the pay, when they can make a living wage anywhere in an industry or government job.

Existing NIH policies, programs, or resources

Just pay them more. You don’t need to do anything else.

Proven or promising external resources or approaches

Just pay them more. You don't need to do anything else.

Response 7

Perspectives on the postdoc roles and responsibilities

A postdoc in my field is generally gaining additional research experience and training and working towards (or within) a K or an R research grant. I think sometimes postodc responsibilities can prevent that key goal if a postdoc ends up doing a job that is more like a research staff position, like being a coordinator for the PIs study. In that case postodcs are at a professional disadvantage because they're spending all their time on admin tasks and not research analysis and dissemination, and grant writing.

Fundamental issues and challenges

In clinical psychology, there is a complete "donut" of support for trainees interested in pursuing a primarily research-focused career that makes it very hard to move through to the K or R stage. Specifically, there are no federal funding mechanisms to support trainees during the postdoc internship year, which is also woefully underpaid compared to basically every other postdoctoral or residency-based trainee in the health sciences across the board. I think it is asking a lot of trainees to literally live on poverty thresholds while also potentially writing a K and finding a postdoc or faculty job. As a result, It is my sense that only the most well-resourced individuals are able to navigate that period, and I would imagine that lower resourced students would struggle a great deal more than those from backgrounds of higher SES. I think the NIH has a lot of power to help the internship situation for clinical psychology to change, better supporting research during the internship year, and to support trainees from diverse or under-resourced backgrounds, and NIH does not seem to be involved in this issue at all despite the fact that Clinician-Scientists do a lot of great work later in their careers with NIH.

Existing NIH policies, programs, or resources

There should be a funding mechanism for the clinical psychology internship year to help bridge to postdoc or career. it could look like an F to K or K to R mechanism, and could incentivize internship sites to protect research-focused trainees' research time but partially contributing to the cost of training for those trainees.

Proven or promising external resources or approaches

NIH already has very cool programming to support trainees to move from the F to the K, but not for clinical psychologists who have the "Donut" year of internship training. I think the existing programs could be tailored to this specific training circumstance for clinical psych PhDs. Alternately, maybe clinical psychologists on internship could be partially funded by T grants like med students on residency.

Response 8

Perspectives on the postdoc roles and responsibilities

Academic postdoc has long been viewed as cheap labor for investigators to advance their career in research. For most postdocs, that path has been a dead end with many years spent working long hours for low wages.

Fundamental issues and challenges

The fundamental issue is that the prospect of earning a reasonable income (for someone with a PhD) is grim when taking the academic postdoc route.

Existing NIH policies, programs, or resources

Postdocs need to be considered as professionals and not trainees! Investigators need to consider them as employees with rights and reasonable work hours.

Proven or promising external resources or approaches

It all comes down to work hours and compensation. Postdocs should not be expected to accept subpar working conditions for low pay in the name of science. They are well educated individuals with advanced degrees and NIH needs to take the lead in changing the culture so other academic institutions follow suit.

Response 9

Perspectives on the postdoc roles and responsibilities

The academic postdoc is an essential stage of career development for an academic researcher, and I am grateful to be in a good situation for my postdoc currently. Most individuals are not sufficiently established to compete for funding as a professor immediately out of graduate school, and the additional time spent in an established lab to build your reputation, publish papers, and secure funding is invaluable to position early-career faculty for long-term success.

Fundamental issues and challenges

I think this has been covered sufficiently everywhere. An extremely demanding job that pays highly trained and independent individuals a very low wage with bare-minimum benefits is always going to face recruitment, retention, and overall quality of life issues. The solution is to pay more and provide better benefits.

Existing NIH policies, programs, or resources

The payback agreement on NRSA fellowships is nonsensical and inhumane. It is cruel for no reason and is not based in any way on the realities of postdoctoral work. Think of the realities in question. Think of a person who has

1. chosen to pursue research as a postdoc despite the low pay,
2. has put in the enormous effort to complete an NRSA application, and
3. has done this at a sufficiently high level to receive funding for this competitive grant.

This person is always, 100% of the time, intending to pursue a career in academic research. They are not trying to scam the government into giving them money. As you are certainly aware, postdocs are not paid very well. Thus, despite this person's sincerest intentions, the realities of life may often force this person to exit the disadvantageous situation of a postdoc sooner than expected. Perhaps they welcome a child with special needs into their family and one of the parents needs to stay home. Given the low income of postdocs, the postdoc partner will likely be the one making this sacrifice. Or perhaps a medical emergency in the family brings financial distress, forcing the postdoc to take a high-paying job outside science to cover the expenses. These are the situations that would drive a hard-working postdoc who is proud to have received an F32 to stop the work early, and they are distressing, financially-straining situations in themselves. The threat of having to pay thousands of dollars to the government in order to make the right choice for your family is unthinkable. The payback agreement forces otherwise qualified applicants to look elsewhere for funding to avoid indentured servitude to the federal government in the event that something in life goes wrong. It needs to be ended immediately.

Proven or promising external resources or approaches

No Response

Response 10

Perspectives on the postdoc roles and responsibilities

No Response

Fundamental issues and challenges

I firmly believe increasing compensation for post-doctoral trainees would improve recruitment. After years and years of schooling, the compensation trainees receive while being a valuable part of the NIH community is meager and borderline disrespectful for the knowledge and skills they have. I believe the lack of compensation also discourages people from pursuing doctoral degrees at all because the amount of time and money invested in attaining the degree is seldom worth the compensation received by the end of it. Without higher pay, I highly doubt the NIH would see an increase of post-doctoral fellows in upcoming years.

Existing NIH policies, programs, or resources

The answer is to increase compensation.

Proven or promising external resources or approaches

No Response

Response 11

Perspectives on the postdoc roles and responsibilities

Postdoc positions have changed over time into an extended period between PhD and faculty where many institutions simply wait to see who is left standing. I don't think postdocs should be like this—we have the opportunity to provide additional professional training that can be useful to the individual (not the lab or the institution) and then move people along to the next stage. The fundamental problem is that we provide too few next opportunities within academia and so the postdoc is now a long period of anxiety and modest productivity for most, especially those outside of Ivy league university and/or those who hit lucky with a given project.

Fundamental issues and challenges

We underpay our postdoc workers badly—not by 5 or 10% but something more like 50%. We have to rectify this problem as a matter of utmost urgency and we have to stop complaining about funding—most institutions have more than enough and need to cut administrative burdens rather than complaining about the poorest paid. It would also be helpful to have formal vacation and parental leave (both parents including same sex partnerships) that are paid for and enforced.

Existing NIH policies, programs, or resources

We don't need policies—we need to pay a competitive salary to qualified workers and make sure they have time outside of work. We also need to have more than one academic pathway and actually value those—we should have an immediate doubling of all staff scientist positions and also value training, community engagement and other important roles instead of keep pretending these are 'less' than PI roles.

Proven or promising external resources or approaches

No Response

Response 12

Perspectives on the postdoc roles and responsibilities

The postdocs are the soul of lab running the lab, producing the the preliminary data for the grants.

Fundamental issues and challenges

The salary is the main problem of reducing number of postdocs in academia. They are treated really bad.

Existing NIH policies, programs, or resources

The strong supportive system for the postdocs is the critical

Proven or promising external resources or approaches

The NIH should monitor the PIs whether they give good salary to postdoc

Response 13

Perspectives on the postdoc roles and responsibilities

It is equivalent to involuntary modern slavery.

Fundamental issues and challenges

Respect, Fair-compensation, job security, and professional development opportunity are all lacking.

Existing NIH policies, programs, or resources

PLEASE RAISE the postdoc salary guidance!!! It is not FAIR!!!

Proven or promising external resources or approaches

NIH OITE and individual IC offices are the only good things happening to postdocs.

Response 14

Perspectives on the postdoc roles and responsibilities

Protected time to further develop research interests with limited mentorship.

Fundamental issues and challenges

Prioritise 1st time applicants when awarding stand-alone postdoc grants, and training programs with postdoctoral training components.

Existing NIH policies, programs, or resources

Incorporate border or open research agendas to allow institutions to research on their own priorities.

Proven or promising external resources or approaches

Option to progress to US postdoctoral positions

Response 15

Perspectives on the postdoc roles and responsibilities

My postdoc was valuable and impressionable on my career development. I viewed my postdoc as a stepping stone in my career that was necessary to expand my scientific knowledge and skill set. My PhD dissertation had a very narrow focus, and so I was able to seek a postdoc that was in a related field to build my knowledge base. It also provided an opportunity to increase understanding of translational sciences, and really accelerated my ability to move ideas at the bench to affect the community (whether it is patients, medicine, devices, etc.). Importantly, the postdoc is meant to instill independence and confidence as individuals progress in their careers.

Fundamental issues and challenges

Expectation from universities to retain postdoc in an academic career. This is problematic for a few reasons. Many postdoc programs and resources assume that postdocs will only seek academic careers, and therefore offer a very limited scope of training in grant writing, teaching, etc. when instead they should support and encourage postdocs to explore career tracks without feeling like they are 'cheating' on their program. Bottom line is that academic openings can be geographically limited and the academic ecosystem of publish/parish for tenure is unattractive. Rather, there are significant needs in biomedical career tracks that are overlooked or frowned upon by Mentors. This mindset needs to shift.

Inadequate salaries. Of all the federal postdoc programs, NIH offers the most realistic salary but still falls short to meet basic living needs. Many postdocs are located in urban areas with rising cost of living. Based on the age group of postdocs, they are either relocating and entertaining a long-distance relationship or starting families. Many postdocs rely on their spouse income for support while they complete training which creates feelings of desperation or inadequacy, and certainly does not support family planning. Due to poor compensation, it creates an environment where postdocs want to train quickly and move onto a career after 2-3 years.

Research programs of a Mentor often rely on the productivity of their postdoc. Postdocs can be extremely productive given their level of training and motivation. While mentors and trainees must have a symbiotic relationship, when a postdoc lands a permanent position, it is often seen as a disadvantage on the Mentor's record rather than an accomplishment. It is important to reframe Mentor and Trainee success, or consider reframing success metrics for Mentor so that movement of postdocs does not compromise their future grant applications.

Existing NIH policies, programs, or resources

Increase programming related to non-academic tracks—including drug discovery and pharmacology. Some postdoc offices at universities offer career exploration and development. Most postdoc mentors do not have the experience advising their trainees in applying or interviewing for non-academic jobs. This is understandable since it is out of their expertise; however, a culture shift for mentors to support and

encourage postdocs to participate in career development opportunities would enhance the training ecosystem. Ultimately if a postdoc is seeking a non-academic career track and lands a job in another career field, this should also be viewed as a success by the Mentor and when the Mentor's performance is reviewed. By diversifying training and experiences of postdocs, this can also benefit the basic research of their mentors by bringing back new ideas, increasing the relevance, or challenging the translatability of their work.

Leadership and team science approaches should be prioritized for postdoc training—these soft skills will benefit in any career, academic or non-academic.

Proven or promising external resources or approaches

No Response

Response 16

Perspectives on the postdoc roles and responsibilities

Further training in specific research area, carrying much of a specific study (design, data analysis, data acquisition, writing papers) and mentoring PhD students, a stepping stone to a faculty position

Fundamental issues and challenges

Salary. No academic jobs to step into once you finish your post-doc.

Existing NIH policies, programs, or resources

higher salary; more funding for research; more academic positions; conference travel funding

Proven or promising external resources or approaches

No Response

Response 17

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellowships are meant for providing additional training to lead to independent researcher positions or to lead to staff scientist like positions.

Fundamental issues and challenges

The salary for postdoctoral fellowships (and predoctoral, for the matter) aren't sustainable for paying bills. Most postdoctoral fellows are of childbearing years and need to make the decision between having a family and leaving or not paying their daycare. Even without children, with the increase in housing, the under paid postdoc no longer makes sense.

Existing NIH policies, programs, or resources

There should be a policy put in place that when a fellow is on parental leave they should not be contacted/harassed by their supervisor requiring work or when they will be returning to work. Education should also be provided to all supervisors that there is 12 weeks of parental leave, because most are unaware.

Proven or promising external resources or approaches

No Response

Response 18

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as one in which brings new expertise to a laboratory and learns a new system to set that academic up for the future. For this, I mean that the training in the postdoctoral labs PI will enable their post doc to combine expertise learned during the PhD with what is going on in the current PIs lab to continue future academic studies. This means that postdoctoral faculty mentors will give up portions of their planned programs to enable future success. While this is a position of partial training, it

also is not. The main issue is that coming in with a PhD means you have substantial background in navigating experimental design, application, and evaluation. Post docs should be compensated for that expertise. That means salary equitable to industry which now range 75k to 100k a year.

Fundamental issues and challenges

Equity in salary is a huge challenge. The inequities in pay across cities in the US are not currently keeping up with housing, living costs, and starting a family across the country. This is why many PhD scientists are leaving academia into industry. The disparity and ability for students from low income families, (ie don't have generational wealth) to rely upon, means they are unable to stay in academia. This does not make sense if we want to understand scientific problems from multiple angles-you have to have diversity in all facets to do this. Money is a great way to make things more equitable and keep scientists in academia. If as a post doc you can only afford to literally pay rent and eat, why would you do this?

Existing NIH policies, programs, or resources

1. Pay for childcare within all grants for parents
2. PAY POST DOCS MORE
3. Enable free healthcare when on fellowships and training grants
4. Give PIs more money so they can support the above three

Proven or promising external resources or approaches

No Response

Response 19

Perspectives on the postdoc roles and responsibilities

No Response

Fundamental issues and challenges

No Response

Existing NIH policies, programs, or resources

Nothing will be fixed without providing more money to a broader pool of NIH-funded labs to allow them to support postdocs and staff scientists with salaries appropriate for their expertise and experience level i.e. higher than the current NIH minimum. The NIH R01 mechanism no longer provides enough money to support postdocs at the level they need to be supported at to make it a viable option for more people, especially individuals from underrepresented backgrounds. The NIH needs to bring back and enact the earlier proposal to cap funding amounts to individual investigators (through both grants and contracts) and commit the recovered money into increasing the budget of the modular R01 grant. This will allow a larger share of NIH-funded investigators to commit to stably funding postdocs and staff scientists at the levels they deserve.

Proven or promising external resources or approaches

No Response

Response 20

Perspectives on the postdoc roles and responsibilities

Postdocs are trainees who are learning to be independent scientists. Their roles/responsibilities include: doing original research and publishing this work under the guidance of a mentor, understanding and implementing responsible conduct in research, learning how to mentor, learning how to communicate their science through oral and written formats.

Fundamental issues and challenges

Issues include low salary, lack of benefits, lack of discrete tracks for postdoctoral training, lack of formal mentorship beyond a single PI.

Existing NIH policies, programs, or resources

NIH could increase postdoc salaries and include benefits, could institute a requirement for mentoring committees of at least 2 other faculty besides the PI and could formalize postdoc tracks on NIH grants which would require a mentoring plan. For example, many postdocs are interested in industry positions after academic postdocs and could take part in workshops to enhance skills sets for industry.

Proven or promising external resources or approaches

I think key focus should be salary and benefits and mandatory mentoring committees that are part of annual renewals for R01s and other grants with non-compliance leading to withholding the next years budget.

Response 21

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should be a short-term training position that provides an academic with the tools necessary to begin to build their own independent lab and career.

Fundamental issues and challenges

The major (and sole) issue at the moment for me is the incredibly low salary/stipend guidelines that NIH provides. This is not a feasibly or enticing salary for any postdoc living in a high cost-of-living city. But given that these guidelines are so influential, many institutions will use that guideline as a good way to suppress salaries and stop individual labs from trying to renumerate their postdoctoral trainees appropriately. There needs to be a major restructuring of payscales for postdocs AND a raising of the >$500K funding threshold for R01s. These two limits are causing a litany of issues; given the $500K bar, people do not want to pay postdocs more (in order to keep costs below the threshold) and because the postdoc salaries are low, many postdocs struggle to survive, thrive and build families at a critical time when they should feel free to do so. This is particularly true at some of the leading institutions that are located in high-cost cities.

Existing NIH policies, programs, or resources

Increasing payscales for postdocs AND a raising of the >$500K funding threshold for R01s (to at least >$800K)

Proven or promising external resources or approaches

No Response

Response 22

Perspectives on the postdoc roles and responsibilities

The postdoc, for me, was somewhat useful as a way to buy myself time to figure out what came next. I did not believe it was a viable path for a long-term academic career. I did have some capacity to further develop skills that would better serve me in industry. I developed both technical and interpersonal skills, e.g. coding and "managing up", both of which made me more valuable in my next job. The research I did was interesting, but developed far too slowly for it to be useful to the rest of my career development. Overall, it was slightly helpful but could not have been worth my time invested for more than 1-2 years.

Fundamental issues and challenges

The bottom line for me and so many more is that we are not paid enough. I needed at least 70k-80k in salary to feel that I was not wasting my time. If the minimum pay from the NIH was lifted to this level, I know that a great plurality of postdocs would be lifted up, and encouraged that they are not just wasting their time in a dead-end job that does not directly prepare them for the next career step. The NIH should also mandate career development for postdocs that fosters *non-academic* paths. There are far too few sustainable academic paths, and we need to give postdocs the tools it takes to build a viable long-term career.

Existing NIH policies, programs, or resources

The minimum pay for postdocs on a NIH grant should be lifted to at least 75k. The only way to significantly move the bar on a national level is paying people more, from the main source of funding that everybody applies to. At the same time, this needs to not cut into other resources on grants that are meant to fund research laboratories. There needs to be a real increase in funding, specifically to provide a sustainable income for postdocs in the US.

Proven or promising external resources or approaches

Industry postdocs last for a promised period of *only* 3 years, explicitly tie into career development at a company that can *actually* promise them a job at the next level, and are paid much better than academic postdocs despite not being as high as other full-fledged industry scientist positions. Personally, I feel this is the best model for the NIH to emulate for the next generation of doctorates who will emerge from graduate training and consider an academic postdoc to be an increasingly untenable position in the current environment for professional research in the US.

Response 23

Perspectives on the postdoc roles and responsibilities

No Response

Fundamental issues and challenges

Clear understanding by the NIH reviewers on the differences between MD's and PhD's views, and pathway involving research when involved in a post-doctoral research fellowship program. PhD's definitely will understand and be motivated about research. MD's might be or may be more interested in that residency spot. Also MD's path may take a lot longer specific to research funding (i.e., 6+ years for a surgeon versus 3+ years for a PhD)

Existing NIH policies, programs, or resources

Ecosystem could be improved by providing at least 5% salary coverage for the main mentoring faculty.

Proven or promising external resources or approaches

No Response

Response 24

Perspectives on the postdoc roles and responsibilities

An indulgence for the wealthy. A financially disastrous decision for everyone else. We are hyperqualified, exploited workers, coming with a bachelor's and a master's degrees, and a with a PhD, we are NOT trainees after all those years and qualifications.

Fundamental issues and challenges

Salary. It's disgracefully low, and it should be at least 200-300% higher. Also, no retirement benefits: You're actively taking from our present and our future.

Existing NIH policies, programs, or resources

No Response

Proven or promising external resources or approaches

No Response

Response 25

Perspectives on the postdoc roles and responsibilities

It's an opportunity to gain extra skills, and enhance skills such as writing, grant preparation, to pave way for a future research career; or to find out whether a research career is a good fit before faculty job applicaiton.

Fundamental issues and challenges

I've been blessed with good postdoc positions that meet my expectation: gain a new skill, learn a new neuroimaging technique, network, writing, publish.

I know others are not so lucky that they spent too much time in data collection, and no time to write and publish.

Overall quality of life: Most of us are over-worked, some weeks I work > 80 hours/week.

Definitely low pay given the qualifications and education.

Existing NIH policies, programs, or resources

Raise salary

More paid holidays, as some institutes don't even have federal holidays off.

Proven or promising external resources or approaches

Improve career paths/options for doctoral/postdocs. Encourage other fields such as industry to recognize the value of doing a postdoc, so to ease the pressure of getting into academia.

Response 26

Perspectives on the postdoc roles and responsibilities

As an incoming postdoc in June 2023, I view postdoctoral position as a transitional stage in my career from being a student to run your own lab. I do though see it as an employment based work, not fully training phase as I will be relying a lot of my prior training to implement in the new lab. Yes, I would strengthen some of the skills however lots of them would be just continuation of my work in another lab until I am deemed independent enough to start my own lab.

Fundamental issues and challenges

Even though I am choosing a path to do academic postdoc, the quality of life of my family will decrease. While I am at the institution that provides subsidized housing and childcare, moving to the next position without help with rent or childcare cost will immensely impact our personal life. I think the biggest issue is low pay for the fact that postdocs are highly skilled employees who hold highest possible educational degree and are being compensated almost at the same levels as researchers without a lot of research experience.

Existing NIH policies, programs, or resources

I suggest that childcare supplements are extended to all available fellows including programs like NCI F99/K00 Fellowship. It is a huge disadvantage that neither F99 nor K00 fellows are not eligible for the supplement: https://grants.nih.gov/grants/guide/notice-files/NOT-OD-21-074.html

The amount of supplement given also could be increased

The other solution could be setting the minimum postdoc salary based on cost of living in certain places. As someone who lived in Virginia where minimum NIH postdoc salary gives enough financial support, it is not enough in places such New York, Boston or San Francisco. I think we should not make people choose where to do postdoc based on the fact where they can afford living, but where they can do exiting science and have a good training.

Proven or promising external resources or approaches

No Response

Response 27

Perspectives on the postdoc roles and responsibilities

No Response

Fundamental issues and challenges

Biggest challenge is relatively low salaries in science, especially academic research, and the "pyramidal" structure that makes it so difficult to succeed. Our trainees look at us and say no thanks.

Existing NIH policies, programs, or resources

We have had several postdoctoral fellows decline T32 positions in the last couple of years due to the insurance issues. At my current (and last) institution fellows who went on a T32 essentially were no longer university employees, and lost a lot of insurance/disability benefits. Some of these the institution could make "whole", but many they could not restore. For example, insurance companies don't sell individual disability. This category switch also affects eligibility for university child care. When I was a fellow >20 years ago, I was going to have to turn down a T32 because I would have lost my childcare and family insurance would have been reduced. My university found ways to make exceptions, but it required a lot of paperwork on my part. Things have not improved for fellows today.

Proven or promising external resources or approaches

No Response

Response 28

Perspectives on the postdoc roles and responsibilities

The Postdoctoral position should embrace further research experience after the Ph.D., with additional training in grant writing, mentoring of undergraduate and graduate researchers, and presentation skills.

Fundamental issues and challenges

The current situation traps people in the Postdoctoral position for too long.

Existing NIH policies, programs, or resources

The number of Postdoctoral positions should be reduced. This initiative is looking to solve a problem that does not exist. With fewer persons in the Postdoctoral programs, salaries can be increased and time of service reduced. To repeat, the current decline in numbers is a good thing.

Proven or promising external resources or approaches

See above

Response 29

Perspectives on the postdoc roles and responsibilities

No Response

Fundamental issues and challenges

No Response

Existing NIH policies, programs, or resources

Make NRSA grants open to non-citizens. There are lots of talented candidates out there.and if we bring them here, they strengthen our scientific infrastructure (since they often want to stay).

Proven or promising external resources or approaches

No Response

Response 30

Perspectives on the postdoc roles and responsibilities

Postdocs are generally the main idea makers in the lab. They are also the workhorses are they are vastly underpaid. 55k for 50-60 hours of work is horrible compared to industry.

Fundamental issues and challenges

Postdocs are generally abused. This is especially true for foreign postdocs. See above as well. The pay is absurd.

Existing NIH policies, programs, or resources

Increase base salary for postdocs and increase the amount for an R01

Proven or promising external resources or approaches

See the industry. Also, dont vote republican.

Response 31

Perspectives on the postdoc roles and responsibilities

A time to build a foundation for research before having more responsibilities added such as teaching

Fundamental issues and challenges

Timing during reproductive years for child bearing people.

Under a T32 if a person has a child and needs to take leave their spot/funding is not paused for them. This is a barrier for people who want to have a family as a post doc because these programs often overlap with reproductive years.

Having to move

If it is not likely the post doc will lead to a job it is difficult to move for a 2 year position especially if you have a spouse and a family.

Existing NIH policies, programs, or resources

Pausing funding clock for maternity leave

Pausing funding clock for medical leave especially for disabled fundees

Proven or promising external resources or approaches

No Response

Response 32

Perspectives on the postdoc roles and responsibilities

A temporary job that helps with the transition to an independent position. Additional training period after PhD to learn new skills and decide a research direction.

Fundamental issues and challenges

Much lower salary compared to industry. Long work hours and high stress due to the competitive academic job market. Extra pressure for non-US citizens due to many NIH grants limitations.

Existing NIH policies, programs, or resources

Remove the requirements of US citizenship or permanent residency of NIH training grants. Increase the minimum salary for postdocs to be comparable with industry.

Proven or promising external resources or approaches

Incorporate individual development plan (IDP) into postdoc training. Postdoc salary should not all come from a lab but more from an independent organization (e.g. funding agency, university) to make sure enough autonomy for postdocs for career development rather than being used as staff by PIs.

Response 33

Perspectives on the postdoc roles and responsibilities

This should be a period of training to gain new skills and experience beyond a graduate degree (Ph.D.). This training should prepare a researcher for positions in academia or industry, as well as other pursuits.

Fundamental issues and challenges

I am at the [redacted for anonymity], where the postdocs and graduate students unionized and went on strike in November and December of 2022. It is difficult or impossible for these trainees to afford to work in places like California, New York or Boston, where the cost of living has become prohibitively expensive. This may be why many current Ph.D. program graduates are seeking scientist positions in industry. This will affect the ability of academic institutions to recruit faculty to train the next generation of scientists. Other countries, e.g. Germany, China and Switzerland have solved this problem by increasing stipends for both graduate students and postdocs. Some private postdoctoral fellowship agencies have increased their stipends and the NIH should do the same.

Existing NIH policies, programs, or resources

Increase stipends depending on geographic economics. Look at the UAW agreement that the [redacted for anonymity] made in December 2022.

Proven or promising external resources or approaches

Our institution have made significant improvements for postdoctoral mentoring. However, this will not help recruitment without increased stipends.

Response 34

Perspectives on the postdoc roles and responsibilities

I'm writing as a recent postdoc (2015-2017), ESI faculty, and also now member of leadership for two different T32 programs. A T32 postdoc is a particularly fortunate one, as your job is to figure out your own research program not inherently work to further the agenda of the R01 PI (for example). I was fortunate enough to benefit from several T32s (predoc and postdoc), and now that I've been recruited to lead them as an early Associate Professor faculty member, I'm realizing how leading them are acts of altruism because leadership is unfunded or underfunded.

Fundamental issues and challenges

Granted, this issue is exacerbated in the Bay Area, but postdocs via NIH are reimbursed at $50-60k/year, but if you have a kid or two the poverty line for a family of 4 is around $120k. Childcare costs $3000k/month per infant/toddler at the university-affiliated daycares. Living far enough away to find affordable housing and childcare means long commutes to take advantage of in-person training opportunities. Choosing to do a postdoc if you have or want a family is no longer a rational choice, and often only available to the most-privileged applicants. Groups may aim to supplement funding, but this not universally available.

Existing NIH policies, programs, or resources

More money is needed. Please raise NIH postdoc salaries, adjust for cost-of-living, and match childcare, transportation, etc. costs to those in the community (e.g. current postdoc allowances for childcare only cover 0.5-1 month of childcare out of 12 months of the year). Additionally, add childcare costs to allowable expenses for travel to attend conferences.

In addition, please add financial support for fellowship leadership and staff—its hard/impossible to administer good fellowship programs in soft money environments without funding! It's literally an illogical choice without funding, because it becomes time stolen from other places (like R01s) or family.

Proven or promising external resources or approaches

None of the rest of this is relevant without adequate funding of postdocs and administrative staff.

Response 35

Perspectives on the postdoc roles and responsibilities

Post doctoral training is meant to be a time when researchers are most productive. This is the time during which academic track researchers transition from being trainees to primarily mentors, as they often work closely with techs and mentor grad students. It is also a great time for people to explore a new field/new direction after their graduate training.

Fundamental issues and challenges

Academic postdocs are some of the most highly trained and undervalued workers in my opinion. Non-academic postdoc postions pay 2-3 times what an academic postdoc pays, and often feature shorter hours and higher benefits. Also, postdocs at most positions have little support through maternity leave etc, which is critical at this time in most birthing people's careers since this is a natural time for having kids in most careers. If these things were addressed, I think retention would be higher.

Existing NIH policies, programs, or resources

Increased postdoc salary.

Proven or promising external resources or approaches

Talk with unions like the [redacted for anonymity] union that represents postdocs.

Response 36

Perspectives on the postdoc roles and responsibilities

This used to be the necessary step prior to the faculty position.

Fundamental issues and challenges

I am overworked and underpaid. This career track does not make any sense anymore, compared to going to industry. It is time to check the reality.

Existing NIH policies, programs, or resources

Funding! What would one expect with the decreasing resources? Again, please check the reality. My opinion doesn't matter, the fact matters.

Proven or promising external resources or approaches

Check the average US salary and working hours (degree adjusted). You will get all your answers.

Response 37

Perspectives on the postdoc roles and responsibilities

essential job that is a stepping stone to an academic position.

Fundamental issues and challenges

Salaries are no longer competitive with industry and government positions. Its very difficult to offer to write a postdoc with someone and have them say they simply cannot live on the allocated NIH stipend. My lab often runs on a shoestring and I rarely have adequate funding to top off the salary.

While the allocated child care supplement was a wonderful addition, the allocated amount does not even approach the actual cost of child care which often is $1000/month.

Existing NIH policies, programs, or resources

If child care costs were expanded, that might be enough to make up for the low salary.

Proven or promising external resources or approaches

No Response

Response 38

Perspectives on the postdoc roles and responsibilities

A post doc is a time to work with a new mentor, patch holes in your knowledge, learn to manage your own time and scientific projects, and grow towards thinking about lines of inquiry rather than paper-level questions.

Fundamental issues and challenges

Post-docs make less money than a masters-level staff member. Because of NIH funding guidelines, it is really hard to get your university to allow you to pay them more. Post-docs are often at an age where they are starting families, and the post-doc salary is simply insufficient for this. The current state of funding for faculty, where there is a soft money environment and no guarantees, and the difficulty in transitioning between industry and academia, means that it is not necessarily worth it to try for an academic position, even if someone is competitive for a tenure-track position.

Recognize that the system is set up to be reasonable for the goal of being the "breadwinner male scientist with a stay-at-home wife working under the assumption of 30% paylines" and not the reality of "dual career families forced to train where childcare is super-expensive and that are far from relatives who could help, for the hope of competing for grants under [sentence incomplete].

Existing NIH policies, programs, or resources

Pay them more. Commit to funding people, not projects? Don't allow universities to train more Master's students as money-making endeavors. Increase the size of NIH grants so that success isn't dependent on the use of unpaid student labor or underpaid postdoc labor?

Proven or promising external resources or approaches

Pay them more. Commit to funding people, not projects? Don't allow universities to train more Master's students as money-making endeavors. Increase the size of NIH grants so that success isn't dependent on the use of unpaid student labor or underpaid postdoc labor?

Response 39

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral trainees as an essential part of our scientific and academic community, now and in the future.

Fundamental issues and challenges

There are many challenges facing postdoctoral researchers including rising housing costs, realities of dual income households with or without children, family leave policies and challenges within long term academic careers(funding, position availability, low salaries in high-cost environments). Trainees are unfortunately also facing high levels of student debt as well.

Existing NIH policies, programs, or resources

Expand flexibility with family leave policies for men and women. Continue to increase salary and benefits such as child care stipends, travel, or other funding categories. Expand housing options or programs (if possible). Continue to grow and develop support systems for women and underrepresented communities in science.

Proven or promising external resources or approaches

Sponsor programs geared towards engaging high school students to join scientific communities (and eventually move into postdoc positions). Continue to grow and develop support systems for women and underrepresented communities in science.

Response 40

Perspectives on the postdoc roles and responsibilities

Postdocs are often the main source of expertise in a lab and offer mentorship to grad students and technicians. In addition, the scientific expectation is that they will be independent and produce significant output that will put them on track to a PI position (typically).

Fundamental issues and challenges

Postdocs have effectively no recourse in cases of poor or abusive mentorship. There is no option of "quiet quitting" as it will only hurt the postdoc themselves. In addition the stipends are completely out of touch with basic cost of living as well as a reasonable expectation of quality of life. Postdocs are often making

not much more than technicians in a lab while having vastly more experience and expertise. The NIH needs to update its support system for postdocs by first adopting the same salary scale it uses for all other positions that accounts for geographic location; it's absurd that postdocs across the US receive the exact same amount from an F32. Additionally, there needs to be greater support of postdocs in toxic environments. Support for shifting labs without penalizing that time lost when considering early investigator status would go a long way towards helping postdocs. Grants overall need to be larger as well. Even supportive PIs may feel financially unable to increase postdoc pay without cutting lab sizes.

Existing NIH policies, programs, or resources

See above for suggestions on increasing grant and fellowship amounts.

Proven or promising external resources or approaches

Any resource that connects postdocs with mentors beyond their PI would be super useful. Currently, postdocs may be forced into labs that have poor training environments that could leave them out of the loop when it comes to planning for the next steps.

Response 41

Perspectives on the postdoc roles and responsibilities

Postdoc position is a training position that will lead either to a tenure-track faculty position or a higher level industry job. If it's the second it should be limited in time. A postdoc has many roles and responsibilities from designing and executing experiments independently, writing papers and grants, mentoring students.

Fundamental issues and challenges

Postdoc salaries are very low compared to industry jobs. It's ok to be lower since they are a training position but postdocs already have a PhD and the current NIH cap for their salaries is extremely low and I can see why PhDs don't want to do a postdoc. The NIH also puts a lot of limitation like how many years after PhD to apply for fellowships or they are not allowed to be PIs in grants in some institutions. Basically they do most of the work but they are the most dispensable in academia and their future is very uncertain.

Existing NIH policies, programs, or resources

K99 or other awards that have time limitation should be lifted. Salary restrictions especially if you receive a fellowship should be restricted. Most importantly the $250k modular budget for R01 is not enough to support both highly qualified postdocs and reagents/supplies. Without increasing the budget we will have to do less research either because we will not be able to pay for salaries (if postdoc salaries increase) or we won't be able to find good postdocs (if salaries remain so low nobody will stay in academia for a postdoc).

Proven or promising external resources or approaches

Postdocs are usually at an age that they start having families and children. NIH and universities should do something to support postdocs for housing and for daycare costs like other developed countries do.

Response 42

Perspectives on the postdoc roles and responsibilities

I view the academic postdoc as a potentially valuable, enjoyable, and transformative phase of a scientific career. It is a time to learn new skills and make new connections that are important for becoming a professor or industry researcher.

Postdoctoral scholars also make huge contributions that benefit everyone else in the academic system, including the PIs and younger mentees. **Research would not function without them!** We need people who are well trained and can devote nearly 100% of their time to research (and the training and mentoring that research involves) without other administrative duties.

But postdocs are also underpaid and often taken advantage of.

Fundamental issues and challenges

No Response

Existing NIH policies, programs, or resources

For NRSA felllowships:

- Higher base salaries
- Salary adjustments for local cost of living
- Wider eligibility

Proven or promising external resources or approaches

No Response

Response 43

Perspectives on the postdoc roles and responsibilities

I believe in what I think is the classic view of doing a postdoc. It is to receive more training (preferably in a new field/research topic or majorly different research approaches to a similar problem) and to show real ability to become independent, to gain more experience as a mentor and nowadays to also obtain some real teaching experience

Fundamental issues and challenges

I am a NIH T32 director (for 15 years). For us, postdoc applications have been going down even before COVID. Some of it is salary and some of it is—kids see faculty struggle for funding and don't want to go there. I think life balance has become a bigger deal—which is balanced with what is perceived as a low salary and too much time focused on career success. I also think they view postdoc outcomes as being a faculty member. If there was a way to create NIH funded postdocs that were one some sort of track to industry, government or other non-academic careers that might attract more applicants.

Existing NIH policies, programs, or resources

For T32s—you should let them have at least some of their postdocs be NON-citizens. There is a large talented workforce there—and frankly many are willing to work harder to US postdocs.

Proven or promising external resources or approaches

Some people here are trying higher salaries. We tell the university that broader efforts are needed—but here the focus is (too much) on graduate students.

Response 44

Perspectives on the postdoc roles and responsibilities

The academic postdoc is position to expand my network and develop a research program that will empower me to progress towards an independent career. That's of course not guaranteed. If I hit the end of the line without securing an independent academic position, I will have considered this time a great waste of my time with respect to my peak earning years.

Fundamental issues and challenges

Sexual harassment and the inability or unwillingness of universities to take action against PIs who garner millions in grant funding. Relying on institutional enforcement of title IX just doesn't cut it. Academic institutions protect their PIs, not their students. In line with this, the need for letters of reference for virtually everything.from PIs who have engaged in sexual harassment against trainees needs to stop.

Financial incentives. I had to take out 12K in student loans while I was a graduate student to pay income taxes on health insurance. This was on top of 46K for undergraduate. My rent at the time was $1250 for a room in a house with 8 other people with no access to a kitchen. Why doesn't training qualify for student loan forgiveness, except through special programs? Since we are typically paid from non-profits we should quality. But our status as "contractors" prevents this. Similarly, if we become disabled tomorrow we wouldn't qualify for disability because we aren't paying into social safety programs. Nor are most of us

getting retirement benefits. As trainees we already make far less than we would on the fair market, and the lost income is money we will never recover in our lifetimes, placing us a decade or more behind peers who skip the slog to an academic position. At the same time, places like Temple are financially punishing students for speaking out for their own best interests. Either we are students on fellowships and get money to study. Or, we are employees who get paid to work. Refusing to pay fellowship money because students refuse to work is criminal, given we're not employees. If we are employees, pay into the social safety net and give us retirement benefits. Put policies in place that let us break even, financially.

Existing NIH policies, programs, or resources

Find a way to protect the trainee. Having a PI who has all the power is not the way to retain scientists. Sexual harassment is a serious problem. The mental trauma that sexual harassment causes aside, it's likely I will never be able to circumnavigate the PI who fired me "if you don't like it, leave" for asking them to stop flirting with me. PIs have way too much power over the fate of their trainees. The NIH can't just put the onus for managing bad PI behavior on the institutions because the interests of the university aren't tied to the interests of the student.

Proven or promising external resources or approaches

Stop funding of PIs whose students are driven out of science altogether. During my tenure in one such lab, it received two MAJOR grants from the NIH, including one R01 and one larger grant. Yet the papers reported on NIHReporter for those grants, which have now ended, had nothing remotely to do with the grant's specific aims. Essentially, all output from the lab was cross-posted to all grants that had been secured. The NIH MUST enforce completion of proposed work. There should be a general alignment with the proposed research and the output accepted on NIHReporter. Where there is not, stop funding the PI! Otherwise, the PIs who are good at securing funding run projects that never get finished. That work never gets published, and if it does, it doesn't get published on the timeline trainees need to advance their careers. These labs are where careers go to die, and the NIH needs to find a way to stop funding them.

Some PIs expect their trainees to write ENTIRE grants for them. The NIH should require that the PIs write their own grants (or through paid science writers), rather than relying on their trainees for these functions. It is never in the student's best interest to write an NIH grant for the PI, not even segments of them. Writing fellowships in which the trainee is the PI is the only acceptable way students should be permitted to gain experience with grantsmanship. In other words, the NIH must do something to protect the student's best interests because many PIs will not.

Response 45

Perspectives on the postdoc roles and responsibilities

The postdoc position is (should represent) an opportunity to explore an entirely new research area while (as part of) developing a future independent research program. The postdoc position (to me, with some exceptions) should be for individuals who wish to remain in academic science as future principal investigators (or senior scientists that the NIH needs to increase mechanisms for funding). In addition, the dearth of postdoc trainees presently is largely a function of insufficient salary support, research support options, and reasonable assurances of future career progression.

Fundamental issues and challenges

Money. To think that someone with an advanced degree proving/supporting they are a singular expert in a particular field (represented by their dissertation) is only worth $45-60K per year is absurd. Union laborers at general contractor/construction firms make $25+/hr starting in middle American markets (this equals $50K/year at 40 hours per week. To be sure, those individuals aren't staying up to read the latest issues of engineering publications (in contrast to the sometimes all consuming rigor of many postdocs reading their literature, writing papers, writing grants, analyzing data, etc). The postdoc experience is an absurd joke and that the NIH sets the minimum (but by proxy standard) salary at a wage provided to unskilled labor is an additional absurdity. [Union labor deserves this wage and perhaps more which is not to defray from the mockery of pay for skilled labor at the postdoc level.]

Existing NIH policies, programs, or resources

More money, more F and K funding opportunities (expand eligibility to >5 years experience for K99/K22). In addition, the NIH (and therefore US Congress) needs to increase the standard R01 budget to probably

$500K-$1M per year while incentivizing older PI's to retire and/or institutions to expand the number of faculty positions offered per year. Paylines also need to be increased to 25-33%-ile while standardizing scoring criteria across study sections and reviewers (need to decrease score compression!!!). NIH needs to expand the R50 mechanism to all IC's.

Proven or promising external resources or approaches

Decrease emphasis on F and K proposals on mentor experience. Expand F99/K00 program and increase/expand availability/rates of K99/R00 and DP2/5 opportunities. You know what the answer is, giving postdocs more money to live and more money to do their work. This is easy to understand. Now lobby congress to expand NIH and NSF budget not by percent but by fold-change.

Response 46

Perspectives on the postdoc roles and responsibilities

Post-doctoral training should serve two goals:

1. To provide advanced training post-PhD, preparing the trainee for a future professional career, in either academia OR industry. There is no reason to assume that a post-doc must lead to a position in one or the other.
2. To provide an opportunity for the trainee to observe what it is like to be a PI, without having to carry the responsibilities of being one, and be able to make an informed decision on whether they aspire to such a role or not.

Unfortunately, these goals are not served in the current post-doctoral environment--the vast majority of PI's use post-docs as cheap labor, and provide little to no career development opportunity.

Fundamental issues and challenges

Post-doc salaries need to be competitive. The antiquated notion that post-docs can be paid minimum wage because they will work for nothing in the quest for a faculty position, is silly. If post-doc salaries are not competitive with industry salaries for fresh Ph.D.'s, the best and brightest will begin gravitating away from academic positions at an early stage, perhaps as early as college. Post-docs also need to be seen as role models for younger students. If they dont have positions that students see as aspirational goals, the result will be a degradation of post-doctoral quality and eventually faculty quality. NIH can easily fix all this by simply making the minimum post-doc salary today $100k, and adjust it for inflation every year, with a 5-year level-set review.

Existing NIH policies, programs, or resources

Make the post-doc position serve more than just academia. Provide opportunities for post-doc programs in collaboration with the industry, and with government/regulatory organizations.

Proven or promising external resources or approaches

Honestly, the NIH need look no further than Faculty recruitment, training, mentoring and job satisfaction profiles at tier-1 schools, and apply them objectively to post-docs. As a faculty member I am shocked at how disparate these programs are. Schools know that their best faculty will leave if they dont treat them fairly. They need to apply the same principle to post-docs. NIH can make them do so.

Response 47

Perspectives on the postdoc roles and responsibilities

I am tired of being considered a "trainee" I am a professional research scientist, all be it of a junior position, but I am not a student, I am not a trainee. Postdocing is an entry level position in academia and it should be considered as such. It feels a little insulting that we're considered trainees when in reality we are; doing research, writing grants, training undergraduates and grad students, teaching, outreach, and fundraising under the supervision of a boss.

Fundamental issues and challenges

The knowledge that an international postdoc does not have the same level of access to career development as a US citizen is disheartening, despite knowing international postdocs make up the majority of postdocs in the USA, and therefore the bulk of the work. The NIH is happy to take us as cheap labour and unwilling to allow us to develop our careers to the same extent. We literally CANT stay in academia here!

Existing NIH policies, programs, or resources

All postdocs should be treated the same, end the second class nature of postdocs on J visas. Very few countries in the world have these restrictions, the UK, Canada, Australia, Japan, New Zealand. The restriction on non-permanent residents applying for F, K and R awards puts US science in a less sure footing than other nations. A system that embraces the best in awards rather than bias passport or residency produces better science and better value for money in that science.

Proven or promising external resources or approaches

I find this question hard to answer when the reality of the situation is I can't really tell people to come to the US and train as a postdoc knowing I'm bringing them into an unequal system where they will not have the same chances in their careers because of the passport they own. All of that overrides job satisfaction, mentoring, working environment etc. You can't mentor your way out of visa restrictions.

Response 48

Perspectives on the postdoc roles and responsibilities

The academic postdoc provides an early career investigator the opportunity for continued mentorship, access to data and opportunities to grow one's research program and portfolio deeper and/or broader, and more time to publish and submit grants, on the path toward independence in research.

Fundamental issues and challenges

The financial pressures faced by early career investigators have reached a tipping point; given the phase in life that many postdocs find themselves in, they are coming off of several years of living off of miniscule graduate school stipends, negotiating several moves to relocate for research opportunities, while simultaneously making family planning and other personal life decisions. No longer are people willing to sacrifice financial and living stability to pursue these training options, particularly when there are so many other avenues that can be pursued in private industry. Put another way, the ability to sacrifice financial and personal/living stability in pursuit of these underpaid research opportunities is a privilege that only some have, and most cannot absorb this risk. Pressures from covid, remote work arrangements, and inflation all contribute to the problems related to quality of life for postdocs. We have seen a noticeable decline in postdoc applicants over the past several years, and I have heard the same from colleagues at comparable institutions.

Existing NIH policies, programs, or resources

Put simply, the stipend levels set by NIH must increase at a substantive rate. These are doctoral level individuals with talents and expertise who are paid at the same rate as the bachelor's level research assistants we hire. It's not acceptable, but even for non-NIH funded fellowships, the NIH stipend levels set the amount for all of the fellowships in our training program. Also to add that grant budgets must therefore be increased to accommodate the increased salary/stipend for fellows. It remains a mystery why budgets for any of the R-level grants have not changed at all in the 20 years that I have been an independently funded investigation. Setting the stipend level is one thing, but also providing the funding to support the infrastructure to pay postdocs at that level is another.

Proven or promising external resources or approaches

Funding.

Response 49

Perspectives on the postdoc roles and responsibilities

I enjoy very much my work as a neuroscientist and postdoc, but have several concerns with my role and career, and these concerns are widely shared by other postdocs I interact with. Most importantly

1. the narrowness of the academic career trajectory and its competitiveness and
2. the various ways my university avoids recognizing my value by treating me as a trainee rather than an employee

Fundamental issues and challenges

As far as I understand, the career trajectory of all academic researchers is intended to be PhD student > postdoc > lab head. I'm told that even if you do want to run your own lab, this path is very competitive. So what are the alternatives that would give postdocs a safe backup career option while remaining in academic research? This uncertainty and dread of making the next career stage weighs heavily on myself and other postdocs. It would be nice if I could imagine a future where if getting a faculty position doesn't work, I could just work as a competent lab professional. I'm told that the lack of these positions is dictated by the NIH requirements for labs' budgets when giving grant money. I'd love to learn more about this and why it's the case.

Universities routinely treat postdocs (and graduate students) as trainees, allowing them to devalue my labor, since I'm lucky to be working here at all and getting this training. While I don't find my compensation to be unfair, our benefits aren't very good, and my status as a trainee prevents my employer (the university) from really recognizing my work (or that postdocs run this place). This lack of recognition affects morale, and many postdocs do in fact consider our compensation to be inadequate, and are trying to organize a union as a result.

Existing NIH policies, programs, or resources

Particularly for my first concern, I would love to understand whether it's true and in what ways the NIH discourages labs from hiring / paying staff scientists outside of the traditional student > postdoc > PI route through control of budgets. If this is the case, I'd appreciate this hugely impactful policy decision being explained in some way. I can't stress enough how much it weighs on postdocs and what a common topic of conversation it is that I hear.

Proven or promising external resources or approaches

No Response

Response 50

Perspectives on the postdoc roles and responsibilities

Postdocs are essential to keep the lab running and to accomplish research goals. After cutting of training grants for graduate students we have very few students for many labs in our graduate program, plus graduate students take a lot of training before they are able to contribute. So we have to rely on postdocs. Postdocs are already experienced in basic lab techniques and lab planning, and get much more done than the students. They are in a phase to gain more independence and to start thinking about their own interests and directions and thus bring the necessary discussion to the lab. Because they come from different backgrounds they also bring different viewpoints which again is essential for a fruitful discussion and a viable research program. Without postdocs a lab becomes a nice teaching enterprise, but it would be really hard to get research done.

Fundamental issues and challenges

The perspectives for postdocs are not wonderful in terms of the number of faculty positions. Good postdocs go to large, established labs to increase their chances to be competitive. For young labs it is almost impossible to get US postdocs, and we have to rely on postdocs from India, China, etc. As far as I know there are no NIH programs for non-US postdocs, and very few of the private fellowships are available for non-US postdocs so we have to pay all of them from R01 type grants. This leads to the young labs who already have difficulty recruiting postdocs also having to rely more heavily on grants to be able to afford them, while the large labs have the good postdocs who can bring their own funding.

Childcare is an ongoing problem. Especially for international students, PhDs have gotten longer (and are typically started after a Master's) and postdocs have gotten longer (in order to be competitive), and many will want to start families while still at a postdoc position. Childcare in the US is so expensive that I have seen several of my fellow postdocs at the time quit because childcare for 2 children was more than a postdoc stipend.

Existing NIH policies, programs, or resources

Include foreign postdocs for consideration for F32s.

Make smaller postdoc grants for meetings and small independent projects so they can gain some independence even if they don't get a full fellowship.

Make R01-addon grants that postdocs can apply for to propose their own research that touches on/synergies with the main research project.

Proven or promising external resources or approaches

No Response

Response 51

Perspectives on the postdoc roles and responsibilities

Postdocs are the major workforce in my federal funded projects.

Fundamental issues and challenges

Low salary stipend comparing to industries, fewer faculty positions available in the market, job security, NIH grant with a modular budget (R01) is insufficient to support a postdoc to complete a project.

Existing NIH policies, programs, or resources

Increase budge, or additional support for postdocs for funded project.

Proven or promising external resources or approaches

No Response

Response 52

Perspectives on the postdoc roles and responsibilities

The postdoc is a term of learning new scientific skills and demonstrating mastery of the scientific method and the business of science (experimental question selection, paper writing, funding acquisition, networking/communicating work). Once optional, a postdoc of 5-10 years is all but required for a successful tenure track faculty application. At any time, factors completely out of the postdoc's control can derail an academic career (negative result, unfashionable question, personal illness, family finances, PI's funding, PI's support). It is a highly uncertain undertaking that is being challenged by a growing biotech industry where increased personal agency in building a career is becoming more attractive.

Fundamental issues and challenges

As an F32 and K99 recipient in a high cost of living area ([redacted for anonymity]), the finances of a postdoc and junior faculty member (who is expected to hire and train graduate students and postdocs) just doesn't make sense. The F32 increased my tax liability (health insurance costs became taxable), and the K99 improved my salary without increasing my tax burden, but not enough. I had a child during my K99 period, and I was grateful for the opportunity to have an administrative supplement for a technician, but the increased costs of childcare ($3000/month at [redacted for anonymity]) and a mentor who was not supportive of extra flexibility after childbirth, and who actively sought to keep me as a postdoc to work on his grants instead of supporting my move to an academic or industry position, was demoralizing and harmful. I ended up taking a medical leave for mental health reasons. There are few checks and balances to the 'trapped' feeling of being tied to a poor mentor for an entire academic career.

Furthermore, the lack of support from NIH for junior investigators also contributed to my decision to seek employment in industry. The modular R01 hasn't changed in decades, yet postdoc and grad student

salaries are (rightfully) increasing. The 'publishable unit' for papers has also substantially increased, and experimental supplies are also vastly more expensive than they were in the '90s when the modular R01 was last changed. These strains and barriers to probable success made me decide not to pursue a tenure track job despite my K99/R00. I see this as avoiding a huge amount of stress that would also require a move, likely away from my support network of family and friends.

Existing NIH policies, programs, or resources

Change the F32 to be administratively like the K99/R00, so that postdocs do not either lose healthcare or have to pay tax on healthcare expenditures. Get rid of the payback clause in the F32—life circumstances can change drastically for anyone, and forcing someone who may be financially unable to pay back up to a year of salary to stay in a job far from family or in spite of personal circumstance is nonsensical.

Increase grad student, postdoc and junior faculty stipends/salaries. This has to be a financially viable career choice to make it more appealing than industry. This also means the modular R01 must be substantially increased to accommodate the true personnel and supplies costs of doing high-quality scientific research.

Encourage postdoc-to-PI pathways at the same institution. Postdocs often have young families, and moving to different cities away from support networks at each career stage is a huge disincentive to staying in academic science.

Encourage or reward publications (in study section, hiring panels) that are smaller in scope (faster time to end of postdoc) or are multi-first author. The idea that a single postdoc spearheads often huge papers depending of the field encourages postdocs to stay 6+ years in a lab, which is too long at too low of a salary to comfortably bear. PIs often do not support postdocs going on the job market before a work is published, further delaying job seeking that requires this letter of support.

Proven or promising external resources or approaches

Postdoc-to-PI pathways that encourage retention at the postdoc institution. The postdoc will have some hope of stability at an earlier stage in an academic career.

Response 53

Perspectives on the postdoc roles and responsibilities

A post doc is protected time to continue to establish your program of research before beginning a tenure track position. This time should be hyper focused on developing/ refining needed skills, getting out publications, and highly mentored grant writing experiences. I think when working with a mentor whose program of research is closely aligned with the post doc leads to the best development opportunities

Fundamental issues and challenges

Timelines for applications vary substantially for institutions. Requiring applications too early can be difficult for applicants to know if they will actually be ready to start the post doc (ex: asking for applications in the fall for a post doc start the following fall—will the applicant finish their PhD in that time?).

Inconsistency in institutional post doc offerings—post docs often tied to grant funding so institution has a post doc position for this year and next, but not the following year. Investigators and PhD students cannot make long term plans

Lack of information about available post-docs—I rarely found post doc positions listed on institutional websites

Existing NIH policies, programs, or resources

Unacceptably long application timelines for k awards. K awards should be on the same timelines as F awards. Post docs are far too short for the k application timeline. Applicants wait 4 months just to know if the application is discussed, and then another 2-3 to know if it will be funded. That can be half of someone's postdoc time. Resubmissions are incredibly difficult timelines to complete during the relatively short post doc period. NIH timelines in general seem quite long with nearly a year transpiring between application submission and funding hitting (if a grant is even funded the first time) that slows the progress of science.

Proven or promising external resources or approaches

No response

Response 54

Perspectives on the postdoc roles and responsibilities

A postdoctoral position basically feels like a temporary position to obtain either a tenure-track research position or a holding place to find a role outside of academia. The role is to contact high-quality, trained research under little guidance for low pay.

Fundamental issues and challenges

Low pay, bad benefits

1-year contracts that lead to job instability

A postdoc position is not needed for transition into industry roles and is really only required for obtaining a tenure track position, of which the openings of those are low.

Culture of overwork with little reward and only for the promise of publications

Existing NIH policies, programs, or resources

Increase post-doc pay line for the national average and reflect the cost of living areas. There are many post-docs in high-cost-of-living areas due to the uneven distribution of NIH funding and this is not reflected in the NIH pay guidelines.

Proven or promising external resources or approaches

Genenetech's post-doc program

Response 55

Perspectives on the postdoc roles and responsibilities

Postdoc means a protective position to get more involved in research. It also serves as a transition period towards future independent research position.

Fundamental issues and challenges

One major issue is the compensation. The current salary, though much better than many years ago, still does not reflecting the US market value. Person with similar experiences in industry has much better pay than postdoc, including better benefits and retirement packages, and yet they are functioning pretty much similar to a postdoc in academia with a better working environment (9-5 protected working time for example or overtime pay).

In addition, the lack of faculty position is another challenge for postdoc. More and more postdocs are stuck in positions like research associate that is basically another "forever" postdoc position.

A third issue is about the mentorship. In academic, postdoc is especially vulnerable to the idea of mentorship. In my own experiences, postdoc is essentially treated as a better functioned or more productive graduate student. And most postdoc rely on the mentor to have good paper published and to secure funding. Also, postdoc will need the mentor to provide recommendation letter to get promoted in academia. However, this mentorship idea can be dangerous and really works for the mentor. After all, if mentor is not satisfied with the progress of a postdoc. It is very likely that the postdoc will suffer and not end up well in academia.

I think the issues are there, and that's why postdoc are fleeing away from the academia. People should admit that postdoc is not merely a training, but a job. Overall, I think the issues are low compensation, job security, and unclear career promotion.

Existing NIH policies, programs, or resources

To address the above issues, one thing that NIH can do is to boost the NRSA recommend salary. Second, NIH can set up more diverse positions that suit postdoc scientist. I understand the fact that not everyone/

postdoc can be an independent researcher or open a lab after postdoc. But opening other permanent positions with much better pay should be considered.

Proven or promising external resources or approaches

Improving working environment and the processing of mentoring can be considered.

Response 56

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

The payback agreement is truly horrific and should be removed (I can't imagine this being legal in any other industry). It treats postdocs as indentured servants. Requiring a postdoc to pay back the money they earned if they don't stay for two years is just wrong. It's not as if the data collected or the code they wrote just gets thrown away if they don't stay two years. The PI still benefits from the work they did during the first year, and they earned and deserve the money they were paid during that time. Most people unfortunately don't know about this until after they have agreed to join a postdoc lab and have begun their F32 or T32 funding. Postdocs should not be in fear of financial ruin should they decide to leave academia before their two years are up.

Proven or promising external resources or approaches

No response

Response 57

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as an opportunity to gain additional training, experience, publications, and possibly funding, in preparation for a faculty job.

Fundamental issues and challenges

1. The postdoc positions are inherently temporary, while people with PhDs and usually in their 30s would often want something more stable
2. The salary is relatively low considering the qualifications required
3. The chances of getting a faculty job are relatively small, so one might wonder, is it worth putting up with years of low pay and lack of stability for a slim prospect of landing a faculty job (which is not stable either due to the tenure process)

Existing NIH policies, programs, or resources

I think that most postdocs should be 'self-funded' through individual fellowships, where the postdoc will have a chance to develop a new research direction under the mentorship of a PI and be able to take it with them, and the number of these positions should be consistent with the number of available faculty jobs. Labs shouldn't rely on postdoc labor and use them as skilled technicians, specific already funded projects should employ staff scientists.

Proven or promising external resources or approaches

If postdoctoral training is coupled to a clear path to a faculty position (not guaranteed but with a good chance), this could possibly make these positions more desirable.

Response 58

Perspectives on the postdoc roles and responsibilities

the postdoc is an advanced training, term-limited position for researchers to gain more experience and develop additional scientific independence.

Fundamental issues and challenges

fundamental challenges include the desire of candidate to move to big cities on the coasts and work in large labs, even though they may not be the best training environment for everyone and even though there are outstanding resources and scientific opportunities in other geographic areas.

retaining qualified postdocs is a real challenge—the best ones often leave early!

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 59

Perspectives on the postdoc roles and responsibilities

I view this position as a way to build more connections and do more science to position me for a faculty position.

Fundamental issues and challenges

Money! As a postdoc, I am making less than half of what I would be if I were to leave academia (my salary: ~$65K. Computational biology starting salaries: ~$130K). I am in my second year as a postdoc and have effectively forfeited $65K x 2 to have a small chance at a faculty job. I enjoy the science, but I would also enjoy being able to afford a house. I don't have children to support, but it would be much harder if I needed to also spend money of child care.

Additionally, I moved to Boston from LA to do a postdoc because the opportunity was better for me. Since a postdoc is a temporary position, it did not make sense for my partner to move with me. Many postdocs have to face this decision and either way it is not easy. Coupled with the higher pay, remote jobs in industry are much more attractive than postdocs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 60

Perspectives on the postdoc roles and responsibilities

I did one year in an NIH-funded postdoc program. I received valuable mentorship, hands on research experience, as well as time and support to accomplish other professional goals: publish two dissertation chapters, apply for jobs and attend a conference. My postdoc program was very flexible, in that I could design and execute my own research project, with guidance from two mentors (and others in my institution, as needed). This was an ideal arrangement for me. Lastly, although it's hard to know how others perceive this, I believe that having this postdoc training from a well-respected program strengthens my CV and will help in the future.

Fundamental issues and challenges

My situation was somewhat unusual and shaped heavily by the pandemic. I was accepted into a postdoc program in spring of 2021, and I was told at that time that while the program normally requires that

postdocs relocate, they were going to make an exception for my cohort because of the ongoing COVID-19 pandemic and allow postdocs to work remotely from another city or state. This represented a unique opportunity for me. Doing that postdoc in person would have required moving across the country. To be honest, it's unlikely I would have been able to move across the country with my partner and kids, regardless of the pandemic. Uprooting my partner from their job and uprooting my kids from their schools would have been quite disruptive, regardless of the pandemic. The fact that the postdoc was offered remotely made it possible for me to do it.

This dynamic is of course intertwined with postdoc salary. I earned just under $54,000 annually as a postdoc. As a 36 year old with a PhD, substantial professional experience and a family to support, $54,000 is very low pay. That needs to be emphasized. However, because I could do the postdoc remotely, my partner could keep their job, and I could have the benefits of working from home, I decided that the postdoc was worth it. It was a great year. Ultimately, after one year, I received an offer for an excellent researcher position and decided to leave the postdoc early and take that position. The low postdoc salary made it easier to leave, even though the professional development and flexibility of the postdoc were advantageous.

Existing NIH policies, programs, or resources

The reimbursement for childcare expenses was helpful. I would encourage increasing this to cover more of the actual cost of childcare. (I spend $2000 per month on childcare for two children.)

Also, I will note below that I think it would be advantageous for NIH to accommodate more remote postdoc positions.

Proven or promising external resources or approaches

I would strongly encourage that, for fields of study where it is feasible, NIH support opportunities for postdocs to work remotely so that they do not have to move across the country. Remote work could be coupled with regular (e.g., monthly or bimonthly) visits to the host institution for in-person interaction, which I recognize is still very valuable. For me, as a mother of two children, it would not have been feasible to move across the country to do a postdoc, particularly for the stipend that I was being offered. However, the opportunity to do it remotely made it possible. And, I still had an excellent postdoc training experience. I met regularly with my mentor and postdoc cohort over zoom, I attended presentations, and I visited the institution in person. I am not alone among new PhD graduates who do not want to relocate for a postdoc. There were 5 of us in my PhD cohort; every single one of us were completely or somewhat "geographically bound," either because of our children, our spouses, or other financial needs. I believe that accommodating remote postdoc scholars would open these postdoc positions to a more diverse group of PhD graduates, particularly those who are parents and/or those with lower to middle income backgrounds.

Response 61

Perspectives on the postdoc roles and responsibilities

The typical career paths after a postdoc are: academic career at a research institution, academic career at a predominantly teaching college/university, or industry. The postdocs already planning to go to industry have the option to go to an industry postdoc, or skip the postdoc experience altogether. Thus, they are not as much of a concern. The main issue is to support highly qualified postdocs, who want to follow one of the other two paths, but may give up due to financial or other considerations.

Fundamental issues and challenges

The number of qualified postdoctoral candidates has been plummeting, not only in my own experience, but also according to anyone I know. When everyone is seeing it, odds are that it is statistically correct. The crisis is exacerbated by the recent reduced influx of scientists from foreign countries.

The main issue is financial: salary and benefits. There are two ways to look at it. One is, how the postdoctoral salary/stipend in academia compares to what a PhD makes in industry. The comparison is of course not at all favorable. Unfortunately, we cannot expect that the NIH can raise postdoctoral stipend levels that much. Right now, a postdoc in academia is paid less that even someone with a BS working in industry. Those candidates, who go for the higher salary, will go to industry.

The other way to look at it is affordability/cost of living. What must be done is raise the stipends/salaries and benefits of academic postdocs enough that those, who want an academic career can survive. The typical postdoc is in their late 20s and 30s. They need to be able to support not only themselves, but also have a family. That is not feasible on a 55K salary, especially in large cities. Thus, the salary levels have to be increased to meet the cost of living, and adequate health care and dependent benefits must become standard. The universities may have to be required to participate in covering the increased costs.

The alternative is bleak. We will miss out on highly skilled scientists, and try to do high end work with untrained recent college graduates. And even worse, many bright scientists will choose an alternative career path and not pursue an academic research career, to the detriment of future scientific progress.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increased salaries/stipends; benefits, including family benefits; training and mentoring tailored to the different needs of the different future career paths.

Response 62

Perspectives on the postdoc roles and responsibilities

Finishing school for research training. Expand the research toolbox. Gain publications prior to writing the first independent grant and entering the job market.

Fundamental issues and challenges

The need to move themselves to another location prior to taking a faculty position (yet another move usually), particularly if there are a spouse and or dependents involved.

Pay compared to taking a faculty position immediately.

Lack of local institutional funding for post-doc positions.

The difficulty for doctoral candidates to write a F32 with a doctoral mentor who is not co-located with them at the same time that they are finishing their dissertation and possibly job searching as a backup plan to the postdoc.

Using the F32 mechanism for those with a professional doctorate (e.g., an AuD) who are pursuing a PhD sends the message that they don’t need postdoctoral training post PhD

In our field, post-docs are identified through networking rather than advertisements, which can be opaque to some candidates.

Existing NIH policies, programs, or resources

Use the F31 designation for all people pursuing a PhD and F32 only for post-PhD training.

Create a short-term funding mechanism (e.g. 1 year) that is a relatively simple application (like a diversity supplement) that would provide a PhD candidate the means to move to a post-doctoral lab where they could write a F32 within that 1st year.

Proven or promising external resources or approaches

In my field, job satisfaction for a post-doc is generally higher than for a new faculty position. It is one of the main benefits of going the post-doc route.

Response 63

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is marketed as a training position, yet for the vast majority of the postdoc we are not given the space to pursue training. I am expected to produce constantly and consistently and manage the lab, at that. I am not given the space to try new ideas and to fail, unless I do so without my PI’s explicit approval. I am constantly being told that my experiments are too expensive.

Fundamental issues and challenges

The largest challenge is compensation and benefits. I cannot be expected to operate at full productivity of an employee who would be paid at least 1.5 times my salary, yet be paid as though I am a trainee. I have explored other career opportunities and with my skillset I can be making at least double my current salary, with performance based bonuses and retirement matching, which are not provided by the university. I am also constantly expected to work more than 40 hours a week, nights and weekends, and manage the lab in addition to my research work.

In addition, there is no defined method for me to provide feedback on my mentoring situation. If I am having trouble, there is no way to hold my mentor accountable for the mistakes/problems they cause to me. Mentors should be answerable to someone at the NIH, perhaps the program officer or such.

Existing NIH policies, programs, or resources

The payscale that institutions use to set their minimum salary needs to be raised by a substantial amount. In addition, there needs to be guarantees that postdocs will get a full set of benefits. Make it a requirement that if a university takes NIH funding, they MUST match retirement contributions for their postdocs, provide good healthcare plans, maternity leave, and reasonable options for daycare for children. Moreover, put extra funding or develop a 401K type program into F32 and other similar fellowships so that the fellows do not have to take a hit on their tax-free retirement contributions during the course of the fellowships. One major problem is that F32 fellows cannot contribute the 20500 that workers paid through R01's or other grants can, they can only do the 5000 in an IRA.

Postdocs are the workforce of extramural research programs at research universities, yet they are not compensated as such. I understand that there will be some pay cut taken by participating in the academic enterprise, whose goals are not to make money. However, the pay cut cannot continue to be 50% or greater of your expected pay in industry, or the academy will keep losing trained workers.

Proven or promising external resources or approaches

No response

Response 64

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral position as an opportunity to expand upon and diversify my training after honing my interests in graduate school. It allows for time and resources to learn new methods, broaden my network of collaborators, and decide precisely what I would like my career to look at in 2 years. However, at the end of the day, this is also simply a job like any other, just paid at a much lower rate than someone with my training would get in a comparable position.

Fundamental issues and challenges

Increasing stipends (as Veteran's Administrations have recently done for postdoctoral fellows by 12%) would be the primary way to immediately increase recruitment, retention, and quality of life for postdocs. Many organizations follow the example NIH sets as minimum salary for all postdoctoral fellows. Increasing this rate to be competitive with positions these skilled workers would make these positions more appealing to talented individuals who might otherwise leave academia. Graduates of doctoral programs are looking for positions after 5-7 years of low pay that often requires individuals to take out loans or rely on outside help (e.g., familial loans), which create further barriers to entry for individuals of marginalized backgrounds. Academic workers, graduate students, and faculty around the world are striking for living wages and benefits. NIH has a responsibility as a leader in scientific training programs to increase equity by raising stipends.

Existing NIH policies, programs, or resources

Expanding of diversity-related funding such as diversity supplements and individual training grants designed for diverse applicants. Further, the F99/K00 D-SPAN grant should be opened to clinical psychology PhDs, with the opportunity to pause funding during the clinical internship year.

Proven or promising external resources or approaches

No response

Response 65

Perspectives on the postdoc roles and responsibilities

A postdoctoral position means having freedom to do research that excites me. However, low pay takes out all the exciting parts of research because I have to worry about covering my grocery bill rather than my science.

Fundamental issues and challenges

Low pay.

Existing NIH policies, programs, or resources

Stipends, defined maternity leave, increase childcare alimony.

Proven or promising external resources or approaches

I have a very good postdoc which makes me very happy. However, this is not the case for everyone.

Response 66

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are the basic science equivalent of medical residents. They are well trained already but they need further training to be fully independent specialists. A postdoctoral fellow needs to be able to semi-independently conduct research and mentoring graduate students under the PI's guidance. And a significant growth in independence is expected.

Fundamental issues and challenges

The scarcity of faculty positions is probably the most fundamental problem. which severely diminish the career growth for postdoctoral fellows. The level of compensation for postdoctoral fellows is an issue but is not the root of the problem. Residents are paid low wages too, but that has never been an issue because there is the prospect of well compensated career ahead of them after the residency. There is no such of hope at the end of the tunnel for academic postdoctoral fellows.

Existing NIH policies, programs, or resources

There may be a balkanization of the post-doctoral fellowship programs. Each NIH Institute seems to be very enthusiastic to seek unique programs of their own. It becomes more confusing for both sponsors and applicants.

Proven or promising external resources or approaches

No response

Response 67

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Compensation

Existing NIH policies, programs, or resources

Adjust the modular grant award amount for inflation, taking into account every year since it went into existence.

Adjust all grant awards for inflation each year.

Proven or promising external resources or approaches

No response

Response 68

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The NIH salary scale for post-docs no longer provides a livable wage in many US cities and hasn't been adjusted based on competition in the biotech industry and other related fields. Because of NIH pressure to do so, there is current competition amongst universities to recruit "diverse" post-docs without regard to their qualifications or likelihood of success. There is no mechanism to retain trainees from disadvantaged backgrounds for longer training periods in order to bring their skills up to par with others who have had more experience. Mentors need to be allowed to be budgeted for in NIH training grants—the days of PIs having multiple R01s enabling them to mentor for free are over. Mentorship is the critical predictor of success, and we can't budget for it.

Existing NIH policies, programs, or resources

Ideally there would be a bridge award to help the divide between completing a T32 before submitting a K award. There is a total mismatch between how T32 positions are used, and the expectations for a K. Nearly all T32 trainees are expected to work on their mentor's projects, yet a K requires them to move to independence. Rarely can a T trainee publish enough to be competitive for a K, and even more rarely can they develop their own research ideas or program. Most T-level trainees are essentially cheap labor, they are not encouraged toward their own programs of research. So promising T trainees need intermediary funded—with an adequate research budget—to collect preliminary data or otherwise pursue their research programs. The TRE in T32 programs is grossly inadequate for trainees to do much of anything—even their tuition costs aren't covered. Let's be real about the expectations—how can a trainee be expected to succeed when

1. their mentor isn't paid to mentor them,
2. their can't work on their own interests,
3. their training budget is inadequate,
4. it is nearly impossible to develop any independence to be competitive for a K, and 5. the salary doesn't even meet their basic needs?

Proven or promising external resources or approaches

The whole approach needs to be modernize. It's sorely outdated.

Response 69

Perspectives on the postdoc roles and responsibilities

A position to embark on scientific discovery in an effort to eventually become an independent researcher.

Fundamental issues and challenges

Salaries are far below what is competitive for the level of training required for the postdoc position, despite the recent adjustment in NIH salary minimums. This does not scale to the cost of living at various locations in the US. In a high cost of living area, I don't understand how someone in their late 20s—30s (without a domestic partner/spouse that has a higher paying job) can expect to afford housing (rent/mortgage/down payment), childcare (can be over $2k/month/child in some areas), and have savings at the end of each month after taxes/insurance are taken out of the postdoc salary. There is no financial incentive to become a postdoc and the bottom line is that financial resources improve quality of life. This severely burdens those with student loans, dependents, and disabilities. There is no tangible way to diversify faculty at research institutions when these burdens disproportionately affect certain groups of people. It becomes much more attractive to find jobs in non-academic sectors when the pressures and commitments of work are equivalent, but the salary is at least 3x higher and more amenable to those who want to strengthen their personal finances after completing a PhD.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Higher salaries, unionization, longer parental leave standards.

Response 70

Perspectives on the postdoc roles and responsibilities

As someone who recruits postdoctoral fellows to my laboratory, I perceive this as a training position. This is someone who is entering my lab, with a high level of skill from their PhD training, who is now going to learn how to direct and develop their own independent training program. I believe that postdoctoral fellows should be the primary intellectual drivers of their Science, while being overseen by a scientific mentor. They should initially contribute to the scientific and funded goals of the laboratory (first 2 years of training) but then ultimately transition to developing their own projects and ideas that they can then take with them when they leave the laboratory (last 2-3 years of training).

Fundamental issues and challenges

The funding of postdoctoral salaries via award mechanisms at NIH (eg. F32) are not keeping up with the real cost of living for postdoctoral fellows, especially those with families to support. Although this is a training position, these are adults, often in their late 20s and early 30s, who have already been in training for a long period of time. My own institution recently raised the minimum salary of new postdoctoral fellows to $80,000/year (first year postdoc) to address this problem and I am seeing it having a positive effect on my ability to recruit and retain postdoctoral fellows.

Existing NIH policies, programs, or resources

Increase the salary of postdoctoral fellows via the F32 mechanism to $80,000+/year. This would be a level much more commiserate with their education level and stage of life.

Proven or promising external resources or approaches

No response

Response 71

Perspectives on the postdoc roles and responsibilities

I viewed it as an opportunity to expand my skill set to something more desired in an industry setting after having realized my Ph.D. was limited in scope beyond an academic lab.

Fundamental issues and challenges

Money. If you think it is anything else then you are purposefully ignoring the main issue. Why stay as a postdoc any longer than a few years when I can increase my salary by 50-100% in other settings. The math for staying doesn’t work out.

Existing NIH policies, programs, or resources

Money. Salaries. See above.

Proven or promising external resources or approaches

Better pay. And scale the pay to cost of living in a given area of the country. Mandate time off to match federal holidays and vacation time.

Response 72

Perspectives on the postdoc roles and responsibilities

Postdoc: a transition stage to independence when still is needed training to warrantee high-quality performance in the specific field.

Fundamental issues and challenges

Unfortunately postdocs are seen by many institutions/PIs as only technicians (cheap high-quality work), and are not really defining a training plan or guiding the postdoc for independence.

Postdoc is a vulnerable momentum, as there is no a faculty position and the individual is not anymore student. This often leads to a lack of identity feeling.

Existing NIH policies, programs, or resources

Eligibility for KR00. currently their is a cap of 5 years. If the postdoc was unfortunate to do not be well trained on the culture of writing a grant (common problem), then when realizes that there is a time sensitive grant application, that could be too late. At this stage the postdoc can bi highly skilled, however the options are gone to move to independence.

I suggest to open these specific cases to discussion.

Proven or promising external resources or approaches

NIH could offer certification to institutions based on their programs to support career development for postdocs.

Some institutions do not have a strategic plan to support postdocs for transition, and this becomes an issue when applying to NIH transition grants that request evidence of institutional support.

Response 73

Perspectives on the postdoc roles and responsibilities

I think a postdoc is a critical step for me to learn new skills and advanced my training and prepare myself to be a PI in the future. As a postdoc, not only I will conduct experiments and write manuscripts, but I also routinely help to train new students and help PI with proposals and grant writings. Meanwhile, I have to prepare myself for independence later.

Fundamental issues and challenges

I think two things are bothering me a lot. First of all, postdoc outside NIH institutes has low pay. Secondly, the funding opportunity for non-citizen and non-permanent resident scholars is so limited. I guess only K99 is available, which is very competitive. Nowadays, without a K or other funding, it's very hard to find a faculty position even with some good publications. Or even if I found a place, with only startup funding from the university, it is very stressful and challenging to do sustained research and secure the tenure promotion later.

Existing NIH policies, programs, or resources

I think it's hard. May be good for retaining domestic scholars but it's definitely not attractive for international ones.

Proven or promising external resources or approaches

I think NIH should increase the pay bar for extramural postdocs and open more grant application opportunities to international scholars.

Response 74

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as an opportunity to expand research skill sets, help graduate students, gain further training & experience with lectures, gain more experience with grant writing, and as a way to become more prepared for a permanent position.

Fundamental issues and challenges

Postdocs don't get paid enough, some appointments are too short, relocation expenses are rare, PIs are abusive & overwork their postdocs, postdocs are often expected to do the work of a PI for them without receiving any training along the way

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 75

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Challenges to:

Recruitment:

- PAY is way too low compared to other career paths

Retention:

- PAY IS LOW
- Lack of fundable projects in lab that can establish independence
- Lack of funding sources
- Unclear direction from supervisor
- Work atmosphere feels like a continuation of graduate school instead of a step towards independence

Overall quality of life:

- PAY IS LOW

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 76

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is a bridging step in attaining research independence and taking alone a project with scientific acumen, grant writing skills and publications between graduation and independent faculty post.

Fundamental issues and challenges

Lack of proper mentoring, cohesive environment and lack of appreciation and motivation both financially and psychologically.

Existing NIH policies, programs, or resources

Better management skill development and writing motivation for postdoc to establish through potent publications in respective domains.

Proven or promising external resources or approaches

Job satisfaction and mentoring are the two biggest factors according to my opinion.

Response 77

Perspectives on the postdoc roles and responsibilities

It is meant as an advanced training beyond a PhD in skills needing further development after the doctorate.

Fundamental issues and challenges

The post-doc is being considered as experience before faculty positions. That is not the intended purpose behind it. In many cases, the position is used to "wait" till the right position becomes available—also not the intended purpose.

Existing NIH policies, programs, or resources

Limit post-doc support and increase graduate student support. Higher stipends. Require detailed post-doc mentoring and training plans.

Proven or promising external resources or approaches

Pathways to non-academic jobs should be acceptable as an outcome.

Response 78

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase postdoc salary

Response 79

Perspectives on the postdoc roles and responsibilities

An academic postdoc sets up a researcher for a job in either academia or industry. It's an incredibly important position, and has been absolutely instrumental in my evolution from a PhD that thought I knew everything, into a 3rd year postdoc that also runs a startup, and has national funding through the NSF (the NIH keeps rejecting me, what gives?). It's extremely disappointing that so many are deciding to skip this step in favor of more money.

Fundamental issues and challenges

Apparently, money. I had no idea people thought they'd be rich after getting a PhD, so perhaps the issue is we're bringing people in that are getting a doctorate for the wrong reason. Quality of life for postdocs is fine, we make more than double what a grad student does. Anyone complaining about quality of life needs to get a grip, this is the best job you could ask for.

In my opinion, those that bail out because of quality of life, or money, or because it's hard, just aren't up to snuff. Don't get soft on us now, the system, as currently designed, separates the wheat from the chaff—isn't that the point?

Existing NIH policies, programs, or resources

The only thing that the NIH could probably do better is eliminate the across-the-board base pay for postdocs. Pay needs to be adjusted to the region—$45,000 in Podunk, MS is in no way shape or form equivalent to that same amount of money in, say, Los Angeles, CA (or Chicago, or NYC, or even DC).

However—I don't think we need more money. The job pays fine, an—this is the crucial part—if you do well and write grants like you're supposed to, you supplement your income handsomely. It's not a difficult concept. Otherwise, a postdoc is a crucial step in becoming a real scientist that's hired for their brain, not some set of hands on an assembly line at Lonza.

Proven or promising external resources or approaches

No. Iron sharpens Iron, the program works. If you adjust the postdoc program to cater to the vocal minority that constantly complains, you will assuredly be lowering the bar of what it means to be a true, effective scientist. The NIH is the gold standard for high quality science—don't change now—the US is the destination for up and coming scientists for a reason—we have the best programs. The fact that we educate the academics of the world should be a constant reminder that quality of our scientific systems will always be more important than quantity of people involved.

The world, today, has more scientists than have ever lived. This is inherently the problem—there are too many people who want to be Bill Nye getting into science, who clearly don't have what it takes. Please don't change this program—while it has been as difficult as anything I've ever done, I wouldn't have wanted my experience to be any different, as it led me to where I am. If you maintain the program as it is, this will continue to be the case, and we will continue to lead the world in scientific discovery.

Response 80

Perspectives on the postdoc roles and responsibilities

A postdoctoral position to me means a chance to continue education and technical training under a timed contract and is necessary if you wish to pursue a career in academia.

Fundamental issues and challenges

Postdoctoral trainees are severely underpaid and undervalued. Its hard to justify moving your life to another state where you may only be there for 1-2 years and are underpaid and treated poorly by administration.

Existing NIH policies, programs, or resources

Overall there just needs to be more funding and support for postdocs.

Proven or promising external resources or approaches

Postdocs need to be better financially compensated.

Response 81

Perspectives on the postdoc roles and responsibilities

Post-docs should be generally self-sufficient and provide about 25% of their time to mentorship of other trainees, 10% of their time towards lab management tasks, and the remainder of time to research and proposal writing. I view academic postdocs as a bridge between performing supervised research and preparing for a faculty role, which includes project and employee management, grant writing, and budgeting skills.

Fundamental issues and challenges

Both recruitment and retention suffer due to postdoc salaries and benefits. Most post-docs are between the ages of 28-35, when they are trying to make crucial financial investments in their future, such as purchasing real estate and contributing to retirement funds. This is also the prime age to start families. However, post-doc salaries and benefits rarely provide the financial stability and security to pursue these time-sensitive milestones. Importantly, there is no guarantee that after 1-2 post-doc positions, researchers will obtain a faculty or tenure track position. Therefore, the financial risks of a post-doc rarely outweigh the potential benefits.

Existing NIH policies, programs, or resources

By the time graduate students graduate with a PhD, they have been living a low quality of life for 5-7 years, are experiencing burnout, and likely have unattended health issues. Improving retention and

recruitment in post-doctorate positions begins with improving the national standard of stipends and health benefits for PhD graduate research assistants. NSRA stipends for pre-doctoral trainees should be further raised to 35,000 and should include an option for health insurance subsidies through the ACA. Additionally, a national standard for post-doctoral NSRA retirement benefits should be established.

Proven or promising external resources or approaches

No response

Response 82

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Lack of funding

Age-limiting funding opportunities for researchers that have not followed a straight academic pathway

Existing NIH policies, programs, or resources

K99/R00

Proven or promising external resources or approaches

No response

Response 83

Perspectives on the postdoc roles and responsibilities

My postdoc was a fantastic experience. It was a very valuable training period for me which helped me develop my grant writing skills and land a R1 tenure-track faculty position.

Fundamental issues and challenges

I don’t think the pay in general is the problem, but it should be adjusted for cost of living. For instance, postdoc salary in Boston, MA would need to be double the postdoc salary in Birmingham, AL to achieve the same standard of living.

Largest issue is that faculty don’t have enough resources to cover personnel (including postdocs) and research costs with the existing NIH grant budget limitations and lack of support from institutions.

Existing NIH policies, programs, or resources

All R-level awards need to increase the budget so that faculty can afford to pay postdocs.

Higher fringe benefits should be allowed so that postdocs can be enrolled in their institution’s retirement match/contribution program.

Institutions should be required to pay faculty salaries so faculty can use grant $ better

Proven or promising external resources or approaches

No response

Response 84

Perspectives on the postdoc roles and responsibilities

I see the postdoc as an opportunity to help launch an independent academic career. However, too often, postdocs are relegated to grunt work for the PI. There is no room for creativity or developing one’s own program of research. For example, even T32s are highly specific (e.g. “training the next generation of suicide researchers in machine learning methods”). If your research doesn’t fit into a particular funding opportunity, you are forced to shoehorn your interests.

Fundamental issues and challenges

A big issue for me was relocation and expenses therein. I had to turn down postdocs that were a better research fit because I could not uproot my entire family again for a 2 yr position. Another issue of course is salary. The cap for NIH salary is far far far too low and should be adjustable instead of automatically starting at year 1. I was fortunate in that I have a working spouse who was willing to support me through the postdoc, otherwise, I wouldnt have been able to afford it and would have gone straight into a job. Along with postdoc training, more opportunities to stay at the institution and apply for grants across all mechanisms would be helpful. Some universitys restricted the grants postdocs could apply for.

Existing NIH policies, programs, or resources

NIH stipends must increase especially for year 1 to be viable and competitive with other industries. In addition, there should be variable salaries based on cost of living in thee area. Moreover, granting the postdoc more freedom to carve out their own path instead of a narrow and highly specified T32 would be a great improvement. It seems like T32s are awarded just like any other grant--”show how niche and specific your program is”. That is a huge downside in my opinion as funding opps are limited and it has pushed my career in a direction I’m not sure I want to go and that I’m not sure whether there will be jobs in. But it’s what pays the bills and so I have to persist.

Proven or promising external resources or approaches

Pay us more. Period.

Response 85

Perspectives on the postdoc roles and responsibilities

Postdocs are an important part of the academic research enterprise. They do important research, gain new skills to prepare them for their next career while balancing formal and informal mentorship of junior trainees ranging from undergraduates to graduate students.

Fundamental issues and challenges

Postdocs deal with a number of stressors which are plainly obvious to graduate students and prevent some graduate students from wanting to pursue a postdoctoral fellowship. Postdocs are on one year contracts typically, so the lack of job security can be a source of stress. While the pay is certainly better than it used to be, the salary for postdocs in most institutions is still not exciting, especially in the face of cost of living expenses in many locations. The other main source of stress is that the average length of postdoctoral fellowships seems to be significantly longer than they once were. After a PhD which takes about 6 years, it can be seen as a tough ask to become a postdoc for another 6 years before finding a job.

Existing NIH policies, programs, or resources

NIH mandated minimum postdoc salaries could be improved and enforced for all postdocs regardless of whether they are on fellowship. The NRSA program also should be adjusted so that it doesn’t cause postdocs to change employment status as happens at many institutions. For example, at Northwestern, a postdoc I worked with lost access to some benefits such as tuition benefits when she was awarded an F32. It seems awful to penalize someone for winning a competitive fellowship. I’ve even heard of some postdocs declining their NRSA awards to retain their standard employment benefits.

Proven or promising external resources or approaches

St. Jude’s and at least one other institution (Van Andel Institute, if memory serves) have announced that they will start paying postdocs at levels above the NIH minimum mandate. They may have other initiatives for postdoc recruitment and retention. It could be worth looking at these strategies and seeing how they can be adopted nationwide.

Response 86

Perspectives on the postdoc roles and responsibilities

I have been a faculty member for over 27 years, and built a thriving research program (with 25 consecutive years of NIH funding) primarily on post-docs. Over this time, there has been a shift in the goals of post-docs from desiring to be in my shoes at the end of the training period to now desiring

something else (industry, science writing, teaching, anything other than primary research). This is alarming in and of itself. On top of that, over the last five years the market for recruiting post-docs has dried up. I see this in the precipitous drop in applications to my own lab, as well as co-director of an NIH training grant when we advise students near the end of their PhD; it used to be that over half were headed for an academic post-doc, but now it's less than 10%. I fear for the future of academic science if these trends continue.

Fundamental issues and challenges

1. Pay—Post-docs are not paid enough. And the modular NIH R01 budget hasn't changed in over 20 years, meaning that it is impossible to pay people what they are worth from an R01. This leads to students and early post-docs choosing to leave to get decent pay. For example, I had a post-doc leave after a year because she would get twice the salary at a job as a science writer (even though she would have been competitive for a faculty position had she stayed).
2. Being a post-doc is hard. You have to work your butt off and give up many of the pleasures of life. An end is not in sight, because this continues through the period as a junior faculty member.
3. Job prospects at the moment for a faculty position are poor. Competition is tough and the number of job openings is low.
4. In some places, post-docs are abused. Post-doc training compacts and mentorship compacts are not universal, and offices of post-doctoral training are not universal.

Existing NIH policies, programs, or resources

1. Increase pay for post-docs.
2. Increase the typical R01. Caveat to these two: fewer R01s.
3. Programs to convince hiring institutions to consider hiring faculty who don't have papers in the CNS journals—push for smaller papers in society journals.
4. Put an age limit on an R01—a colleague of mine is submitting an R01 at 86. This should not be allowed.
5. Enforce adherence to training and mentorship compacts to provide more even training experiences, and punish faculty who abuse trainees.
6. Provide support for offices of post-doctoral training to support existing post-docs.

Proven or promising external resources or approaches

Mentoring compacts—there are many at institutions across the country. We are developing resources at the [redacted for anonymity] for mentor training and mentorship compacts, and some of the training is based on those at other institutions.

Publishing practices—partner with DORA.

Response 87

Perspectives on the postdoc roles and responsibilities

To me, the postdoctoral position is an opportunity to build focused career skills, with the intent of pursuing academic research. It is a liminal state which can provide extra protected time to focus on career development without yet having all of the responsibilities and roles of a PI—but it should also be in preparation to build the skills (and relationship building) necessary for success as a PI. For postdocs who are unsure or change their mind about pursuing an academic career, training opportunities should also be presented for postdocs to transition to non-academic roles.

Fundamental issues and challenges

I think most people pursue postdoc positions and research careers because they love what they do, rather than for economic gain, but PLEASE increase the NIH salary for postdocs. The salary guidelines have not kept up with inflation and cost of living, ESPECIALLY in large/expensive cities. It's frustrating to be highly skilled / trained and be living in bad housing or with tons of roommates and still have 70%+ of my income go towards rent with what's left over to go towards groceries, gas, etc. It makes a huge difference in

quality of life. Low pay plus long hours makes a postdoc position unappealing even if the passion for the work is there. It also affects recruitment and retention and biases towards people who have familial wealth—why would a talented young person choose a postdoc position that they may be in for 4+ years when they need to support their family (or start a family), have debt, etc? The wage gap is causing a brain drain in government/academic science and will impair US scientific innovation and progress if it is not addressed now.

While I think salary is the #1 problem facing postdocs, there are also really important issues to be addressed, including proper mentorship. If NIH is giving PIs money to support salaried postdocs, it seems only fair that postdocs should be able to provide feedback on their experience as a trainee/employee directly to the NIH. I think there needs to be more collection of feedback from current trainees and accountability for quality of life/lab culture/etc. issues.

Existing NIH policies, programs, or resources

Increase postdoc salaries.

Proven or promising external resources or approaches

A mechanism for NIH trainees / NIH-funded postdocs to provide feedback to the NIH on the quality of the mentorship, training, etc that they are receiving under their PI.

Response 88

Perspectives on the postdoc roles and responsibilities

Early career researcher, rapidly growing into an independent researcher, mentor, professor

Fundamental issues and challenges

$$$

Post-covid rents have reached stratospheric levels. Here in [redacted for anonymity], a 2 bedroom appartement is $3,200+. Daycare at [redacted for anonymity] $2,200 per kid.

It is now officially impossible to sustain a family as an academic postdoc.

Of note, ability to sustain a family is a requirement for J1 visa, and partners under J2 visa do not necessarily have authorization to work. Even worse for H1-B, for which dependent cannot even apply for work authorization.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 89

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs are not paid a fair and living wage.

Existing NIH policies, programs, or resources

NIH policies, programs, and resources prevent postdocs from earning a living wage.

Proven or promising external resources or approaches

No response

Response 90

Perspectives on the postdoc roles and responsibilities

We are primarily employees, not trainees. There is literally no industry in the world that would ever label someone with a PhD as trainees. However, we get labeled as trainees because it conveniently allows the system to keep exploiting us as cheap labor and justifying paying us 1/3 of what we could get paid in industry.

Fundamental issues and challenges

We don't get paid enough. We are trained PhDs with an enormous skillset, not trainees to be exploited as cheap labor. Pay us entry level industry salaries (100K+).

We get penalized for getting fellowships by our universities.

The outlook for getting faculty positions is grim.

There are little to no mechanisms in place to get a faculty job at the same institution you are already at--forcing people to constantly have to move around from place to place. This is extremely unfriendly to anyone who has a family or partner.

Not enough guaranteed maternity/paternity leave.

Not enough benefits for parents (childcare, grant extensions)

We can't even pay ourselves more when we get extra grants. I got an F32 and a NARSAD BBRF award, and the university would not let me pay myself more. If PIs get to pay themselves more when they get grants, why can't postdocs???

Existing NIH policies, programs, or resources

Paying us more, giving us more parental leave, giving us resources for childcare on their own would be a HUGE help. The next thing is to have more faculty jobs open for us, otherwise this entire career path is a futile effort for the majority who will not get faculty jobs. I realize the number of jobs is outside NIH control, but it's something for everyone to be thinking about.

There are also many of us who would be happy to stay long term as staff scientists in academia. However, there are very few such positions in large part because PIs do not have the funding to pay staff scientists a salary that they could typically find in industry. Maybe the NIH could think about funding mechanisms specifically designed to fund permanent staff scientist positions.

Proven or promising external resources or approaches

No response

Response 91

Perspectives on the postdoc roles and responsibilities

Academic postdocs are one step away from becoming junior faculty and should be treated and paid as such. Their responsibilities are to continue training, develop their own independent programs, and start applying for funding. The institutions MUST treat them at a higher academic level than grad students and perhaps on the same level as faculty, but certainly not volunteers who have to constantly fight for adequate benefits.

Fundamental issues and challenges

Postdocs aren't paid enough, and I say this as someone who employs them and as the PI of a T32 training grant. Institutions (maybe just ours, but I doubt it) do not respect their advanced degrees and treat them as nuisance employees. Non-TGE postdocs have few opportunities for extramural funding which hurts their trajectory. There are few programs to train postdocs how to become faculty.not just career development seminars.training on how to run a lab, how to hire personnel, how to budget, etc. That needs to start before they become faculty.

Existing NIH policies, programs, or resources

Non-TGE postdocs need access to extramural funding. It is not fair that these individuals are biased out of extramural funding which could enhance their careers. There are more non-TGE postdocs than TGE postdocs available, which leads to these budgets being cut (which might be good for NIH but is bad for institutions and their postdocs). NIH should demand that any institution with a T32 have an office of postdoctoral affairs dedicated to the welfare of postdocs and that it be active and inclusive. NIH should also demand that institutions treat their postdoctoral positions like faculty positions (better benefits, access to retirement plans, etc.). This may vary from state to state but it really shouldn't.

Proven or promising external resources or approaches

Look at the T32 grants that scored highest in the last few rounds of review. Those probably have excellent approaches that the NIH can draw from.

Response 92

Perspectives on the postdoc roles and responsibilities

Postdoc positions are temporary training positions that are akin to apprenticeships. They allow PhDs to further develop their research expertise and gain/refine skills related to scientific communication (through talks, preprints and papers), teaching, mentoring, time management, and funding discovery. Many faculty positions in the biological sciences require postdoc experience, but in other fields it is not common (i.e. computer science and bioinformatics). Postdoc positions can stretch longer than a 5 year period due to many reasons, or folks may find themselves needing to do more than one postdoc. These experiences are burdensome and can reduce the scientists chances for success in academia because it often means they age out of award eligibility, have lapses in research continuity, and may have to incur additional living expenses as they are in temporary jobs. Ten (or 20) years ago a PD was a 2-3 year role that was needed before landing a tenure-track job. While they are still required for faculty jobs nowadays they seem to be longer and more uncertain.

Fundamental issues and challenges

A postdoc job is not family friendly and lacks key benefits (like retirement) for a significant time frame of ones career. A PD's success can hinge on their mentor. It is difficulty to recruit postdocs to more rural areas (like central Iowa) over more urban areas (like Berkeley or Boston) even when the salary is equivalent (NIH scale) and the cost of living is lower. I think many PD suffer from a lack of opportunities—there are few jobs and the market is competitive. Many PD are highly skilled and trained and would be perfect fits for secure staff scientist type jobs (with benefits!) but these are nearly impossible to fund with sufficient job security to recruit anyone.

Existing NIH policies, programs, or resources

Define "early career" (like for a ESI MIRA) as time from when they secured their independent position, not from time of their earned terminal degree. Add more seed grants or small funding opportunities to support postdocs independent of their PI—but not a K99/R00 which is select for those only destined for academic careers. Establish NIH wide guidelines for policies related to benefits and paid time off (for life events such as birth/adoption, family death or care of an elderly parent). Offer cross-training or internship type opportunities to allow PD to develop skills beyond the academic bench. Provide a mentoring workshop/training series that aligns with NIH mission and goals. Offer annual travel awards for PD to attend conferences.

Proven or promising external resources or approaches

The HHMI "Entering Mentoring" resource is an excellent training guide, but this could be updated and modernized. Implementation of published policies to improve gender equity and support scientists of color during grant review process and post-award support would be beneficial.

Response 93

Perspectives on the postdoc roles and responsibilities

A short-term training period after the PhD to gain new research skills and prepare for a professional position

Fundamental issues and challenges

1. Postdocs are financially exploitative, and they only work for people who can afford to be exploited and not consider their long-term financial security. I have the credentials to earn 6 figures, but I am doing a poorly paid job that is securing my mentor's future, not my own. Fellowships are even more exploitative, because you lose annual pay increases, pretax health insurance, and retirement benefits.
2. My graduate training environment was harassing (ex. being called a bitch by a lab member), and the stress of that (6 years) was horrible for my health. After grad school, I was diagnosed with clinical depression. These experiences make it really hard for me to function in an academic environment, and doing a postdoc often feels like a punishment and a pointless extension of grad school.
3. I discovered during the pandemic that I like working from home, which has diminished my enthusiasm for bench work. As soon as I find something else, I will almost certainly quit.

Existing NIH policies, programs, or resources

Postdocs need guaranteed retirement benefits, pretax health insurance, and annual increases regardless of funding source. Fellowships should pay better, and universities should not be allowed to pay a 6th year postdoc the 0-year minimum!

Basic sciences programs are rife with abusive behavior, and administrators largely ignore it. This should be considered research misconduct, and universities should face penalties for failing to resolve it. Their funding should be tied to their ability to provide a training environment free from bias and harassment. Otherwise, they will never fix this.

I really think postdocs should be rare. Most people do postdocs because they think they might want an academic job or because they need skills that they didn't gain in grad school. Grad school should provide a greater diversity of skills so that people don't feel the need to get another PhD's worth of training after spending 5 or 6 years as grad students. The work done by postdocs should be performed by fewer, better paid, long-term staff scientists. This would be far more efficient.

Proven or promising external resources or approaches

No response

Response 94

Perspectives on the postdoc roles and responsibilities

I did an academic postdoc at a university in the bay area before switching to industry. It was a valuable period to switch fields from in vivo to in vitro research and the skillset I built up during my postdoc helped me switch careers. I view the postdoc position as an opportunity to expand skillsets and learn techniques whilst at the same time contributing to research outputs

Fundamental issues and challenges

Low salary in the bay area. With university subsidized housing, I spent 60% of my stipend on rent. The market rate for rent was more than 100% of my stipend. J1 visa status makes it complicated to find employment after the postdoc. Another challenge was facing a toxic environment on a J1 visa. There are no consequences for bullying/ creating toxic work environments at the well known US universities and lack of funding promotes a hypercompetitive environment where only people willing to do whatever it takes makes it. My US postdoc experience ended my career in academia but I am thriving in industry outside of the US. My PI used my visa status to control me and other immigrants in the lab and used deportation as a threat. I reported this to the university and she received a verbal warning with no record the complaint kept and no mechanism to warn future postdocs coming to the lab.

Existing NIH policies, programs, or resources

The NIH payscale forms the basis for stipends at most universities. That needs to be increased to keep up with cost of living increases.

Stricter deterrents for academic bullying coming with the grant.

Mandated record keeping of PIs with bullying complaints against them.

Proven or promising external resources or approaches

Prestigious science at a brand name university was the reason I came to the US and that would still be a valid reason to come

Support for H1B/ O1 visa instead of J1

Response 95

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary and availability of tenure-track job opportunities.

Existing NIH policies, programs, or resources

Increase minimum salary. Increase overall dollar amount for grants.

Proven or promising external resources or approaches

More money.

Response 96

Perspectives on the postdoc roles and responsibilities

Post doctoral position is meant for gaining additional research experience and preparing oneself for the academic setting

Fundamental issues and challenges

The lack of good pay. It's very difficult to survive in big US cities with such less payscale. It's sad that even after getting the highest possible degree of PhD, postdocs still suffer so much

Existing NIH policies, programs, or resources

Increase the pay—make it respectable for a PhD holder.

Have defined vacation days—be treated as a full time employee

Have defined maternity leave

Proven or promising external resources or approaches

Job satisfaction

Response 97

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a place of uncertainty. From interaction with current Post docs, it is where your career in academia is discouraged. Because most times the end goal of engaging in a post doc position is for most people not gotten. Students need to do more grueling years in order to get to the goal of becoming independent. Some have called it a glorified graduate school, some have called it cheap labor for the professors. Either way that doesn't sound appealing to any graduate student interested in academia.

Fundamental issues and challenges

The pay and a way to transition to independence is the most critical issue in my opinion. There's a problem or low payment. Most prospective post doctoral scholars are in their late 20's and 30's. Some have families that they need to take care of so the low pay combined with the financial burden from dependents makes it impossible. M most post docs I know have to get a side job in order to make ends meet.

Apart from the pay, there's no defined pathway to independence, because of this most scholars end up in the post docs cycle. Doing 5-15 years of multiple positions without the independence that they seek.

Existing NIH policies, programs, or resources

The grant system has to be modified to accommodate post doc independence transition. This could be in form of more start up grants or pathways to independence. Akin to what is obtained in the MD track. Where you do your residency and in some cases subspecialties and then being to practice. There could also be a pathway for research, teaching, enterprises/entrepreneurship independence.

Proven or promising external resources or approaches

No response

Response 98

Perspectives on the postdoc roles and responsibilities

A necessary training step needed to progress from more closely mentored graduate training, on the way to an independent research career. It is less needed for individuals more interested in industry research, where postdoctoral training is needed. In many instances postdoc fellows are necessary for academic research labs to function, obtain data for grants and publications.

Fundamental issues and challenges

The largest current issue is salary. In many locations, the NIH minimum is no where near the amount necessary to live. Additionally, many citizen's and permanent residents leave academic training because of the low pay lines. It is additionally burdensome on faculty, as even if institutions raise pay levels, their grants cannot cover higher salaries in addition to rising costs of materials. I believe many individuals will leave postdoc training because of the inherent sacrifices necessary to live on a postdoc salary. Coming from a low income family, who I cannot rely on for financial support, this has been particularly true. Without better pay and more equity between institutions, many individuals from low income or other under-represented groups may not continue within academic research

Existing NIH policies, programs, or resources

Increase NIH minimum pay lines to be in step with what is necessary for cost of living in many large US cities.

Increase grant funding to cover additional salary costs.

More funding opportunities for postdocs would also be helpful.

Proven or promising external resources or approaches

Establishing more training grants for postdoctoral fellows could help institutions have better working environments, clear mentoring expectations, and potentially help increase postdoc pay.

Response 99

Perspectives on the postdoc roles and responsibilities

Postdoc play an essential role for completing research projects on limited time.

Fundamental issues and challenges

It becomes extremely challenging for recruiting and retain high-qualify postdoc these days. I heard the same issues over and over again from faculty across multiple institution.

Among many factors, here are tow of them may have important impact:

1. Fewer postdoc candidates, particularly from china. China has been one of countries that delivers a good portion of well-trained postdoc candidate before, but many stop going aboard starting from last a few years.
2. increased competition for funding and less faculty positions. increased pay in industry.

Existing NIH policies, programs, or resources

1. provide more training grants in number and amount, more NIH funded resources.
2. Increase the amount of modular R01. the $250/y standard of the modular R01 has not been changed since 1998. If considering the inflation, it should be 400$/y now. Nowadays, one R01 is barely cover the personnel required for high quality projects, plus it lasts shorter. As a result, too many investigators are in full time for "writing grant proposals" rather than "doing science". This has been a fundamental issue for 20+ years.

Proven or promising external resources or approaches

No response

Response 100

Perspectives on the postdoc roles and responsibilities

My main roles as an academic post-doc include designing and executing experiments independently, training graduate and undergraduates in the lab, and writing research fellowships and also publications. My roles are similar to an academic PI with the main difference being a large portion of my time still goes into performing my own laboratory experiments. I feel there is nothing wrong with my roles and responsibilities. Although I work long hours and most weekends, I am not too bothered since I do enjoy my work and being a part of academic research.

Fundamental issues and challenges

The main reason for challenges with post-doc recruitment and retention is the pay scale. It is incredibly low. At this point in our lives we have spent likely 10+ years in upper-education training and have all achieved the title of "Doctor." However, our pay is still

Existing NIH policies, programs, or resources

Increase the post-doc starting salary to at least >60,000

Implement regional pay scale based on cost of living (ex. cost of living in California or Massachusetts is not the same as Minnesota, therefore, it would help account for this in the minimum post-doc salary)

Proven or promising external resources or approaches

No response

Response 101

Perspectives on the postdoc roles and responsibilities

I am a university staff member, not an academic, but I often describe postdocs to the outside world as "apprenticeships" under university faculty. So, in my mind there is an implication that the apprentice will eventually get a tenure-track R1 research job. Seventy-percent of my postdocs want TT R1 faculty jobs. Less than 10% will achieve that, which equates to failure for many of the rest. That is a problem. I also have concerns about doing an apprenticeship after already doing 5 years in PhD study, although I do see the difference in PhD study as becoming an expert in a discipline, and a postdoc as becoming an expert at the role of being a university faculty member. Both are trainee positions, and thus the lower salary is part of the deal, with the payoff being tenure and eternal job security. For the majority of postdocs who want TT R1 faculty positions but will not get them, it's a bit of a bait-and-switch to hire them as postdocs. I do think they are being exploited to some degree, in particular the international postdocs, which make up over half the postdoc population at most universities. My university has a low number of postdocs compared to the amount of research expenditures, and I don't think that is a bad thing. Unless that means the PhD students are doing the bulk of the work, which is probably the case, and probably not any better.

Fundamental issues and challenges

We haven't really seen to much of a problem filling postdoc positions, but we are a large university in a warm climate. Our numbers have remained steady. Overall quality of life is not great. Cost of living/rent has increased dramatically, while wages have not. Retention seems to be ok, as postdocs will typically stay

if their contract is renewed, but that is likely due to a lack of options. It is quite disheartening to speak with a 3rd or 4th year postdoc, in their early 30's, who are facing the realization that their are few jobs available that they want, and are having to re-evaluate their goals and kind of start from ground-zero. They lament with comments like, "I guess I'll have to go into industry." Humanities scholars seem to have even fewer options.

Existing NIH policies, programs, or resources

I do not have a lot of familiarity with existing policies. However, I would not be opposed to limits on the number of postdocs and students that could be funded on projects, and requirements to hire key personnel under Research Scientist or Research Faculty titles with salaries competitive with industry. I also think indirect costs/overhead at many of these universities have become egregious. There is a lot of waste in administration.

Proven or promising external resources or approaches

I have tried to build programs with industry, but it has been difficult to make those connections. Industry does not seem to have a lot of interest in building pipelines with postdoc offices. I suspect most of those partnerships are with schools and colleges directly. Mentoring programs with industry professionals have also been difficult to launch. Like many postdoc programs, my office lies within the Graduate College at my university, and I have suggested that we need to start a conversation with graduate faculty about being realistic with their students about the job opportunities available within academia, and my leadership has zero interest in this.

Response 102

Perspectives on the postdoc roles and responsibilities

They are trainees who are interested in further his/her knowledge and learn to a more critical thinker. During this training they learn to be able to come up with hypothesis and projects to answers their question. They should learn how to troubleshot independently. In regards to their professional development, they continue to network and learn how to formulate grant application, participate or write their own fellowship grant or small grants.

Fundamental issues and challenges

Not enough graduate students, which is a pipeline issue. The pay is an issue and family support is another. [redacted for anonymity] has agreed to increase the pay, paid vacation and child support by a very large percentage. Such large increase without the increase grant support will hurt the hiring of postdocs. I foresee that the postdoc hiring will greatly decrease until the NEI budget has increased accordingly to match the cost of hiring of postdoc.

Existing NIH policies, programs, or resources

see above. the salary and budget should be increased to meet the current postdoc salary. In addition, there should be more F grants for postdocs and funding to forester the professional development.

Proven or promising external resources or approaches

you might want to track the career path of previous postdocs.

Response 103

Perspectives on the postdoc roles and responsibilities

I did a postdoc abroad, and for me it was a great experience where I learned a ton of new research skills as well as soft skills -—I was able to give talks at conferences, teach a few classes, mentor students in the lab, and organize conferences. However, it must be said that I was paid very well for my postdoc in Switzerland, an equivalent of $100,000/year plus matching retirement savings support.

I think an ideal postdoc gives the trainee sufficient autonomy to develop a robust research project while nurturing soft skills that are important in a research career, whether in academia or industry. It's important that any postdoc training program be transparent about the long-term prospects of a career in academia and adequately prepare postdocs for alternate career paths.

Fundamental issues and challenges

1. The lack of transparency about long-term prospects for a career in academia, given the lack of sufficient faculty positions opening up for postdocs to transition into, is terrible. Career planning and development should be intimately integrated into postdoctoral training programs.
2. The low earning potential for most US-based postdoc positions is a travesty. PhD-trained researchers should be paid a healthy salary that includes basic benefits like healthcare and retirement savings. It's no wonder that so many are choosing to work in industry, where they are paid much better for their expertise.

Existing NIH policies, programs, or resources

1. The salary cap for NIH-funded postdoc positions needs to be raised considerably.
2. There should be a minimum postdoc salary guideline, in order to force academic institutions to pay their postdocs adequately.
3. Postdoc salaries should rise annually with inflation, and should ideally be further adjusted to compensate for local costs of living.
4. Any NIH funded postdoc training programs should be required to include career development programs.

Proven or promising external resources or approaches

Look at the postdoctoral training salaries and policies in some European countries for inspiration, for example in Switzerland:

https://ethz.ch/en/the-eth-zurich/working-teaching-and-research/welcome-center/employment-contract-and-salary/salary.html

Response 104

Perspectives on the postdoc roles and responsibilities

I see it as a stepping stone to my career goal in becoming faculty, but I also see it as a job.

Fundamental issues and challenges

Extremely low wages for effort and education. Postdocs should be paid at higher wages (but not at the detriment of PI grants which do not currently support pay increases). NIH minimums should be adjusted for cost-of living. Additionally, many people lose benefits when on fellowships. NIH should work with institutions to fix this ongoing problem.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 105

Perspectives on the postdoc roles and responsibilities

As a graduate student, my perspective on the role of a postdoc is to lead their own project with input from the PI, as well as receive mentorship from the PI in how to pursue a career in academia, including mentorship on how to be a PI, lead a lab, grant applications, running a lab, etc. In addition, postdocs should be a leader in the lab and mentor graduate students as well as undergraduate students.

Fundamental issues and challenges

LOW PAY. OVERWORK. TOXIC WORK PLACE. I cannot stress enough the incredible impact low pay has on my decision to NOT pursue a postdoc. It is terrifying that post docs will start out with such low pay and few making anything more over the years. In addition there seems to be little upward mobility after becoming a post doc, especially if the only option is to become a PI. Many researchers would love to stay

in academia, but not be a PI, unfortunately the pay is so incredibly low, it is impossible. Post docs are overworked, it does not matter the amount of recognition received. Working over 40 hours a week is insane, when no other business requires that without extra pay. Additionally, there is no vetting process to becoming a PI. This results in the most underqualified "bosses" in any industry. PI's have no requirements to being good mentors, good leaders, or a good employer. This results in many opportunities for toxic and bad work environments. Lastly, the continuous pressure to "publish" and in "high impact journals" in order to be considered successful or to succeed needs to change. Many postdocs are incredibly smart and hardworking but you cannot change scientific fact. If experiments simply result in null findings, that should not be punished. So the pressure that you can only succeed if you publish positive results leads to increased toxicity and overworking of postdocs.

Existing NIH policies, programs, or resources

NECESSARY MENTORSHIP AND PI TRAINING. All PIs should have to undergo training to run a lab and become a PI if they receive NIH money. Postdocs should have a MINIMUM 15 days off + federal holidays. Post docs should get a raise, and there should be cost of living adjustments required.

Proven or promising external resources or approaches

No response

Response 106

Perspectives on the postdoc roles and responsibilities

A post doc should be about half and half split between applying the knowledge and skills you already have and training on new knowledge and skills. More than just a student, but less than an independent investigator.

Fundamental issues and challenges

In my own experience, the two big barriers to going into a post doc are money and immigration status. When I was an NIH NRSA post doc in 1989 the pay was miserable and I had to rely on my wife's better income and benefits. It seems like people are saying the same thing today.

Many of my graduate students are offered good post docs, but because of their immigration status they end up going into industry. This seems like a sad waste of talent and training, when they could be contributing to science in the larger public interest instead of proprietary, narrow corporate interest. We should open up the NRSAs to non-citizens who have received PhDs in the US.

Existing NIH policies, programs, or resources

Two suggestions: open up NRSA fellowships to anyone who graduated with a PhD from a US school, regardless of nationality, and extend the student visa terms for an additional four years to anyone with an NRSA or who is paid as a post doc on an NIH supported grant.

Proven or promising external resources or approaches

Perhaps the NIH could foster a sense of community among all post docs who are supported by NIH through one or another mechanism by hosting conferences where the post docs present their work. In a sense, create a scientific society made up only of NIH post docs. Bring them together, celebrate their work, let them get to know their peers.

Response 107

Perspectives on the postdoc roles and responsibilities

Step to a faculty position

Fundamental issues and challenges

There is no career path outside of few faculty positions in academia after postdoc. Your success heavily depends on one PI and his grant project. The strict, closed-minded traditionally defined job descriptions for faculty positions do not consider outside of the box candidates thus after maximum of five years in a lab as a post doc science world closes its doors on you. Industry doesn't always want you because you

aged and overqualified and your basic research skills are not well-defined, scaled, or cutting edge. So other than big labs and big PIs many other labs are no outlet streets after a postdoc there. Preparing a postdoc application may take days if not weeks applying to an industry job on LinkedIn easy apply with only a CV takes seconds. At industry most of the time after 5pm or during weekends/ holidays you are not expected to work and if you do you are compensated. A postdoc at [redacted for anonymity] had to pay parking lot money for after hour while not getting paid for extra hours as if they have so much money. Lots of postdocs are subjected to all sorts of discriminations and bad treatments especially from their PIs and international ones especially can't say anything or take any action because of Visa issues or their career's dependency on PIs rec letter and network. Science is cool but science world is like a jungle with limited money)and there are no real protection for postdocs. Postdocs are there because they love science but they are disposable, cheap labor and replaced with new ones easily. I saw biology postdocs who became realtors, business analysts, credentialing analysts, makeup sellers, etc. How sad to lose that experience and talent in science and how can those people find a way to go back.

Existing NIH policies, programs, or resources

Programs, policies, recourses are all on paper and not implemented in real life unfortunately and they don't cover every single postdoc.

Proven or promising external resources or approaches

Hiring faculty from industry can help. Setting up advisory boards with industry background for departments can help. Getting postdocs out of academia for internships etc can help.

Response 108

Perspectives on the postdoc roles and responsibilities

I had two years of postdoctoral training funded by a T32. It was a wonderful opportunity, particularly having protected time for research and the opportunity to interact with a cohort of other postdocs at a similar career stage as well as supportive mentors. I learned an enormous amount and was able to take some risks in my research that I might not have been able to otherwise.

Fundamental issues and challenges

We simply do not pay postdocs enough. The perception that postdocs are essentially overgrown children, rather than autonomous adults who often have families, is harmful. Postdoc pay should reflect the level of expertise they bring to the table: these are highly trained scientists who could certainly command higher salaries in industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 109

Perspectives on the postdoc roles and responsibilities

Further scientific training, skills, and expertise. This includes hands on skills, writing/ communication, mentoring and laboratory leadership, and implementation and design of experiments and publications.

Fundamental issues and challenges

Inadequate compensation

Depending on the institution—does not guarantee retirement, subsidized health benefits, employee status (this limits qualifications for certain programs like PSLF and LRP)

Wellness resources and changing "publish or perish" mentality

Not enough good quality mentors

Lack of diversity (gender, sex, race, etc)

Lack of support for trainees at the institution at large

Existing NIH policies, programs, or resources

T32 stipend make into an employee status and aid recipients on how to navigate how to pay taxes for it

LRP program is very attractive for trainees that have large debt

Guidance on grant writing, IC support

Proven or promising external resources or approaches

Require mentoring / leadership classes for both mentors and mentees (including older mentors not just the new upcoming scientists)

Increase diversity

Increase funding

Response 110

Perspectives on the postdoc roles and responsibilities

I have supervised over ~50 postdocs in my career ~25 of whom now have independent positions with professorial or European group leader ranks. Non-academic postdocs have gone to established companies large and small, and several have started their own companies. To me, having postdoctoral trainees is a core mission and central to the identifty of my lab. Postdocs in my group can take all aspects of their projects with them when they leave, providing them with a boost at an early career stage. However, this puts an enormous strain on my ability to fund my lab—particularly as Federal, corporate, and Foundation grants become more and more milestone driven. It is far more difficult today to balance training requirements with the production oriented standards of contemporary research—particularly in my field of cancer systems biology. It would be far better were postdocs to be self-funded to the greatest extent possible, with my grants providing experimental and computational resources. As it stands, I perceive little correlation between postdoctoral performance, subsequent success in faculty positions, and funding through the NIH/NSF or private foundations. Instead, the more conservative the project, the better the chances of success and I think this is the opposite of what we should encourage. Postdocs are not meant to be cheap labor on highly scripted faculty -led projects, they are meant to be independent thinkers with maximal autonomy and the ability to make breakthrough discoveries. Every recent trend in American science is trending the other way.

Fundamental issues and challenges

I preferentially recruit American postdocs to my group but find that they are strongly attracted to industry positions in large part because they find salaries too low and career options too limited in Academe. The cost of living has increased dramatically in cities such as Boston (where I am based), largely due to the large influx of pharma companies. Even committed postdocs cannot afford to live on the stipends that are offered—and these are commonly well above what is budgetted in an NIH R01 style grant. A dearth of postdoctoral funding mechanisms is very discouraging to US postdocs. Even among Americans who evnetually secure faculty positions out of my lab, fewer than half secure any fellowship despite multiple tries. In contrast, almost all of my European postdocs have their own fellowships and they are generally much more optimistic than their American counterparts. This situation could be mitigated by providing more and better paying postoctoral fellowships. More complex is addressing challenges with publication. The average time from sumission to acceptance of manuscripts from my group is well over a year, and this causes enormous stress when people are in the process of leaving the lab. It also leaves a lot of good science unfinished. Unfortunately I am not sure how to mitigate this—athough some journals are trying to reign in excessive and open-ended "reviewer 3" demands, which are the primary cause of publication delays.

Existing NIH policies, programs, or resources

First and foremost we should try to stop sending the message that there are too many people trained in science and that interested students should look elsewhere for a career. Unemployment among biomedical PhDs is very low and industry demand exceeds supply—at least in my area of biomedical research. The most important change NIH could make is to expand fellowship activities and make NRSAs less bureaucratic and dependent on preliminary data. We should encourage postdocs to get NRSAs at the start

of their post graduate careers, not three years in when they have a few papers under their belts. In my (admittedly somewhat limited experience of n=3), fellowships geared at underrepresented minority groups are even more discouraging. Review is glacially slow and involves a lot of complex procedural hoops. I discourage postdocs of color in my group from even applying.

Proven or promising external resources or approaches

As described above, we should do everything possible to encourage a spirit of independence in postdocs combined with mentoring opportunities. The current funding systems has turned them into low-paid workers in a milestone/RPPR-driven scientific environment in which incrementalism is the name of the game. We need to make it possible for people who do not come from wealthy families to afford their first apartment or move across the country. I personally beleive that this is the responsibility of academic institutions but have little or know hope that most medical schools or hospitals have any interest or plans to make the necessary investments in their trainees.

Response 111

Perspectives on the postdoc roles and responsibilities

The postdoc has the same responsibilities as the graduate student—to conduct an independent research project under the supervision and funding of a lab head. Both positions are temporary, typically 4-7 years. The only real difference between graduate students and postdocs is the level of experience doing research.

Fundamental issues and challenges

1. postdocs are underpaid. It is very difficult to support a family on a postdoc salary, especially in expensive cities where most postdocs live.
2. postdocs have no job security. It is expected that postdocs leave after 4-7 years for a different position. This is difficult because postdocs' spouses and kids often must find another job and school.
3. the biggest benefit of doing a postodoc is the slim possibility of getting hired by an academic institution to be a lab head. Doing a postdoc is not necessary for most industry jobs. Therefore, doing a postdoc is a huge gamble and often a waste of time.

Existing NIH policies, programs, or resources

1. pay postdocs more. Supply more grant money for postdoc salaries
2. alternatively, make postdoc funding more stable. If most postdocs are 4-7 years, make the grants that pay them 4-7 years. This would encourage postdocs to join smaller labs in more affordable locations without worrying that their lab will run out of funding.
3. create funding mechanisms for postdocs to stay in their postdoc lab as permanent employees. Allow these permanent employees to apply for grants that fund their research and fund them at acceptable success rates. The K99 is not good for postdocs. It encourages them to peruse projects already established in their postdoc labs. When they get a job, they are offered lower startup and they end up competing with their PI or trying to start something new with zero momentum. A better solution to help postdocs land faculty jobs would be to fund more new investigators and reduce the funding to huge labs.

Proven or promising external resources or approaches

I suppose the nih could invest in funding facilities/services for postdocs. For example, day care and parental leave. These benefits are common in other large companies.

Response 112

Perspectives on the postdoc roles and responsibilities

A postdoc is meant to carry an independent idea/project in the lab of a principal investigator.

Fundamental issues and challenges

With the average age of the defending graduate student getting older and older, the idea of being a early-mid 30's adult earning $56K with no retirement benefits if we get a fellowship is offensive. Postdoc lengths have also been increasing to 6-7 years. Coming from an already wealthy background or choosing to live in an extremely low COL area seems to be the only way to accept a post-doc. I think the challenges are quite obvious at this point. There are better positions with much higher pay now.

Existing NIH policies, programs, or resources

Funding for 1-2 year mini post-docs focusing on learning a particular scientific technique. Push for bigger R01 budgets that haven't changed in the past 2 decades.

Proven or promising external resources or approaches

Response 113

Perspectives on the postdoc roles and responsibilities

In my position, I have wide ranging responsibilities including:

1. Training grad students, and undergrads;
2. Study design and set up;
3. Data collection;
4. Data processing, curation, and analysis;
5. Hypothesis generation and analysis design;
6. Data analysis and communication;
7. Publishing
8. Funding acquisition. I'm encouraged to be a mini PI while still doing all the the same tasks as a grad student.

I do think that part of why folks have conflicting experiences is that no two postdoc positions are alike. In some, you may be treated as more of a trainee, others a staff scientist, and others as a secondary PI. Often, it's a combination of the 3, resulting in feeling like you are always behind and not paid enough for what you do for the lab.

In my view, there should be fewer postdoc positions. These positions should be limited to individuals seeking specific training and get paid as a graduate degree and 5 years of experience in the field (basically an advanced grad student, so more than a stipend but less than a data scientist). If someone is operating as an expert (e.g., designing studies or training students), however, and is not primarily receiving instruction, I think they should have a higher position that is appropriate for their role (e.g., staff scientist or data scientist if they are responsible for data curation and analysis, clinician if they are administering treatment, junior professor if they are training or teaching, etc). I think academic institutions and funding agencies should make more of these expert opportunities available and encourage them as the default path after PhD/MD/etc.

Fundamental issues and challenges

Lack of standardization in benefits **and responsibilities**, low pay, high risk. By high risk, I mean that postdocs are generally short-term opportunities with an expectation of moving to work with someone you don't know well. Since there isn't the added protection of a specific training program, postdocs are often exploited and have less power than a grad student to do anything about a toxic or abusive situation. That, combined with the fact that postdocs are more likely to be older and with familial responsibilities, a stable, higher paying, non-academic job becomes much more attractive.

Existing NIH policies, programs, or resources

1. More funding opportunities for non-postdoc positions (like data scientists, clinicians, junior faculty, etc.) and
2. Stricter requirements on what institutions must provide postdocs.

Proven or promising external resources or approaches

That's a tough one because I'm not sure of comparable positions in other industries. I think having a clear separation between trainee roles (which should come with trainee benefits such as tuition, structured mentorship, etc.) and professional roles (which should come with industry standard pay, responsibilities, and benefits) would go a long way. If there is literature on how to reduce workplace harassment and exploitation, incorporating those suggestions would be good, too.

Response 114

Perspectives on the postdoc roles and responsibilities

The role of an academic postdoc should be to carry out independent research and prepare for what comes next —postdocs are not permanent positions and so career development (from figuring out what the next career stage will be to holistic development and preparation for that phase) is critical. Postdocs should be allowed dedicated, protected time for career development. Additionally, mentors of postdocs should be evaluated for their ability to truly mentor and develop postdocs (and this should not be measured in the number of postdocs that move on to faculty positions). This also means that postdocs should have the financial support necessary during this phase of their career. Postdocs are highly trained, capable scientists who should be rewarded with salaries above the minimum living wage.

Fundamental issues and challenges

Postdoc salaries need to increase. NIH NRSA scales are a good place to start, but the NIH *must* start mandating that universities that get NIH funding (or labs that have individual grants such as R01s) pay ALL of their postdocs at least NRSA scale. Too many universities fail to set a postdoc salary floor that is in line with the actual cost of living or worth of postdocs. While I realize that the NRSA scale is meant to apply to those with NRSA fellowships, it is factual that many more postdocs are worthy and qualified of NRSA awards than the number of NRSA awards provided. Therefore, not holding universities to a rigorous salary scale only ensures that postdoc pay in general lags woefully behind.

The NIH must work with universities to ensure that postdoc benefits do not change when postdocs receive NIH funding. I was awarded a T32 spot after being a postdoc associate (non-fellow) for a year and it cost me hundreds of dollars because my postdoc associate health insurance and benefits plans ended, and I was forced to go onto graduate health insurance (without benefits such as HSA etc) as this was the only plan available for postdoc fellows (such as those on T32s/F32s). Countless postdocs across the US have similar horror stories, from losing medical providers and falling behind on medication availability because of forced insurance changes that universities say is the mandate of NIH (schools blame these insurance/benefits policies on NIH).

Postdocs need higher salaries and better benefits (including retirement). Most postdocs are in their 20s and 30s and it's unacceptable that a prestigious position (such as a postdoc) at this stage of life does not come with job benefits such as retirement or child care.

Existing NIH policies, programs, or resources

No reponse

Proven or promising external resources or approaches

Higher salaries lead to higher employee satisfaction.

Response 115

Perspectives on the postdoc roles and responsibilities

I would love to do a post-doc because, in my view, the role is a great way to continue doing the work that I love. However, I also view it as a role that I cannot afford to do. For example, I live in CA, and getting paid $55k/year is not even close enough to a middle-class income for 2 people (without kids!). Not to mention that I have over 50k in student loan debt to pay for.

Fundamental issues and challenges

The issue is pay. It's literally just pay. The incoming post-doc generation is composed of millennials who are strapped with student loan debt and will be forced out of science because post-docs just simply don't pay enough. It's really straightforward.

Existing NIH policies, programs, or resources

Increase the salaries. It will mean that fewer opportunities are available for post-docs, but I think that is probably just fine.

Proven or promising external resources or approaches

Increase the salaries.

Response 116

Perspectives on the postdoc roles and responsibilities

It should involve training in research, and training in independent thought. It should no be conceived as a source of cheap labor for the PI.

Fundamental issues and challenges

My PhD graduate students in statistics and biostatistics can land jobs straight out of graduate school that pay from $100,000 to $300,000, plus bonus, stock options and stock grants. It's always been true over my 30 year career that my students make more than I do, if not immediately upon graduation, then after a few years in industry. To ask them to take a postdoc position paying perhaps 60,000 (it used to be even less) is just plain insulting. They'd rather go back and live with parents for a month until they can land a good quality job in the biotech/pharmaceutical industry or in Silicon Valley. At the moment, one postdoc salary doesn't remotely come close to paying for room and board and transportation in Los Angeles. There are a lot of cities in the United States now where faculty can't afford to buy a house on even a faculty salary. Postdocs need to eat and ideally to thrive. Increase postdoc salaries, immediately! Please!

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 117

Perspectives on the postdoc roles and responsibilities

A stage in the academic career where you develop independence, have a chance to use the skills acquired during your PhD to do exciting research, and to prepare your own research profile for faculty applications.

In Europe postdocs frequently have supervisory roles towards master students and PhDs, which helps them develop critical mentoring skills for later PI jobs.

Fundamental issues and challenges

The low salary, barely enough to have a decent life in Boston. Less than many earn with just a Bachelors degree. Certainly not enough to start a family. It does not seem to have increased adequately with inflation.

Ridiculous structure of penalising postdocs with a fellowship: they should get more benefits for bringing money and prestige to the university, not less.

Precarious visa situation, very limited support from HR before moving to the US/the institute.

Uninviting and volatile political climate, expensive healthcare, low number of vacation days, horror stories about mass shootings all disincentivise international scholars.

2-body problems: all of the above but navigated twice.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 118

Perspectives on the postdoc roles and responsibilities

Postdoc training to me should be preparing the individual to run their own research program while balancing managing people and administrative work. This means more thinking big picture and managing graduate students, undergrads etc, with less emphasis on working at the bench. There should be more transparency on how to budget for grants and people.

Fundamental issues and challenges

I had a horribly abusive Ph.D. experience and every time I reached out for help, I was gaslit and blamed for the negativity. The problem is that there is even less support as you reach a post-doc position and a PI position. Having to work through all this negativity on top of barely being paid and stressing about finances, is a beautiful recipe for burnout. If you really want to improve the postdoc experience, it starts with comprobable pay and support at every level. By support, I mean mentorship, actionable responses to abuse and less pressure to publish Nature, Cell, Science.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 119

Perspectives on the postdoc roles and responsibilities

The postdoc is a period where I get to spread my wings, scientifically. It's an opportunity to prove that my past success is an indicator of future outcomes, and to identify a unique and pressing question that interests me.

Fundamental issues and challenges

Funding, funding, funding. Any other answer is silly and just a distraction of this main issue. I mean this not only from a postdoctoral salary/fellowship perspective, but the fact that R01 funds haven't increased in over a decade doesn't match the reality of science nowadays. On one hand, many postdocs feel stress to obtain funding, or they may never be able to pursue an independent scientific question outside of their supervisor's existing grant programs. On the other hand, many postdocs looking ahead to having their own labs are highly discouraged by funding prospects, both the success rate and dollar amounts. Graduate student and postdoc salaries are constantly increasing, to the point where having one R01 is not sufficient to sustain a lab. Given the average amount of time it takes for an ESI to obtain their first R01, the thought of needing more than one to support multiple students/postdocs is daunting.

Existing NIH policies, programs, or resources

Funding at the postdoctoral and investigator levels need to be expanded/increased. Any other policy adjustments are misplaced bandaids that do little to fix anything.

Proven or promising external resources or approaches

None of those other things matter if funding stays as limiting as it currently is. There is no job satisfaction if constant worrying about funding is attached to the job. It's not surprising that retention rates are dipping when better funded scientific opportunities exist outside of academia.

Response 120

Perspectives on the postdoc roles and responsibilities

I view the post-doctoral position as a transition position from graduate school to faculty. For me, the goal has been to get the training in how to run a lab, how to mentor, how to chose and conduct my own research directions. My responsibilities are to be a good lab citizen, do my research, contribute to public knowledge about the world, and do science that can help people.

But it is also a job that I do to pay the bills, feed my children, and have safe housing.

Fundamental issues and challenges

The fundamental need for me as a woman who had a child in graduate school and in my first postdoc is social support to make it possible for me to do my work. I did a postdoc in Europe, and there the social support is so much better—insurance, salary, housing, parental leave. I was on an F31 in the US when my first child was born and almost went broke, left academia for a while, and only returned to academia because of the post-doctoral benefits I was offered in Europe. Having the second child during postdoc abroad was much, much easier because I had the possibility to take a long leave (8 months paid) and was able to hire a research assistant to continue my experiments while I was in late pregnancy and on leave. Then, I received a fellowship to support extra childcare costs and to hire household help (house cleaner) during COVID. These have also contributed to my retention. Now I am a postdoc in the US on a T32, and I am back to paying huge amounts of money for childcare with high demands on my time and low social support. The contrast is stark.

Existing NIH policies, programs, or resources

Childcare costs policy: This is a fantastic policy and I have taken advantage of it. Ideally, the maximum would be more than $2500, as this covers around 1-2 months of childcare in most places. Additionally, it would be great to have this allowance allowed through more funding mechanisms (i.e. R01s) as graduate students and post-docs are also paid through those funding mechanisms.

Pandemic accommodations: the NIH should allow people to "double up" on eligibility extensions for K awards. The pandemic affected my productivity during a critical period in my post-doc. I had no childcare for several months, and was unable to work. I also had a child during my post-doc. When I add up the amount of time I was on leave or unable to work, it is more than 1 year. K99 is becoming almost required in my subfield for getting a faculty position, and the eligibility limits are restrictive for mothers who tend to have less time to work than those without children or (data suggest) fathers. Being able to get a longer extension is both fair and will improve the representation of any people who have had more caregiving demands during their early career that overlapped with the pandemic.

Parent leave accommodations are too short. 8 weeks is not enough time to bond with a child and recover, especially for graduate students who cannot afford high quality childcare.

Proven or promising external resources or approaches

While in a European country, I received a privately funded fellowship that was a monthly allowance for me to use freely "to support compatibility of science and motherhood". I used it to buy a washing machine, hire biweekly house cleaning, pay for a babysitter to pick my kids up from daycare, and to get some babysitting during the pandemic when the childcare facilities were closed or closing early. This money made a huge difference. Anything that the NIH can do to improve the quality of life of mothers in science is going to life everyone up. Now that I am on the cusp of having a faculty position and seeing many women dropping out of academia because they just want enough money to pay for housing and childcare, I see that this is the single most important thing for the retention of mothers in science.

Response 121

Perspectives on the postdoc roles and responsibilities

In most cases, a postdoc should be training explicitly for a professor position. In some cases, postdocs may just want to learn a new system or technique before going to industry.

Fundamental issues and challenges

The minimum stipend set by the NIH has failed to keep up with inflation and NIH recommendations for decades, especially in high COL areas.

The "training" structure set by the NIH devalues the abilities and contributions of postdocs, who hold terminal degrees in their fields and can easily earn more respect in industry.

Existing NIH policies, programs, or resources

MORE INDEPENDENT FELLOWSHIPS FOR POSTDOCS.

Obviously, increase postdoc minimum stipend.

Don’t let faculty pay postdocs off of R01 grants. That is paid labor, not a training opportunity.

Pressure universities to create more permanent jobs for people with PhDs, in lieu of the bloated and exploited postdoc labor force.

Proven or promising external resources or approaches

No response

Response 122

Perspectives on the postdoc roles and responsibilities

This is the most underrated position I know. The most important lab member (besides PI) with many responsibilities, yet the salary amd benefits does not refelect it. Expected to work as much possible for as low as possible salary, with no PTO, no employer 401k contribution, no dental issurance (changed in 2023), no parental leave benefits. Salary cap is too low when living in big cities with high rental prices, affecting work life balance—meaning no life with such a low salary

Fundamental issues and challenges

Low salary

Low salary and high expectations

Benefits not equal to other staff members

No paid time off

Even for people who love research, it is difficult to plan future with low savings.

No support for women, especially young mother in science

No child care support

Existing NIH policies, programs, or resources

Everything needs to be updated to reflect 2023 year, current cost of living and lifestyle.

Specific development plan from postdoc position to independent scientist.

Specific programs offered to mothers/fathers that want to do research and not only be present but take active part in their children life.

Proven or promising external resources or approaches

Higher salary!!!!!!!!!!

Response 123

Perspectives on the postdoc roles and responsibilities

It is a time to learn a new technique, skill, perspective before opening a lab of your own. A time to expand mentor and professional network. It is also a valuable time to learn about basic lab operations.

Fundamental issues and challenges

Biggest fundamental issue is financial. Cost of moving is significant given the role’s temporary nature. Salary is also low. For those seeking academic jobs, it feels like the options are

1. postdoc, low salary, with potentially low chance of getting hired at faculty level or
2. non-academic job, higher paying salary, more stability in 5 year term.

I am also at a UC school where the university requires that I get paid above NIH scale. This becomes challenging because my advisor has limited funds to cover the difference.

Existing NIH policies, programs, or resources

NRSA childcare supplements should be expanded. The resource existing is great, but not enough to make significant impact on parents' lives.

Proven or promising external resources or approaches

No response

Response 124

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1. You want to know why people aren't becoming postdocs? It's because postdoctoral pay is unconscionably low because of NIH policies. Your guidelines or requirements for postdoctoral salaries are immoral. Not only are postdocs in general paid well below what equivalently trained people are paid outside of academia, NIH postdoc pay is shockingly low even compared to postdocs funded by other federal agencies. I was an NSF and EPA-funded postdoc back in the late 00's, and I made almost 2x what my wife in an NIH-funded postdoc made, and my pay was 30% below the private sector offers I was receiving. These disparities certainly remain, and I would guess no federally-funded postdoctoral salary has kept up with inflation since them, especially cost of living inflation in the kinds of cities where most universities are sited. The pay is so bad that I ACTIVELY DISCOURAGE students and mentees from applying for (much less accepting) NIH-scale postdocs. Moreover, in my own grant proposals I never ask for funding for postdocs because it would be cruel of me to hire someone on NIH scale salary. If I want someone with that level of expertise, I hire them under a job title that allows me to pay them half-decently, something comparable to an NSF postdoc in the physical sciences.
2. The $500,000/yr cap on modular R01s has also not kept up with inflation, so even if I were willing to hire a postdoc at NIH scale (which I wouldn't because I'm not a terrible person) I would probably have to hire a graduate student instead.

Existing NIH policies, programs, or resources

1. All the problems of bullying, abusive advisors that plague PhD programs are only magnified in postdoctoral positions. NIH should change its funding scheme so that funding for postdocs and graduate students is not tied to an individual project or advisor but is applied for separately via a department-wide grant. At least then the trainee wouldn't be at the mercy of one possibly sociopathic individual. Plenty of research organizations use models like that. NIH should learn from them. This would have the ancillary benefit of introducing many postdocs earlier to collaborative team science, experience that they need more than "independence".
2. NIH should stop issuing K-awards to postdocs. Expecting people at that level of experience to start applying for grants is absolute insanity, and is a big part of why people don't want to stay in the academic research pipeline at that career state. The grant writing expectation should only arrive once a person in a faculty position.
3. A postdoctoral fellows should have minimum 90 days of paid parental leave for birth of a child and NIH should withhold funding for employers/advisors who don't obey those minimums. Plenty of people in the late 20s and early 30s want to have families, and the structure of postdoctoral positions makes postdocs uniquely vulnerable when they decide to have children. This is another big reason people, especially women like my wife, leave the research pipeline at that career stage, and it goes hand-in-hand with the need to disentangle postdocs from a single project or advisor.

Proven or promising external resources or approaches

Pay people what they're worth and ensure decent benefits and a decent work environment and they'll take the jobs. It's not that complicated.

Response 125

Perspectives on the postdoc roles and responsibilities

Postdoc is training cum independent research capability development opportunity in an exciting and resourceful environment. It offers many opportunities for helpful resources, and co-work with independent leaders to further training in academic and administrative development so as to prepare for a future independent position.

Fundamental issues and challenges

The basic drawback of a postdoc position is very low pay and limited to no benefits. Here is my own example of why I left academia for industry: I worked as PI of a [redacted for anonymity] (130000.0 USD for 2 years) which paid me 52500.0 USD per year. I had a very stimulating research and mentoring environment and envisioned myself leading a research group after 3-4 years of post-PhD training. However, as an international student with a family of 3 in [redacted for anonymity] could not survive on that salary. Therefore, I could not even complete my fellowship period and was terminated after 1year for an industry that is paying me 132000.0 USD/per year with full benefits for at least financial peace in my family.

Existing NIH policies, programs, or resources

To retain postdocs, NIH MUST have, at least, a similar payscale and benefits with other Federal like FDA, EPA, NIST, or Government Labs.

Proven or promising external resources or approaches

Providing a similar payscale and benefits with other Federal like FDA, EPA, NIST, or Government Labs would eventually enhance the postdoctoral training ecosystem.

Response 126

Perspectives on the postdoc roles and responsibilities

Postdocs are vital to advancement of research programs. They are often the workers that bring in new technology and approaches to subject areas and they are the guarantors of future inquiry. Their leadership at the ground level of research labs has a profound effect on other trainees and staff.

Fundamental issues and challenges

Postdocs are faced with unfair economic choices. The must forgo a living wage to pursue an academic career. Thus, we lose the best talent to the private sector. Their choice should be based on chosen career path, not survival. Thus is a fundamental component of Institutional racism, because only those with outside resources can easily make the choice to pursue a postdoc or an academic career. Those that do choose a postdoc often find it economically untenable and leave. Postdocs also face unrealistic work expectations that do not meet minimum standards of employment in the private sector, including parental leave, paid time off, and hourly work standards. Finally, career development training is non existent at most institutions, so they are often unprepared for the job market and lag behind peers.

It is time to bring Postdoctoral training out of the scholastic tradition of mendicant monks and into the modern era.

Existing NIH policies, programs, or resources

Living wage competitive with the private sector with benefits, sick and parental leave, and paid time off. Required mentor training to host postdocs. Required institutional career development training. 5 year eligibility for NIH training funding. Training grant funding for program directors and program managers to oversee training and career development. Recognition that postdoc transition to the private sector is a success.

Proven or promising external resources or approaches

UC President’s Postdoctoral Fellowship Program. NSF INCLUDES funded programs. UC San Diego EPIC training curriculum for postdocs.

Response 127

Perspectives on the postdoc roles and responsibilities

The main purpose of a post-doc is to gain additional research training. This may be used to increase qualifications for industry positions or as the basis of an independent academic lab. Post-docs assume many responsibilities, including mentorship, data collection, publishing, logistical aspects of the lab, etc. To me, the most important aspect of a post-doc is the opportunity to learn a new skillset that can be incorporated with previous training (graduate school, etc.) for a successful independent research lab.

Fundamental issues and challenges

The number one problem with post-doc positions is the outrageously low compensation for someone with an advanced, terminal degree (Ph.D. or M.D.). I know many very passionate scientists who had to make the difficult choice not to pursue a post-doc because they could not support their family on a post-doc salary. Academic research looses many passionate, talented scientists due to our failure to properly compensate post-docs. Anything other than a substantial increase in post-doc pay set by the NIH will be viewed as lip service.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Mount Sinai pays their post-docs a competitive wage (about 70K) and housing assistance. This would be a great program for the NIH to model.

Response 128

Perspectives on the postdoc roles and responsibilities

A preparatory stage to become a Principal Investigator at Universities or National Labs

Fundamental issues and challenges

- Salary range is very much not comparable to industry positions. Another problem is that universities follow the "NIH minimum salary", so the NIH should be willing to change such policies
- Visa processing is absurdly complicated for PhD-holders in general. Contracts are short (often with yearly renewal) and visas are only granted for a 1 year period, forcing researchers to thousands of dollars and time to travel to renew their visas.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 129

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The biggest issue for me is the salary. My postdoc is in a high cost-of-living city and it would be impossible to have an acceptable quality of life (e.g.,

Existing NIH policies, programs, or resources

If the budget cap on grants contributes to the low postdoc salary, increasing the budget cap for grants would alleviate that.

Proven or promising external resources or approaches

No response

Response 130

Perspectives on the postdoc roles and responsibilities

The postdoctoral role is additional training post-PhD.

Fundamental issues and challenges

I was a T32 postdoctoral fellow 2021-2022 who left the position early because I could barely afford rent in boston on my salary. My quality of life was extremely difficult. My T32 salary did not even meet the NIH minimum recommended salary. I left my position for an industry scientist position and tripled my salary and my quality of life has drastically improved. I wanted to stay in academia but being able to afford childcare and starting a family was more important. Also the lack of health insurance as a postdoc was very troublesome.

Existing NIH policies, programs, or resources

Postdocs need to be paid more and have guaranteed health insurance. As a T32 postdoc 2021-2022 I was not even making the NIH minimum salary recommendation while living in a high cost city (boston).

Proven or promising external resources or approaches

Pay Postdocs more and guarantee health insurance.

Response 131

Perspectives on the postdoc roles and responsibilities

Research scientist. Should learn new fields and/or techniques while also learning to be a mentor to graduate and undergraduate students. Should be building ideas to build a lab around while contributing to the postdoctoral lab OR the techniques needed to succeed outside academia. Continue to expand on the professional network and scientific communication skills developed in graduate school. If continuing in academia, should also be focused on developing skills necessary as a professor—grant writing, peer reviewing, lab building, teaching, etc.

Fundamental issues and challenges

1. Salary and benefits. Most postdoc salaries are set to the NRSA minimum with limited benefits under the justification that a postdoc is a temporary training position. However, a postdoc is a PhD-level research scientist and works in a lab for typically 3-5 years or more while doing difficult, skilled labor. If you want people to stay in academia, you need to increase the salary to at least 1.5x the current amount and include benefits for grant recipients (at least health/dental/vision, retirement, paid leave, parental leave). This is still less than industry, but will be enough to stop driving people away.
2. Penalized for staying local. Currently, it is discouraged to do a postdoc at the same university you did you graduate studies in. This makes it very difficult to put down roots. Just drop this entirely. Let people like and work where they’re comfortable.
3. Penalized for longer graduate studies and for undergraduate grades. Judge a scientist by the science they’ve produced when they produced it. Don’t ask for a justification for a long time in graduate school or poor undergraduate performance. It feels awful to explain how years of trauma or life events added time to your studies and then still have that justification ignored by reviewers. Just judge based on the the quality of the work at hand instead of the length of time it took to get there.
4. Sexism, racism, and power abuse in academia. The power dynamics in academia are such that if a PI is successful (defined by grant/papers), they can get away with hurting trainees. I don’t know a solution, but this needs to be addressed.

Existing NIH policies, programs, or resources

1. Require that grant funds cover salary and benefits for the awardee, including training grant funds. Raise the salary to at least 1.5x the current amounts, add benefits (at least health/dental/vision, retirement, paid leave, parental leave). If grants cannot be raised to this amount while giving the same amount of grants, give fewer larger grants.
2. Raise lab grant sizes. R01's and R21's are too small to sustain modern labs while also providing graduate students and postdocs with the quality of life they deserve. If grants cannot be raised to accommodate the needs while giving the same amount of grants, give fewer larger grants.
3. Remove the limit on the number of years as a postdoc. This was intended to keep people from becoming forever postdocs as it is a "temporary" "training" position. However, in most fields 3-5 years (a typical length for a successful postdoc) is not temporary and every type of position has training involved. Additionally, professorships are few and far between. Make postdocs a viable long-term position akin to a research scientist.
4. Don't penalize people for staying in their graduate field. Science certainly benefits from cross training ideas, but it also benefits from some people becoming very knowledgable in their field. If some people don't want to change fields after graduate school, they shouldn't have to. There's still a lot to learn from a postdoc even if they're in the same field and model system.

Proven or promising external resources or approaches

Pay. Benefits. Equity.

Not new trainings.

Not new resources.

Increase our pay. Give us benefits. Address power imbalances in academia.

Response 132

Perspectives on the postdoc roles and responsibilities

Develop new skills that will benefit you as an you transition towards becoming an independent PI in the next phase of your career

Fundamental issues and challenges

Please raise salaries to make postdoctoral positions more attractive to potential trainees who may come from underrepresented backgrounds or who may be navigating decisions around supporting new/young families, individuals who may otherwise be tempted by higher-paying full-time jobs right out of their graduate programs for fiscal reasons.

Existing NIH policies, programs, or resources

Higher pay for T32 fellows, etc.

Proven or promising external resources or approaches

Promoting work-life balance with potential for implementing 4-day work weeks or flexible scheduling

Response 133

Perspectives on the postdoc roles and responsibilities

I believe a postdoc have already gone through training and developed a special area of expertise during grad school; thus, they are no longer a trainee, and are instead scientists who bring their skills and knowledge to a new lab to help the PI in developing a research direction that the PI otherwise could not be able to do so himself/herself.

Fundamental issues and challenges

Postdocs are compensated as trainees when they are actually expert scientists already. Specifically, the stipend for postdocs is way too low--it is very difficult for a postdoc to sustain an acceptable quality of life if he/she wishes to have a family and children, not to how demoralizing it is to see the industry is paying

at least two or threes times more for the same qualification, with better work-life balance and job security. On top of that, there are also lots of restrictions on eligibility for fellowships and grants (e.g., most are for US citizens/ permanent residents only), making it difficult for qualified postdocs from a diverse background to stay in academia.

Existing NIH policies, programs, or resources

Increase the minimum compensation for a postdoc (starting at 75k per year), set a ceiling for the amount of time that it takes for a postdoc to transition into research scientists positions (maximum 3 years), increase the availability and funding for research scientist positions, expand the eligibility of fellowship and grants applications

Proven or promising external resources or approaches

No response

Response 134

Perspectives on the postdoc roles and responsibilities

Postdocs today essentially function as staff scientists but with precarious positions and low pay. An ideal postdoc is able to do independent but related work to the host lab/PI, getting guidance and resources to become more independent and a better scientist. However, most do not function this way, and many are just used as research labor that is often cheaper than grad students due to the lack of tuition, and requiring less effort in training for the PI. I don't think it is necessarily bad that Postdocs fill this role in labs and departments, but they should be compensated and treated commensurate with their level of education.

Fundamental issues and challenges

Postdoc positions are only rational to take if one is interested in a career in academia, and there seems to be a viable route to getting a permanent position. As the job market becomes more precarious, it is rational that fewer PhDs would choose to go into a postdoc. Absent a major change to university hiring practices and trajectories, the only way to increase postdoc retention of recruitment is to provide more money and more stable positions. This would obviously also improve quality of life. As a current postdoc, I would worry less about whether I should continue in my position if I was paid adequately and didn't know I had a clock on how long I could work in my lab. Similarly, if pay raises and adjustments to postdoc salary year to year reflected economic trends and provided a financial boost that didn't seem like a joke, I would be more inclined to stay. It was demoralizing to see the salary adjustment, after more than a year of record inflation, was nowhere near high enough to cover the increase cost of living. I now make much, much less in adjusted salary than I did when I started. This is ridiculous.

Essentially, if you paid postdocs anything near what they were worth, and gave them more stability, more people would want to do postdocs.

Also, quit calling postdocs trainees. We have 8+ years of education and training. Every new job requires learning and training no matter what level you are at, this is not unique to postdocs. Calling us trainees gives cover for universities to deny us resources afforded to employees when it suits them.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

One approach would be to let postdocs remain working in labs as staff scientists. Most postdocs will not get a faculty position, and many do not want to. A lot of good researchers are lost to academia because they either don't want to run a whole lab/teach/essentially do paperwork, can't afford it, or need more stability. A more stable staff scientist position in an existing lab would retain a lot of these people.

Response 135

Perspectives on the postdoc roles and responsibilities

Graduate school 2.0. More pressure, more stress, and much less appreciation.

Fundamental issues and challenges

One main issue is the pressure to publish and get funding. Depending on the lab you might be stuck as a post doc with little opportunity to advance. Lastly, the pay for the amount of work is so low. I can make twice the money in industry as I can a post doc which would give me a better quality of life. That's very important given the increased costs for basic necessities.

Existing NIH policies, programs, or resources

It's really the whole academic system that needs to be modified. Older faculty need to retire, funding rates need to be increased

Proven or promising external resources or approaches

No response

Response 136

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be a transitional role to gain a new skill set by completing an independent research project.

Fundamental issues and challenges

Fundamentally, the postdoctoral position (unlike predoctoral studies) offers very little value for any person who does not go on to pursue an academic tenure track or equivalent. Meanwhile, the compensation is very low for a highly educated American adult. Problematically, most postdocs who want tenure track position at a research university do not obtain one due to market conditions. Further, the norm, encouraged by NIH policies, dictates that most postdocs pursuing an academic position hold a postdoc position for about five years.

Existing NIH policies, programs, or resources

Personally, I believe the NIH will only consider incremental changes in the postdoctoral position, but the following structural change should be enacted:

Make the maximum postdoctoral training period two years.

Doing this would force candidates to attain faculty or staff scientist positions in academia or pursue a job outside of the academy. Likewise, institutions looking to hire tenure track faculty could not expect ~5 years of postdoctoral training.

Proven or promising external resources or approaches

No response

Response 137

Perspectives on the postdoc roles and responsibilities

Post-doc is an intermittent position to gain insights into expanding your knowledge from grad school and applying it to real-world scenario. It is a key role that is a part of decision making process in your career to move into an independent scientist or industry player or startup one of your own

Fundamental issues and challenges

Challenges—Navigating the US institutional research environment; Limited funding opportunities for non-residents, lack of sufficient training sessions that help in transition to specific roles

Issue—Insufficient pay to support dependents and kids; visa issues creating panic and unnecessary administrative hardships, lack of proper guidance in matters of taxation

Existing NIH policies, programs, or resources

Institutions in which Postdoc's work do not provide any awareness regarding the policies, programs or resources. So NIH should proactively establish compulsory training ecosystem to promote Career transition of Postdocs

Proven or promising external resources or approaches

Create a Nation wide ecosystem of all Postdocs ensuring implementation of a uniform code

Response 138

Perspectives on the postdoc roles and responsibilities

A transitional role for someone to further develop their research horizons and capabilities in preparation for a permanent position in industry or a tenure track role in academia

Fundamental issues and challenges

Salary and benefits

Existing NIH policies, programs, or resources

Increase postdoc salary and funding so that labs can afford more and better paid postdocs

Proven or promising external resources or approaches

Increase postdoc salary and funding so that labs can afford more and better paid postdocs

Response 139

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

As a graduate student I have already decided against doing a Postdoc. It is 98% due to pay. The increasing lengths of PhDs in Biology/Neuroscience mean that I have gained more expertise in my PhD training than predecessors from decades ago. I refuse to give more of my life to academia with little to show for it outside of my name on publications. I have already put off so much else in my life that I cannot imagine putting anything else on hold to make the money I could've made with a bachelors in industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 140

Perspectives on the postdoc roles and responsibilities

The post-doc just seems like an extension of a PhD. I don't feel like it is anything special nor are you treated any better in my opinion.

Fundamental issues and challenges

Payment. To be honest, as a doctoral student the post-doc position is not appealing in the slightest. I went through rigorous training and hours devoted to my research projects to get paid just a tiny bit more. The PhD is supposed to symbolize you becoming an expert in an area and it doesn't seem like that at all in academia. Plus I find it common with post-docs not getting offered faculty positions at the institutions they are at. Meaning after two-years of being somewhere you must move yet again. I'd rather be a job where I am paid accordingly for my degree and not having to move.

Existing NIH policies, programs, or resources

increase payment and have set institutions where post-docs leads to faculty positions. I'm finding it more common that institutions will not hire unless you are coming in with a K-grant aka you are self-funded.

Proven or promising external resources or approaches

No response

Response 141

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The publish or perish culture has fostered toxic learning environments that scares people away.

Existing NIH policies, programs, or resources

There are limited options for students to defend themselves if they are abused by their PI.

Proven or promising external resources or approaches

No response

Response 142

Perspectives on the postdoc roles and responsibilities

Postdoctoral roles would allow me to continue expanding on my dissertation findings, while developing further research programs that would further extend the impact of my work. It would afford me the space to breathe while I figure out a K award.

Fundamental issues and challenges

Money. Simply put, I would need funding that is commensurate with my doctoral-level skills. It's not feasible to live in a US city and make less than 80k.

Existing NIH policies, programs, or resources

Long-term funding from PhD through first R. Less racist review process. Include international students.

Proven or promising external resources or approaches

No response

Response 143

Perspectives on the postdoc roles and responsibilities

As a former postdoc, to me, a postdoctoral fellowship represented an extended period of training where I could gain new skills and hone current skills. I viewed it as training for my future profession (I am now faculty) and I learned many of the skills needed to be a successful PI. But importantly, a postdoc is a job, just like any other job. One of the first pieces of advice I got as a postdoc was "your job as a postdoc is to get a job", and that's how I viewed my postdoc. Training to get me a job.

Fundamental issues and challenges

There are several fundamental issues.

1. Pay. Many prestigious labs are located in extremely expensive cities (San Francisco, Los Angeles, San Diego, NYC, Boston, etc) where the postdoc stipend barely keeps up with rent. As a single, childless, postdoc in [redacted for anonymity], I spent half of my paycheck on rent (and I was paid above NIH scale). My friends with children had to make immense sacrifices to pay for childcare, food, and housing. I had to ask my parents for financial support. I am fortunate my parents could help me and understood the nature of my position, but this is not sustainable for anyone who does not come from wealthy parents. Childcare costs as much if not more than rent, and many universities provide zero support for childcare. This means that prospective postdocs have to make a choice, and many choose to do what is best for their families.
2. Bullying. I was EXTREMELY fortunate to have a really fantastic postdoctoral mentor and informal mentors who encouraged me and provided me with support. For other postdocs this is rarely the case. Many postdocs are bullied, abused, and stories about visas being threatened if postdocs do not work insane hours have circulated for decades. As recent events have shown, many prestigious labs at big research institutions that receive millions in NIH funding are incredibly toxic environments.
3. Job security. A postdoc is at most a 1-3 yr contract dependent on funds the PI has available and postdoctoral fellowships. This is incredibly unstable and many postdocs with families to support cannot constantly move around. It's also been historically thought that moving around (institutions/location) show a diversity of experiences, and this is extremely expensive and difficult for families, especially when moving for a postdoc means leaving support networks of friends and family.

Existing NIH policies, programs, or resources

Some ways the NIH can improve the experience is to

1. increase the postdoc salary scale. Many institutions use this to set their funding levels for postdocs, so the NIH has strong influence here. Allow PIs to ask for increased salary support. Postdocs are unionizing and getting better pay. I strongly support this effort, as postdocs have a PhD and are highly skilled workers, but if I don't have the funds to support my postdocs I have to let them go or hire fewer postdocs, giving fewer opportunities to those who need them the most.
2. Expand mentoring resources and programs. Things like the K99/R00 MOSAIC and NIGMS K12 programs that include development of postdoc cohorts and professional development opportunities are invaluable. My time as a K12 trainee gave me opportunities I would have never gotten otherwise. Incorporating aspects of this into F32 and T32 would be excellent as well as strengthening existing programs.
3. Increased opportunities for support for childcare. Some NIH grant mechanisms allow for funding childcare support but expanding this to all postdoc (and even grad student) funding mechanisms would be transformative.
4. NIH has a grant conference for ESI's I attended, but expanding this to target postdocs could be really great. Most postdocs don't know how to write grants or even where to find resources like reporter or matchmaker so having workshops on this could be invaluable (if these workshops do not already exist).

Proven or promising external resources or approaches

UC San Diego has a very good postdoctoral affairs office that works well. Providing mechanisms for institutions to apply for funding to improve these offices or develop these offices would be beneficial.

Response 144

Perspectives on the postdoc roles and responsibilities

Leasing /training less senior students. Research and training to become an independent investigator.

Fundamental issues and challenges

Salary, no respect, even PhD students overrule even on GLP. Overworking.

Existing NIH policies, programs, or resources

You should enforce what you have to everyone you fund and then we can talk about increases. Most PI use loopholes to avoid following your minimum wage guidelines. No money for training or conferences. Just work as a slave. And the moment you even ask for at least the official policy to be upheld. You are gotten rid off—All of a sudden funding dries up. And of course all university resources available to Postdocs work for the PIs. Just another measure of control after wasting everyone's time.

Proven or promising external resources or approaches

Postdocs should have same benefits as staff researchers such as tuition forgiveness etc. an actual contract and not this clown show we have now. Where they are doing whatever they want without any consequences.

Response 145

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be a time to expand research and critical thinking skills while you prepare for the next career stage. This should be short term and used as a time to enhance your resume and solidify your primary research/career goals.

Fundamental issues and challenges

There are many challenges here as postdocs are not well supported in many institutions. Currently, students come out of PhD with very little savings and then have limited capability or desire to accept a postdoc position where they will also make little money and work long hours. There is no parental leave or support for childcare in most institutions and this is horribly unsupportive, especially since the PhD + postdoc journey is so long it is typical for people to have children during this time. The quality of life of postdocs is poor because they undergo so much training, only to continue to work long hours for little pay with little vacation time or support for work life balance. It is no wonder so many people want to go to industry after PhD where they get these benefits. I am a US citizen but I know for international postdocs the pathway to citizenship can be difficult and also poses a challenge. Lastly, the postdoc experience has become so long in recent years. It used to only be a few years but now it takes 5-7 years to publish good papers and move on—this is not appealing to anyone who has just finished a 5-8 years PhD.

Existing NIH policies, programs, or resources

Anything that would support higher pay, more vacation time, paid parental leave, childcare, and support for international postdocs. Furthermore, a more structured program to help postdocs move through their time at a quicker pace.

Proven or promising external resources or approaches

No response

Response 146

Perspectives on the postdoc roles and responsibilities

A postdoc position is for those who wish to stay in academia or acquire more specialized training. I think for those who want to stay in academia, it is a necessary step to gain more experience, make connections, and perform highly impactful research that would make one competitive for academic positions. For myself, I do not wish to become a PI and to me, doing a postdoc is more about gaining new sets of skills and working in a related, but new field. It is also a place where I can continue to explore research and determine if there is really a long term place for academics like myself who want to continue to do research at public institutions without necessarily becoming a PI. I do think that a postdoc also is giving me the time and space to explore whether I can continue in academia or whether I should in fact leave like most of my peers into industry.

Fundamental issues and challenges

I think compensation plays a huge role in retention. Here, it is just not possible to continue to live on a postdoc salary and also have things like a family or be someone's caretaker (I personally know a postdoc who has two children, so her cost in childcare is $2500/month per child, which is as much as she makes a

month). The university and academia in general prides themselves on being an inclusive place, but it really is not. Institutional support for first generation scientists, those with families, or internationals is highly lacking and causes us to lose tremendous amounts of talent as these workers leave for industry or completely change fields altogether. I have fellow postdocs as friends who have had to tell their children they cannot join the soccer team or go on a trip to meet their grandparents because they are literally living paycheck to paycheck. If we want to foster academic research and attract (+retain) top talent, we need to increase compensation to living wages.

For me, I like the academic environment, but don't know if there is a long-term place for someone like me that does not possess the aspirations of becoming a PI. The traditional model seems to be that there is a literal pyramid scheme leading to the top, which is the PI position and there is a huge bottleneck for positions past postdoc. Additionally, toleration of systemic abuse is another reason I would also consider leaving academia. I have witnessed terrible things that have gotten swept under the rug and have had multiple colleagues leave academia because they have been so terribly abused.

Existing NIH policies, programs, or resources

I think the T32 model for postdocs is actually horribly regressive and a form of indentured servitude. I was actually awarded a departmental T32 here at my institution and I had to turn it down once I read the language. I think the "other forms of commitment" while offering some flexibility, is really just unnecessary and seems like a means of holding recipients hostage in the field. If you want people to stay in academia after you fund them, there should be rewards for staying, not punishment for leaving. I care for my elderly parents and if I were to have accepted the T32 and for some reason, need to leave the field and the workforce completely to become a full time caretaker, the last thing I want to (nor should) do is have to bargain with the NIH for a repayment of the fellowship or some other form of "service".

I also think the application process for fellowships should not take undergraduate GPA into consideration for the applications. It is asinine to think that someone who has already been productive publishing, who has a PhD from a competitive institution, has good letters of reference, and is highly skilled, would then be judged by how they performed in an introductory chemistry course. As someone who had to work throughout college and care for elderly and ill family members, it is shocking to think that anyone would still care about a grade I got in a course 16 years ago when I have demonstrated my ability to publish impactful work and my research has helped my PIs secure multiple R01s.

Proven or promising external resources or approaches

Stop funding abusers. Stop creating an environment that allows PIs to abuse their trainees. This includes sexual harassment, discrimination, threats, and overworking/underpaying their trainees. Academia is quite toxic and the NIH does not seem to bother itself with these issues. However, if it were to actually punish programs, departments, PIs, and institutions that tolerates abuse of the trainees, their hands would be forced to deal with these issues. I think the NIH could also focus more on promoting ways to keep postdocs in academia by creating funding sources and programs for just that. I am not thinking K99s or career transitional funding into faculty positions. I am thinking more about creating more funding opportunities and programs that could structurally change the model. While more little labs as opposed to large labs is a good approach, I also think working on funding career academic researchers. that are not necessarily faculty or PIs and giving them the funding and space to continue to do research and live well so that their talent is not effectively lost from the pool as they leave for industry.

Response 147

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are often valued positions by the hiring PI but often disregarded as dispensable by an institution. Institutions maintain stringent barriers between faculty positions and postdoctoral positions. The former is treated as a valued, career prospect employee while the latter is viewed more similar to that of a student. Institutions do not want to be responsible for retaining postdoctorates and along with this is active prevention of postdoctoral researchers from receiving institutional support as a PI to submit R level funding which could allow promotion.

A postdoctoral position should be treated similar to the trades. A trainee such as a journeyman will, in a predefined timeline, be given the opportunity to advance into master's level position given certain competencies are met. Institutions should employ postdoctoral trainees with the intention of their success

being rewarded with a faculty position within the institution. Conversely, if an institution trains far more postdoctoral researchers than it is willing to promote into faculty positions, it is effectively showing it cannot successfully train postdoctorates to the standards the institutions themselves set.

Fundamental issues and challenges

Postdoctoral positions maintain a fundamental lack of long term job security or prospects. It is rare that postdoctoral positions can guarantee secured funding for more than 2 years once started. Even if it is extended to longer (4-5+ years), this is almost always done in single year increments affording no stability to the position.

Many of the entities with the most postdoctoral positions (research intensive medical schools) refuse to implement standard procedures to promote postdoctorate personnel into long term, faculty positions.

The use of the 'fellowship' loophole to treat Doctors of Philosophy as students (as to keep from offering proper job benefits) is ludicrous. No postdoctoral positions, NIH fellow or otherwise, should be treated differently than the faculty member he/she works with as it pertains the HR-related benefits and processes. All postdoctoral positions, even those supported by the NIH should be salaried, full time employee with benefits positions.

Existing NIH policies, programs, or resources

The use of the 'fellowship' loophole to treat Doctors of Philosophy as students (as to keep from offering proper job benefits) is ludicrous. No postdoctoral positions, NIH fellow or otherwise, should be treated differently than the faculty member he/she works with as it pertains the HR-related benefits and processes. All postdoctoral positions, even those supported by the NIH should be salaried, full time employee with benefits positions.

The NIH should heavily incentivize retention of postdoctoral researchers through promotion into faculty positions (preferably tenure track). This could be done through modifications to existing T32, F32 and K type awards by including options to maintain or increase funds awarded to an individual if promoted into a faculty role. This would also give the benefit of allowing T32, F32 and K recipients to have PI or co-I status on R level proposals.

Proven or promising external resources or approaches

No response

Response 148

Perspectives on the postdoc roles and responsibilities

I view it as extra training before gaining independence but I also see it as a waste of time because it now takes years to complete a postdoc before being "competitive" enough to apply for a position in academia. it feels like doing a second phd with less help

Fundamental issues and challenges

Money. If you want postdocs in your lab because we are highly skilled and advanced then pay us a living wage.

Change the whole [redacted] system. Requiring a big paper before applying for a job means years as a postdoc. and it's harder and harder to get big papers because they now require so much data. Panels a-z in a figure? That's a whole paper! But institutions wouldn't even pick a candidate with a j neuro paper from their postdoc. What ami training for? I got the training I can do the science, it's not like you're reaching me how to manage or budget or do any admin business—just ridiculous. I could switch to industry tomorrow and make over 2x my salary. And have a more balanced life.

Existing NIH policies, programs, or resources

System wide changes

Proven or promising external resources or approaches

No response

Response 149

Perspectives on the postdoc roles and responsibilities

I see postdoc position as a training opportunity to learn additional skills to prepare for an independent research career. While it is a training opportunity, postdoc contribute significantly on driving and leading the research program. They are leaders in doing actual experiments while mentoring graduate students and communicating with PIs.

Fundamental issues and challenges

I see two major challenges:

1. low salary and
2. lack of job security.

The salary of postdoc need to be adjusted so that postdoc can have a survival life to support a family. A $55000 salary cannot support family. Postdoc are highly skilled workers and need to be compensated accordingly. NIH postdoc pay should be competitive to industry scale. Often, postdoc position contract are for 1 year which does not offer job security. Although NIH grants are usually 4-5 years, postdoc are not offered long-term contract.

Existing NIH policies, programs, or resources

Postdoc should be treated as scientist. In the name of training, postdoc has become a way to recruit cheap labor to do highly skilled critical thinking work. Postdoc position should not extend more than 3 years. Labs should hire Phd with more than 3 years experience as "Scientist" position and they should be paid competitively. NIH should have grants funding mechanism to allow this kind of hierarchy. Not all postdoc can be PI. there should be other academic positions between postdoc and PI.

Proven or promising external resources or approaches

No response

Response 150

Perspectives on the postdoc roles and responsibilities

I am applying to postdocs right now. There are so many exciting ones out there. I see these postdocs as a chance to learn new skills, focus on my research and teaching, and develop new connections in the field.

Fundamental issues and challenges

One of the most pressing issues I'm facing is financial, and related specifically to student loan debt. By the time we get to postdocs, some of us are no longer eligible to defer our student loans. And we're no longer students, so we're not able to defer as we were in grad school. But we simply are not paid enough to make payments on our loans.

Existing NIH policies, programs, or resources

Take the average annual rent for a one bedroom apartment in each location, multiply it by 3, and make that the starting annual salary for postdocs.

Proven or promising external resources or approaches

No response

Response 151

Perspectives on the postdoc roles and responsibilities

The postdoc seems like an excellent time to develop independent research skills and gather preliminary data to start a new research program as a PI.

Fundamental issues and challenges

To me, the postdocs seems like it can be a valuable opportunity with the right mentor fit and with some time-bound planning (ie lasting a few but not 5+ years). Beyond that, the biggest barrier I see to pursuing a postdoc is salary; at the time in my life I would be pursuing a postdoc, I would like to be getting married and starting a family, which is hard to envision on a postdoc salary in most metro areas today. After not being able to save much money during grad school due to low wages, I am not sure it will be financially feasible for me to pursue a postdoc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 152

Perspectives on the postdoc roles and responsibilities

A post-doctoral position should be a time when an individual can consolidate and extend the training they received as PhD or other graduate field. It should be a time of opportunity to just do science, and publish, and learn how to write grants, and to begin to craft their own academic/scientific trajectory. The post-doc should be the last tine that they are free from administrative and departmental political burden and they can take advantage of this sheltered time to do a lot of science!

Fundamental issues and challenges

1. Salaries are ridiculously low--for everyone, but especially for MD, PhDs.
2. Can't compete with industry salaries and the ability to "leave work at work". The persistent expectation that post-docs need to work night and day turns many people away from an academic career.
3. The pressure to do job talks, submit multiple grants, "get a K or get out" detracts from what should be a wonderful experience doing science.
4. For those with clinical skills, the lure of having a private practice and setting your own schedule is much more attractive to parents (in my team mostly mothers) who have abandoned academic careers and sometimes even left grants behind because it felt incompatible with being a good mother.
5. Everything in academe feels like too much of a "crap shoot" and the "luck of the draw" from getting papers published to grants funded, to support from department leadership--all of this leads to a sense of uncertainty, unpredictability, and unfairness that turns many people off. Individuals from minoritized groups are often so sought after in faculty positions that they can't afford to take the opportunity to do a post-doc which in the long run could really benefit their career. They come fresh out of their PhD and are overrun with committee work (even more than typical because of their backgrounds). So much is broken.

Existing NIH policies, programs, or resources

1. Faster turnaround for F awards. Trainees often graduate before they get results from a second round of grant reviews. It is demoralizing.
2. Institutions vary in how much help they give post-docs transitioning to faculty and K awardees to R-level funding. The transition points are where we lose people (at least at my institution). Specific programs for becoming a career scientist, developing your own trajectory, how to be a scientist and have a life would all be so helpful. We had a senior scientist enter a room of PhDs to give a career lecture and he started it out by saying "If you are in the audience and you want to have a life, you should just leave now and find another job." It is that kind of ridiculousness that turns people off. Having role models of all genders who do not brag about how little sleep they get, what drugs they take to write grants, and how they don't have life outside of the lab is essential. This has become even more pressing after covid as so many of us have realized how quickly life can be taken away or drastically curtailed. Funding for mentorship should be prioritized. Those of us who are good at it do it as volunteer work. The amount of uncompensated work that goes into mentorship disproportionately "burdens" those who are dedicated to training the next generation of scientists. It's fine if some people don't want to be mentors, but we shouldn't be punished for taking that part of our jobs seriously. For example, funds should be available for T32 directors and mentors.

Proven or promising external resources or approaches

Post-docs should unionize. Individual universities should invest more in transitioning people from post-docs to faculty. More post-docs in partnership between academe and industry would build a more nimble scientific workforce, would improve academic-industry collaborations, may make it easier to give higher salaries, and would make it less of an "either-or" decision to take an academic or industry track.

Response 153

Perspectives on the postdoc roles and responsibilities

I view it as a potental stepping stone to a faculty position, time to gain additional training outside the focus of my graduate studies, and an opportunity to connect more with faculty and consider different career options (e.g., decide whether to stay in academia).

Fundamental issues and challenges

At my institution [redacted for anonymity] postdocs receive only 6 weeks of paid parental leave (and all available vacation is forfeited towards that leave), sub-par health insurance, no subsidies for dental or vision insurance whatsoever, and very limited vacation time. This combination of conditions may be tenable for brief periods for young, single people with no dependents, family obligations, or plans to start a family, but for people predominantly in their upper-20s to 40s, poor benefits can make for harmful delays in healthcare and delays of major life events (such as parenthood). When even at the end of a long training period, stipend and benefits remain so inferior to those available in other sectors, it can feel irresponsible to remain in academic research.

Existing NIH policies, programs, or resources

Higher stipends, larger number of K99 awards or other awards to facilitate transition into a faculty position, allowing non-MDs to propose K99/R00s with trials across all NIH institutes, more training/resources on how to identify relevant funding mechanisms.

Proven or promising external resources or approaches

No response

Response 154

Perspectives on the postdoc roles and responsibilities

Further training on applicable aspects of ultimate career goal. For example, if goal is tenure track professorship, training in research, teaching, mentorship; if goal is industry scientist, training in research techniques and application; etc.

Fundamental issues and challenges

Low compensation relative to other positions requiring the same experience; lack of consistent health insurance, retirement, and family (e.g., maternity/paternity leave) benefits; inconsistent training/expectations; high likelihood of poor/toxic working environment; persistent inequities and poor diversity/representation in positions of power; low stability; and low likelihood of achieving the designed outcome (i.e., tenure track faculty position). In sum, the benefits of doing an academic postdoc are not worth living and working on these conditions for an unknown period of time while trying to hold out for a tenure track faculty position (since probability of getting they position is very low), when positions with better pay/benefits and better quality of life exist outside of academia.

Existing NIH policies, programs, or resources

Providing health insurance and benefits universally across funding mechanisms, increasing mandated salary minimum there

Proven or promising external resources or approaches

There are many peer-reviewed sources highlighting issues relating to quality of life, job dissatisfaction, low mental health, and inequality that directly stem from the low pay, lack of clear benefits, and persistent inequities that postdocs face in the current academic environment.

Response 155

Perspectives on the postdoc roles and responsibilities

The role of an academic postdoc is two-fold. First is to obtain additional experience and training beyond the PhD that will help the postdoc obtain a permanent position. The second is to conduct high-quality scientific research within an academic laboratory.

Fundamental issues and challenges

- Pressure to move to a new institution (which often means a new geographical area)
- Low pay
- Toxic laboratory environments
- Temporary nature of the position
- Lack of opportunities after completing a postdoc (especially in academia)

In general, postdocs are often at a stage in their lives when they want to find long-term stability. Many people start families in their late 20s and early 30s. Moving to a new city away from your community for a low-paying job that will only last a few years at most with uncertain job prospects in the future is not appealing to many people. Personally speaking, doing a postdoc has caused me to delay starting a family.

Existing NIH policies, programs, or resources

A big issue is that fellowships strongly favor applicants who changed institutions between their PhD and their postdoc. This hurts people who have family and/or community obligations that prevent them from changing geographical areas (which is disproportionately women and URMs). I know multiple people who chose not to apply for F32s or other NIH fellowships because they had stayed at the same institution due to family obligations and didn't believe they would be competitive for these awards.

The base level of NIH pay for postdocs is very low given that they are already highly-trained workers and could earn much more in non-academic positions.

Proven or promising external resources or approaches

Improving the work environment and the mentoring postdocs receive could always be improved.

Postdoctoral training is rarely formalized and often focuses exclusively on research. More formalized training for people interested in alternative careers would be helpful (e.g. science writing, teaching, mentoring, etc.).

In general, it would help if there were more PhD-level career options in academia beyond traditional PI roles. For example, if there were more job openings for senior scientists, facilities managers, teaching professors, etc. in academia I think more people would do postdocs to prepare for these roles.

Response 156

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral studies as an opportunity to pursue challenging questions in science, establish a niche that is independent from my mentors.

Fundamental issues and challenges

One of the challenges comes from that PI have no incentive to care about postdoctoral fellows' career. In fact, the system reward bad PIs who sabotage their postdoctoral trainees. Here is my story: There are challenges along the postdoctoral career path since we are dealing with many unknown variables. One of the biggest issues is the uncertainty related to the scientific project outcome. However, with proper conceptual ability and critical thinking, good scientists can come with a variety of novel ideas which can move the science forward. The actual challenge that I faced came from lack of commitment of mentors. Despite having a written career agreement on an institutional email, my main supervisor, once I was able to carve a niche for my future independent career and 90% finish a project which I came up with, he terminated my appointment a month before my first Faculty interview (which he was aware of). In many previous discussions right before his decision, he mentioned that NIH don't track success of postdoctoral

trainees in any PI's lab and that he will not gain anything if I become a PI myself. He mentioned that he would gain more if he took my project and submitted as "his own". He took my whole project as started submitting as his own second R01 with other PIs who never contributed to the project. He faced no consequences in what he did. I had to start over in another lab and it took me two more years to be able to establish a new project. However, in my new situation I have lost all legibility for NIH path to independence grants.

Existing NIH policies, programs, or resources

1. Creating preventive measures to discourage PIs and/or faculty from sabotaging their postdoctoral fellows.
2. Establishing Incentive system for PIs who help their postdoctoral fellows to pursue academic career and becoming new PIs themselves.

Proven or promising external resources or approaches

Providing retirement, child support.

Response 157

Perspectives on the postdoc roles and responsibilities

additional research experiences to transition to an academic career

Fundamental issues and challenges

Money, post docs are not paid nearly as much as they are worth and the salaries allow institutions to exploit students. unsure why we are even asking the question—the issues and challenges should be obvious but nothing is being done about it.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 158

Perspectives on the postdoc roles and responsibilities

The role of the academic postdoc is to help mentor graduate students, lead projects and write grants. For these reasons, they are truly integral parts of the lab.

Fundamental issues and challenges

Money. I just started my postdoc a few months ago and could possibly leave soon if I can't find a way to make extra money. I am in my 30's, I am a doctor, yet I don't have a way to start saving money for retirement and am afraid to start a family with my current level of income. However, I am going to be too old to have kids soon, so I may need to choose between having a family and staying in academia.

Next would be increasing benefits, similar to a job in industry. This would include employer-matched retirement benefits and maternity leave as well as an emphasis on work life balance.

Existing NIH policies, programs, or resources

The NIH sets the minimum amount that postdocs get paid and most university's follow that. Even if a PI wants to pay their postdocs more, it is very difficult to waver from the university's pay structure. NIH raising the minimum wage would fix this.

Proven or promising external resources or approaches

There is no need to improve recruitment, training, working environment, or mentoring. All these things are fine the way they are.

Advertise competitive salaries and adjust for cost of living in the area and pay postdocs better so they may have a better quality of life.

Response 159

Perspectives on the postdoc roles and responsibilities

A postdoc should help a PhD researcher develop into an independent researcher. It should provide opportunities for the researcher to develop leadership and management skills. It should not just be focused on applying a pre-existing skill set to a PI's project.

Fundamental issues and challenges

Low salaries that don't match cost of living. I was offered triple the salary for an industry job, but I still remain in academia, because I have no family requirements for the moment.

Existing NIH policies, programs, or resources

Salaires need to be drastically increased. And if anything they should reflect location costs of living. It makes no sense for an NIH postdoc in Boston to be paid the same as a postdoc in rural Kentucky.

Proven or promising external resources or approaches

No response

Response 160

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Pay. The fundamental issue and challenge keeping PhDs from pursuing postdocs is the pay offered by a postdoc relative to the cost of living in major areas where many research institutions operate. Postdoc salaries in nearly every field have not kept pace with industry jobs that offer compensation to reflect the skills and talent that people with PhDs will bring to the field. Please, please pay postdocs more!! Set a standard that other agencies and private funding institutions can match! All we hear about from professors is how great academia is, but the cost of living is rising and our stipends just do not reflect that reality.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 161

Perspectives on the postdoc roles and responsibilities

It feels like a necessity to be even possibly competitive for a faculty position. If I could get a faculty position without doing a postdoc I would not do a postdoc. I feel ready to lead a lab, but am not viewed as a competitive applicant.

Fundamental issues and challenges

The pay is far too low and if the only reason to do a postdoc is the chance at finding a faculty position then it is probably not worth it or viable for most people. I am only able to take a postdoc because my partner has a reasonable salary from a a career outside of academia. That is a privilege. And after all the sacrifice, I still might never reach a faculty position. I am lucky to be in a position to take such a risk but it is no surprise that many people are not or do not wish to.

Existing NIH policies, programs, or resources

Increasing pay, parental leave and child care support.

Proven or promising external resources or approaches

More encouragement for postdoc positions that turn into faculty positions. More support for staying at the same university. Less need to complete postdocs to be competitive or at minimum better pay to make it less of a risk to spend time in a postdoc wishing for a faculty position.

Response 162

Perspectives on the postdoc roles and responsibilities

I think of it as training period that will help me blossom based on what I learn and implement and possibly be able to do this on my own without the help of my trainer later on.

Fundamental issues and challenges

There's no money. Most trainees don't know why they're doing a postdoc. Most are unlikely to land a respectable job in Industry but they hope to be directors some day. For immigrants, you're tied to institute and project based on your visa and everything is left on your understanding of the foreign system. Most don't know why NIH route is different from Instructor route and whether tenure could be had either way. Immigrants are atleast 5 years behind the natives despite being just as competent if not more.

Existing NIH policies, programs, or resources

Every postdoctoral fellow should receive a standard training to explain grant options and routes to Professorship. They should also receive training on Sort of hot topics that are primarily funded by the NIH to plan their careers if they're not committed to a subject. They should also understand what it means to join Tier 1/2/3 institute.

Proven or promising external resources or approaches

None there's not an inclusive system for any trainee from abroad.

Response 163

Perspectives on the postdoc roles and responsibilities

The worst layer in the pyramid scheme that is academic research careers.

Fundamental issues and challenges

Disgustingly low salary + lack of full benefits, and for what? An academic career that has the same salary issue (relative to industry). And if you happen to get that prof appointment, guess what. Sorry, no more science. Become a grant writing machine. Life-long underpayment for the privilege of begging the NIH for a piece of the ever-dwindling (due to inflation and inadequate increases) funding pie. No thank you.

Existing NIH policies, programs, or resources

Increase the minimum postdoc salary by a LOT. Mandate full benefits (including retirement plan matching). More funding for the NIH.

Proven or promising external resources or approaches

Irrelevant. Money talks. Otherwise, postdocs walk.

Response 164

Perspectives on the postdoc roles and responsibilities

More independent training before pursuit of a position leading a group in an academic, industry, government, or institute setting.

Fundamental issues and challenges

Low pay is the biggest factor by far. Cities with the highest cost of living (Boston, Los Angeles, San Francisco) are home to the schools faculty recruiters tend to favor applicants from and have the most

resources to carry out the most fundable, most cross disciplinary, and highest impact science. Postdocs have already suffered from poor income through graduate school, it's unsustainable to keep getting paid too little to have any savings at all by late 20s-30s in these locations. I want to stay as a postdoc, but I just can't afford it anymore. I can't go on vacation. I can't visit family. I can't buy anything that isn't essential. With no prospects of that changing, I cannot stay even though want to.

Existing NIH policies, programs, or resources

Higher pay.

Proven or promising external resources or approaches

No response

Response 165

Perspectives on the postdoc roles and responsibilities

Postdocs should expand training and knowledge, produce quality research and publications, and move forward lab projects. Greater training and mentorship of junior students would help prepare postdocs for industry and academia.

Fundamental issues and challenges

Stipends not enough for major cities; postdocs deserve benefits+retirement; temporary status an impediment to focus and quality work. Longer term positions with benefits would create a more stable workforce and higher skill in scientific labs. The postdoc to faculty pipeline has such high attrition, it is difficult to justify a postdoc. Stability of funding (5 years) would help keep skilled labor in the lab.

Existing NIH policies, programs, or resources

The time limit on years of postdoctoral work needs reconsideration. The practice of limiting many postdoc fellowships to 2 years harms the ability to train in high quality science. The instability of positions creates anxiety that is widespread and detracts from scientific focus. A longer term training scheme is common in Europe where group leaders can gain responsibility for training and mentorship prior to full faculty. That model might be implemented in the US to stabilize the postdoc to senior scientist transition. It is difficult to justify salary for long term staff on grants (based on review). Longer term staff would help productivity tremendously. Forcing postdocs to move institutions or else face career consequences is a massive social cost that is unfair and disproportionately harms URMS/women. It is one of the single worst practices in academia to move adults 3-5 times in their 20s-30s.

Proven or promising external resources or approaches

Look at the group leader model in Europe. Senior postdocs are given small labs of 3-5 trainees and some funding for independent projects. It seems a better transition than what we have in the US.

Retirement benefits should be standard. It is inexcusable to undermine financial stability in young adults.

Response 166

Perspectives on the postdoc roles and responsibilities

I believe that a postdoc position is a critical step to develop and expand research endeavors. Although, challenges at my institution ([redacted for anonymity]), financial stress and other challenges associated with being viewed as a temporary staff has dampened my enthusiasm reflecting on my experience.

Fundamental issues and challenges

Some challenges may include salary recommendations and staff/employment status at academic institutions.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 167

Perspectives on the postdoc roles and responsibilities

Please realize that the shortage in funds to provide research training to postdoctoral candidates also includes MDs. Healthcare systems are in deficit spending, and the NIH has been a cornerstone for MDs receiving subspecialty training to get quality experiences in research.

Fundamental issues and challenges

The projected supply for pediatric subspecialists, especially in academic institutions, falls far short of needs. We need a healthy supply of physician scientists.

Existing NIH policies, programs, or resources

Expand support of postdoctoral training, which has steadily waned in recent years.

Proven or promising external resources or approaches

Fund increased T32 and F awards

Response 168

Perspectives on the postdoc roles and responsibilities

It is a temporary position to gain additional skills before landing on a permanent job.

Fundamental issues and challenges

Salary and the lack of benefits is the main issue. Postdoctoral fellows are young professionals with families. The current NIH salary structure and the grant budgets are not suitable to pay the postdocs what they deserve. Furthermore, many institutes do not provide benefits (such as maternity leave, retirement accounts and healthcare) that these individuals should be entitled to as working professionals.

Existing NIH policies, programs, or resources

NIH should modify the postdoc salary scale that many institutions follow and adjust the salary based on the living cost of a particular region. Without reducing the number of issued grants, NIH should increase the budgets of R grants to match the inflation rate. NIH can further enforce the institutes to pay a minimum living wage to graduate students/postdocs and cover their benefits from overheads. This could be a requirement for institute's eligibility to compete for NIH grants. Stipend on the training grants should be adjusted proportionally and additional funding mechanisms should be created for international postdocs. Policies should be implemented such that postdocs on training grants do not lose their benefits.

Proven or promising external resources or approaches

The trainings offered for intramural postdocs should be accessible by the extramural postdocs. Policies can be established to make trainee experience as a component of the tenure criteria and investigators who fail to comply can be banned from competing for NIH grants.

Response 169

Perspectives on the postdoc roles and responsibilities

Based on my experiences and people I have worked with, the post doctoral position is often treated as a full time researcher working independently on a project under the supervision of a principle investigator. While it is often called a training position, it very rarely functions as such and is most often actually treated as a semi independent researcher pushing the lab goal forward.

Fundamental issues and challenges

The biggest issues preventing me from considering a post doctoral position are the low salary and benefits when compared to other

PhD scientific positions. While it is of course difficult to match industry level compensation, it is not feasible to expect highly trained workers to take a position with such a low relative pay and lack of health insurance

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 170

Perspectives on the postdoc roles and responsibilities

It is a stepping point to an individual faculty job where you have more freedom than a graduate student but still need training/mentorship.

Fundamental issues and challenges

The pay is way too low. I can't afford to send my child to daycare 5 days a week and pay all my bills.

Existing NIH policies, programs, or resources

Simply finding announcements and explicitly state the documents needed for each K award separately. It was very difficult to figure out which documents were required specifically for K22 compared to other grant mechanisms. A better walk through of the documents required since my PI didn't know anything about the funding mechanism and felt like I was on my own.

Proven or promising external resources or approaches

Improving job satisfaction. Better pay, help with child care, etc. The NIH LRP program is amazing and helped keep me in academia. More programs like that will help with retention.

Response 171

Perspectives on the postdoc roles and responsibilities

The postdoctoral associate or fellow is the main producer of publishable insights in the academic lab. They are expected to learn during their tenure, but their main responsibility is to be productive according to the PI's research vision.

Fundamental issues and challenges

Postdoctoral trainee pay is not competitive with industry, and it is well understood that the only reason to do a postdoc is to eventually get into academia. In reality, there are far more postdocs than academic positions, so it is immediately not apparent why someone would choose to make less money when they won't get an academic positions anyway.

Existing NIH policies, programs, or resources

Increase in postdoc pay and tax benefits associated with being paid by the government. For example, the institutional allowance in a nih postdoctoral fellowship can be used to cover healthcare, but that is counted as taxable income in our taxes. Increased pay will have a massive impact.

Proven or promising external resources or approaches

No response

Response 172

Perspectives on the postdoc roles and responsibilities

I am grateful to have had a chance to do a postdoc. I learned a tremendous amount of new skills, and I was set up perfectly to move into a faculty position. I think postdocs are essential.

Fundamental issues and challenges

Postdoc salaries are very low and require sacrifice to live on especially in big cities and for those of us with children at home. I was lucky enough to be at an institution for my postdoc that had supplemental funding for moving costs and conference travel. Without those things it would have been even more financially difficult.

Existing NIH policies, programs, or resources

A consolidated, indexed website with postdoc opportunities would save a lot of duplicated effort in searching—NIH reporter is not the best tool for this. And per my previous response increases in stipends and other funding would be vital.

Proven or promising external resources or approaches

No response

Response 173

Perspectives on the postdoc roles and responsibilities

It's basically training, but in my experience, the postdoc tends to do most of the leg work for a lot of research projects. They tend to be underpaid for the functions they provide, especially given that many companies would pay triple their stipend for the same work and time commitment.

Fundamental issues and challenges

The pay structure. I chose not to pursue a postdoc because of the pay. I went straight into a teaching institution because it paid more, and I still got the needed experience that I need. While the long-term reward may be better for those with postdoc experience, the existing and very current/urgent need to be able to support yourself or your family is a lot more important than the promise of a budding career that may or may not come true.

Existing NIH policies, programs, or resources

Not sure how to change it, but again, it's the funding and pay structure.

Proven or promising external resources or approaches

None of these listed "training ecosystem" address the problem that is more fundamental in Maslow's Hierarchy of needs—the ability to support oneself and one's family. This need supersedes any form of recruitment efforts because in today's climate, you're going to be hard pressed to find people willing to subject themselves to lower standards of pay for the same amount of work, especially as the cost of living keeps increasing.

Response 174

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

While I, personally, decided to become a postdoc, the majority of people I know from graduate school and elsewhere did not, and the decision came down to financial reasons (and sometimes benefits) 100% of the time. People don't feel incentivized to become a postdoc when they can just as easily find a job in industry that will pay nearly double the starting salary, generally comes with better benefits, and very often means working fewer hours.

The fact that many don't feel that there's a clear path from a postdoc to something other than a PI job is also part of it—everyone recognizes that they can't all become PIs, and many don't find themselves cut out personality-wise for the competitive nature of the current ecosystem (as there's an impression that you have to dedicate a huge part of your life to becoming a PI to remain successful, minimizing time with family and other activities outside of work).

But ultimately, it really comes down to money. If a postdoc position meant proper benefits—contributions to retirement, guaranteed leave, etc., or especially if it paid even 80% of what many industry jobs open to

the same new PhD graduates are paying, rather than 50-60%, I think far more people would make the choice to stay in academia. Most people want to remain in academia from a scientific purity perspective, it just becomes hard to justify doing that while also wanting to start a family, purchase a home, etc., when an easy option to make substantially more money is available.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Raising pay. Guaranteeing benefits. More non-PI opportunities in academia/that benefit from postdoctoral training. No other approaches are going to fix the problem or impact the retention of more than a tiny fraction of people.

Response 175

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The main issue that I see is pay. So many grad students choose industry/other careers over doing a postdoc because of the huge disparity in pay. Postdocs are not paid what they are worth.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 176

Perspectives on the postdoc roles and responsibilities

Postdocs are currently treated as highly specialized labor for cheap. Postdocs design and run experiments, train the next generation of scientists, write papers and grant proposals, basically function as mini PIs while getting insultingly low pay. “The love of science” and “prestige for working at X institution” do not pay rent.

Fundamental issues and challenges

Postdocs are not paid a living wage, especially in high cost-of-living cities. Lack of consistent support for parental leave and childcare disproportionately women scientists. Again, you can’t pay rent or buy a house with “love for science” and “prestige”.

Existing NIH policies, programs, or resources

Implement a cost-of-living adjustment to postdoc salaries. Increase postdoc salaries to match inflation. Compel universities, especially private universities, with certain amount of assets/endowments to step up and pay the cost-of-living adjustments. Have robust parental leave policies. Have consistent minimum standards for healthcare and childcare coverage.

Proven or promising external resources or approaches

If you must means-test, NIH could do a pilot where the postdocs get a pay bump and track/measure the immediate delta in quality of life and postdocs’ outlooks and inclinations to stay/leave academia, and also see this over time. This isn’t rocket science. Go talk to labor economists.

Response 177

Perspectives on the postdoc roles and responsibilities

I'm the Postdoctoral Officer at [redacted for anonymity] and also a full-time tenured faculty member at the medical school. During my 25+ years as a PI, I've seen little change in the roles that postdocs fill. They are, and have long been, the ones doing the lion's share of the actual lab work. They train graduate students, design experiments and often write the first drafts of papers. In recent years, the number of domestic postdocs has dropped significantly, and the postdocs we get now are mostly from overseas. Though their responsibilities have not changed, their ability to carry out these responsibilities has, as many do not speak and write English well enough.

Fundamental issues and challenges

At the monthly postdoc coffee hours I attend, salary is often a major topic of discussion. Minimum postdoc salaries at [redacted for anonymity] are pegged to the NRSA 0-year level, and this has not kept pace with inflation, particularly in the Boston area. Overall, my sense is that most of our postdocs are not unhappy with their work or work conditions. The pay, however, definitely makes life challenging, particularly for those with families.

Existing NIH policies, programs, or resources

I was pleased to see the NRSA increase released recently. I think raising this farther would have a significant impact on postdoc satisfaction rates across the country. There are a wealth of career development resources available to postdocs. For our postdocs these include those offered by the individual schools within [redacted for anonymity], those sponsored by the postdoc office that I lead, those organized by the Boston area postdoc association, those offered by our neighboring institutions (including the NIH sponsored programs at [redacted for anonymity] and those offered by [redacted for anonymity]) and those offered by the National Postdoc Association. Despite this, few postdocs make use of these resources. Moreover, attendance even at recreational activities (i.e. Christmas parties or kayaking on the Charles River events) is quite limited. What is needed, in my opinion, is not new or increased programming. What's needed are sufficient funds so that we can run postdoc retreats and other community-building activities.

Proven or promising external resources or approaches

The [redacted for anonymity] IRACDA program (sponsored by the NIH) has been extremely successful in placing postdocs in faculty positions, with about 85% landing faculty jobs. In part this is because they are able to be selective, but it's also because postdocs in that program are required to do significant teaching. This allows them to build skills that universities find attractive.

Response 178

Perspectives on the postdoc roles and responsibilities

A post doc seems like grad school 2.0 with slightly more pay. A post-doc in academia ultimately would not be worth it for me because it severely would impact my earning potential.

Fundamental issues and challenges

The pay is honestly the biggest issue. I love research, but a postdoc would not be sustainable for my future goals.

Existing NIH policies, programs, or resources

More pay.

Proven or promising external resources or approaches

More pay would aid with job satisfaction.

Response 179

Perspectives on the postdoc roles and responsibilities

Postdocs perform an essential role in US biomedical research. They perform most of the day-to-day research and represent the future of US biomedical science. Without postdocs, our research efforts would be crippled.

Fundamental issues and challenges

In recent years there has been a pronounced decline in the numbers of qualified graduates wanting to take a postdoc position. In my personal case, I have gone from a situation where I received 10-20 unsolicited postdoc applications per year from qualified individuals, to a situation where I receive only 2 or 3 applications from unqualified foreign graduates. For the first time in my long career, I have been forced to advertise for postdocs, generally with limited success. All of the applicants are foreign and most are under qualified for the positions advertised. Retention is another serious problem, with postdocs departing at short notice for jobs in biotech, leaving research projects incomplete.

Existing NIH policies, programs, or resources

Postdocs deserve to be better paid for the essential function they perform in the academic research endeavor. Certain states, e.g. California, and certain university systems have mandated minimum salaries for postdocs that better recognize their essential role in research and offer them a better standard of living. However, these minimum salaries are far in excess of the NIH postdoc salary scale and grantees struggle to meet the increased salary cost. Since NIH grant budgets are never increased to reflect increased salary costs, better treatment of postdocs comes at the cost of research productivity since group sizes must be cut to meet a fixed budget. This in turn makes grantees in high cost states less competitive. More resources need to be made available to grantees to cover the costs of paying postdocs state or university mandated salaries. The salary scale for postdoc fellowships should also be revised to better reward them for their efforts and make postdoc training more attractive.

Proven or promising external resources or approaches

No response

Response 180

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions at the moment are temporary stepping stones to academia or industry that hamper actual science productivity due to qualified applicants constantly having to move and acclimate to new positions every year or two. Instead, there should be staff scientist positions for researchers with Ph.D.s that provide more stable and long-lasting employment so we do not constantly lose progress from hiring and rehiring or having to re-invent progress every time a postdoc has to move on.

Fundamental issues and challenges

Salary is not commensurate with

1. Expertise,
2. Duties, or
3. Cost of living and is not even slightly competitive with other fields in which that expertise is desired.

It’s frankly ridiculous that postdoctoral researchers are still treated as students and not employees when they are often the main research staff contributing to grant work and other science. Moreover, most PIs are not given the support or training to properly manage a lab, much less senior staff like a postdoc. The burden is placed on postdocs to self-manage or co-manage their work environment with the PI rather than focus on science itself. Lastly, the lack of adequate funding for postdoc’s own research means they are unable to launch their own programs of research and contribute to the creation of innovative research beyond that already imagined by existing PIs, stagnating the process of science as a whole and filtering out many good scientists from continuing in academia.

Existing NIH policies, programs, or resources

Provide more grant funding opportunities aimed at helping postdocs develop their own programs of research and giving them more freedom to innovate rather than only work on specific grants. Provide support for grant applications for postdocs. Modify existing grant criteria so that postdocs hired to work on grants also have time allocated to producing innovation within the grant itself rather than just producing what was already promised.

Proven or promising external resources or approaches

There are not very many, and I'm not aware of any that I've actually found useful.

Response 181

Perspectives on the postdoc roles and responsibilities

A place to learn an optimize things, Doing science for community, Wanted to be an independent researcher so translate this culture to new coming scientist

Fundamental issues and challenges

The wage is so underpaid respect with amount of input (physical, mental) that even a three member family can't maintain a respectful life. Which is so frustrating

Existing NIH policies, programs, or resources

Letter of recommendation for transition

And wage/ salary

Proven or promising external resources or approaches

Check not only with the University as well as with the postdocs, review their opinion and suggestions at time of making policies. Cross check actual salary and overtime done by postdoc. Apply rule for overtime payment strictly.

Response 182

Perspectives on the postdoc roles and responsibilities

I did 5 years post doctoral fellowship before transition to industry

The mentor plays crucial role in post doc positioning. Unfortunately most mentors in US are not supportive for academic transition of mentees.

Fundamental issues and challenges

The MENTORS, they are afraid of competition

They do not want their mentees to have their own lab. they are no suportive. They are bringing scince to a the valley of death

Existing NIH policies, programs, or resources

Additional committees needed to mentor the post doc and direct him to the right path. They should be independent of the mentors

Proven or promising external resources or approaches

No response

Response 183

Perspectives on the postdoc roles and responsibilities

The purpose of graduate school is to train students how to think like a scientist and how to do science. The role of a postdoc is no longer a trainee—but rather an opportunity to enact science as trained in graduate school in a new environment and at a new scale. The scale is larger than graduate school. Postdoctoral

researchers should aim to carve a niche for themselves from the foundation of their host laboratory. This niche should have the capability to sustain many years of research in an independent laboratory.

Fundamental issues and challenges

First, postdoctoral researchers are not trainees. Second, money. Most research universities are in high cost of living areas. The NIH minimum salary for a postdoctoral research is abused by university administrators to squeeze cheap labor out of their employees. The metric of an NIH minimum salary should be abolished. The current state of the postdoctoral job market permits jobs in the Bay Area to have the same minimum salary as a job in small town Connecticut. A single-family home can be had in West Haven for $350,000, whereas that amount could only buy a basement studio apartment an hour away from San Francisco. Pretending there is parity in living costs is a mistake, the consequence is a huge push of recent PhDs towards biotech (recent PhDs are making around $120,000 from my surveying of past-cohort). Third, opportunity cost. The salary disparity is so vast that prospective postdoctoral researchers will instead choose to make six-figures in biotech rather than the NIH minimum salary for five or six years. The benefit of doing a postdoc, with the exception of those who seek to start their own lab, is zero. There needs to be a pipeline between from postdoc to biotech with tangible benefits.

Existing NIH policies, programs, or resources

Increase the F32 salary to $85,000 per year.

Proven or promising external resources or approaches

No response

Response 184

Perspectives on the postdoc roles and responsibilities

The postdoc position is an advanced career position where freshly graduate PhD student get training on needed skills to transition to their permanent position.

Fundamental issues and challenges

- lack of structure in the training, it is up to the PI to mentor or no.
- PI are not hold accountable as some use the visa renewal argument to put pressure and harass their international postdocs.
- postdoc salaries are very low especially postdocs are at the stage of their life where they start their own family
- lack of retirement benefits.
- health insurance to cover family members is a hole in the budget.
- international postdoc suffer a lot as many rules prevent them from being competitive. When a postdoc is affiliated with a USA institution they should be eligible for all grants applications and have some sort of visa allowing them to travel to all conferences regardless of their citizenship. Each time I prepare for a conference, I need to prepare my presentation and select the talks I will be attending but unlike my lab-mates I need to go to the embassy of the organizing country and pray I will get a visa on time for the conference. This is unfair!
- lack of promotion or perspective for promotion
- The academia culture of figured out yourself is counterproductive at all stages, specifically at postdoc levels with the high level of international trainees that never had a chance to get the exposure to USA system prior to their postdoc.
- NIH needs to take into account mentees feedback when they evaluate a mentor or a progress on a project. This ideally should be anonymous.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

- I think I touch based on that already, a postdoc in industry setting is worth 130k a year at starting levels in addition to all the benefits including health and retirement.
- NIH needs to work hand in hand with Congress and policy and advocacy folks in academia, to make conferences accessible regardless of citizenship
- An efficient training can be possible only by holding principal investigators accountable. As of now such metrics is not in place. Asking to provide a list of former mentees and their actual positions does not tell much on the contribution of the PI towards the successful transition.

Response 185

Perspectives on the postdoc roles and responsibilities

The temporariness of a 1 year position is extremely challenging. The low pay is also difficult. NIH should consider increasing their pay scale.

Fundamental issues and challenges

Pay and temporary position (putting life on hold).

Existing NIH policies, programs, or resources

Postdoc trainee mentorship through NIH and connections with other postdocs would be helpful. More postdoctoral funding possibilities for pathways to independence would be meaningful.

Proven or promising external resources or approaches

No response

Response 186

Perspectives on the postdoc roles and responsibilities

I view it as wasted time for most because the salary is terrible and most will not progress to PIs due to restrictive funding opportunities or choosing postdocs that do not enhance their CV. In some cases I feel it is an exploitative position.

Fundamental issues and challenges

Salary. NIH minimum salary is appalling. There is literally no other issue worth talking about that even comes to close to the magnitude of the salary issue. There will not be a future generation of scientists if postdocs cannot afford rent and food.

Existing NIH policies, programs, or resources

Salary. Increase NIH minimum salary.

Restrictive grant applications for those from abroad—why is the K99 my only path to NIH funding? This massively affects postdoc retention too.

Proven or promising external resources or approaches

Salary.

Response 187

Perspectives on the postdoc roles and responsibilities

A temporary position to grow and develop as a scientist. NOT a training, NOT cheap labour for PIs to continue neglecting their mentoring responsibilities.

Fundamental issues and challenges

The pay? The short term contracts? The lack of immigration support during/after said postdoc? The lack of opportunities to be kept on, as an academic, of that's the career choice? The lack of actual training for said academic job OR any other job for that matter.

Existing NIH policies, programs, or resources

Just have more flexibility, ESPECIALLY for foreign students who haven't trained in the US. More importantly pay a living wage and give proper support for relocation.

Proven or promising external resources or approaches

Improvement recruitment by not picking from the same 5 favourite schools. Accountability for PIs to actually mentor people. Pay a living wage and give relocation support. Have direct opportunities for postdoc to transition into permanent staff positions for research and/or teaching roles. If you train them, why not keep them??

Response 188

Perspectives on the postdoc roles and responsibilities

As a postdoc in academia, I made this choice as it is a mandatory training to acquire all the skills (scientific or not) to finally prospect a career as a fully independant PI. It is a crucial period career speaking as we are supposed to be the most productive during this time.

Fundamental issues and challenges

1. Salary. We are PhD owners paid half what the industry pays us—this is not encouraging
2. NIH grants elegibily criteria requiring US citizenship. This is absolutely Unfair to still have poly this as you know with your statistics that most postdocs are international people.
3. Maternity leave

Existing NIH policies, programs, or resources

Us citizenship criteria for the grants, we need to be as competitive as anyone else so it can be faire

Salary once again—if you want us to stay and not to go away

Reinforce equality also for women who are still too few to reach the Assistant Prof stage.

Proven or promising external resources or approaches

If you listen to all the people who are raising their voice on social media you will understand that academia is no longer attractive to a lot due to the reasons explained before. Just read.

Response 189

Perspectives on the postdoc roles and responsibilities

Getting training and technical knowledge to think and work independently about biological problems to ensure new future directions.

Fundamental issues and challenges

1. Overall life: satisfactory
2. Much lower salary than industry
3. 90% of postdoc Mentor(s) does not like a postdoc to leave his/her laboratory in fear of losing a trained slave.
4. A postdoc is used to generate data for his/her mentor's Extramural Funding, but is not allowed to take a part of it as his/ her future independent work.
5. 90% of mentors provide bad recommendation letters when a postdoc tries to join other lab or independent careers (that's why industry jobs do not ask for reference from postdoc's direct supervisor)

Existing NIH policies, programs, or resources

NIH always helps to introduce new policies and programs, but in most cases, the beneficiary of that program is the supervisor of the postdoctoral fellows. Because,

1. The donot need to pay salary for that postdoc
2. Most likely the postdoc will do a part of his/ her supervisors grant from which the PI will make data for a RO1 grant.
3. The postdoc will never be able to use that work to continue his independent work.

Therefore, it seems that the existing method of NIH is not effective to prevent the decreasing number of postdocs in academia as the benefits were grabbed by middleman and not to a ppstdoc properly.

Proven or promising external resources or approaches

Several measures can be considered to improve the situation.

1. At the end of the postdoc training period, a little fund for a year of research (around 100k) to see how he/ she was trained to carry out research independent of his postdoc Mentor confirming that the PI can not use that data to his/her grant application.
2. After completion of postdoc period the PI should make the postdoc as Multiple PD/PI to apply grant if the mentors uses the data of the postdoc.
3. There should be 3 mentors for a postdoctrsining. The postdoc can provide his data thar was generated from NIH support to any one of them to apply for a grant.

Response 190

Perspectives on the postdoc roles and responsibilities

When I sought this position, I saw it as a chance to develop independence as a scientist. This meant confidence in following through with my own ideas; I was already technically skilled and ready to no longer view myself as a trainee. I also wanted opportunities to hone my mentoring and teaching skills, to get a sense of what I wanted the rest of my career to focus on. Having watched early&mid-career PIs I am now certain that that is not a career I want. My PI says it’s a shame because I’d be good at it, and I agree. I’d be good, but I would not be happy.

Fundamental issues and challenges

Job insecurity (present and future), pay not adjusted to regional cost of living, teaching not supported (PI wants you in the lab full-time because they pay your salary and teaching doesn’t directly benefit them). Constantly being referred to as “trainees” in academia (see this prompt) while industry views our skillset as that of a highly trained professional. In Boston, living in a below-median-rent one-bedroom 45min (train) outside the city I was still paying 70% of my salary on rent, following a raise I now “only” spend 55% on rent, at this rate it is mathematically impossible to save towards big goals like retirement. We are not expecting to become 1%ers doing this work but say if the starting salary was 70k it would lift a giant weight off of many of our shoulders and enable us to be more creative and better scientists.

Existing NIH policies, programs, or resources

Non-citizen postdocs are eligible for so few grants it barely feels worth trying. There should also be financial support systems in place for postdocs who don’t want to pursue the TT (K99 grants), ie support for teaching/DEI/policy work.

Proven or promising external resources or approaches

Make it clear to universities that the pay scales are MINIMUMS, not caps like the universities choose to interpret them. This may also be more of a university-level thing, but hire future faculty from your existing pool of postdocs rather than forcing us to uproot our lives every few years for next to no improvements in quality of life.

Response 191

Perspectives on the postdoc roles and responsibilities

As someone who runs a large lab, postdocs are critical for advancing biomedical research into new, impactful areas. They do not need to take classes, are well-trained to conduct research and make use of the latest technologies and approaches, and are not encumbered with the need to seek funding. they can focus their effort 100% on the science, and make big ideas that PIs have happen. The postdoc period is also a time of personal discovery. Often grad students leave a lab feeling cocky, think they know everything, and could start their own lab. the postdoc period humbles them, as they then realize that doing cutting edge science requires a massive amount of luck and grit--as the "softball" projects they are often tasked with as grad students are not so well-flushed out in postdoc period--postdocs are expected to make the seemingly impossible possible.

Fundamental issues and challenges

There are two:

1) people who are considering a postdoc are not stupid. They are some of the brightest people in the world. As such, they look ahead at what lies beyond the postdoc, before they even start. And what they see is grim--they see how most postdocs

a) never get faculty positions and

b) those that do go on to become PIs wind up stressed out beyond belief, trying to get NIH grants when the payline is depressingly low. So as a country, we lose a large number of smart people even before they start a postdoc. One needs to be somewhat foolish to do a postdoc when job prospects are so much better outside of academia. The best way to fix this issue is to fundamentally change how NIH grants are awarded to PIs, so PIs can spend more time doing science and mentoring, and less time stressing out constantly about grants. I recall when I was a postdoc, we would all sit around and ask ourselves why we were doing this, when our peers were in industry or other jobs making literally 10-100x more than us. Makes one then question how "smart" one really is, to dedicate ones life to eternal stress and subpar salary. That gets me to item

2) Salaries of postdocs need to be increased; and obviously that isn't going to happen w/o increasing the amount of $ PIs get on grants. Need more $ in the system, or fewer bodies. this is basic economics. and unfortunately, w/o more $ in the system, the biomedical enterprise will slow, if not decay.

Existing NIH policies, programs, or resources

NIH training grants and R00 type grants are helpful. But as someone who runs a large unit at a large medical center, these grants are largely meaningless when it comes to recruiting faculty. Sure it's nice to see candidates with funding in hand. But we hire to fill a need or missing area. The NIH is sadly great at funding incremental research. So most of the R00 type awardees are doing incremental research. We seek people from HHMI/Harvard/Stanford type labs, who are doing cutting edge research.

So I suppose the NIH needs to find better ways of funding non-incremental research. It is really sad to see what does well at a typical study section--safe, incremental science. I know how to write grants that do well at study sections--they are boring, but the odds of getting a boring grant funded is much higher than a grant that seeks to break truly new ground.

So in a sense, the NIH funding model is probably also sapping the creativity out of talented, ambitious trainees and postdocs. They enter passionate about science, then see the realities, and get disillusioned.

Proven or promising external resources or approaches

Stop funding incremental science. People become scientists because the process of discovery is exciting. Discovery entails taking massive risks. follow HHMI model, fund people, not projects. Great people will do great science, and remain excited.

If NIH continues along this same path, people will continue to play the same "game" (write incremental boring grants), stress constantly about funding, and have the excitement and passion that drove them to become scientists, sucked out of them.

And regarding satisfaction--postdocs also see how the NIH is constantly increasing the administrative burden on PIs. This needs to stop. Other support docs where every single foreign contribution needs to be scrutinized and disclosed, data sharing plans, revisions to biosketch format every few years. Really??? We are scientists, stop asking us to waste our time on things that have absolutely nothing to do with actually doing science.

It is thus no surprise people are leaving the biomedical enterprise in droves. Death by one thousand cuts, all while getting paid well below what your truly "smart" friends are getting paid (in non-academic jobs).

Response 192

Perspectives on the postdoc roles and responsibilities

The postdoc is a position that artificially suppresses wages of the most intelligent and technically skilled labor force in the country.

The only people who should do postdocs are those who

1. Didn't adequately plan for what to do after their doctoral training or
2. Want to secure an academic job.

Fundamental issues and challenges

The postdoc salary is too low.

Existing NIH policies, programs, or resources

Move money from fellowships and training grants to create a special class of research grants restricted to applicants between 0-3 years after their terminal doctoral degree that allow budgets for higher salary and pilot funds for starting an independent research program (honestly the K99/R00 is perfect with a higher salary—get rid of the Fs and make them all K99/R00s—need to give way more of them). Restrict to only PhD holders (not MDs—they have plenty of opportunities already).

Ts need to pay higher salaries.

Proven or promising external resources or approaches

Not really a resource—but mentors who provide space and time for doctoral students to develop ones ideas should be celebrated and emulated. These are sadly fewer than there should be, and rarely recognized.

Response 193

Perspectives on the postdoc roles and responsibilities

A post doc is a highly trained expert practitioner of academic science. They are the workhorses of the field, and are only in "training" in that they are practitioners rather than managers.

Fundamental issues and challenges

The career pipeline is broken; most won't get PI positions, yet there is no other way to advance their career. Doing a post doc is rolling the dice and the odds just aren't very good. Furthermore, having a family while doing a post doc is particularly hard. There's not enough money for childcare, and you have to work beyond the normal hours to be competitive. If I do a post doc, I'll end up in my late 30s before I maybe could have a job that would pay me enough to start a family in a city, but most likely I'd end up leaving the academy anyway and going to industry,.which k could have done without a post doc.

Existing NIH policies, programs, or resources

The NIH needs to find more family support (or higher wages, though this would be more expensive), and career tracks that are not exclusively pushing towards being a PI (since there just aren't enough PI positions to give 2-3 postdocs per lab a job). Terminal staff scientist positions that pay >$80k would make science better, and would make doing a post doc less of a dice roll. This is, to me, a no brainier; there's a reason that firms don't like staff turnover, and the academic model of mandatory turnover every ~5 years is just not good for anyone.

Proven or promising external resources or approaches

I don’t know.

Response 194

Perspectives on the postdoc roles and responsibilities

Publishing, writing grants, collecting and analyzing data, training students, all the things professors with phds engage in

Fundamental issues and challenges

The pay is too low for the degree and skill set phds have, there is really no meaningful location adjustments, the benefits are poor, it’s a lot to ask for a temporary job of an adult who is trying to start a family

Existing NIH policies, programs, or resources

Provide more money to postdocs

Proven or promising external resources or approaches

No response

Response 195

Perspectives on the postdoc roles and responsibilities

postdocs should be considered researchers who devote their time to generating the results and data that drive the lab, since PIs for the most part don’t do experiments and students are learning. A postdoc should be temporary position that involves learning to manage other people like students to progress your research.

Fundamental issues and challenges

- Insultingly low wages that do not scale with cost of living and do not reflect the amount of education required to be a postdoc. It is absolutely ridiculous to expect people to become postdocs if they will be paid $50k, when they could get a job with benefits, twice the pay, and respect in industry
- No guarantee of a good faculty position after working for little reward for years, and putting off having a family and ever having the opportunity to buy a house
- Being treated as a “trainee” when you’re in your 30s and you’ve been doing top research for 10+ years
- Lack of support for parents
- Lack of benefits
- Poor infrastructure for postdoc support from academia
- Often unregulated and unsustainable workloads
- Toxic culture in academia (racism, sexism, expectations of no work life balance)

Existing NIH policies, programs, or resources

increase the minimum salary

Proven or promising external resources or approaches

No response

Response 196

Perspectives on the postdoc roles and responsibilities

Because the academic job market is so competitive, a postdoctoral position is usually necessary for most early career researchers. It is a great opportunity for further learning and to build on our CVs.

Fundamental issues and challenges

The primary issue comes down to salary. Postdoctoral researchers spent at least five years in graduate school living off of a stipend and are expected to continue working in labs for not much more, and with demanding work hours.

Existing NIH policies, programs, or resources

More work towards increasing postdoc salaries and programs and fellowships that recognize the work of postdoctoral researchers, particularly from minorities groups.

Proven or promising external resources or approaches

No response

Response 197

Perspectives on the postdoc roles and responsibilities

The roles **and responsibilities** of a postdoc vary extensively by one's lab. In some laboratories, a postdoc is viewed akin to a junior faculty member; in these environments, the postdoc's independence tends to be respected and their role is to apply the skills they acquired during their PhD to new scientific problems. In others, a postdoc operates as a high-skilled technician who is expected to enact the vision of the laboratory's principal investigator. In my perspective, the role of an academic postdoc should be closer to the former of these two scenarios. Ideally, an academic postdoc should be responsible for performing original research along with related activities like teaching, mentorship, and grant writing, albeit at a pace that is slightly less rigorous than that of an actual professor. The goal would be to produce research that will benefit society, while also learning softer, leadership-type career skills. Presently, however, training environments like these have a tendency to be rare.

Fundamental issues and challenges

I had a single goal that I pursued for the past fifteen years of my life —to become an academic professor. I was always enamored by the prospect of having a career in which I could discover cool stuff, work collectively with a forward-thinking community to tackle an idea that was bigger that any single person, and give back to society's next generation (i.e. our trainees). I worked very hard in pursuit of my goal, routinely putting my research before my own needs. Moreover, I always pursued my best available training opportunities, which brought me to four different academic institutions located on the East Coast, the West Coast, and in the Midwest. For many years, biomedical research was the only thing I envisioned myself doing. Currently, I am conducting the best research of my career while also feeling entirely trapped within an abusive system, to the point where I am now considering leaving science altogether. Being a postdoc today feels like a scam. So, what might be the issues affecting us in academia? They are numerous, but to pinpoint a few: poor treatment of postdocs by senior scientists, mismanagement of funding acquired by postdocs, general neglect of postdocs in the scientific community, a growing academic culture of conformity over innovation, and salary that is not commensurate with one's education level. Many individuals at the pinnacle of US biomedical science earned and deserve their spot, but they typically ascended in a toxic system where enduring poor treatment was accepted as a rite of passage. And yet today, there are simply not enough job opportunities to justify perpetuating that culture. Those at the top of academia represent what their profession values —they must understand that they are delegates for biomedical science. If they want to be followed, they must inspire.

Existing NIH policies, programs, or resources

Honestly, I am unsure if many of the issues affecting today's postdocs can be adequately addressed without major systemic reform. Perhaps postdocs would be better supported if there were fewer of them, and, from the NIH's standpoint that may require providing greater levels of support to a smaller group. The standards for obtaining a PhD in the USA appear to have fallen in recent years, where training programs are currently incentivized to confer PhDs to students who may not deserve them, as graduation rates and time-to-degree are now valued statistics that impact T32 funding. As such, earning a PhD no longer elicits respect from one's superiors by default, as they are wary about the gaps in talent that exist amongst postdocs. Since awarding fewer degrees (or resources) is likely to be politically unpopular, an idea involves the NIH broadly empowering trainees —either at the graduate or postdoctoral level. Just as trainees require a letter of support from their mentor or institution while submitting a grant application or

closing out an award, I propose that, when closing out an award, a trainee should have the opportunity to evaluate the performance of their mentor and institution. Injecting greater transparency about trainee experiences into the funding system may incentivize training programs and mentors to actually advocate for, and support, the people they take on. The NIH could then review this information and use it to decide which institutions and mentors actually deserve F31s, F99/K00s, or even T32s.

Proven or promising external resources or approaches

No repsonse

Response 198

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is multifaceted. While I agree that postdocs are trainees in the beginning, they quickly (years 2-3) can become integral, senior members of their lab with staff-level management responsibilities on top of their research/experimental responsibilities.

Fundamental issues and challenges

The timing of postdoctoral fellowships is such that it often lines up around marriage, family expansion, etc. With little to no guaranteed support structure during or after having kids (e.g. paid maternity leave, child care), it becomes an added burden to also be compensated at a relatively low level.

Existing NIH policies, programs, or resources

The NIAID supplement for family leave is phenomenal and should be a wide-spread opportunity, even for those without current NIH funding.

Proven or promising external resources or approaches

The American Cancer Society has recently included 12 weeks paid maternity leave for postdoctoral fellows, as well as a 3-month expansion. This has been recognized by ACS grantees as being transformational.

Response 199

Perspectives on the postdoc roles and responsibilities

It’s a job.

Fundamental issues and challenges

Low salaries, terrible mentors with no oversight. Poor job outlook. Poor work and life balance.

Existing NIH policies, programs, or resources

Postdoctoral and graduate fellows should just be employees of the NIH and standardize benefits and pay. Remove academic PIs as bosses.

Proven or promising external resources or approaches

Literally any company with functional training programs and HR departments.

Response 200

Perspectives on the postdoc roles and responsibilities

Stepping stone towards assistant professorship or more “senior” position in industry

Fundamental issues and challenges

- Lack of academic job opportunities
- Long timeline impeding the ability to start a family at the desired time
- Low pay

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 201

Perspectives on the postdoc roles and responsibilities

There are fundamentally two forms of postdoc: "learn techniques to get a tenure track job" and "on the way to becoming a staff scientist". Both are viable, both should be supportable. But, there is a real challenge in that most mechanisms are geared towards the former, and specifically look for traits of an independent investigator.

Fundamental issues and challenges

Salary. Salary, salary, salary. When I was a postdoc, life sucked and my wife nearly divorced me because she was sick of being poor. Now it's even worse, because we set a single T32/NRSA scale nationwide, regardless of whether you postdoc in Palo Alto or Kalamazoo. That cannot continue. We have to acknowledge that universities create high costs of living and postdocs need to be paid a living wage. Few people do creative science under financial austerity. I recall a univerisity where I asked how people could afford to train there and was told "marry someone who works for Amazon".

Existing NIH policies, programs, or resources

Index T32, NRSA, and similar to inflation and to local cost of living indices. Just that one change would make a difference.

Proven or promising external resources or approaches

The one thing that some places do well is to ensure that ALL postdocs, regardless of funding source, are treated as employees (not students) and thus have access to health/retirement benefits.

We need to recognize that postdocs are now older people with families. THey are professionals. We need to treat them as such.

Response 202

Perspectives on the postdoc roles and responsibilities

Postdoc positions are training positions designed to help promising research scientists with the following:

1. obtain grant funding,
2. publish more papers, and
3. receive mentorship to assume a research position.

Fundamental issues and challenges

It is really difficult to accept a postdoc salary at 55,000/year with inflation as a single-income single person. Many of the researchers I want to work with are located in cities like San Diego and San Francisco. As a single-income, single person who has no family support in that area of the country, I cannot live off $55,000 in either city.

Additionally, many industry postdocs are paying postdoc fellows $70,000 and not requiring relocation (giving the option of remote work). It is challenging to accept a temporary position (1 year) and relocate with no relocation expenses reimbursed. This is especially challenging when the nature of the work can be done from anywhere.

Existing NIH policies, programs, or resources

Increased salary, more remote working options.

Proven or promising external resources or approaches

No response

Response 203

Perspectives on the postdoc roles and responsibilities

I decided to skip the postdoctoral position altogether since I have spoken to many about their personal responsibilities. As such, I saw this position as a higher level doctoral student. Where they did not have as much say as the PI but they had more influence and understanding of projects than some doctoral students starting out.

Fundamental issues and challenges

- Salary—People cannot have a doctoral salary for years. then make a postdoctoral salary. It is not feasible in this economy.
- Lack of relocation funds
- Lack of independent work

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 204

Perspectives on the postdoc roles and responsibilities

Vital underpaid position that drives the scientific enterprise in the country .

Fundamental issues and challenges

- Extremely bad situation for junior physician scientists .
- No dedicated research time allotted by most institutions without grants .
- Clinical workload leaves no time to write initial grants .

Existing NIH policies, programs, or resources

Intramural program should encourage research in all areas including common health problems like diabetes and obesity instead of focusing on extremely rare diseases of little public health relevance.

Intramural program should focus on admitting more extramural candidates as faculty.

The Pay for junior physician scientists in intramural and extramural programs fall within the bottom decile for market rates . Expecting great applicants to apply for these positions with this pay is wishful thinking at best .

Proven or promising external resources or approaches

Improve pay , work—life balance and encourage the best applicants from all over the world to apply so that USA is the leader in science .

Invest(funding) in promising physician scientist based on past track record for atleast 5 years .

Response 205

Perspectives on the postdoc roles and responsibilities

The reason is obvious. The pay is terrible, the training period is too long for maybe getting a tenure track position and maybe getting funded and maybe getting tenured.

Fundamental issues and challenges

Salary

Existing NIH policies, programs, or resources

Increase salary

Proven or promising external resources or approaches

Increase salary

Response 206

Perspectives on the postdoc roles and responsibilities

I see it as just an internship type of position until I find a job where my competence and effort are appreciated.

Fundamental issues and challenges

The pay is simply embarrassing. I accomplish 5-10x more compared to people with no scientific education straight out of undergrad, and yet their work is appreciated more than mine. Not to mention that last year true inflation (the only categories I have money to spend on—groceries, rent, gas) was 17%, and you guys gave me 2% compensation for it. Just dehumanizing

Existing NIH policies, programs, or resources

The pay. You have 100 billion to waste on unsolicited involvement in every single war possible, but not for us to build this country. It's embarrassing. I care more about building the future of this country than it's own government does.

Proven or promising external resources or approaches

Check out how much same jobs are paid in industry.

Response 207

Perspectives on the postdoc roles and responsibilities

I view a postdoc as job—a research scientist—with the goal of fostering independent research. Like any other job, postdocs learn new skills. However, to call postdocs trainees negates their massive prior experience, earning a PhD in a highly related field. This view leads universities to minimize postdocs as trainees—meaning they have access to fewer benefits and lower salaries.

Fundamental issues and challenges

The fundamental issue is salary. The NIH and universities speak often about DEI work and increasing diversity, equity, and inclusion in science. When you pay a postdoc *at minimum* 54k, when an industry job can be double that out of grad school and triple with a few years of experience, you are precisely excluding those you wish to include in science. All individuals who come from low SEC-over-representing those who come from historically oppressed groups-often lack resources to compete with their privileged peers. Why would any person who is in debt, who had to pay for college, who had to support themselves in grad school, who has a family that relies on them, choose to stay in academia? How do postdocs choose to have families when institutions like [redacted for anonymity] don't even offer affordable childcare? In boston, childcare is $3k a month (with a $1,200 YEARLY allowance from [redacted for anonymity]). That leaves $1500 a month for rent. In Boston, that doesn't even get you a studio, so you better be lucky enough to have your partner live in the same city as you. And then food, insurance, taxes? If you are an NIH fellow—guess what! You now have the honor of paying for your insurance out of pocket and getting reimbursed, but you now have to pay *extra taxes on it* because you are not a [redacted for anonymity] employee. It is fundamentally irresponsible for the NIH to not come up with ways to at least scale the stipend to cost of living. Universities will always pay as little as possible; the NIH sets the bar. Paraphrasing a recent tweet: it is cruel to expect that any scientist could perform at their intellectual best while paying survival wages.

Existing NIH policies, programs, or resources

1. Specify that trainees receiving NIH fellowships may remain classified as employees of their home university. As far as I know, there is no stipulation that fellows must re-classify their employer upon receipt of fellowship (for example, as a student on an NIH fellowship, I am still an employee of my university). Yet postdocs must reclassify as 'external fellows,' no longer considered university employees. I am considering simply not applying for NIH fellowships as a postdoc if this remains the case, as I do not want to have to pay more in taxes on my insurance, lose my guaranteed paid family and medical leave from my state (massive concern!), and lose other benefits as a supposed honor of being selected for a fellowship! That is insane and ignorant on the part of the NIH to not consider the repercussions of the change in employment status. So: if universities just choose this option as an easy out and it is not required: please clearly STATE this in the fellowship award so it can be shown to HR. But ideally, make it even easier—Re-configure how they are paid to match grad fellowships and pay through the university. It is absurd to lose money when you win a fellowship.
2. Raise the minimum postdoc salary. If it cannot be scaled across the whole US, find a way to scale it regionally or state wide. You will lose postdocs, especially the people you say you want to recruit—women, URMs, first generation researchers—if you do not do this.
3. Provide additional funding mechanisms for subsidized child care.

Proven or promising external resources or approaches

No response

Response 208

Perspectives on the postdoc roles and responsibilities

To preface, I completed my Ph.D. in biomedical engineering (optics) in 2021, postdoc in behavioral neuropharmacolgy in 2022. As a postdoc entering a brand new lab, I set clear expectations with my PI that my goal was to build my own research operation focused on building advanced microscopy platforms to study astroglial physiology in murine drug/alcohol use disorder models. I had the optical systems engineering and glial biology expertise. My PI had the behavioral neuroscience expertise and a willingness to let me loose in his lab. The goal of my postdoc was to learn what I needed from my PI and lab mates to build a compelling proposal to fund my own lab within a few years of joining—all while installing what technical expertise I brought in optical engineering and image analysis to streamline their experimental workflows. My PI and I saw our work together as a mutually beneficial collaboration to build each others careers, with the expectation that we would help each other out. Though our time was brief, I felt nothing but full support from my PI and the lab during my time there and leading to my departure.

Fundamental issues and challenges

The School of Arts and Sciences at my institution shot down my negotiated stipend, citing the resulting gender disparities in pay it would have created in the lab. My stipend was pegged to the NIH minimum in a city that has seen double digit home value and rent price growth in the last 4 years.

My family situation left me geographically constrained in the postdoc positions I could pursue. Despite nearly a dozen offers across the US, the most suitable option was staying at my doctoral institution but moving to a new lab in a different college and department. I was advised this may count against me in my grant applications by all mentors except my postdoc PI.

Academia has successfully instilled this idea among trainees and university administrators postdocs cannot make more than the NIH minimum recommended amount. As cost of living grows nationally, the tradeoff between a stable, comfortable career and the noble pursuit of fundamental science no longer makes sense. For me, that was realizing that my earning potential over the next decade was questionable at best in academia. And i needed to provide for my wife and infant daughter. it took 3 months in my postdoc to realize academia was not a financially sustainable career path for me if I intended to provide for my family.

At least for US citizens, there is very little incentive to pursue an academic career outside intellectual curiousity. The same skillset I am using during my postdoc earned me multiple $100k+ job offers in industry. In my current position, i nearly tripled my postdoc salary and relocated to be closer to extended

family. That sort of career move is not possible in academia today—and trying to make it happen is financially unsustainable.

Existing NIH policies, programs, or resources

The NIH needs to mandate cost of living adjustments into their minimum salary guidelines for postdocs based on local rental prices and median home sale values.

The NIH needs to incentivize institutions to support postdoctoral researchers. Currently at my institution, postdocs cannot negotiate compensation levels. Postdocs are not eligible for employer sponsored retirement contributions or tax advantaged savings vehicles.

The NIH needs to instruct institutions to cover fellowship recipients (e.g. F or K awardees) health insurance premiums, retirement contributions, and temporary disability insurance. At my prior institution, fellows made less money than those funded off of research grants because their health insurance was worse coverage, fully unsubsidized by the institution, and there was no retirement savings vehicle made available to them. Despite the career impacts of these awards, the economic effects are palpable at R1 institutions.

The NIH needs to manage expectations of study sections on F and K award applications. The level of scrutiny of these grants that all trainees ultimately see select against any trainees with a family to take care of or any other personal obligations outside their careers. It discourages many trainees (including myself) from even trying to make it happen.

Hold institutions more accountable for taking care of their graduate students and postdoctoral scholars.

Proven or promising external resources or approaches

Just listen to the academic chatter on twitter. through a lot of the noise, there is a LOT of valuable perspective to be had.

Response 209

Perspectives on the postdoc roles and responsibilities

In theory, a postdoc should be a time for a person to begin to gain new research and management skills while generating data to craft a research plan that will allow them to run their own research group. In practice, it is often a way for labs to operate with highly skilled, low paid labor. There are no safeguards to ensure that PIs will help their trainees get academic posts in a timely fashion, or allow them to take research discoveries with them to their next lab. The competitive academic job market compounds this, as postdocs now need 2-4 first author papers which can take 6-8 years in many fields. This is far longer than it takes to learn new skills and learn to mentor. The postdoc, as it exists today, is ripe for abuse.

Fundamental issues and challenges

The primary issue is the massive pay disparity between the postdoc and all other career paths available to a PhD-level scientist. Without a partner or family support, it is very difficult to live comfortably on a postdoc salary, particularly in areas of high cost of living. Even when a scientist would like to complete postdoctoral training it can be impossible to continue when other paths offer financial stability, particularly as the postdoc aligns with a time in life when many people would like to start families/purchase a home. The second hurdle is the lack of anything close to a guarantee that a tenure-track faculty position awaits them at the end. Most postdocs will not end up securing a tenure-track faculty position and will have to switch career paths anyway, so the idea of doing so many years of additional training for low pay when the likelihood is that you will not secure a position at the end anyway is very difficult to swallow. I think an additional factor, particularly for marginalized groups like women, people of color, and LGBTQ people, is the concern that academia has not yet successfully established proper workplace norms to protect these groups. This is especially true when the lab structure and the job application process mean that a handful of people can decide the fate of your career. It puts trainees in a tenuous position, and institutions are still too slow to act. Entering a career track where there are HR departments and professional standards are enforced can feel much safer to a person in these categories.

Existing NIH policies, programs, or resources

Increase postdoc pay scales, and consider a cost-of living adjustment. Postdocs in Boston, San Francisco, and New York cannot survive on their salaries, and a national pay scale does not make sense. But also

make it more feasible for PIs to have career researchers in their labs by including funding for PhD level scientists who don't necessarily want to be PIs but who do want to work in academic science and earn a livable wage. The current system is a pyramid scheme--each PI is training many postdocs in order to put out sufficient research output, but there are not that many job vacancies each year. If labs were not so reliant on postdoc labor, a shortage of postdocs would not be a concern, because we don't actually have a shortage of new PIs. The solution is not luring more PhD trained scientists to do an academic postdoc before being forced out of the academic track because there isn't a job for them, the solution is to diversify talent in the typical academic lab such that postdocs aren't a necessity to get work done. Also eliminate the absurd payback requirement for the F32. Postdocs not supported by government funding would never be expected to pay back their salary for research hours worked simply because they left the field, and its absolutely ridiculous that the "reward" for a competitive government grant is a pay back requirement that often isn't even mentioned or described to recipients until they will accept the award. It benefits no one, and should be a no-brainer to eliminate it. Society benefits from trained scientists in many ways, not just in academia. Postdocs produce the majority of research output each year, pretending that it is only training and not a job is a farce.

Proven or promising external resources or approaches

The NIH should require that institutions offer retirement benefits to postdocs. The academic postdoc is growing in length, and it is unacceptable that many of them do not get any retirement contributions until they are in their late 30s/early 40s and have completed a postdoc. Acknowledge that the postdoc is primarily a source of cheap labor in labs, rather than a bona fide training, because the majority of them will not get a tenure track academic position at the end. Therefore, postdocs should not be "exempt" from benefits that would be considered standard for any other employee.

Response 210

Perspectives on the postdoc roles and responsibilities

Learn to do solid science. Also, to set up your field for a career in science.

Fundamental issues and challenges

In this order of priority:

1. Postdoctoral pay is around 1/2 what it should be;
2. Insufficient support for laboratories;
3. Time required on the job to be competitivve

Existing NIH policies, programs, or resources

the minimal recommended postdoctoral pay must be increased. NRSA award payback clauses should be absorbed by the institution that is benefitting, not the postdoctoral researcher. PIs should be allowed to use federal funds to supplement postdoc pay.

Proven or promising external resources or approaches

Damon Runyon and Jane Coffin Childs award; Fellows programs (ie Whitehead or CSHL).

Response 211

Perspectives on the postdoc roles and responsibilities

Indentured servitude to megalomaniacs

Fundamental issues and challenges

See above, along with horrible pay, unreasonable hours and expectations culminating in a fragment of a chance at a career with no job security.

Existing NIH policies, programs, or resources

Mandatory managerial training for PIs, fix the "rich get richer" system of funding, de-anonymize peer review

Proven or promising external resources or approaches

Good luck saving academia

Response 212

Perspectives on the postdoc roles and responsibilities

Position to grown professionally in, get more experience, more independence and a stepping stone for a career in academia or industry

Fundamental issues and challenges

The biggest challenge is low salary compared to industry positions. Second challenge is the limited number of vacation days and not being able to see family often due to both financial and holiday restrictions

Existing NIH policies, programs, or resources

- Increase the salary of the postdocs and provide better insurance, more
- Vacation days and more support
- For foreign scientists (visa issues, spouses, children etc)

Proven or promising external resources or approaches

Any European institution can serve as a role model when it comes to vacation days, insurance and other benefits.

Response 213

Perspectives on the postdoc roles and responsibilities

Conduct research at high level of independence, publish and present research findings, attempt to secure external funding, establish new research program distinct from mentor to secure academic independent investigator position.

Fundamental issues and challenges

Low pay relative to level of training and experience, high cost of living in cities with 'desirable' institutions, job insecurity as a postdoc, low chance of securing faculty position in academia, unclear path to jobs in industry if outside biotech hub regions.

Existing NIH policies, programs, or resources

higher Mandatory minimum pay scales for nih funded postdocs, career guidance and counseling each year for postdocs

Proven or promising external resources or approaches

No response

Response 214

Perspectives on the postdoc roles and responsibilities

Postdoc position is a job. It should be considered that way, and every postdoc should be getting benefits as that of a job. That includes, incremental salary with every inflation cycle, but not limited to salary.

Fundamental issues and challenges

The major issue is salary. Scientific research per se is a high risk job. It includes lots of sacrifice and mental pain. When a job of this nature with lesser motivation, at least money as a factor which is compatible with industrial postdocs, the retention might increase.

Existing NIH policies, programs, or resources

Not aware

Proven or promising external resources or approaches

EMBO postdoctoral fellowship program is a promising program to get inspired by

Response 215

Perspectives on the postdoc roles and responsibilities

A postdoc is a training period where I perform research, learn new techniques, and explore new ideas/directions in preparation for my future lab.

Fundamental issues and challenges

STEM PhDs make >80k if not 6 digits/year, but postdocs are paid ~50k/year. Thus, if a PI cannot provide 30k+ worth of mentoring & career development (in terms of trainee success and satisfaction), they also should not be hiring postdocs, or at least should not complain it is hard to hire "qualified" ones. On one hand, some PIs do not care about the careers of postdocs—they just want the experiments done. On the other hand, there is a systemic lack of funding which PIs cannot address as individuals. Finally, a majority of STEM PhD graduates deem it is more desirable to land an industry job directly than doing a postdoc, since tenure-track positions are rather competitive.

Existing NIH policies, programs, or resources

1. I have known many postdocs doing "chasing postdocs", doing postdocs after postdocs hoping to get a desirable position. I'm sure something can be done about that both in terms of the PI and the trainee. One or both could be true: the trainee was not informed of alternative career choices that they can pursue and/or the PI has not given sufficient mentoring and career development for the trainee to land a permanent position.
2. NIH should include confidential mentee evaluations of PI for funding decisions. NIH should prioritize funding PIs with a track record of mentee success and well-being and avoid PIs with a reputation of bully, harassment, and/or other toxic behaviors, which are unfortunately not uncommon. PIs with poor mentee outcomes should be banned from hiring postdocs with NIH funding until a improvement in mentee evaluation.

Proven or promising external resources or approaches

Higher mentee salary baseline and more funding from Congress designated for mentee salary (not direct cost) will help for sure.

Response 216

Perspectives on the postdoc roles and responsibilities

It is used to exploit highly skilled and highly trained (>10 years) workers for their labor at virtually no cost, as the pay rate is less than a living wage in almost every market.

Fundamental issues and challenges

When you run the actual numbers for the hours that are worked, the pay is about half minimum wage. In order to be considered for a position in academia, lots of people who weren't born rich have to do 2 or even 3 postdoctoral assignments to even be considered

Existing NIH policies, programs, or resources

Limit hours, increase pay. We've been saying this for YEARS AND IT HAS FALLEN PERPETUALLY ON DEAF EARS

Proven or promising external resources or approaches

PAY RATE YOU FOOLS

DO YOU NOT SEE HOW MUCH RENT HAS INCREASED? I LEFT ACADEMIA BECAUSE I WAS LITERALLY STARVING AND WORKING 90+ hrs/wk

Response 217

Perspectives on the postdoc roles and responsibilities

The post doc for physicians is different than PhDs. Having a T32 training program is essential for medical programs to retain trainees in research but often the PI of the grant has interests that vary widely from that of the clinical fellow. Having flexibility for trainees and broader scope of research options for trainees is important for retention.

Fundamental issues and challenges

Many women physicians want to pursue research training after medical training. However, due to the long medical and residency and fellowship training, women of child bearing years are often faced with the decision to start a family before they finish training. The timing of having children extremely stressful for trainees. Childcare coverage during the infant and toddler years is a nightmare for most academic moms. School age children are more independent and it gets easier after a decade of parenthood. Many of my physician and PhD friends I trained with who left research did so due to the need to stay home with children or need for a stable income. Lack of family support and no grandparents nearby, lack of spousal support to stay home full time, high cost of living, high childcare costs and extremely limited availability of childcare options and often terrible hours (9-4) that hardly cover the typical academic or physician schedule are all to blame. However, mentors and grant cycles that are not forgiving for those with young children are also at fault for forcing women out of the workforce. Lack of reentrant programs or mentored programs for those who took time off to stay home are needed.

Existing NIH policies, programs, or resources

More clarity on the training timeline and how to request additional time for maternity leave.

Proven or promising external resources or approaches

Interdisciplinary women in medicine meetings at each institution should be supported and funded and prioritized. Many women are the only female in their department with a very heavily skewed group of male decision makers at all ranks above them who never knew what it was like to juggle career and breast feeding. Flexibility to work from home is important. I had to pump milk in the car during lunch break of my standardized exams because the advanced notice requirement to request disability accomodations for Prometric happened well before I even told my family I was pregnant and before I even thought I would need to even ask for time to pump. My infant son was only a few weeks old when I took my first board test and 3 months for the 2nd test. Lack of time and lack of private pumping space both at work and during testing is an issue. A women in medicine group is important for supporting trainees and talking openly about these and other barriers and options for leave. Post docs have a particularly hard time taking time off due to no formal leave policies and no one to cover during the absence. Women want to work, be successful and have a family. If you make them choose, you will push them out of academics because family always comes first.

Response 218

Perspectives on the postdoc roles and responsibilities

The postdoc position advertised itself as being a professional training emphasizing experiential professional training as part of the 2 year fellow shop program. So I expected to learn more from practical work experience.

Fundamental issues and challenges

The fellowship was nothing that it was advertised for but instead feels like being enrolled in a grad program that will result in a degree while also working a full time job. The pay is so low for having to live in the most expensive cities in the US. Work hours are ridiculous—working 50-60 hours a week. There is pressure to publish and less focus on conducting good research. I was given 3 months of maternity leave, only to be made to work all evenings, weekends for rest of the year. I don’t even take lunch breaks or other breaks while at work. It’s just so unfair.

Existing NIH policies, programs, or resources

All of it. Whoever is making these policies—ask yourself would you do this fellowship for the workload and pay?

Proven or promising external resources or approaches

Work environment—make it more friendly to postdoc with families, prioritize work-life balance.

Response 219

Perspectives on the postdoc roles and responsibilities

My understanding is the purpose of graduate school is to learn how to do research effectively, while developing somewhat of an expertise in your selected field. A post-doc is the next step in training, in which you will

1. apply what you learned in graduate school to do more research and develop expertise, while
2. learning from a mentor how to be a PI (e.g. grant funding, managing a lab etc.). This makes sense to me, as a post-doc seems to be the next step for those who want to write grants, run their own research, and join an academic environment.

Fundamental issues and challenges

I currently work as a Service Fellow at CDC, a position I obtained in the second year of my PhD. I had been interested in doing a post-doc and joining an academic career, and was especially interested in being able to answer my own research questions (in a way that we are not always able to do in government), but now entering my late 20's, it's difficult to justify leaving a job with a salary of 78k that only required a Master's degree, to make 55k with a PhD. Post-doc salaries are not competitive compared to government, and especially not industry. Additionally, there is a lot of uncertainty about how long a post-doc may be funded for, and thus it is difficult for me to make the decision to move myself and my partner across the country, potentially, just for a one-year position. I'm also deterred by the fact many post-docs seem to include research coordination (which includes duties that do not require a PhD) or student management, which can easily expand and take over what should be protected time for research.

Existing NIH policies, programs, or resources

I think at the very least the post-doc salaries should be adjusted for locality, or match the government stipend for a position similar to the one I have, at a GS-11.

Proven or promising external resources or approaches

I think it would be great to have some kind of post-doc listing so it would be easier for grad students to find positions. For example, I work a lot with the Midlife in the United States cohort, and it would be great to be able to search somewhere for all post-docs related. All post-doc interviews I've gone on so far were due to networking and my advisor, which doesn't seem very equitable. It would also be great if post-docs were more assured of the step following—a common fear to me and my grad student cohort is that academic positions will be scarce by the time we finish a post-doc.

Response 220

Perspectives on the postdoc roles and responsibilities

An opportunity to take on a new project and explore new directions different from grad school. A step towards independence and learning new bench, management, and mentoring skills

Fundamental issues and challenges

Where to start, there are so few incentives. First and foremost, the salaries are insulting and unlivable for the amount of training required. Post docs should be able to live comfortably and save money, as they are highly educated and specially trained professionals. The assumption that you will relocate for a post doc, and then relocate again for a faculty position. High stress and long hours, weekend work. Poor health and retirement benefits. No guaranteed parental leave. The classification of post docs as trainees. Extremely few permanent academic research positions that are not principal investigator positions. And low pay for those positions that do exist. The increasing competition for increasingly less powerful (dollar wise) grants. The lack of repercussions for sexual harassment, abuse, and academic integrity creates a hostile work environment for many and discourages those who are rigorous and stringent in their research practices.

Existing NIH policies, programs, or resources

Higher pay and better benefits, funding for childcare costs (substantial amounts that make a considerable dent in the total amount). Repercussions for those who have sexually, physically, or emotionally abused trainees and colleagues. More serious repercussions for those found guilty of academic dishonesty.

Proven or promising external resources or approaches

No response

Response 221

Perspectives on the postdoc roles and responsibilities

a post-doc is someone with skills that still needs time to learn some new skills to make it to the independent research career.

Fundamental issues and challenges

There is too much competition from industry and too few prospects for tenure track jobs. In my opinion the post-doc talent pool is very shallow right now and I think this is because of the poor compensation and career prospects.

Existing NIH policies, programs, or resources

Post-doc pay needs to be increased if we want good people to stay in academic science. A lot of the best scientists are not even considering staying in academic research.

Proven or promising external resources or approaches

No response

Response 222

Perspectives on the postdoc roles and responsibilities

I view it as an opportunity to gain more skills. You don’t want to be a spin-off of your PhD advisor, so you mesh what you learned there with something that will differentiate you

Fundamental issues and challenges

Unclear timelines (used to be 2 years, now 6 is common). Would be good to have a formal cap. Also, pay is horrible, especially in medium to large cities. Postdocs need to be able to afford to live 20 min or less away from lab to maintain work-life balance. Also, doing more to subsidize childcare costs (both direct and indirect). The way potential postdocs search for jobs is also difficult compared to searching for jobs in any other industry

Existing NIH policies, programs, or resources

NIH childcare supplement is far too low and should be expanded to include more types of childcare (ie those without a license)—many of the cheaper in-home day cares are not licensed, many nannies are not licensed, and au pairs are never licensed. Childcare for an infant in larger cities and surrounding suburbs is approximately 2/3 the salary a postdoc gets after taxes, so without partners making substantially better money or doing 100% of the childcare, it would be impossible to afford full time childcare

Proven or promising external resources or approaches

Funding pipeline conferences and workshops so postdocs can make connections with universities and industries that would use their skills

Response 223

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low pay,

Existing NIH policies, programs, or resources

COVID extension on K99 eligibility is not fair for people who started their postdoc in 2020! They are affected by the shutdown without any data that can be analyzed. However, they are not entitled to get K99 COVID extension since NIH does not provide further extensions beyond people whose eligibility ends in 2022. This is totally not fair. Everyone starting their postdoc while expenceing COVID-19 shutdown should all get 2 cycle extension.

Also, 1 yr of childcare extension for K99 eligibility for fathers should be granted automatically like mothers. Nowadays, both mothers and fathers mostly share the same parenting responsibilities.

Proven or promising external resources or approaches

No response

Response 224

Perspectives on the postdoc roles and responsibilities

I view it as a "traditional" stepping stone for those who want academic positions in America. Our department often penalizes ABD applicants who apply for TT positions for NOT having done a postdoc.

Fundamental issues and challenges

As a doctoral student who has been considering what to do after graduation, my biggest concerns are finances and quality of life. I would like to have children and get married in the next couple years, but the pay level and work/life balance of postdocs in America are huge turn-offs considering the non-academic alternatives. I feel like a postdoc really delays "starting your life".

And given that they're mainly to prepare you for TT jobs, why would I bother if the future of higher ed in our country has made me so pessimistic?

Existing NIH policies, programs, or resources

Increase the minimum pay rate!

Proven or promising external resources or approaches

No response

Response 225

Perspectives on the postdoc roles and responsibilities

- Advance science
- Learn new skills
- Train grad students and techs
- Become a leader in specific topic
- Publish well in order to get a job

Fundamental issues and challenges

- Salary is at least 2x lower than industry and too low to make ends meet.
- Moving across the country is difficult, especially when you are leaving close friends and family or when a spouse or partner must change jobs to come with you.
- Abuse is rampant and quality of life depends too strongly on your PI. Academic protections are weak.
- Postdocs do not feel the NIH or their institutions value them.
- No child care leave protections during peak child bearing years. I have ZERO paid child care leave at my institution.

Existing NIH policies, programs, or resources

As a non-citizen or permanent resident, the NIH does not support me financially through fellowships. Opening fellowships to international scholars would be important for me.

The NIH sets the salary of most postdocs in the nation by setting the NIH minimum. The NIH could make doing a postdoc a viable financial decision for so many more people if they increased the NIH minimums drastically.

Proven or promising external resources or approaches

Increase the NIH salary minimums and I can guarantee there will be more individuals interested in postdocs.

Response 226

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Need to pay higher salaries

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 227

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an opportunity for advanced scientists to learn new skills, and contribute to science at the highest level by bringing experience and knowledge to the most difficult problems in biomedical research. We are the “hands” who carry out the most difficult NIH-funded projects, and who provide hands-on training for graduate students and technicians. Professors are the ones who lay out the overall research strategy for a laboratory, and who secure funding to carry out such strategy. Postdocs are the academic workers who implement the strategy and turn it into reality.

At the same time, a postdoc position is a mentored training opportunity. Postdocs are not permanent staff scientists, but rather accept low pay for a heavy workload in exchange for mentorship from faculty in new scientific fields distinct from their graduate training, and in the more subtle and challenging aspects of an academic career such as grant writing, peer review, and publication. Ultimately, due to its low pay and ambiguous status in the academic hierarchy (we’re trainees when universities don’t want to pay us more, and employees when universities don’t want to accept more rigorous oversight and training for us), postdoc positions must be temporary. They provide the chance for the postdoc to build the body of published work, and skillsets to move on to independent investigator positions within academia, or advanced and lucrative positions in industry.

Fundamental issues and challenges

- Timelines are absolutely punishing.
- It takes years to produce the minimum 1-2 high-impact first author publications needed to compete for faculty positions. Much more than the 3-5 timelines that guide most NIH policy on postdocs.
- 7-10 years is the norm at my institution for postdocs who successfully compete for faculty positions. It's not that postdocs willingly chose to spend so much time in training, but it simply takes that long to generate data for about two high-level papers.
- Pay is abysmal. $60,000/year in Boston is barely enough to afford an apartment within commuting distance of campus, with no savings.
- The pay gap compounds time pressure. Every year spent in a postdoc feels like an "ante" in a poker game, where you give up sustantial financial security for one more year of work towards independence. By the mid-stages, the timeline feels crushing.
- There are almost no funding opportunities beyond year 4. This puts postdocs in a precarious position as they must be supported by lab grants.
- The extended timelines and financial insecurity especially weigh on parents (especially mothers).
- Postdoctoral advisors have too much influence and control over their postdocs. For example, my advisor delayed editing and my manuscript for over a year, causing me to miss out on multiple grant opportunities.
- Mentorship is variable and usually lacking. Many PIs see postdocs as labor to be used and exploited.

Existing NIH policies, programs, or resources

- The K99 COVID extensions were completely mishandled. I lost eligibility when I passed 4 years in the postdoc this October cycle. If I had started my postdoc a few months earlier, I would have been eligible for a one—or two—cycle extension. My postdoc was severely impacted by COVID (3 months shut out of lab, 1 year with access for just 8 hours a day), but yet I received absolutely zero extension for the K99, the most important training grant a postdoc can apply for. The NIH should have blanket extended eligibility for year 5 for all postdocs in their positions during the pandemic.
- It should be possible to "pause" the 10-year Early Stage Investigator Status (ESI) and 4-year K99 timeline for up to 1-3 years at any point post-PhD. ESI and K99 timelines are huge pressures, and severely discriminate against postdocs in slower fields, who pursue different fields than their PhDs, or with substantial family obligations. Allowing trainees to "take a time out", stopping the clocks, for any reason would be incredibly helpful as it provides greater flexibility to pursue challenging training opportunities and reduce time pressure on postdocs from diverse backgrounds. Postdocs who become faculty without taking the timeouts can still benefit by extending their eligibility for ESI status on 1st R01 applications.
- Postdocs on training grants should be required to have a committee of 2-3 faculty separate from their primary advisor to review their work, provide additional mentorship, and provide a "check" on advisor abuses.
- There should be funding opportunities for more senior postdocs (5-8 years) to compete for fellowships that pay them ~$80-100k as staff scientists/non-tenured faculty. These funding opportunities would be an acknowledgement of the reality that a postdoc takes 7+ years now, and provide additional salary security for the most advanced postdocs.

Proven or promising external resources or approaches

- ESI and K99 timelines should begin as soon as an individual enters a mentored postdoc position, NOT as soon as the PhD is awarded as is current policy.
- This will enable trainees to pursue internships/industry experience before entering into mentored postdocs.
- There are several advantages here.

1. Some postdocs would begin with substantial industry experience and contacts, enriching their research.
2. Many trainees who will end up in industry anyway will chose to stay there, reducing pressure on the "postdoc pipeline".
3. 1-2 years on an industry salary would relieve substantial financial burdens for many postdocs.

- Universities should treat postdocs as staff, not as trainees.
- Universities should not have separate benefit categories for postdocs with external grants and postdocs funded by lab grants. Many postdocs win an F32 and promptly lose their health insurance.

Response 228

Perspectives on the postdoc roles and responsibilities

It means advance my scientific career in more independent way. It is a way in which I can get even more specialized training in a state of the art environment addressing scientific unknowns. Having said that, it increases the responsibilities within the PI's environment

Fundamental issues and challenges

Given the responsibilities and excessive work load, I do believe that if postdoctoral researches are given that workload, they should received better salaries and benefits. Plus, the research intense environment makes extremely hard to handle research and family responsibilities. Then a more friendly schedule for post docs with less pressure will be beneficial.

Existing NIH policies, programs, or resources

Increase salary and benefits

Proven or promising external resources or approaches

No response

Response 229

Perspectives on the postdoc roles and responsibilities

As a T32 associate program director and a laboratory PI, postdoctoral fellowships are critical for providing the needed training and networking to become an independent scientist. This may be in academics or industry or other venues, but it's really teaching the key thinking, problem solving, technical, and communication skills.

Fundamental issues and challenges

There are multiple key issues:

1. The Postdoc salaries are very low, compared to that of equivalent skill levels in industry. We hear a lot about postdocs asking why they are working so hard, for so little pay, when their colleagues may earn 2-3x as much in industry or other equivalent jobs. In addition, union negotiations and contracts means the actual salary of a postdoc is not what the NIH provides —that funding gap needs to come from somewhere, and if the institution doesn't provide support, that postdoc position is not filled.
2. There are fewer and fewer US Citizens wanting to do postdocs, yet we can't fund highly qualified foreign-trained scientists who would be able to fill in the gap and push our science forward.
3. Job transitions are extremely difficult, with the tight funding for junior faculty and general lack of suitable positions; and
4. Postdocs should have lives too, and so basic things like parental leave policies need to be better unified across institutions.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

It would be useful to look at other foundation grants that do not have a citizenship or US Residency requirement—and understanding better about how their fellowship graduates do and how many stay in the united states.

Response 230

Perspectives on the postdoc roles and responsibilities

In my opinion a postdoc is a highly trained individual who following completion of their Ph.D, is very knowledgeable in theory and practice of their particular field. Postdocs are in most cases the driving force of projects in any lab as they are able to think independently and critically. Individuals who seek postdoctoral training targeted towards academic research careers are seeking to establish their names as budding experts in their field through publications and presentations at conferences.

Fundamental issues and challenges

As a new transplant in the U.S and having experienced a previous postdoc in Europe, I can clearly see that postdocs in the U.S are absolutely not valued. They are grossly underpaid for the living costs in US states, with poor benefits which in some cases they are required to contribute towards from the little salary they get. It is near impossible to raise a family on a postdoc salary alone in the US, (more so for international postdocs whose partners are not allowed to work), given the high cost of childcare and other expenses. Additionally, although NIH has the recommended minimum salary guidelines, not all institutions adhere to this and in some cases it is left to the discretion of the P.I. In my opinion the quality and resources available for scientific research is a big draw for International postdocs coming to the US, however, after arriving, it quickly becomes clear that the lack of work-life balance and poor quality of life significantly contribute to the lack of retention or even interest in pursuing academic careers. Many of the fellow postdocs with whom I have discussed about future careers aspects are aiming towards industry careers because they would like to be financially secure. It is clear that a lot of the academic brain-drain related to postdocs has its roots in poor financial stability and the expectations that a lot of academic institutions have of overworking and underpaying postdocs.

Existing NIH policies, programs, or resources

Make more funding/grants available to International postdocs who truly are the majority of the workforce in most academic institutions.

Proven or promising external resources or approaches

No response

Response 231

Perspectives on the postdoc roles and responsibilities

The postdoctoral role is to engage in independent, high-quality research work as a fully-qualified PhD scientist, while also receiving ongoing training and mentorship to prepare for a position as a successful, impactful scientist (whether in industry or academia).

Fundamental issues and challenges

The standard pay for postdoctoral scientists in academia is too low—closer to that of a student than a professional. It should instead made to be lower, but competitive, versus comparable industry positions given similar levels of experience (i.e., postdoctoral scientists in STEM should make ~90-100k, which is still relatively low compared to industry positions but at least it is marginally acceptable). The standard NIH rate of ~55k/year for postdocs is a non-starter for STEM PhD graduates who are weighing the pros and cons of an academic postdoc position versus industry. In a city like Seattle where I live, the industry starting salary might be approximately $150-175k/year or more for a recent PhD grad (anecdotal number based on my classmates/friends), which is nearly 3 times higher than the NIH postdoc rate. Industry "postdoctoral" positions are still around ~100k/year (based on the examples I've seen). Most postdocs like myself are not "in it for the money", and accept a lower salary in exchange for intellectual reward, valuable experience in academia leading to hopefully a tenure-track or R01-supported research position, and to further their important research topics. However, when the stark reality of living expenses forces a choice between, for example, sharing a small apartment with roommates and forgoing the ability to contribute to a retirement account, versus a nice salary working for Microsoft Research, Google, Meta, or one of the many biotech companies around, most people choose the latter. This is especially true for PhDs in computer science, artificial intelligence, and other areas that currently command very high industry salaries. The phenomenon contributes to a brain drain in these specific areas of research, due to the huge disparity in industry versus postdoctoral salaries.

Existing NIH policies, programs, or resources

The minimum NIH standard salary for postdocs should be adjusted for the cost of living in a particular city, should be adjusted based on the particular field of study in order to remain somewhat competitive, and should also be made at least somewhat comparable to the median starting wage of a PhD industry job (e.g., set the postdoc rate equal to two-thirds of the median industry STEM PhD starting salary). The comparable salaries are industry-specific. Myself and other postdocs are happy to accept a slightly lower pay in exchange for pursuing our important research and the intellectual fulfillment that comes from dedication to our research topics. However, the lower pay should not be so low as to hamper our ability to save for retirement, have a family, etc. A salary that is two-thirds or more of the equivalent industry job might be reasonable, perhaps. However, the current rate of less than half (or less than a third in the AI/computer science fields) is a hard pill to swallow.

Proven or promising external resources or approaches

The NIH should do more research to determine how much to raise postdoc base salaries to be more palatable for those considering academia. However, in addition, many postdocs feel that it is an insurmountable task to achieve eventual research independence, and that following their postdoctoral fellowship, they will have to leave academia anyway due to the difficulty in attaining tenure or a steady academic job. Therefore, it would be helpful to postdocs if the process of transitioning to an independent academic scientist was more obvious, and was easier, and if there were more paths to do so, to encourage new PhD graduates to pursue a postdoctoral fellowship with the knowledge of it leading to a potential career in academia. Therefore, NIH should increase funding to enable a greater number of career transition awards (e.g. K01) and reduce the threshold required to get them. If more postdocs could acquire career transition support, and receive this support earlier (perhaps also with an increased salary), perhaps more PhD graduates would be willing to remain in academics to pursue postdoctoral fellowships, knowing that there would be support to help them transition to a steady career afterwards.

Response 232

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows have some of the highest managerial, mentorship, and experimental responsibilities in the lab. Considering most labs do not have lab managers or staff scientists, postdocs are the key mentors for graduate students, technicians, and undergrads, while also expected to be the most productive in their research. Postdocs on the academic track are also expected to come up with their own funding (K99) and therefore manage every aspect of their own job.

Fundamental issues and challenges

PAY, PAY, PAY, PAY. I would be shocked if the NIH actually needs to hear this. The idea that this is a "training" position is grossly incorrect. Many, if not all, PI's expect postdocs to be able to enter their lab with minimal training and guidance on research techniques. In addition, many PI's may help postdocs submit grants, but that should not be considered training, as the PI mainly discusses overarching ideas and verbiage—something any boss should do with an employee. Postdocs are expected to work extended hours (more than 40 hours per week, often more than 60 hours per week), leading to reduced work life balance and burnout. PI's are not subject to any oversight by NIH and barely are subject to oversight by their university, leading to many dangerous and toxic work environments. Postdocs are also not afforded parental leave, postpartum care, retirement benefits, all of which can be offered to prospective postdocs in industry or other jobs. Pay is barely more than graduate student stipend (top graduate student stipend is approx $45,000 and the NIH minimum for postdocs is approx $56,000). Postdoc salaries in industry start around $90,000, with full benefits, and less working hours. You want to train intelligent scientists during their graduate school, why are you surprised they can do the math and join industry?

Existing NIH policies, programs, or resources

PI's use the NIH minimum as a maximum. You need to raise the NIH minimum to $80,000. In addition, R01 funds need to be increased to allow PI's to accommodate the raise in postdoc salary.

Proven or promising external resources or approaches

Industry is a very promising external resource to inform NIH's efforts to enhance postdoctroal training—salary starting at $90,000, full benefits, paid parental leave, retirement plan, clear goals towards promotion (in academia's case, faculty position or industry), clear expectations for hours worked per week.

Response 233

Perspectives on the postdoc roles and responsibilities

For me: Envisioning, developing, and executing independent projects with the goal of publishing research and formulating a research program to launch my lab

More generally with goals to

1. Gain valuable research expertise
2. Present work
3. Build towards future career pathways

Fundamental issues and challenges

Salary, lack of mentoring from postdoc advisors, and difficult job prospects and federal funding success rates in academic positions

More minor: lack of community and investment from academic departments and institutions

Existing NIH policies, programs, or resources

Raise minimum postdoc salaries; NIH modular budgets should be updated to match the current economic landscape especially for compensation; existing NIH grants should allow PIs to pay postdocs on other funding sources (such as private fellowships) to supplement their income to match salaries adjusted for areas with higher costs of living

Proven or promising external resources or approaches

Requiring all NIH funded PIs to take DEI training (some already available through NIH office of dei). Requiring annual postdoc mentorship plans for each postdoc and provide regular reporting on these plans to NIH (could include this info when PIs provide research progress reports)

Response 234

Perspectives on the postdoc roles and responsibilities

Ideally, I consider a postdoc as a training position to gain further skills to continue on the academic track and eventually obtain a tenure-track position.

Fundamental issues and challenges

The pay is much too low to be competitive with industry positions. Moreover, the general lack of benefits (retirement accounts, sometimes health insurance, etc.) and lack of job stability sets postdocs even further behind their peers, since many of these are also lacking or inadequate during graduate studies. My peers are buying houses and having children, but I would be struggling to pay my bills if my partner had not left his postdoc position for industry.

Existing NIH policies, programs, or resources

$2500 per budget period for childcare costs is laughable when yearly costs for daycare can easily be 10x that amount. Everything helps, but this would only cover childcare for a conference or two.

Proven or promising external resources or approaches

Biotech and pharmaceutical companies do an excellent job of recruiting and retaining employees by paying them what they are worth.

Response 235

Perspectives on the postdoc roles and responsibilities

My postdoctoral fellowship has provided an incredibly valuable opportunity to continue my training and work with expert mentors.

Fundamental issues and challenges

The salary is the main issue in my opinion. It is simply not feasible for many postdocs to live on the current NIH postdoc salary. It has only been feasible for me because I am in a low cost of living state, I am not supporting a family, and my institution supplements my salary. I cannot imagine that it is possible for people to live on this salary in higher cost of living states without supplementary income. This is also the main concern I hear from my peers.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increasing the salary

Response 236

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Average postdoc makes less money than an average clown in the US. Thats a fundamental issue

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 237

Perspectives on the postdoc roles and responsibilities

Transition from doctoral student to independent investigator. Pipeline of future leaders.

Time to launch a line of research at a peak of training, energy and imagination; before other obligations take over (management, teaching, administration).

Fundamental issues and challenges

First, it is a real issue. thanks for the opportunity to comment.

From my perspective, PhD students are not going into post-doctoral positions because they see:

- Other PhD students going into industry after graduation and getting salaries 3x times higher than post-docs (often peers that were not as birth as they are).
- Post-docs looking for academic positions after 3 years and not finding them, or not finding them in the locations they would prefer.
- Faculty working nights and weekends to keep up with writing grants, papers, teaching, correcting, etc. And working over weekends and vacations. New generations do not find this lifestyle appealing.
- The benefits of academic life (flexibility, working from home) are offered by every other job now. No longer a reason for going into academic career.
- Apparent no need to be an expert to publish, teach or communicate to the public. Anybody can write a tweet, do a podcast or write for the NYT. Excellency and deep knowledge that requires time and preparation is not rewarded nowadays.

Wonder also whether the brightest minds have been attracted by AI and technology in the past decade. Maybe right now new generations are driven towards diversity, inclusion and belonging. (?)

Existing NIH policies, programs, or resources

Making academic life more attractive will make post-doc training more attractive. I do not have the magic trick but pay lines in the 8th percentile are exhausting and discourage academic careers. Perhaps we were too many academics submitting grants and lowering the numbers will get to a new balance with easier funding. While maintaining or increasing the quality of research, the significance and the innovation.

Proven or promising external resources or approaches

No response

Response 238

Perspectives on the postdoc roles and responsibilities

Mastering the skills of a research scientist that you learned as a graduate student

Preparing for a future role as a mentor and PI

Fundamental issues and challenges

Postdoctoral salaries are pathetic. Work-life balance is poor. They are sometimes not even treated as “real” employees. The days are treating science as some great life calling are over. It’s a job. People (yes, postdocs are people too) have families, hobbies, and entire lives outside of the lab. That needs to be recognized and accommodated. They are employees of ann organization and should receive the same benefits. The romanticization of the research scientist role needs to be recognized for the antiquated facade over the exploitation that it is.

Existing NIH policies, programs, or resources

Leadership training and opportunities in the form of courses, coaching, and emerging leader programs. Decent salaries. Postdocs shouldn't be paid 20K a year when a PI makes 200K. Support in the form of full employment benefits, even if it's for a contract position.

Proven or promising external resources or approaches

Treat postdocs with respect and give them the benefits and pay they deserve. They are employees just like anyone else. Don't treat them otherwise. Develop them into future scientific leaders with access to leadership trainings and coaching opportunities. Create and enforce a code of conduct that offers all postdocs a safe working environment free of abuse, manipulation, and exploitation.

Response 239

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a transient period of training given to an individual with a Ph.D., with the goal of securing research opportunities primarily in the academia

Fundamental issues and challenges

1. As an international postdoc, I find it difficult to support my dependents because the pay is insufficient. I would appreciate it if there was a way that allowed universities to pay for medical insurance for dependents.
2. Visa issues. Currently, as a J-1 visa holder, there are a lot of difficulties with visa renewal each year. It would be great if the J-1 visa did not need yearly renewal, but was for a "one-time" 5-year period without going through the pain of yearly renewals.
3. Have a smoother visa policy for industries to hire international postdocs

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 240

Perspectives on the postdoc roles and responsibilities

It is a means to advance my scientific career and learn new techniques and tools.

Fundamental issues and challenges

I have heard about postdoc recession, but I have been trying to secure a position but have not been able to. Is there really a recession or PI'shave become more selective?

Existing NIH policies, programs, or resources

Workshops and trainings on transitions from postdoc to obtaining grants are already there but postdocs are less aware.

Proven or promising external resources or approaches

No response

Response 241

Perspectives on the postdoc roles and responsibilities

My postdoc has been the chance to grow into my own as a scientist, now that I have the "license to practice" obtained through my PhD studies. In seeing what professor life has been, it also feels like the last chance to do science that is uniquely *mine* (i.e. done by my hands), before beginning a professorship, where I'm expected to leave the lab but still channel the process of science in training

students. It's also incredibly bittersweet —my social network is extremely well-connected, and there is deep grief at the idea of abandoning it for a job where I have to start over. It is a common assumption that as a K99 fellow I've "succeeded." Yet. why is the prize losing the close access to support networks that I've cultivated for 4-5 years, both inside and outside the institute that I've found success at?

Fundamental issues and challenges

I'm sure plenty of people will talk about financials, so I won't harp on that. *LOCATION*: Postdocs are typically late 20s/early 30s. This age range is when it is no longer easy to build strong social networks (no incoming cohort, etc). We are asked to upend our social network that we developed during graduate school to start another training position, and expected to leave this location again 2-5 years later, usually to start over *again*. Furthermore, assistant professors are often left at arm's lengths by their departments until they get tenure, a further way that these social networks are left unfilled. And yet, assistant professors —30-year-olds with no training in mentorship, with little-to-no social support network, and with the prospects of having to either *succeed* or risk starting over *again*, are expected to train 20-year-old graduate students, who are also often in a completely new place with very little social support network.

Scientific research (heck, NIH-FUNDED research) has shown that social networks are critical for success in the workplace. And also critical in giving these trainees and assistant professors the resources required to navigate the high-stress years of pre-tenure without focusing this stress upon trainees.

Existing NIH policies, programs, or resources

Again, I won't talk about financials, although those are certainly important. E.g. Pathway-to-independence awards (e.g. K99) should get explicit commitments from the sponsoring institution/university to generate space for the R00 portion of the award, if so desired by the applicant. Mechanisms that do not expect postdocs to continuously choose their career over every other aspect of their life are essential to improving postdoc well-being, not only during the postdoc, but also afterwards. Modifying resources so that postdocs can apply for grants/other-funding that would permit them to transition to academic research scientist careers in their sponsoring lab (or another lab) are also critical. Many of us are incredibly good at doing the process of scientific inquiry, it would be wonderful if an alternative option to "leading a lab (where you transition to writing grants and dealing with bureaucracy)" existed that looked like "continue doing what you've spent the last 5+ years BEING TRAINED to do."

Proven or promising external resources or approaches

No response

Response 242

Perspectives on the postdoc roles and responsibilities

Postdoc is a full time job.

Fundamental issues and challenges

Low pay. NIH minimum should be 75k. Postdocs are not "trainees." Any/every job requires training.

Existing NIH policies, programs, or resources

Increase NIH minimum postdoc salary to 75k. Minimum 2 year commitment. If a PI can't afford this then they can't afford a postdoc. The system is unsustainable.

Proven or promising external resources or approaches

Increasing minimum pay is a key DEI issue. the first thing I ask when advising students about an academic career is "do you have student loans?" This is not complicated, and everything else is window dressing in comparison.

Response 243

Perspectives on the postdoc roles and responsibilities

Postdocs are experienced, well-trained scientists who hold doctorate degrees and personally perform experiments in the lab. Their primary role is to design experiments, collect data, and analyze results. Academic scientific progress is largely dependent on the research performed by postdocs.

During this period, postdocs may gain experience in additional skills that may help their future career (eg grant writing, managing, mentoring, and training students and technicians, developing projects). Due to their experience, the managing, mentoring, and training performed by postdocs may be essential for the operation of the lab. However, the quality and degree of training is highly variable between individual labs. This is not the primary focus of the position.

Due to the large discrepancy between the number of academic postdocs and the number of academic professorships, a significant percentage of postdocs will not ultimate receive academic professorship positions. Since academic professorship positions are largely given on the basis of research output during the postdoc, this further reinforces the focus of postdocs on producing research that will result in first author papers in high impact journals. However, some postdocs (ultimately the majority of them) will pursue other career trajectories, each of which has requirements falling outside the range of what postdocs may learn as an academic postdoc.

Fundamental issues and challenges

The largest issue in recruitment, retention, and quality of life is the low salaries offered postdocs. Postdocs all have advanced degrees which would enable them to obtain significantly higher salaries outside academia. Since postdocs spend the early portion of their careers as PhD students, they don't have large savings to support them as their pursue their postdocs. Without the income and savings of similarly aged individuals, it is hard for academic postdocs to maintain the quality of life afforded other similarly aged, similarly trained individuals. In particular, most postdocs are at the age at which many Americans get married, have kids, and buy houses which require significant financial assets. as a result, many postdocs are forced to choose between delaying these life decisions or leaving academia.

The low salaries have additional impact on the diversity of scientists who remain postdocs. Since wages are low, people with independent wealth may be likely to remain in academia and people with less independent wealth may be more likely to leave. Further, parents who need additional income to pay for child care (especially women scientists) are also incentivized to leave academia.

The uniformity of postdoc salaries also incentivizes the most talented (or at least the most marketable) scientists to leave academia. A large majority of institutions offer postdocs a set salary scale at the level suggested by the NIH. R01s are also not large enough to accommodate higher postdoctoral pay. Individuals therefore have limited flexibility to negotiate or offer higher salaries, so postdocs of all qualities end up being paid on the same scale.

The salary issue is especially acute now due to the slowness with which the NIH and academic institutions respond to changing factors. Salaries and R01 budgets are not tied to inflation and have not increased to keep pace with inflation.

Existing NIH policies, programs, or resources

Increase NIH suggested salaries.

Provide a range of NIH suggested salaries.

Include performance bonuses in NIH suggested salaries.

Include subsidies for child care in NIH suggested salaries.

Increase salary sizes in R01 modular budgets (and adjust R01 size accordingly).

Extend K99/R00 fellowship eligibility, and early career status for all postdocs who completed PhDs before the Covid19 pandemic.

Extend K99/R00 fellowship eligibility, and early career status for all postdocs who take parental leave (fathers and mothers).

Ask for input from postdocs more often (not just in crisis time)

Require references from past trainees in all evaluations of PIs (research grants, training grants, awards, etc). This may incentivize better mentorship.

Offer workshops or funding for late stage postdocs to learn skills needed as a PI (budgets, leadership, hiring, interviewing, grant writing).

Proven or promising external resources or approaches

No response

Response 244

Perspectives on the postdoc roles and responsibilities

Postdoctoral period is a crucial phase where a scientist gains a bird's eye view of the entire research cycle, from research planning and execution to learning to secure research funds (beyond salary support), networking with other scientists, and gradually becoming autonomous.

Fundamental issues and challenges

Beyond funding and adequate salary to afford to live in major cities, racism and favouritism in the workplace need more attention. Discrimination isolates postdocs and refrains them from pursuing academic careers. It is even worse for international female postdocs whose lives/visas in the U.S. depend on the yearly contract, and they go through this emotionally traumatic experience quietly. I left my postdoctoral studies [redacted for anonymity] after being subjected to racial discrimination and bias by my PI and I am beginning to hate science altogether. I was told several times that there are too many professors of my descent in the U.S. and so I should rather teach at a community college and give away my research dreams. It is not fair to suppress one race to promote another. I lost two precious years of my postdoctoral period, and I am trying so hard to salvage my academic career back in my home country.

Existing NIH policies, programs, or resources

The policies and programs stipulated by NIH are perfect but still are not reachable by most international postdocs. When I applied for funding from external agencies, my application was rejected because of my PI's track record of training postdocs and their funding status. It would be better to have postdoc fellowships that are not evaluated based on their PIs status. Also, NIH should consider recognising and funding the PIs who have an inclusive and diverse team.

Proven or promising external resources or approaches

No response

Response 245

Perspectives on the postdoc roles and responsibilities

I loved my post-doc. And I love training post-docs. It is truly a period of training, but training happens in many professions and the fact that these trainees have advanced degrees must be recognized by higher salaries.

Fundamental issues and challenges

Money. The NIH has not changed the modular budget in many years despite inflation. It's you, hi, you're the problem it's you. You need to increase postdoc stipends and PI grants.

Existing NIH policies, programs, or resources

Get rid of training grants and do more individual postdoc and grad student grants. Training grants have turned into who can create the most ridiculous statements about their programs as opposed to showing you how individual faculty are training individual trainees. It has become a circus.

Proven or promising external resources or approaches

No response

Response 246

Perspectives on the postdoc roles and responsibilities

Academic postdoc means freedom to pursue our own ideas and to square off a topic precisely catering to each and every patient

Fundamental issues and challenges

Fundamental issues are visa issues for international students and the mandatory requirement of experience for the post and lack of opportunities for the students at their home country and us as a leader should open up more opportunities for international students and not only for underrepresented communities it is mandatory that we view each challeng as an opportunity.

Existing NIH policies, programs, or resources

Existing grants for international students should be changed for good

Proven or promising external resources or approaches

No response

Response 247

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

little to no funding available for international postdocs, short apointments, salary not competitive, slim chances of advancing to group leader/professor

Existing NIH policies, programs, or resources

extend current oportunities to non US citizens, fund project scientist positions for those beyond 6 years of postdoc

Proven or promising external resources or approaches

No response

Response 248

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

low salary and low job security has become a serious problem for future Americans. Commonly in academics labs, majoiry of post-docs are hired from overseas and given H1B visas, which do not require lotteries to be granted. The low pay makes US citizens less likely to apply for post-docs, and overseas applicants may have more tenacity in this situation. As a result, the PI might be more willing to hire people from other countries, such as India or China. In addition, these foreign scientists must endure the low rewarding position due to their immigration status, if they resign, they might have to leave the country. Such a slvaory practice is unfair. As a result of these hiring decisions, Americans lost out on opportunities as well. Policy suggestions include increasing the postdoctoral salary annually and requiring at least a certain percentage of Americans to be in a research grant so as to prevent taking advantage of foreign labors and empower opportunities for Americans.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 249

Perspectives on the postdoc roles and responsibilities

My postdoc was intended to provided me a mentored training experience in a laboratory in order to set up for transition to becoming an independent investigator leading my own research program.

Fundamental issues and challenges

I was used as a staff support position and my career development opportunities were frequently delayed to perform support work for my laboratory. There is no adherence to a career development plan leading to a transition to independence, and there is no longer any expectation of a future independent research program.

Existing NIH policies, programs, or resources

Provide very clear expectations for mentors in NIH funded mentored training grants (K awards). My mentor has used every opportunity to delay my K award for productivity on lab projects rather than prioritizing my career development. Find ESI R01s at a level that does not require 3-4 submissions because There are not enough years of ESI remaining after providing years of support toward my "mentored lab experience" .

Proven or promising external resources or approaches

No response

Response 250

Perspectives on the postdoc roles and responsibilities

Academic postdocs were a personal nightmare when I was one many years ago and I do everything I can to make our postdocs have a phenomenal experience at our company

Fundamental issues and challenges

None.

We provide higher pay than every exclusively university postdoc I know of (plus they are paid as regular employees with no [redacted] about fellowship vs grant vs other annoying types pay that make taxes a nightmare). Postdocs also get full benefits including 401k with match, health insurance (with options for a family), and childcare options. And finally we frequently convert postdocs to full time employees within our company.

Existing NIH policies, programs, or resources

Not particularly aware as I am mainly focused on activities within our own company.

Proven or promising external resources or approaches

Look at big pharma postdoc practices.

Require all NIH funded postdocs to get benefits that are standard at large chemical and pharmaceutical companies (BP, Pfizer, Dow etc)

Response 251

Perspectives on the postdoc roles and responsibilities

I'm a former postdoc. I worked in a prestigious lab and was part of a group doing meaningful research (which was great) but as a career it's awful. My experience as a postdoc led me to leave research and pursue a completely different career.

Fundamental issues and challenges

Simple: PAY. No one wants to spend 5 years on a PhD to earn less than $50k / year in a highly focused and demanding postdoc role. I think this pathetic pay is pushing young scientists out of research because it's challenging to make ends meet on a postdoc salary in many situations.

Existing NIH policies, programs, or resources

There are other issues, but fundamentally the pay is laughably bad and undermines the entire NIH approach. People in other careers are SHOCKED when I tell them what postdocs earn.

Proven or promising external resources or approaches

If wages improve it will attract and retain talented people. If not, they'll eventually go elsewhere and any other changes will not be enough to fix it.

Response 252

Perspectives on the postdoc roles and responsibilities

Post docs are increasingly seen as cheap labor without the need to perform additional training

Fundamental issues and challenges

Postdoc programs are unstructured, lack milestones, lack avenues for submitting formal complaints, and the experience is heavily influenced by the lab you are able to join. The pay is abysmal and the expectations are high.

Existing NIH policies, programs, or resources

The only "incentive" to staying in academia is the idea of flexibility and freedom in research which ultimately falls apart when you consider the demands placed on post docs, the lack of resources, and the lack of pay. How can somebody be expected to do their job well when they're living paycheck to paycheck?

Proven or promising external resources or approaches

Competitively pay postdoc for the value they add to academia. If they're the backbone of pushing research to new heights, the NIH should act like it

Response 253

Perspectives on the postdoc roles and responsibilities

An academic post-doc seems like a temporary position that primarily exists because there are too few faculty positions relative to PhD graduates. In most universities, post-doc compensation is inadequate to cover cost of living in nearby area. Coming from a period of financially struggling to survive graduate school, it is infeasible to continue poor financial situation post graduation, especially when other positions offer substantially higher compensation and growth opportunities.

Fundamental issues and challenges

Financial concerns seems to be a foundational problem. In considering my career options immediately after graduating from a PhD, post-doc positions are nowhere near competitive with what compensation alternative positions can offer.

Existing NIH policies, programs, or resources

Limitations on post-doc compensation should be revised to consider cost of living needs of post-doc trainees. Doing so will ensure a post-doc position is a viable option for PhD graduates.

Proven or promising external resources or approaches

NIH can dance around the issue, but more funding and higher postdoc compensation are critical.

Response 254

Perspectives on the postdoc roles and responsibilities

Post doc roles and responsibilities are on par with entry level industry jobs, but pay one half to one third the amount.

Fundamental issues and challenges

Inability to live with dignity or have the option to support a family due to poverty wages in an increasingly harsh economy.

Existing NIH policies, programs, or resources

Simply paying more would go a very long way.

Proven or promising external resources or approaches

Paying more would definitely immediately enhance recruitment, working environment, and job satisfaction.

It would likely also increase the quality of post docs candidates. Smart people with lots of industry options are not going to take a job that pays around the same as Walmart managerial staff to do cutting edge biomedical science.

Response 255

Perspectives on the postdoc roles and responsibilities

To use a plane analogy, I think the PI should be the pilot, and the postdoc should be somewhere between a co-pilot and a flight attendant. These days, I think postdocs are expected to be the pilot, flight attendant, ground crew, gate agent, and baggage handler. I've always viewed the postdoc as a simple and perhaps necessary stepping stone for a newly minted PhD to use towards achieving their academic dreams

Fundamental issues and challenges

I am a first year graduate student who has always considered himself on the track towards being an academic PI; however, I must say that watching some of these postdocs do a 6 to 8 year appointment scares me out of my wits. I really don't know if that is something I would want to do and I think this is probably the same for so many other young trainees across this country. Furthermore, these full-fledged scientists don't make all that much more than a graduate student.

Existing NIH policies, programs, or resources

Maximum appointment limits of five years. PIs need to be held accountable for the fact that they cannot simply hold someone back indefinitely from advancing their personal scientific career.

Proven or promising external resources or approaches

Increase pay!! And benefits!

Response 256

Perspectives on the postdoc roles and responsibilities

A way to deepen your scientific work to launch a career as faculty or advanced industry role by producing a high impact publication (and other output)

Fundamental issues and challenges

Salary–needs to be 3 times rent in the area of institute, and current NIH standards are inadequate for most cities. Also benefits, including healtcare, retirement matching, and paid parental + maternal leave.

Existing NIH policies, programs, or resources

Raise official salary for postdocs to 75k/year and peg annual increase to inflation. Add benefits, and this to ALL calls/programs that involve postdoc funding

Proven or promising external resources or approaches

Salaries and benefits in countries like Switzerland, the Nordic countries, etc. The idea is a large-scale recognition for the need for fair pay for the work.

Response 257

Perspectives on the postdoc roles and responsibilities

The postdoc offers a critical experience in independent research engagement (with some supervision) beyond the PhD training and education. The postdoc should learn the role of being a member of a research team, take initiative in research, and be socialized into the researcher role. The postdoc should not merely be a research assistantship. Aspects of the expected researcher role should be part of the postdoc including conducting research, managing oversight and leadership aspects of working with a research team, writing for publication, presentation at national or international conferences, and writing at least one external grant proposal.

Fundamental issues and challenges

A primary challenge that I understand inhibits recruitment of postdoc fellows is the requirement to uproot and move for the 2-year postdoc position. By the time many trainees reach this point, they are settled in their home. We have learned in general, and especially during the COVID-19 pandemic, that many fields do not require full-time in-person presence. As such, I recommend removing the requirement of presence on campus or on site and permit the particular program to negotiate an arrangement with the postdoc fellow.

Existing NIH policies, programs, or resources

Expand postdoc programs to less research intensive universities to boost their research potential and offer more opportunities.

Proven or promising external resources or approaches

No response

Response 258

Perspectives on the postdoc roles and responsibilities

It is a temporary research position. Not a particularly training position, mainly just a job working on a research problem.

Fundamental issues and challenges

Bad compensation. I decided not to pursue a postdoc after my PhD because doing postdoc will not allow me financial stability. Meanwhile I’m old enough to have family and kids.

Existing NIH policies, programs, or resources

Stop framing it as a “training”. It is just a job. Treat it like one. There should be no cap in salary.

Proven or promising external resources or approaches

NA. Why do highly skilled workers getting paid < $25/hr? Why would people stay when it is so difficult to survive day-to-day life? What an illogical decision to keep the status quo.

Response 259

Perspectives on the postdoc roles and responsibilities

The postdoc is / should be a time to hone skills and pursue career development opportunities to enable success in a future job (academic or otherwise).

Fundamental issues and challenges

The number 1-100 issue is salary. Postdoc salaries are too low in relation to the cost of living near most academic medical centers. NIH must raise the stipend levels AND increase grant budgets accordingly. Doing the first without the second is a doomed experiment.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

$$$

Response 260

Perspectives on the postdoc roles and responsibilities

I really see the role of a postdoc position to be a bridge between the doctorate and an early career independent investigator. The postdoc serves as a junior investigator much like a resident does in medicine, where they are mentored to become the best researcher they can.

Fundamental issues and challenges

I think there are a number of issues that inhibit postdocs. First, there is a lack of standardization. Not all postdocs are created equal and it is very dependent on the PI or Lab in which you are working. I think research could look to residency-type programs as a way to standardize postdocs so that they truly progress in their careers rather than just become glorified PhD Students or research assistants for a PI. Second, there should be more opportunities for funding for all types of postdocs. There is a real bias towards clinicians for K awards, not to mention that the number of awards is limited. If postdocs were a true priority, then there would be more opportunities for them to get experience writing and conducting research grants.

Existing NIH policies, programs, or resources

Exand the number of non-clinician K awards and increase the funding overall for postdoc level investigators. Consider T32 programs that also cater to postdocs as a main target and not just to PhD candidates, and the postdocs are an after thought. Consider creating a funding stream for universities to establish more standardized postdoc training program (like in medicine and pharmacy).

Proven or promising external resources or approaches

Overall, pay lines for postdocs to make it very difficult to choose that as a career pathway, particularly for those with student loans and families. Even an increase in pay lines of at least 10K could really go along way. Provide funding/programs for women, in particular, those with families and children who are trying to make it work and in the end, have to quit because they don’t have the support (mentoring, programming and financially) to stay in postdocs. The Fogarty institutional training programs are a great opportunity for postdocs, but they are limited to one year and are based overseas. Such programs should be extended or have the option to renew, and other institutes could consider doing something similar.

Response 261

Perspectives on the postdoc roles and responsibilities

I love it, it is good for learning and training; except the financial issue that affects every individual.

The financial burden is seen even more in Boston as the city is relative 3 times more expensive than other places but the postdoc salary are not adjusted accordingly.

Fundamental issues and challenges

Quality of life is not good as financial freedom is restricted, when it comes to family, place of living and health insurances

Existing NIH policies, programs, or resources

Certainly the pay grade should be adjusted accordingly with states and place of living.

For example, there are London/ Zurich based adjustments when it comes to paying postdocs

Proven or promising external resources or approaches

I like the training and resources

Response 262

Perspectives on the postdoc roles and responsibilities

Transition to independence, no longer an early stage trainee

Fundamental issues and challenges

1. Low salaries
2. Low salaries
3. Low salaries
4. Low salaries
5. Abysmal job prospects in academia, especially since non-academic positions do not require a postdoc

Existing NIH policies, programs, or resources

Foreign ineligibility for NIH-funded training grants needs to be gone. Most postdocs at top schools are foreigners that stay in US and leave academia because they can't get funding for their positions

Proven or promising external resources or approaches

SALARIES

Response 263

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a professional appointment with allows for continuity in the academic track. The postdoc, while gaining more training, is a qualified individual with highly specific skills who provides research support contributing to the US research enterprise. This enterprise cannot continue to compete without the skills, ideas, research of postdoctoral fellows. They are individuals with doctoral degree who should be provided the equivalent respect, career training, financial stability/support in order to continue to effectively contribute.

Fundamental issues and challenges

The issues ad challenges facing post docs are immense but can be summarized as follow:

1. Compensation is not up par to their skills/and level of education
2. The work conditions in great part are very exploitative. They are expected to work long hours and weekends, with no benefits of time off, adequate vacation times, contributions to retirement, etc.
3. The advancement to independent career is very slim

Existing NIH policies, programs, or resources

The NIH funding system needs to increase to reflect not inflation and to match the skills/levels of education that post docs are bringing to the table. Post docs need to be afforded the resources to live and to not be in financial stress while conducting research. The funding mechanism needs to reflect the areas they are living in and not just everyone gets the same pay no matter where.

There should be programs in place that allows post docs to further their careers if they can't or don't want to become a PI.

Proven or promising external resources or approaches

There are a few institutes who are taking the charge in improving post doc conditions. These institutions (Van Andel Institute, St—Jude's) have increased the pay for post doc and guarantee them benefits of medical, dental, vision, parental leave, contributions to retirement, etc. and provided them with support staff with establish working conditions to avoid and minimize their exploitation.

Response 264

Perspectives on the postdoc roles and responsibilities

Protected time to establish research with enhanced mentorship and training opportunities.

Fundamental issues and challenges

Pay, especially when compared to other opportunities

No clear career trajectory

Not necessary for desired positions

Existing NIH policies, programs, or resources

Increase pay

Proven or promising external resources or approaches

No response

Response 265

Perspectives on the postdoc roles and responsibilities

1. Expanded their scientific/technical knowledge
2. Learn how to drive a project from conception to papers
3. Be technically and scientifically independent
4. Figure out the field in which they would like to start their independent career
5. Became better mentor/manager

Fundamental issues and challenges

1. Very low salary compared to individuals with the same experience in industry position (postdoc salary in the industry start with a base of $90,000.00 a year vs the $54,000.00 at university)
2. Lach of relocation funds. Postdocs are expected to relocate often, to not take postdoc positions in the same institution where they did their Ph.D. training, and then relocated again during the faculty job search. However, no relocation fund has been offered. This is DEI gatekeeping since people who come from low-income situations might not be able to relocate for free.
3. No reasonable parental leave (most institutions offer only 8 weeks for mothers and 0 weeks for fathers)
4. No affordable daycare options. Again how do you want to increase DEI representation if only wealthy households can afford daycare? Woman postdocs have to spend over half of their salary on daycare, how they can be efficient in their training if they are constantly worried about financial ruin?
5. Conflict of interest with PI: Postdocs want to finish their training as soon as they can, be successful, and transition into an independent career. On the other hand, PIs want to try to keep successful postdocs in as long as possible in their labs because they need to produce papers, write grants, and drive the projects.
6. Postdocs are completely dependent on their PIs without any safeguard from institutions.
7. No training on how to be a PI (manage people, admin work, budgeting)

Existing NIH policies, programs, or resources

1. Increase base salary
2. When evaluating grants and funding of PIs, do not rely only on the teaching/DEI statement, but actually, ask them to provide a track record of their postdocs. How long each postdoc was in their lab? Did they transition successfully into academic or industry roles? Did the postdocs get enough paper?
3. If PIs grants are based on papers their postdocs, also postdoc should be co-PI of the grant.
4. Mandate federal parental leave for both parents

Proven or promising external resources or approaches

Postdocs should have a PIs committee to increase their mentoring exposure

Response 266

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions should not be construed as cheap labor performed by mediocre individuals. Only outstanding future scientists should be accepted as postdocs. A significant salary increase together with a reduction in the number of postdocs is the most efficient solution as the total budget will remain essentially the same. Quality over quantity.

Fundamental issues and challenges

Significant salary increase coupled to much higher standards will attract outstanding individuals and filter mediocrity

Existing NIH policies, programs, or resources

Eliminate admission of lesser qualified individuals to postdoctoral positions. Nowadays, a doctoral degree is enough. Standards must be much higher. Doctoral degrees from foreign universities of dubious reputation are considered sufficient for acceptance. This should be eliminated.

Proven or promising external resources or approaches

The main problem is that too many unqualified individuals are accepted as postdocs, thus lowering the standards of the academic and scientific discourse.

Response 267

Perspectives on the postdoc roles and responsibilities

The opportunity to apply your doctoral skills to other disciplines and begin paving your own path in research by combining what you know with other laboratory skills

Fundamental issues and challenges

Absolutely 100% the salary. I will be starting a postdoc at the end of this semester which was a very stressful decision for me. Ultimately, I was not ready to give up the chance to learn certain skills I wanted for my career BUT this came at the cost of knowing I will continue to be living paycheck to paycheck the next 2-3 years on a T32 salary. I have spent the last 5 years stressed about finances on a grad stipend, with the promise that having a PhD would be worth it. At this point, having a postdoc salary will qualify me for income-restricted housing in the city I will be moving to, and that is unimaginable after all the work and training that went into getting a doctorate. Postdocs should be paid what we are worth as research scientists and should not have to make a choice between the post doc we want OR being able to afford an apartment and groceries.

Existing NIH policies, programs, or resources

Double the NRSA pay scale.

Proven or promising external resources or approaches

Pay PhDs the equivalent to industry averages.

Response 268

Perspectives on the postdoc roles and responsibilities

I perceive postdoctoral position as an underpaid position that folks interested in academia have to go through in order to become a principal investigator.

Fundamental issues and challenges

Postdocs are NOT paid enough and they do not receive decent benefits, considering the level of expertise that they have and often their age.

Existing NIH policies, programs, or resources

Increase the pay minimum of postdocs to $80,000 per year and ensure they receive a 401K.

Proven or promising external resources or approaches

Increase the pay minimum of postdocs.

Response 269

Perspectives on the postdoc roles and responsibilities

This is a critical training stage for those who want tenure-track or research-track faculty positions. During this time a postdoctoral trainee develops their own research agenda and receives mentoring to navigate the job search and to succeed as a faculty member. This is no longer a necessary step for industry positions.

Fundamental issues and challenges

Low salaries, lack of mentorship, and lack of work-life balance is discouraging many from pursuing a postdoc. This is especially true for underrepresented groups, which has direct impact on the diversity of the professoriate. As more industry jobs for PhDs no longer require postdoctoral experience, more domestic graduate students are skipping the postdoc. Since this is not a realistic option for international students, the proportion of international postdocs is likely to increase and the reliance on an international workforce at the postdoctoral level and beyond is subject to international politics and could seriously jeopardize the future of academic research. Faculty need to accept their mentoring responsibility and stop hiring postdocs as super technicians. The hiring process is opaque and biased.

Existing NIH policies, programs, or resources

1. Make it clear to institutions that they can use their funds to offer benefits and make postdocs on NIH fellowships employees of the institution.
2. Make PI mentoring track record a factor in awarding ALL grants not just training grants. A measure of quality of mentoring needs to be used as this is not simply about how many people you have trained.
3. Encourage trainees and institutions to report toxic work environments and behavior to the NIH.
4. Advocate for abolishing the use of reference letters to advance in academia.
5. Demand hiring processes modeled after the best practices in faculty hiring: use of rubrics at each step of the process, no reference letters, advertise to underrepresented groups, include a commitment to mentoring and professional development in the ads.

Proven or promising external resources or approaches

The NIH IRCADA program is a great model to prepare faculty. This model should be expanded and promoted as the way to train postdoctoral scholars.

Response 270

Perspectives on the postdoc roles and responsibilities

A postdoc is a transitional period for additional training, learning of lab leadership mentoring in grant writing and management. It can be a time to expand knowledge in a completely new area or to learn a new method or technique to enhance competitiveness.

Fundamental issues and challenges

There are several fundamental issues: postdocs don’t have sufficient benefits and support for individuals with families, health concerns or folks from URM backgrounds. There is a problem with pay but also with how it is structured. Postdocs need to have a base pay rate that is higher or we will continue to lose postdocs to industry. The focus on moving for a postdoc makes it unpalatable for families and URM folks which is a larger and larger percentage of postdocs now especially as we diversify grad education. There are no resources for a “two body” problem with a move and employment. Postdocs need paid health care and family leave policies that are more friendly. Finally, there needs to be an emphasis on limiting the length of postdocs. 2-3 yrs is plenty. Either create levels or make additional resources available for

transitional positions. Recognize that not every postdoc is going to be a traditional faculty member. What about those that lead core facilities? Right now there aren't resources for training or grants for these folks but we need them.

Existing NIH policies, programs, or resources

Make the base pay higher both as the NIH standard and on training grants. A relocation allowance would help with the URM folks. Offer training in lab management and grants management. More career guidance and training for faculty careers and teaching should be incorporated for those who want it.

Proven or promising external resources or approaches

There is a great training course at UC Davis offered by [redacted for anonymity] on laboratory management for postdocs and early career faculty. This came out of the P30 NIEHS environmental health sciences center. and the School of Veterinary Medicine at UC Davis. They have to limit enrollment It would be nice if this course had a broader reach it is excellent.

Response 271

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be one in which the postdoc assumes the leading role in developing their research. Usually, at least in the beginning, the postdoc does not have their own funding so they use their supervisor's funds and resources to conduct their research. They are expected to contribute intellectually to other projects, provide new ideas, supervise personnel, train other colleagues, contribute to manuscript preparation, and, in general, work towards building an independent career in the near future.

Fundamental issues and challenges

The issues that I think are inhibiting recruitment, retention, and quality of life are:

- Extremely low salary in comparison with peers with similar or even lower work experience. The salaries in the industry usually are 4x higher than in academia. This usually means that only people that have extra economic support can pursue a career in academia, especially if they have a family.
- Job insecurity. In academia, even if you do everything as you are supposed to the chances of landing a PI position are extremely low. This means that if you sacrifice your quality of life by having a lower salary in the hope of getting a PI job the chances of not getting it are very high. In the end, this means that most people end up with a job outside academia having lost a lot of money in the meantime.
- Job/life balance. Usually, you are on your own in terms of bench work. If you are lucky you have one technician that can help you. Since the postdoc work is very diverse it usually comes with a high workload. Moreover, usually, the possibility of getting a PI job depends on having a good publication record. This requires a lot of dedication that usually eats into personal time. This issue is more important when you have a family since the cost of daycare is outrageous. Most of the time the cost of daycare is equal to the whole postdoc salary which makes it really hard to reconcile having a postdoc job and a family.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 272

Perspectives on the postdoc roles and responsibilities

Responsibilities are varied and differ by lab. My role as a postdoc includes a lot of project management and interface with students.

Fundamental issues and challenges

The pay. There needs to be a pay increase. This is a temporary position and we often move for a postdoc. At least covering moving costs/help with signing lease would be a step in the right direction. If you spend 10 years not making wages or contributing to retirement because of a PhD, postdoc salary and benefits should help reprieve some of that lost time.

Existing NIH policies, programs, or resources

Higher wages, help with moving costs, standards about how long students can hold offers (eg don't let t32 programs require a response to offers in less than a week if students are still interviewing)

Proven or promising external resources or approaches

Academia needs to consider that the alternatives to a postdoc pay a lot better and have a lot more benefits. Postdoc should be treated as a job where pay and benefits are transparent and upfront. Postdocs are often "required" to stay for 2-3 years even if their contract is only for one year at a time. This is confusing and prolongs time spent in low paying positions and makes it hard to leave for other opportunities.

Response 273

Perspectives on the postdoc roles and responsibilities

As a postdoc in the lab, my roles **and responsibilities** include overseeing everyday tasks to ensure research is progressing forward for the entire lab and teaching/sharing knowledge with new additions to the lab. As a member of the lab with more experience, I believe it is my responsibility to progress the research program forward and to take more risks in the experiments I am attempting (ie developing new protocols that have not been previously attempted before in the lab for other members to eventually use). I view my postdoc position as a stepping stone in my career in academia—it is a necessary step that I must take before I am qualified to become a professor.

Fundamental issues and challenges

The main issues that postdoc's face are poor salaries. We can easily secure any position within the industry and make twice the salary we do as a postdoc. Being a postdoc, you are required to work around the clock and face constant pressure to publish in high impact journals. We are the leaders of the lab and ensure everything is running smoothly, yet we are not compensated for this work. We are encouraged to remain in these poorly paid positions in the hopes that we can eventually become a professor, but the truth of the matter is that professorships are highly competitive jobs and postdoc terms are running longer and longer. When my PhD supervisors were postdocs, a routine postdoc lasted 2-3 years, but now 7-10 years seems standard. With a salary that is barely able to meet my everyday needs, it becomes harder and harder to justify staying in academia.

Existing NIH policies, programs, or resources

It would be great if the NIH would raise the minimum salary for postdocs. Many institutions abide by NIH guidelines, and it would greatly influence many universities across the country if the NIH were to significantly raise postdoc salaries.

Proven or promising external resources or approaches

I think institutions should not shy away from advertising industry jobs to postdocs, or encouraging us to go in that direction. We are treated better as employees in the industry, and quite frankly, there are not enough professorships for every postdoc. It seems that postdocs are all being trained for an job in academia, while a majority of us will not end up securing those positions. Also, more resources for postdocs dealing with fellowships/taxes on fellowships. I found that as an international postdoc, I was not aware of the hardships that I would encounter after accepting an external fellowship (ie. losing medical insurance from my institute as I am no longer considered a full time employee, not being taxed properly on my fellowship and being left with significant debts and fines during tax season). If the US would like to continue to attract international postdocs, it would be nice if there were resources to help us in these situations. Especially resources pertaining to taxes—my institute always suggests that I see a tax attorney, but given my extremely low salary, this is not a reasonable solution. I also don't think I should be penalized for receiving external funding and have to pay a large lawyer fee.

Response 274

Perspectives on the postdoc roles and responsibilities

I serve as a shadow PI. I run the lab on a day to day basis. I am the primary mentor to graduate and undergrad students working in the lab. I also run my own research program. This process was helpful at first, but after 2 years I am just doing the work of a PI without the title or pay.

Fundamental issues and challenges

Pay. The salary is complete trash for the level of training and skills that I have. I can get paid over twice as much outside of academia.

Also, stability. Having to move every 2 years is exhausting and drains the little savings that I have. Having better funded, longer postdoc positions would solve this.

Existing NIH policies, programs, or resources

Increase the salary.

Proven or promising external resources or approaches

Increase the pay.

Response 275

Perspectives on the postdoc roles and responsibilities

This is a position that allows an early investigator to gather the skills required to obtain an independent research position in the future. It also allows scientists who are indecisive about their next step to think and gather the skills to transition to their next position.

Fundamental issues and challenges

The salary is very low for the training that one has received. This is especially true for postdocs who have families and live in expensive cities. There is no universal parental leave established. Depending on the city, a parent may get 6-12 weeks. Six weeks is not enough for a woman to recover physically and emotionally after giving birth, to find childcare (especially in cities where waiting lists are long), and to be ready to start working full time. Work-life balance can vary tremendously from lab to lab since specific work hours are not established. The number of hours spent in the lab could be significantly affected by an advisor’s expectations. Every institution should have mentoring programs that allow postdocs to receive advise outside of their lab.

Existing NIH policies, programs, or resources

Universal parental leave (minimum of 12 weeks), increased salary or child care subsidy for postdocs with families, affordable health insurance for families, retirement benefits, information and support for careers outside of academia since not everyone will have the chance to become an independent investigator

Proven or promising external resources or approaches

There is external funding that already starts addressing these issues, including NIH fellowships.

Response 276

Perspectives on the postdoc roles and responsibilities

Pursuing an independent research project, or (more often) more than one. Mentoring students, presenting data clearly at meetings and conferences, maintaining collaborations.

Fundamental issues and challenges

Salary (too low for very high expectations). Not being paid by the hour (you depend on your project/projects, no one cares if you have to work more than 8 hours/day or during the weekend).

Existing NIH policies, programs, or resources

More small starting grants for young postdocs, so they can be easier to obtain and boost the cv and help a little the lab economy.

Proven or promising external resources or approaches

Improving job satisfaction and salary.

Response 277

Perspectives on the postdoc roles and responsibilities

The postdoctoral position has been one of the most rewarding positions of my life. I am enjoying the opportunity to fully dedicate myself to conducting research while also developing the professional development skills necessary to become an effective principal investigator in the next stage of my career.

Fundamental issues and challenges

We are currently faced with very few benefits, including a lack of access to travel support for conferences and professional development opportunities.

Existing NIH policies, programs, or resources

The NIH standard salaries are out-of-date. This is problematic as individual labs will look to NIH minimums as guidelines and use this information as a precedent. It is unfortunate because I know many individuals who cannot live off the the current minimum NIH salaries and have instead opted to leave academia in favor of jobs that pay more comfortable salaries.

Proven or promising external resources or approaches

No response

Response 278

Perspectives on the postdoc roles and responsibilities

A postdoc has lost it's purpose in my view. It's a staff scientist without the career stability and a training position where it trains for a role that a minority of postdocs enter into.

Fundamental issues and challenges

The pay sucks, benefits are subpar, the job is demanding, and as there are way too many postdocs compared to tenure track openings it's a dead end job. No other sector other than academic research sees value in postdoc training.

Existing NIH policies, programs, or resources

Fewer postdocs should employed, with higher salaries, and with a clearer pathway to becoming a tenure track investigator.

Proven or promising external resources or approaches

Postdocs are underpaid, overworked, and have bad career opportunities compared to not doing a postdoc. Pay more, it's that simple. I more than doubled my salary moving to industry and the time I spent as a postdoc was wasted. I entered at the same level as a fresh PhD graduate, which is not an uncommon experience.

Response 279

Perspectives on the postdoc roles and responsibilities

What it should be: Further training in your field, preparation for managerial tasks / running a lab, a temporary position that leads to stable employment.

What it is: Underpaid and overworked temporary positions that rarely result in actual benefits to the employee or stable positions in academic science. Consistently ignored by the institutions and insultingly considered "trainees"

Fundamental issues and challenges

Every institution pays the absolute bare minimum claiming it's what the NIH sets forth even though those guidelines are clearly minimums, poor benefits, zero management training or oversight of PIs so many labs are toxic and abusive with no possible course of action to fix it. Positions are always temporary on two-year contracts at best so you can't put down roots because you might have to switch jobs and give up the research you've been doing to find a new position.

Existing NIH policies, programs, or resources

More grants, more accessible grants, and updating the incredibly outdated grant review committee model you use that somehow manages to be less meritocratic than a random lottery. Increase the minimum salary guidelines because every institution treats it as a maximum and pretends they aren't allowed to pay more.

Proven or promising external resources or approaches

I guarantee you 90% of these issues would go away if institutions paid a proper wage and allowed post-docs to transition to stable jobs rather than temporary contracts completely dependent on outside grants.

Managerial training requirements for PIs would also help if I had any faith they'd be implemented properly.

Response 280

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1. Need for strong and supportive mentorship.
2. Abuse and toxic relationships between mentor and postdocs
3. Accommodations for postdocs who have families
4. Postdoc salary, not enough to support families with small children (especially those requiring childcare).

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 281

Perspectives on the postdoc roles and responsibilities

In depth scientific training to get more autonomy in conducting scientific projects. For me who don't want to be a PI, I consider it as gaining experience and increasing my curiosity while I get additional trainings to be able to find a position in industry.

Fundamental issues and challenges

Postdoc salary is very low and the gap with industry is huge making it difficult to stay in academia for a long time even though we like what we are doing.

Postdoc are treated as trainees and not real employees by some institutions such as not having retirement benefits which is difficult when you commit to 5 years of postdoc training

University do not match NIH salary scale years to years creating inequalities between old postdoc that are sometimes less remunerated than freshly graduated phd starting a postdoc.

Existing NIH policies, programs, or resources

More access to training helping postdocs who want to pursue a career in industry.

More fair salary for postdoc

Mandatory retirement contribution included.

Parental support like F32 with child care help.

Proven or promising external resources or approaches

Not sure to understand this question

Response 282

Perspectives on the postdoc roles and responsibilities

I view my academic postdoc as an opportunity to enrich my training beyond the skills I learned while earning my PhD. My institution very clearly views my position as a source of cheap expert labor.

Fundamental issues and challenges

It is hard to reconcile the insultingly low salary/stipend levels paid to postdocs with the years of intellectual and emotional strain sacrificed to earn a PhD. In many ways it is a wonder anyone pursues an academic postdoc at all; current trends in postdoc recruiting reflect this sentiment. In my mind, there is no other single thing which could improve the experience than increasing salary/stipend levels to those commensurate with the expertise and hard work that postdocs provide to laboratories and institutions. In addition to making everyday living a struggle, particularly in high cost of living cities where academic centers tend to be concentrated, I think postdocs are demoralized by being paid a pittance after years of hard work and struggle to earn a PhD.

Existing NIH policies, programs, or resources

Fellowship and training stipend levels must be increased across the board, and must be made more equitable based on the local cost of living. For instance, the current stipend levels may suffice for a postdoc in a relatively rural area, but make basic living a struggle in large metropolitan centers, which is where most of the top institutions postdocs strive to work at are concentrated.

Proven or promising external resources or approaches

Some institutions are waking up to these critical issues. See, for instance: https://postdocs.stanford.edu/funding-rates-and-guidelines; https://www.dailyprincetonian.com/article/2023/02/postdoctoral-researcher-letter-petition-university-increased-salary-demands-nassau-hall-princeton; among others. To be clear, marginal increases will not solve the problem. Institutions will continue to hemorrhage postdocs who realize their worth and leave for other better paying opportunities. In the end, this is a matter of basic respect to people who have sacrificed years of their lives to pursue their passion and simply want to be compensated at a rate which ensures their basic comfort and dignity.

Response 283

Perspectives on the postdoc roles and responsibilities

The Postdoc is an early career scholar who brings a great deal of education and training, but not a lot of experience managing research projects independently. The Postdoc position is an opportunity to gain more experience under supportive mentorship, with more independence than they received in a Doc program. The Postdoc should be capable of managing a research project, including all aspects of the research process.

Fundamental issues and challenges

Very low pay for someone who is highly educated. Postdoc positions at academic institutions are also on contingent contracts, therefore they’re ineligible for retirement benefits. Most people who can find a faculty position or a better paying industry position will take that over a Postdoc.

Existing NIH policies, programs, or resources

More funding and training opportunities to support social and behavioral scientists.

Proven or promising external resources or approaches

No response

Response 284

Perspectives on the postdoc roles and responsibilities

It means everything to me

Fundamental issues and challenges

Insuficient salary

Existing NIH policies, programs, or resources

Establish minimum salary for poatdocs nih funded that increases with the years of experience

Proven or promising external resources or approaches

Salary is the main issue

Response 285

Perspectives on the postdoc roles and responsibilities

Postdocs should be learning positions to launch PhDs to their next positions, either in academia or industry depending on the postdoc's preference.

Fundamental issues and challenges

I see faculty everyday, including senior leadership in my own department, who view postdocs solely as cheap labor. There is zero incentive for a PI to launch an outstanding postdoc to the next level. In fact, there is disincentive to do so, since the productivity of the lab takes a hit when an experienced member leaves. Furthermore, many institutions get around the time limits placed on postdocs by simply calling them a different name (eg, in my institution, after 3 years, every postdoc is automatically transitioned to the title of "senior scientist". But in practice, that person is still treated as a postdoc with salary less than the NRSA stipend level for experience).

Existing NIH policies, programs, or resources

Have a minimum salary for all PhDs listed on grants as the other bookend to the maximum salary. It needs to include all PhDs so that institutions can't get around it by simply giving postdocs a different title. This would prevent institutions from hiring excessive numbers of postdocs as cheap labor, with no intention of supporting their launch into their independent career.

Proven or promising external resources or approaches

The NRSA stipends for PhDs within 6-years of degree should be applied to all NIH-supported postdocs, including those on extramural grants.

Response 286

Perspectives on the postdoc roles and responsibilities

Having been a postdoc for about a year and a half now, I view the position of postdoc as no different in roles and responsibilities than that of a late-stage PhD student. I would describe at least 95% of my position as train students, helping write text for grants, and performing research. These are all activities I did as a senior PhD student in my first lab. The other 5% is preparing for, attending, and participating at scientific conferences. Again, this is no different than might be expected of a senior PhD student. Therefore, my perspective on the roles and responsibilities of a postdoc is that PIs across the nation truly want a longer PhD studies period, but realize it would strongly reduce the attractiveness of PhD programs. Therefore, they decided to require a postdoc for serious consideration of a PhD candidate so as to get a

longer period of (relatively) cheap labor from skilled scientists without having to offer benefits or competitive salaries that would be expected for scientist positions in exchange for the future potential of a tenure-track faculty position and an understanding that you have been "trained", even though this training is almost non-existent.

Fundamental issues and challenges

A postdoc seems like a worthless training position: we are treated as no better than PhD. Further, we have little in the way of benefits (generally only health insurance) and non-competitive salaries (so that we generally live paycheck-to-paycheck). This last is particularly frustrating when public school teachers can make as much as or more than we do with full benefits, including attractive retirement benefits. Further, many of our advisors didn't have to do a postdoc to secure their positions, but seem to require it of current faculty candidates. Finally, our institutions call us "faculty" but often make it very clear in ways both overt and subtle that we are second class citizens of our academic communities. In total then, it feels like a waste of time as we acquire neither financial stability, savings for our future, useful skills, nor respect. Further, the role is by definition temporary, so that all these downsides come with the additional problem of instability. It is simply a position I took to "check a box" so that I could achieve my career goal of a tenure-track faculty position and to acquire a few more high quality letters of recommendation for my faculty application package. Generally, the "box is checked" once we have published, and after that point, we begin looking for a permanent position (what my wife calls a "big boy job"). And that is the problem, with all the downsides, nobody sees the postdoc as a long-term viable career step, but rather a necessary evil to be hurried through as quickly as possible. For those without academic aspirations, the postdoc is meaningless as they can be hired into other career paths right from completion of a PhD, so many simply avoid the postdoc all together since it gives no tangible benefit.

Existing NIH policies, programs, or resources

Honestly, I didn't know any of these **policies, programs, or resources**existed, so part of the problem is getting institutes to support their postdocs and make supports well-known. Would I expect all issue to be simultaneously resolved? No. However, balancing upsides and downsides of this career path could be a way to sustain interest in postdocs, at least in the short term. For instance, quick changes that could be made would include longer-term contracts (most postdocs are on 1 year contracts) with guaranteed funding and annual raises and bonuses. Do not tie bonuses to performance metrics, because postdocs on riskier projects would then suffer. This could at least allow for long-term financial planning. Giving postdocs access to the retirement benefits of regular faculty (e.g. required contributions with employer matching with competitive interest rates) would give a strong sense to postdocs that they are investing in their future through a postdoc, rather than seeing their postdoc as competing with time that could otherwise be used to greater effect. Some might say fellowships or being a co-PI on a grant could resolve these issues, but the vast majority of PIs hire postdocs to work on multiple funded projects, so that postdocs rarely have the time to dedicate to new research projects that would have to be proposed. My PI made clear that if I were to win such an award, I would still be expected to complete the projects he assigns me in addition to the funding award (as he cannot hire new postdocs). This strongly discourages my competition for these resources, as there is simply not enough time and energy to do all this work. Essentially, postdocs are cheap labor for PIs, and PI's have banned together to ensure anyone wanting to be a PI has to suffer through one.

Proven or promising external resources or approaches

I have seen no proven successes in my postdoc, so I have no resources to direct the NIH toward. Training in my postdoc position (aside from new research techniques) is nearly non-existent, as my postdoc supervisor only cares about research output. Participating in training activities outside of research is discouraged (as it competes with time that could be spent on research), so any training I do must be done on my own time. Obviously, as a married postdoc, I value what personal time I have, so I rarely participate in training. Further, many training or internship opportunities require extreme geographic mobility (e.g. the AAAS science policy fellowship requires a year in Washington DC). However, if a postdoc is married and/or has a family, this extreme mobility is difficult (as it also requires your spouse and/or children to move with you) for very temporary positions, which is hugely unattractive to the postdoc and their family. With the advent of remote training, I think many of us would like to see remote opportunities for fellowship and training participation so we don't have to uproot to take advantage of any opportunity. Also, for many of these external resources, postdocs are lumped in with tenure-track faculty positions for job search sites, even though these are two entirely different career stages. Segregating job postings by

career stage would be helpful to those searching for postdoc and faculty positions alike. It would also reduce the idea that such positions are "equivalent", because they are obviously not. However, the inclusion of both types of position as "faculty" in job searches gives the illusion of equivalence and the perception that taking a postdoc is somehow a "failure" to get a tenure-track position.

Response 287

Perspectives on the postdoc roles and responsibilities

It is a transition stage where postdoctoral fellows can learn new skills and explore new research topics to prepare for the next step of careers. It's meant to be 2-3 years long (or 4-5 years long, as some manuscripts may require longer preparation and revision time).

Fundamental issues and challenges

Salary is not competitive. It's hard for postdoc fellows who have families to support. Career-prospect is also not clear—faculty positions in academia are limited. Also, work/life balance is rather poor—In academia, overworking is somewhat encouraged. When you try to maintain a work/life balance, people may think you are lazy. Also, the PI has too much power over the career and development of the postdoc.

Existing NIH policies, programs, or resources

Given that more and more postdoc candidates are international, there should be more funding opportunities for them. To increase postdoc's salary, we will need support from NIH and universities/institutes. As a junior PI, I want to offer better salary to my postdoc, but it is hard because of limited funding. NIH's modular budget also has not changed for many years—it simply has not caught up with inflation at all when everything else is getting more expensive. Also, it is time to consider if the current formats of graduate and postdoctoral programs offer the training and mentorship that graduate students and postdocs need to succeed, considering that most won't pursue a long-term career in academia. In general, the whole academic research enterprise has not changed for 20-30 years when the world is evolving.

Proven or promising external resources or approaches

In the past year, there have been a lot of discussions on why people are leaving academia. If you check social media, you will see people talking about that every day. The biggest issue is money. Postdocs demand higher salary which makes sense. However, NIH and the universities/research institutes do not provide the means to do so. It makes it tough for the PIs, and so begins the vicious cycle. Academia research focuses on publish or perish; however, to pursue a career in industry, consulting, or even academia itself, it requires more than just being able to produce data and writing papers/grants. The current model seems to support the already established PI rather than providing a platform for postdocs and junior faculty to grow and develop. A lot of PIs see their postdocs as data-generators. I personally did an extended postdoc because my former PI knew I was very productive. He was not supportive of me pursuing my independent career until I told him for family and financial reasons, I had to apply for faculty positions or would need to leave academia and find a job in industry instead. I also told him I found out he supported another postdoc to look for another postdoc position but not me. I know I am not alone in situations like this—Sometimes PIs have too much power over the career of a postdoc. If the PIs are not supportive, the PIs could be stuck for a long time with no proper guidance and help.

Response 288

Perspectives on the postdoc roles and responsibilities

I see a postdoc as an "apprenticeship" in which well-trained and talents candidates work on a mentor's research program in the context of a professional development plan. The goals are to learn assays/skills (e.g. bioinformatics, biochemistry.); some didactic training; RCR training; publish data papers and reviews; and develop their grantsmanship.

Fundamental issues and challenges

COVID hurt things a great deal.

Student loans. PhD graduates can more support and loan relief in industry sometimes

Industry can have more focused goals than academics where it is "every man for himself"—figuratively and literally

Academics are often staid and inflexible in their programs. For example, we find it extremely difficult to get administrators to understand why a post doc (MD, DVM etc) would want to be in a graduate program and they can be extremely inflexible at modifying their training program for these candidates.

I think the NIH should require that all post docs receive post doctoral compensation, even when they are in a degree granting program.

Existing NIH policies, programs, or resources

Some post docs are an academic version of indentured servitude. Some minimum standardization in expectations, salaries, benefits could be led by the NIH. Also, we expect trainees to attend RCR but only if funded on training type grants. NIH could require that all trainees complete RCR as well as PIs (say every 5 years). RCR should not be a resented distraction. Postdocs also watch their PIs closely and while specific application of guidelines can be open to interpretation, too many PIs could be considered noncompliant and this creates an ambiguous environment for trainees.

Proven or promising external resources or approaches

T32 budgets should include funds for recruitment.

Equity in salaries and benefits. Too often trainees in the same lab and between institutions have different position descriptions depriving them of equity.

Response 289

Perspectives on the postdoc roles and responsibilities

The academic postdoc position should ideally prepare an individual to become a principal investigator with their own lab.

Fundamental issues and challenges

I personally decided to pursue my graduate studies in Canada instead of the US due to a number of issues with US programs and the US in general including work/life balance, affordable housing and healthcare access. Here in Canada I've found relatively affordable housing, free healthcare and a generous stipend. Furthermore, my rights as a person in the LGBTQ community aren't up for debate here and are guaranteed unlike in the US where there are changes each election cycle.

Existing NIH policies, programs, or resources

Funding for graduate students and post docs and opportunities for new principal investigators and/or tenure track professors. If there's nowhere to go after your postdoc there is no reason to pursue one.

Proven or promising external resources or approaches

Focusing on recruiting, retaining, and promoting diversity at all levels. If women and under-represented minorities don't see a place for themselves in academic research you will continue to see top talent recruited to industry or to academic institutions in other countries.

Response 290

Perspectives on the postdoc roles and responsibilities

As a postdoc, I am a professional who is responsible for independent research. This involves full time work performing highly specialized techniques to generate new knowledge that is essential for human development and progress. It is the cornerstone position driving science. It is NOT training nor are we 'trainees'!

Fundamental issues and challenges

Salary, salary, salary. All of my non-science friends in finance with bachelors or masters degrees with similar amount of experience are making well into 6 figures and in some cases more than 200,000. They

do not do any sort of special work, and it requires much less expertise. For us to get to that pay scale requires being well into a principal investigator position with high productivity.

Meanwhile, postdoc 'housing' at [redacted for anonymity] consists of 100 year old multi floor units that do not have elevators (one person I know had to carry furniture to the 5th floor on the stairs) nor laundry in the building, let alone in unit.

Why would anyone in their right mind live under these conditions? We already put all our energy into the science—or would like to. 'Passion for science' only takes you so far, and I'm afraid the way postdocs are treated in terms of salary and compensation is totally absurd.

Existing NIH policies, programs, or resources

It's very simple. Pay postdocs more.

Proven or promising external resources or approaches

Pay postdocs more.

Response 291

Perspectives on the postdoc roles and responsibilities

Postdocs are transition position which should prepare the fellow for his/her future career. Training in non-quantitative/nonbiologic skills areas should be mandatory. This includes grant writing—which is not typically taught at the doctoral level, career paths such as industry and government, how to find a job and negotiate resources beyond salary, understanding expectations in academics, industry and government jobs and how to build collaborative networks. Research work should be supervised by the advisor but there should mutually agreed upon areas that help to distinguish the post docs work.

Fundamental issues and challenges

Biggest challenges are salary, child care and the requirement for U.S. Citizenship / Permanent resident status. I have had to turn away some truly outstanding international applicants from my training grant.

Existing NIH policies, programs, or resources

The provision of child care support in T32s or F awards should be an allowed expense and added to the budget (i.e. not subtracted from current non-stipend/non-salary administrative costs so that providing child care does not reduce administrative support).

NIH should consider circumstances under which a trainee not yet a citizen can be supported—i.e. if they are a refugee could be an exception, if they come from a low/middle income country or impoverished background could be another. International Fellows could be required to work in the U.S. for a period of time or face a pay back penalty to ensure return on investment. The number of slots for such fellows could be restricted to a percentage such as 33% so as to still encourage citizenship for fellows. The U.S. would be better served to keep talented international fellows here long time.

Proven or promising external resources or approaches

I recommend NIH training grants request data comparing the long term outcomes of all fellows, not just those on T32's. Include information on international fellows. There will need to be additional adminstrative resources to do this but it would not be a huge burden—perhaps limit it to 5 years post graduation from a program. Mandate reporting on all non-research training (grant writing courses, career development programs etc) in specific sections of the RPPR to standardize the reporting. This would help collect the data in a similar format for analysis. This would be needed to understand where investments should be made.

Response 292

Perspectives on the postdoc roles and responsibilities

A postdoc position in my mind is a training position to allow the student to transition into a more independent researcher. They work under a senior advisor and is trained well in not just bench research,

but writing grants, reviewing papers, giving presentations, communicating/networking with peers, and teaching fellow lab members or junior students.

Fundamental issues and challenges

Many training positions in other fields such as Residency in the Medical field, or apprentices in trade professions, usually lead to a full time job in that field and these training positions are expected by employers. Postdocs in academic research have an extremely difficult time finding positions in academic institutions. Many students also view postdocs as something they can do while they figure out what they want to do as a full time profession. If there is a very small chance of getting an academic faculty position, then the need or drive to do a postdoc diminishes drastically. Those that are strong and motivated and know that this is the trajectory they want for their career, do well. This is not an ideal situation for someone who is unsure of what to do. Industry positions now do not require postdoc training and students skip this step. Overall quality of life as a postdoc again, depends on the motivation of the trainee as well as the mentor and lab environment. When either element is suboptimal, the postdoc experience suffers. Finally, although we have seen an increase in postdoc salary provided by the Obama administration, the salary is still lower than what trainees want. If the increase is to happen, there MUST be a mechanism in current grants for PIs to afford postdocs.

Existing NIH policies, programs, or resources

In my mind, the entire postdoctoral training process needs to change. We need to provide training for those that are serious about pursuing academic research. In this light, NIH sponsored postdoc awards should be provided and mandatory to get a spot in a lab. Even of this separate award pays for 50% of the salary which will be matched by the PI's grants, that would improve the quality and motivation of postdocs. PIs need to view postdocs as valuable opportunities to train, and not hire as labor to get research and papers out. There needs to be a COMPLETE overhaul of the postdoc training ecosystem. I would caution NIH to just throw money at this thinking this will improve the current status of the lack of postdocs as this is not just about money. NIH needs to work with faculty to rethink and rebuild the ecosystem with some accountability.

Proven or promising external resources or approaches

No response

Response 293

Perspectives on the postdoc roles and responsibilities

I believe that I am unique with regards to this topic. I have functionally taken over and am running the lab, including ghost writing all of our grants, mentoring, running experiments for my PI. I have taken the mentality of fake it until I make it. This however seems to be burning me since I have applied for a faculty position at my university and part of the feedback was why would they hire me when my PI is already doing the proposed work. The reality is my PI has only a minimal clue what I am doing and why I am doing it.

Fundamental issues and challenges

1. Atrocious pay—I can easily get paid 3x what I am currently getting paid
2. Lack of academic job opportunities
3. Brutal hours—I work 7 days a week
4. Inability to have control over my life, I'm tired of dragging my wife all over the country, we want to settle. We shouldn't have, but we have two kids now, I'm nearly 40. We built a house that we love, but we are either going to have to move or I have to continue doing what I am doing, which is writing all the grants for the lab, running the lab, mentoring all the students, and performing all of the experiments for my PI.
5. There needs to be more support for primate research trainees in the worst of ways. We are facing so many barriers from so many sides, ranging from faculty in our own departments that dont like NHP research, old NHP researchers that was to squash the competition, startup costs, to public perceptions. The only reason I am sticking with this, for the time being, is because I believe that my research will impact human health. I am suffering now in the hopes that I generate the data to spin out a company so that I can get paid back for the sacrifices I, and my family have made on my account.

Existing NIH policies, programs, or resources

The K99/R00 is a joke and does not work the way it's supposed to. On top of that, I have ghost written and received two R01's for my mentor (so far, more are in the pipeline) that I would be taking with me and I cannot get an academic job.

I turned my K99/R00 into an R01 and it's supporting the research, staff, and my own salary–The problem is that I am not getting credit for my work. There should be a way to write grants and find out who has done the work on the grant. I have generated all the preliminary data, I wrote the first ten drafts, I found the collaborators, my PI came in the weekend before it was due and worked on it. Its his name on it, the reason my name is not is because I dont want to lose my EIS when I hopefully get to start my own lab.

Proven or promising external resources or approaches

I am currently on the job market, one of my major frustrations is that there are several individuals that I am competing with that are coming from big name labs. They are clueless in terms of so much of their science, but because they are coming from a big lab, they are getting their foot in the door, which is immensely frustrating. I dont know how to fix this, but its beyond frustrating that students are able to ride the coats of their mentors when there are people like me that have built my own lab, got my own funding, and am running my own program and I cannot get an interview.

One thing that I believe would be immensely beneficial would be to start incubator type labs for people to either sink or swim. This would mitigate some of the risk to the universities by putting a lot more onus on the individual. For example, I work with primates, I know I can get funding if I had the titles. The university definitely has the space to support this type of model where I could share resources with several other groups, as my lab/funding gains traction, I can either renegotiate or having an independent proven track record, use that as leverage to move somewhere else. Conversely, the less funding I have, the more dedicated space/time gets contracted. In this way, startup academic labs can be more like an incubator lab spaces, this proves to the university who is worth keeping and who is not.

Response 294

Perspectives on the postdoc roles and responsibilities

I became a postdoc to develop my career and establish a record of publication and fellowship funding to strengthen a future faculty application package. It has been critical to my ability to network with other PIs, create an independent research project, and develop my own research program. Comparing where I am currently to immediately after my dissertation defense, I am significantly more prepared to lead a research lab.

Fundamental issues and challenges

Financial stability. In graduate school the stipend was $25k. Making $50k in a postdoc or $90k in an industry position was a tough decision and one that required me to sacrifice another 3-5 years of potential higher income to pursue an academic postdoc. There is no dental healthcare included, no protected maternity leave, no retirement benefits, and no real guarantee that my yearly appointment will be renewed. I have been privileged to work for a very supportive and understanding mentor who has allowed me to pursue my own research interests, but I know that is not always the case. Being a postdoc requires a lot of sacrifice, particularly as a woman in her 30s considering family leave.

Existing NIH policies, programs, or resources

An NIH training plan and pathway for the transition from graduate student to postdoc to faculty that is implemented through the office of postdoc affairs would help a lot of postdocs to keep from floundering. It is easy to join a lab and be a worker drone on a PI's project and not develop your own independent project or be able to pursue funding for that project. If the goal is to "train" a postdoc to develop and then move on, there should be a clear pathway with milestones that is standardized and supported by the NIH and the university. Additionally, I recently discovered during my K99/R00 application that despite there being up to $100k in salary support through NHLBI, my university will not approve a raise of more than 6%. If the NIH increases its postdoc pay standards, universities will have to be encouraged to participate in the recruitment and retention of quality postdocs. Intervention from the NIH on behalf of postdoc salaries may be necessary to keep postdocs from being seduced by the financial stability offered in industry positions.

Proven or promising external resources or approaches

SciPhD was an incredibly valuable resource I took advantage of, and even though I plan on remaining in academia, understanding the business of science is critical in postdoc development. There is no formalized grant application training or budget management training, which are critical to faculty success. Increasing postdoc salary and establishing a pathway to faculty other than the incredibly competitive K99/R00 mechanism would improve the entire postdoc training ecosystem.

Response 295

Perspectives on the postdoc roles and responsibilities

Postdocs in my opinion represent a combination of highly skilled labor, and a training position for research in academic or industrial settings. Our academic funding system (NIH, NSF, USDA competitive grants) has positioned postdocs as highly skilled temporary labor. From my view as a PI at an institution where graduate students are very expensive to the PI, postdocs represent the most efficient labor force. I also expect that postdocs will learn (be trained in) the skills necessary to run a lab, write papers and grants, and deal with laboratory administration.

Fundamental issues and challenges

Recruiting—there appears to be a very limited supply of appropriately trained postdocs. For quality of life, the salary scales are limited by limits from funding agencies on the overall sizes of grants.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 296

Perspectives on the postdoc roles and responsibilities

This role should be about doing solid science. Instead it's a constant battle with producing results under the gun, delaying building a family, trying to ensure an academic career after finishing up, pathetic pay that is barely sufficient to pay for housing and food in the vast majority of cities where large universities that support postdocs are stationed. Comically, postdocs are being bombarded with "wellness initiatives", aka total waste of university dollars that could be used to raise their salaries so that their "wellness" truly improves.

Fundamental issues and challenges

The pay is considerably lower than shifting to industry both in the short term and even worse so in the long term. US postdocs are on the order of 5+ years. That time in industry would yield double what current postdoc salaries pay within even a few short years. Meanwhile, NIH and private foundations continue to cut eligible periods for F32, K99, and other similar funding and career transition awards. Why would anyone stay under these circumstances? It reflects poor economic choices in favor for the very low probability of landing an academic research position. In fact, there's no material reason to pursue a postdoc unless one is pursuing a professorship, as no other field requires it. Professorship positions have been shrinking, even while the list of service, productivity, mentorship, committee, . requirements keep piling on. What other industry requires such an absurd workload for impoverished wages? Smart people will choose to go anywhere else, and rightly so.

Existing NIH policies, programs, or resources

NIH MUST raise R01 and other funding to levels that permit paying postdocs competitive wages. It's easy to determine what a competitive wage is, just look at what PhDs who left academia are getting paid. Currently it's approximately $90,000. Where do you get the money from? STOP funding well endowed labs. Nobel, Lasker, . Prize winners, HHMI, 3+ R01 labs don't need anymore money. You're siphoning the minimal funding you have now to give multimillionaire PI's even more money so they can grow their group to 20-40 trainees and provide mentorship to none of them. That's an inane policy and you know it, so why

don’t you do something about it rather than put out these idiotic RFI’s year after year? You don’t need people to tell you this, just do it instead of wasting more money and time on these RFI’s.

Proven or promising external resources or approaches

Provide F32’s and K99’s with no restrictions. Raise salaries to competitive rates, $80,000 now and match it to an index of salaries for PhD’s in industry of equivalent working years. Mark R01 and equivalent pay to LAB SIZE, meaning that PI’s should not have labs larger than 12 people or they simply can’t apply for NIH funds. Stop funding the ultra wealthy labs. Do you want good mentorship and competitive science? I know the answer is NO because your policies are clearly inline with enriching already wealthy labs. Actions speak louder than lip service. I actually don’t even know why I’m filling this form out because you know all this already but refuse to do anything to fix it. I look forward to the next RFI when nothing has been done, the academic workforce has shrunk even further, and you’re still scratching your heads as to why funding wealthy labs and PI’s rather than postdocs and small mentorship teams hasn’t produced any results.

Response 297

Perspectives on the postdoc roles and responsibilities

The postdoctoral position has one of the highest demands in terms of time, stress, scientific ability, and creativity of any post graduate position. However, it is also one of the lowest paid positions with the most uncertain job security. I was entirely trained and mentored by postdoctoral associates in the lab during my PhD. Postdocs are essential for junior faculty to easily train lab members, produce data and secure tenure. As a postdoctoral fellow entering the job market, it is obvious to me that I will be forced to open my lab without postdocs (due to their limited numbers and the high cost of living in most cities). Therefore the lack of postdocs impairs lab productivity, graduate student mentoring, and junior faculty obtaining tenure. Given their pivotal role in academia, postdocs deserve a higher salary and better access to career development opportunities.

Fundamental issues and challenges

High cost of living in major cities coupled with low salary and low job security.

Existing NIH policies, programs, or resources

Make additional K awards that are dedicated to postdocs working with junior faculty. Far too often, K99 awards are selectively distributed to well-established labs, bottlenecking career mobility for successful postdocs in smaller labs.

Incentivize postdoctoral seminars instead of faculty seminars within neuroscience departments.

Remove postdoctoral salary cap. Create more faculty positions. Allow postdocs to be paid what they are worth.

Proven or promising external resources or approaches

Improve postdoctoral training for careers outside academia

Response 298

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs have to be paid more. The current pay is far too low to recruit and retain the best talent and is completely not reflective of the workload placed on postdocs nor their key contributions to research. Additionally, the number of senior faculty who are poor mentors either due to having too little time for mentorship or by actively creating a hostile environment is damaging the perception of the postdoc. One bad experience by a postdoc can discourage 3 other people from even pursuing it—especially after they see the low pay relative to other opportunities they have once graduating with a PhD.

Existing NIH policies, programs, or resources

Increasing postdoc pay is the main one. Without that no other solutions will make a meaningful impact. Beyond pay improved mentorship, coaching in careers beyond academia, and increasing diversity within postdoc ranks will all assist in alleviating this issue.

Proven or promising external resources or approaches

No response

Response 299

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are absolute critical driving forces behind most peer-reviewed science and productivity in the US. In fact, I would wager that non-citizen postdoctoral fellows drive the majority of science productivity in the US. If you look at first authors of high profile science published from US labs, the majority are not born in the US. This means that since they cannot get NIH grants directly, they are often wholly funded by their PIs R01 grants. Many postdocs stay in their position longer than the traditional 3-5 yrs, becoming critical lab members that train all incoming staff/students and take on more responsibilities than just performing research. There are very few mechanisms to reward and retain such key lab members.

Fundamental issues and challenges

Parent R01 funding for postdocs limits PI abilities to pay a reasonable and sustained wage. Further, the lack of security/clarity about their employment at many institutions and categories of job title beyond the initial fellowship years have resulted in a near "extinction" of postdocs, as is seen by massive and desperate advertisements by even huge labs that typically draw many applicants. For those of us not in Boston, DC, NYC and San Francisco, it is almost impossible to recruit these days

Existing NIH policies, programs, or resources

Make the R50 a widely adopted, highly funded mechanism for retaining senior postdocs. All institutes should use this mechanism, there should be a wide swath of non-R01 mechanisms to allow labs to co-apply with postdocs for semi-independent funding that gives them ownership and job security in the eyes of the institute. Also, make the budget for R01s have supplements for postdoc raises/funding rather than make us scrimp on supplies just to be able to squeeze in a reasonable postdoc salary. Make citizenship irrelevant, but productivity the only measure.

Proven or promising external resources or approaches

these little training and survey efforts are irrelevant. Competitive salary, security and ownership of projects should be the focus.

Response 300

Perspectives on the postdoc roles and responsibilities

Trainee position, chance for individuals to expand their expertise, get pubs, learn grant writing.

Fundamental issues and challenges

Too many PI's see PDs as "slave labor" to advance the PI's work and enhance PI status. Not enough accountability of PIs.

Grants are SO hard to get these days, that its a rat race to the top, and PI's can't take time or energy to think carefully about training and development.

Existing NIH policies, programs, or resources

K-awards but also changing modular level funding.

Proven or promising external resources or approaches

No response

Response 301

Perspectives on the postdoc roles and responsibilities

You are expected to over see graduate students, conduct your own research, write grants, and do other managerial things.

Fundamental issues and challenges

I think the post-doc position is under paid and over worked. You are taking on this role expected to work 70 hours a week for maybe 50,000. Also for women you are expected to have kids during this time which is literally giving your entire paycheck in childcare. Many of the post-docs I have talked with don't prioritize their health or their family or just simply don't have kids because it's to hard to financially.

Existing NIH policies, programs, or resources

Providing childcare would be a huge help for post-docs wanting to have kids. Increasing pay.

Proven or promising external resources or approaches

I came into grad school thinking I wanted to post-doc now I will not be. The working environment is abusive in some labs so maybe having a reporting mechanism for grad students and post-docs to anonymously report the PI or like at least a way to share feedback regarding the PI. Also a moving stipend would be helpful too and overall increase.

Response 302

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Increasing the tuition benefit for post docs woudl be very benefitical.

Proven or promising external resources or approaches

Providing effort for program directors and mentors on T32s would be very beneficial.

Salaries for post-docs should be higher (physicians who are residents who become fellows on a T32 would take a pay cut, except where institutions can supplement salaries, but there are not stable funding streams to supplement the T32 salaries.

Expansion of loan repayment programs would be beneficial. For example, the two year commitment of doing largely research is challenging when fellows are looking for jobs After busy clinical year, they have to be ready within 2 months to write a loan repayment grant, and the second year of that grant if awarded will be when they presumably have a new job, at a new institution.

Response 303

Perspectives on the postdoc roles and responsibilities

I love my job. I love being able to generate new knowledge, to pursue my curiosity, and to have the fulfillment knowing that the work I do will make an impact on the world by improving the health of people around the world. However, our responsibilities as postdocs are huge relative to the amount of money we are paid. We are expected to simultaneously be experts on current literature, design projects and experiments, generate new data, perform analysis, write manuscripts, maintain normal lab operations, serve as hands-on mentors for junior scientists, provide institutional service, and then somehow have time to explore independent job opportunities for ourselves. This is a lot to handle, and while I enjoy all aspects of this, I know the experience of others differs greatly.

Fundamental issues and challenges

Low pay and dismal prospects for independent investigator positions, coupled with competition from booming high-income industry positions, seem to be the obvious reasons why fewer people are entering postdoc positions. The NIH, as the main funding source for biomedical scientists, simply needs to put more monetary resources toward paying postdocs what they deserve and establish programs that they can expect to count on for funding as their careers progress. The fact that many postdocs are pursuing passions by staying in academia should not be a good reason for paying them far less than what they should be making for their diverse and highly specialized skill sets.

Existing NIH policies, programs, or resources

The NIH postdoctoral payscale needs significant overhaul, particularly in response to inflation in recent years. As someone in his fifth year of his postdoc, I am making less money now, inflation-adjusted, than I did when I first started this position. This is unacceptable. When starting salaries in industry are easily twice that of what a postdoc makes, it seems fairly obvious to me why there has been a decline in the number of postdocs, who have woken up to the reality that many in academia view us as nothing more than cheap labor. Until the NIH is willing to confront and change this reality, I predict that the current trends will continue.

Proven or promising external resources or approaches

One avenue that needs serious consideration by the NIH is the establishment of programs that create more staff-level, post-postdoc scientist positions. Despite the low pay, I love my job and am very good at it, and if the funding environment favored it, I would continue in my capacity as such a scientist. This is one clear solution to retaining high-quality scientists in academia, particularly if there are fewer postdocs entering the academic pipeline.

Response 304

Perspectives on the postdoc roles and responsibilities

The postdoctoral position, while still a career training position, is made up of highly talented and deeply educated individuals who will make up the future of the academic/industry/nonprofit workforce. By continuing to pay them a salary that is not commensurate with their skills and value their existence, the pipeline that is necessary to support this type of talent work is being outsourced to industry positions and start ups that are willing to pay salaries that are higher, but with less career opportunity for these individuals. This process has created a situation where the NIH now lacks power, leverage, or the ability to shape the talent pool that they have created because top talent is leaving the positions in which the NIH has influence over how their skills are deployed. This talent drain, lack of control and sustainability, seems to be an existential issue in building a talented scientific workforce.

Fundamental issues and challenges

Salary. A salary raise that puts the median skilled postdoc at the NIH at 90-100k dollars at year zero, would cause the best talent to be retained amongst academic postdocs. In many ways, money fixes so many problems here, including second order effects such as quality of life, childcare, and other quality of life issues.

Existing NIH policies, programs, or resources

I don’t believe we need to reinvent the wheel here. The K mechanism is effective in generating new early stage investigators from this pool. If increasing salaries also increases competition by increasing the amount of good postdoctoral candidates for jobs and a decrease in the number of positions, then this is a win for NIH. Academic institutions need to pay more salary, create more positions using their endowments, and allow the grant dollars provided to them to support science. But, at the end of the day, the NIH only has soft influence at these institutions. Starting within the intramural program will create industry change, by supporting postdocs and providing pathways towards independence that are competitive and generate the best outcomes for the institution.

Proven or promising external resources or approaches

No response

Response 305

Perspectives on the postdoc roles and responsibilities

An academic postdoc is not a training position, however, that is how it is portrayed. While some postdocs may learn new skills and mentor new students, ultimately postdocs are recruited to labs based on their training and their expertise. Postdocs are not mentored by PIs in a similar fashion as graduate students, rather they are treated as independent scientists from the beginning. Their advanced training is often exploited to serve as small 'cores' for the lab based on their previous training. For instance, I came into my postdoctoral lab with genomics training—a skill not currently established in the lab. As such, I was not just collaborating with others in the lab but taking on massive additional projects to plan, analyze, and interpret genomics data for all members of the lab. Unsurprisingly, this takes away from my postdoctoral projects and ultimately delays my career advancement. Further, a major flaw of the academic system is that postdocs are only guided toward academic jobs. There is an abysmal effort to prepare for alternate careers. It is utterly flawed logic to think that postdocs will publish and land a tenure-track faculty job. The academic market is saturated, there are only a few positions each cycle, with more and more postdocs applying each year. We need to provide incentives to encourage the retirement of PIs to make room for new PIs. We also need to cap the number of postdocs that a PI can take on. Realistically, a PI is not an effective mentor of 10+ postdocs and the same number of graduate students. Postdocs are the ones left on their own in this situation.

Fundamental issues and challenges

Recruitment and retention are impacted by multiple factors. First, job prospects in the academic job market are low, as mentioned above. Second, entry Ph.D.-level industry positions do not require academic postdoctoral experience and the starting salary is often double that of an academic postdoctoral position. Postdocs are often around 30 years old. This is an age that many start families, buy homes, send children to daycare, etc. I cannot stress enough how truly impossible it is becoming to achieve these personal life goals with a postdoctoral salary, especially if both adult partners in the home are postdocs. Universities charge for parking, which is often upwards of $1000 a year, and do not provide ANY support for postdocs. Access to the university daycare at my institution is $1600 a month and has a 2 year wait list. This cost alone is 30% of an entry-level academic postdoctoral salary, and, added to rent/mortgage, results in pennies at the end of the month for postdocs. Beyond this, universities often do not allow postdocs to contribute to a retirement account. Further, securing a coveted NIH postdoctoral fellowship often greatly hurts the postdoc. Many postdocs (myself included) lost university benefits including health insurance, after securing a fellowship, because the university no longer recognized me as an employee. If I had known this would be the case, I would not have applied for the fellowship. This massive financial burden, coupled with low job prospects and more than 40 hour work weeks results in extremely poor job satisfaction, low quality of life and immeasurable stress.

Existing NIH policies, programs, or resources

1. Childcare costs—$2500 is two, or maybe three months of daycare support. This is not sufficient.
2. Family leave—8 weeks of leave is abysmal and causes massive stress on the birth parent. Minimal leave, coupled with trying to express milk for the lactating parent after returning to work is a major strain.
3. Loan repayment—not accessible to most postdoctoral researchers.
4. The NIH should consider allowing institutional allowances to cover parking/transit to the university.

Proven or promising external resources or approaches

Non-NIH programs that provide a higher postdoctoral salary and more community support at their institution are extremely desirable. These programs (such as at Yale) decrease financial burden and will likely increase enthusiasm for the academic job route. You are also guaranteed a mentoring team outside of your home lab. These types of programs are new but are viewed optimistically by current and past academic postdocs.

Response 306

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be a time limited (2-3 year max) training period that allows for postdocs to broaden experience, gain lifelong mentors, and apply PhD skills to different areas while preparing for their career position.

Fundamental issues and challenges

Admin: the general lack of clear institutional designation and/or staff benefits for postdocs. For instance, as a postdoc in 2016, I did not have clear sick, vacation, or parental leave. My advisor was reasonable and supportive but it is often left entirely to the whim and personality of an advisor. As faculty now, it is difficult to create and track "fair" leave policies in an ad hoc environment. If postdocs were considered staff, they could be managed and tracked just like other employees.

Also, for many female postdocs, the timing intersects with childbearing years. However, many institutions do not grant maternity leave benefits at all, or even in the best case (if an employee is considered staff) for one year following entry. Given the transient nature of a postdoc, this creates a burden. For instance, a pregnant woman may prolong her PhD through the end of a pregnancy knowing that she would not get leave in a postdoc position; or may prolong time in the postdoc for a similar reason; or may leave academia altogether when she realizes how this timing will play out for her life and family.

Culture: the expectation that postdocs change institutions for PhD / postdoc / career is untenable for many with families, especially women or those without substantial family resources. Changing locations several times within a few years carries material and social costs.

Existing NIH policies, programs, or resources

Extend the NRSA parental leave from 60 days to 90 days (even if restricted to a childbearing parent). Vaginal birth recovery is a minimum of 6 weeks and c-section recovery is a minimum of 8 weeks. Among other considerations, postpartum guidance stipulates that mothers should not lift anything heavier than their baby for 8 weeks, and jumping from "no lifting" to the often very physical demands of much science work at exactly 8 weeks isn't good for total recovery. Additionally, infant development allows for much more regular breastfeeding patterns at 90 days compared to 60 days. This is a small amount of career / scientific time but a huge difference for infants and families.

Consider incentives / drivers that encourage institutions to designate postdoctoral trainees as employees, eligible for routine benefits.

Proven or promising external resources or approaches

No response

Response 307

Perspectives on the postdoc roles and responsibilities

I view postdoc position of early scientist position when one can train to independently run a research while still under professional leading.

Fundamental issues and challenges

Overload of work is well known and present—no boundaries for PIs to overload postdocs with work and duties. Pressure to publish and attend career development seminars, often done in free time since no boundaries set up for PIs to give space for training and out-of-research meetings. Non-competitive salaries for the stage of education and knowledge.

Existing NIH policies, programs, or resources

NIH does not support parents and caregivers enough—not enough daycare space/support, no support for outside daycare (that is usually too expensive for postdoc salary), no rules for PI to support family life and excessive expectations for new parents. Lack of support of life/work balance (students do understand this, PIs do not).

NIH does not allow postdoc to become PIs for animal protocol etc = missing opportunity to learn, pressure for lab PIs who can not often deal with extra work.

[redacted for anonymity] courses are too expensive and NIH should have some discounts (the prices are often higher than courses from [redacted for anonymity] etc).

Lack of possibility to learn about other laboratories work/equipment to be able to enhance the research, very bad information and propagation of core facilities, lack of presentation of institutes and their possibilities for co-operation etc.

Proven or promising external resources or approaches

i.e. universities ([redacted for anonymity]) support of postdoc and predoc networking—special websites, email hubs to communicate, help with moving/saling/buying/saving money.

Response 308

Perspectives on the postdoc roles and responsibilities

Learning new technical skills while simultaneously building leadership skills and independence.

Fundamental issues and challenges

Salary and uncertainty of future academic job prospects. It is untenable to be paid below market worth for years, waiting for a job that is highly likely to not exist.

Existing NIH policies, programs, or resources

The institutions I've been at seem to interpret the NIH minimum postdoc pay scale as the standard salary for postdocs. That minimum either needs to be raised or strongly encouraged that pay can exceed that minimum.

Proven or promising external resources or approaches

No response

Response 309

Perspectives on the postdoc roles and responsibilities

It meant a regression in my career

Fundamental issues and challenges

Salaries are terrible

Existing NIH policies, programs, or resources

Not sure, absence of mentoring is difficult to tail

Proven or promising external resources or approaches

No response

Response 310

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The fundamental issue is the underpaying and undervaluing of a highly educated and skilled set of workers. The overall quality of life of postdoctoral trainees would improve if they were offered competitive salaries and benefits and treated as employees not students.

Existing NIH policies, programs, or resources

Postdocs should be treated as employees, not trainees. Changing our status to full-time employees would make us eligible for helpful programs such as public student loan forgiveness, employer-sponsored 401k, subsidized daycare, a salary commensurate with our education and skill level, taxes automatically taken out of our stipend, etc.

Proven or promising external resources or approaches

Offer a better salary and benefits. We already went to school for higher degrees for 9+ years; treating us like students instead of skilled workers will only push away talent into other industries that give us full-time employee positions right away instead of making us "train" more.

The main purpose of the postdoctoral system is to underpay skilled workers for as long as possible, instead of creating more full-time, full-salaried positions.

Response 311

Perspectives on the postdoc roles and responsibilities

A training job to gain a more independent research experience.

Fundamental issues and challenges

Salary is relative low. Particularly in areas with high living cost. No retirement benefits. Usually be treated as a trainee not an employee.

Chance to obtain a tenure track faculty position is very low, and usually concentrates in several highly prestigious institutes (like Harvard, Stanford, Yale, UCSF, Berkeley etc.). Postdocs from average institutes are less competitive in academic job market.

Existing NIH policies, programs, or resources

1. Increase the modular grant funding. It has not change for decades.
2. Increase postdoc salary and benefits.
3. Cut the current K99 awards, establish a new K99 program that only postdocs from institutes with less NIH grant support can apply. I am not saying the current MOSAIC program is not good, but from what I see, many of the MOSAIC awards go to highly prestigious institutes (No.1 Stanford, or Harvard-related institutes, No.2 UCSF, No.3 JHU), thus it is not a real program to promote DEI. Actually many of the K99 awardees from highly prestigious institutes can obtain a TT job just fine without a K99 support. Those who need grant supports in order to land a TT job are often ignored.

Proven or promising external resources or approaches

No response

Response 312

Perspectives on the postdoc roles and responsibilities

A postdoctoral researcher is a fundamental pillar of the foundation of any research program in any given institution. It is a position that requires high level of expertise and commitment, both technical and intellectual. The postdoctoral researcher is not a student, and while receives training and guidance from his/her mentor and the lab, provides highly valuable labor, both physical and intellectual, contributing to move forward the science of the lab and the institution.

Fundamental issues and challenges

Number one: Salary: If we want to incentivize scientific research and recruit highly talented postdoctoral trainees, we should start by recognizing their value by offering a competitive salary that would allow them to focus on their work instead of being distracted by financial problems. That is especially true for American trainees, who end up with pretty high student loans which cannot be afforded, by far, with the current salary of a postdoctoral trainee. In a world that values professions and basically everything by how much money people get paid, scientists, and especially postdoctoral trainees, are in high disadvantage. Youngsters see their peers with bachelor degrees in marketing or admin getting better pay and many feel

deterred to get into the science path because of all the years of training and sacrifice with very little reward other than the intellectual one. Although MD residents are not well paid either at least they know that once they finish their residency their income will change substantially, being partially why they commit to the sacrifice of a residency (beyond their love for their profession). That's another reason why most of the postbac trainees that come to many research labs aim to go to med school, and not many have the intention of becoming a scientist. The financial talking point has been notoriously out of the conversation in science because we are passionate about a job we truly love and we scientists don't think much about money. However, neglecting that topic it's affecting science and we should do something before it's too late. Let's follow the Princeton's example and increase the minimum wage of a postdoctoral trainee to $65,000 nation wide. I think we wont regret it.

Existing NIH policies, programs, or resources

Again, let's start by salaries.

Proven or promising external resources or approaches

Again, let's start by salaries. NIH and academia put enough effort on trainings to provide postdoctoral trainees with the best mentoring possible; minimize as much as possible cases of harassment; enhancing equality of opportunity and inclusion; etc.

Response 313

Perspectives on the postdoc roles and responsibilities

I see this as a requirement to have a continuing research career. My goal is to stay as a staff scientist in academia, and the postdoc is a prerequisite to this. I have increased responsibilities as compared to being a graduate student, such as the implicit expectation that I will be faster to learn and more productive, and more leadership and mentorship roles in my lab and research community.

Fundamental issues and challenges

Being that my goal is to be a staff scientist, I am dissatisfied with the implicit requirement to postdoc for 5 years before I can become permanent staff and earn retirement benefits. For those aiming for a PI position, or who had wanted to do so when entering graduate school, the fact that an 8 year "postdoc" (5-year postdoc and 3 years of staff scientist in the same lab) is becoming increasingly common discourages people from wanting to pursue this track. Add together the fact that if you want to go into industry that it is much more beneficial (in terms of career and salary growth) to go straight into industry, the number of students who want to pursue a postdoc is decreasing. For DEI purposes, this is additionally detrimental — those from underrepresented and underfunded backgrounds are less likely to want or be able to accept another 5-8 years of low salary and no retirement benefits. Finally, living in a place or working in a position that you know is temporary is inherently stressful, so for anyone who wants stability after graduate school, a postdoc is a bad choice.

Existing NIH policies, programs, or resources

Increasing funding levels for grants would better allow labs to pay livable salaries to both graduate students and postdocs. The same goes for providing funding opportunities for staff scientists, which benefits labs by having talented individuals remain in their position for decades, providing important continuity for training new members and continuing research progress. Furthermore, my understanding of childcare supplements provided is that they are quite minimal with regard to actual childcare costs, especially in the high cost of living areas that are considered the best places to do research (and honestly, a requirement to live in if you want to successfully transition from postdoc to PI).

Proven or promising external resources or approaches

I don't have specific resources but I know that more needs to be done about abusive PIs. I was in an abusive lab as a graduate student but managed to leave. This PI went on to abuse many more students and postdocs, and the postdocs most typically had the fewest resources to help them escape. As a graduate student, you have a little more protection–my graduate program directors were able to assist in a lab move. The two postdocs that I know from the lab who left both had to rely solely on the assistance of their graduate advisor and lacked any support at the institution of the abusive PI. I know there are some policies regarding abuse but the only times these apply are when the victims are able to provide

large amounts of evidence and convince higher-ups that there is a problem, which is difficult when the abuser appears as an "excellent researcher" to those same people. The burden to prevent an abusive PI from abusing future students or postdocs should not be placed on the victims, and as of now, it is.

Response 314

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 315

Perspectives on the postdoc roles and responsibilities

Post-doctoral fellows are critical to our national research interests and play key roles in advancing our understanding of science across most disciplines

Fundamental issues and challenges

Salary—To be more competitive with industry, academic salaries for post-docs need to increase however, there needs to be a concomitant increase in NIH grant funding budgets. Additional increases in post-doc salary will greatly hinder funds for research in RO1-type grants, and therefore these budgets also need to be increased accordingly or more training grants provided to post-docs to offset these costs.

Quality of life—The idea that a post-doc needs to move institutions to transition to a faculty member is obsolete and should not be used as review criteria during a study section

Existing NIH policies, programs, or resources

Increased training grants for post-docs

Increased training grants to transition to faculty at the same institution

Increased grants for early faculty such as small RO1, with improved funding lines than a traditional R21.

Proven or promising external resources or approaches

No response

Response 316

Perspectives on the postdoc roles and responsibilities

Advanced grad student. Transition role between grad student and PI where you can learn more skills and leadership roles.

Fundamental issues and challenges

It's very obvious that the pay is probably the main reason. Graduating grad school you are confronted with "I want to stay in acedemia but then I'll be paid 40-50K, but if I go to industry I will be paid 100k-150k". Many people are struggling to buy a home or start a family at this stage in life. Money actually matters for those things. You don't want to have children if you can't provide for them well.

Existing NIH policies, programs, or resources

Pay them more. Give then dental insurance. Make grants easier to apply for (ie not like 50 pages long, more like 10).

Proven or promising external resources or approaches

No response

Response 317

Perspectives on the postdoc roles and responsibilities

It has been explained to me/view it as an extension of your PhD education with more freedom.

Fundamental issues and challenges

PostDoc are treated as they are still students on a lowered salary. By not providing a higher (livable) salary, decent accommodations for people who want to start a family, and addressing toxic culture of academic, people will continue turning to industry. Pay needs to be adjusted.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 318

Perspectives on the postdoc roles and responsibilities

Push forward the boundaries of science by executing high-quality research in respective field; generating scientific papers, perfect own skills for imminent career in a scientific-related field.

Fundamental issues and challenges

From my perspective as an immigrant in the US, I do not think there is an issue of recruitment as many of the US-based institutions are world-class, highly funded and, technologically gifted to other parts of the world. While my benefits are great, I'm not sure if these are the same for all postdocs across the US, or whether I'm lucky because I'm working at a healthcare-affiliated institution. Otherwise, salary would be the main issue to the quality of life. As an immigrant who came to the US with no savings (because I was a PhD student beforehand like the majority of postdocs), this is the first time in my life that I have to worry about money, and that I have literal nightmares about being poor, not being able to pay bills, or provide for my wife (who followed me to the US as a dependent on my visa and is not allowed to work in the US and as such contribute financially). I can't imagine what incoming postdocs with one or multiple children are going through financially. Meanwhile, some technicians in our labs are making more than postdocs, working from 8am-4pm, and we are here working late nights, weekends, which only gets exacerbated during pandemics as I'm in the field of emerging/high consequence infectious diseases. Finally, the 35$-monthly increase between Postdoc 1 and Postdoc 2 is insulting; it's not like we are paid hourly and go just do "more hours" to inflate our salary.

Existing NIH policies, programs, or resources

The only thing that comes to mind would be the Postdoctoral Certificate Program, which at best, feels like a joke by the fact that is a condition of employment, and takes time away from lab work, which can be hard to navigate for individuals with highly-demanding experiments (e.g. animal experiments in high containment laboratories). While I do get the idea behind it, and do support the fact that some classes are mandatory (e.g. ethics), the structure of the program itself is a burden more than anything else. The idea that there are certificates for focused profiles (e.g. teaching, management, clinical research, etc.) is a nice touch, but the fact that as individuals, we need to manually track which classes are needed for the certificate of interest, register to them, and then complete all them is a burden in itself. Now, the fact that even when we DO complete all required classes for a given certificate, the fact that we need to request the certificate, i.e. that is is not automatically awarded to us is ridiculous. I was already hired to do scientific work, I shouldn't have to perform these administrative tasks. What's next? Should we also have to design in Photoshop, print and, get the dean of our faculty to sign the certificate also? Last but not least, I have NEVER heard about an employer asking to see a Postdoctoral Certificate Program and hiring someone with one, over someone who doesn't; its value appears insignificant for the works it requires.

Proven or promising external resources or approaches

I have been in the US, as an immigrant, for over 1 year and I do not waste money in any shape or form but I have yet to save a single dollar as my paycheck gets slashed by retirement stuff, benefits for my wife and I, while 100% of the rest goes to rent, utilities, and food. There has been months where my account was in the red. I need to go in debt every time I need to fly back to my home country for important life events. It's actually hard to focus on generating cutting-edge research in the name of a US institution that will claim it its own, when at the end of the day I can't even provide food for my wife.

Response 319

Perspectives on the postdoc roles and responsibilities

I think postdoc years are about transitioning and figuring out whether we want to do science really, or we should look after other possibilities. However, the perspectives are not good, especially at the academia. The number of available positions are really narrow, and the push on us is really huge. This generates the most problems in science in general. The lot of cheating, improper data presentation are all about the push and fight for every positions. This is toxic. However, I really think, that we have to be clean, and morally strong. This is my intention and how I live my life. I hope it pays back later. The problem is, that is not true for everybody. The other big problem is, that the scientific community does not have the chance to avoid this attitude mainly because of the PC. Science should figure out a internal quality control somehow. These are the most important things to do.

Fundamental issues and challenges

I think, that the biggest problem nowadays in a postdoc's life is the salary, and the continuous feeling that we are really short on money. I think, that it provides a huge frustration day by day. We generally feel, that we are not recognized at all compared what extent and how long we trained ourselves. Especially, the inflation of the recent years had a really bad influence on our life quality. The main importance of this issue is, that I feel it destroys the moral and self confidence a lot. We just can not value ourselves enough. We feel that we are miserable, and we screwed up our life by making the decision in the past to be a scientist.

The improper salary however is not only a problem by the postdocs. I think, that Staff scientist/PI salaries are also far behind the properly acceptable level. The main problem is, that NIH would loose its leading position because of that. Youngsters are willing not to come to NIH, because they don't want to live on water and bread every day. These responses we got from postbags mostly.

I hope NIH is going to join the movements, what started on universities outside about postdoc salaries. Last time [redacted for anonymity] increased minimum postdoc salaries by 20%, with a starting salary of $65k. Right now this number is at around $55k at NIH. Taking together with the living cost in the DMV region, it is a huge difference.

I think this is a major problem, which NIH should solve for the future.

Existing NIH policies, programs, or resources

I feel, that we have to participate on too much trainings regarding ethics, equity, harassment and etc.

Proven or promising external resources or approaches

I think that NIH is still a fantastic place. However, I think that the above mentioned responses about salary and training would help a lot in the life quality and perception of the working environment of the postdocs.

Response 320

Perspectives on the postdoc roles and responsibilities

Traditional definition of a Postdoc: "Gain the ability to do independent research and carry out a project on your own"

Reality: This can happen in graduate school under the mentorship of specific PIs

Additionally, we need to train postdocs in academic institutions to have careers outside the academy. Too much of the training is focused on grant writing and becoming a faculty some where. Need to focus on leadership and training and individual to become a leader.

There's lots of good people wanting to become policy analysts and wanting to become advocates for specific causes. All of this is done in a volunteer scale right now with limited training or training from people who have zero science background. Non-scientist training can be incorporated but if we wish to change these things long term, people need to be paid and receive external motivation to do these things.

Fundamental issues and challenges

Institutions need to actively analyze cost of living in their respective areas. Faculty may not feel the burden of rent increases and other expenses because those making 6 figs income don't feel the same pain.

R01 award sizes need to significantly increase. Many faculty have indirectly complained me saying "science was easier in the 90s when I didn't have to pay grad students health insurance and students fees were low"

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

AAAS fellowship.

Response 321

Perspectives on the postdoc roles and responsibilities

In theory, academic postdocs are useful if a graduate student feels they have something additional to learn to further their desired program of study. Importantly, this should probably not be a necessary stepping stone in the career of every scientist, but rather, something that might potentially be useful. In practice, academic postdocs are jobs that people must take if they want to stay in academia simply due to lack of faculty positions. In addition, people must take postdocs if they did not publish enough as graduate students. I know very few people who do a postdoc for its intended purpose of furthering your own knowledge base.

Fundamental issues and challenges

LOW PAY. Low pay, low pay, low pay. This issue is beginning to affect graduate studies as well, so I strongly urge the NIH to seriously reckon with this. I am at a PhD program at an R1 university and I am about to graduate in one year or so. I don't know a single member of my graduating cohort that intends to pursue a tenure track career, and therefore, that intends to pursue a postdoc. This has been true for the 2 cohorts of students above me, and appears to be largely true for the 1-2 cohorts of students below me. Industry jobs are far too competitive and many of them are scientist positions that allow us to do science without sacrificing salary and being able to choose where we want to live. Academia overworks people and underpays people, and the common path of doing a long PhD with 1-2 postdocs before even beginning the tenure-track process is simply unacceptable. People are in their mid-40s before they can even begin to make a reasonable salary and have a stable career. This must change. Industry is paying people right out of graduate school $100k+. Why would anyone take a $50k postdoc? $50k is a salary that is simply unlivable in most major cities now. Further, people make this sacrifice hoping for a faculty job after this, and then STILL are not able to secure a job.so it's sacrifice for nothing. I came into my grad program wanting to be a PI and fully intending to do a postdoc after grad school, and I am leaving my grad program realizing I can't afford to be a PI, and I am going into industry.

Existing NIH policies, programs, or resources

Set the minimum postdoc pay at a higher salary because most institutions are interpreting the minimum as the salary range postdocs should earn. Postdocs hold advanced degrees and are worth more. I regret to inform you that this won't be solved with a simple policy change. You have to pay people more. Cost of living is rising, and people are sacrificing more than they want to for these careers. You are ensuring that

the people that choose academic paths are only the most privileged among us with generational wealth and spousal financial support.

Proven or promising external resources or approaches

I am truly deeply serious when I tell you that I had a great lab, great mentor, great support, and I am still leaving academia because of money. It's just money. The average clown salary according to salary.com is $63,145. Most postdocs in this country are paid less than clowns. You can go about this trying to make smaller changes, but I promise you, that isn't going to solve the postdoc retention crisis. It will make life better for people choosing to do postdocs, and I think that's great, but until you raise salaries, no one will be making a different choice.

Response 322

Perspectives on the postdoc roles and responsibilities

An academic postdoc has the role to develop their independent line of research and is expected to perform at high-level while trying to learn new techniques and approach a completely different research question—sometimes outside their doctoral field. To me, an academic postdoc is a unique time for you to dedicate time to being independent while pursuing and exploring curiosity. Some of the roles include; writing and reviewing manuscripts, applying to multiple research grants opportunities, developing highly specific skills at the bench and also professionally, mentor and train graduate, undergraduate and technicians, submitting orders, take highly specialized courses amongst others.

Fundamental issues and challenges

The main issue resolves in poor compensation. Academic postdocs get paid very poorly, to the current cost of living surviving with an academic postdoc salary is almost impossible. In a stage of life where you are starting a family, or trying to start a family, living expenses just don't accommodate to the salary. Compared to as a doctoral student, at the end, you receive a certificate and earn a degree—but as a postdoc that doesn't really happen, you are expected to publish a paper in high-impact journal which can take many years, which means that you will have to work more than 40hrs a week with the bare minimum economic and overall support. It is modern explotation, with the hope and idea that you will get an academic position that is not even guaranteed. With the realm of opportunities that you can have once you obtain a PhD saying that you are pursuing an academic postdoc is viewed as a waste of time and money—without bringing into the conversation how toxic academic environments are and can be. Quality of life cannot exist when you are stressed about how you are going to survive with your salary having a whole degree and highly specialized skills in a space that makes you feel undervalued. It's not worth your mental health.

Existing NIH policies, programs, or resources

Compensate academic postdocs appropriately; provide childcare, force institutions to contribute to healthcare benefits, parking etc and develop a way to track and hold accountable toxic academic environments.

Proven or promising external resources or approaches

No response

Response 323

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellowship is a time to take on an independent project with mentorship by a field leader to help a junior investigator get established in their desired field. The postdoctoral fellow should drive the project in the day to day "doing" of the science AND with the guidance of the mentor learn to determine which questions are the critical ones and define which experiments that need to be done to accurately answer those questions. The postdoc should also serve as a mentor and resource for more junior lab members such as undergrad and grad students. The postdoc should also learn how to obtain external funding—ie grant writing workshops and applications for level appropriate funding—this is important to help them determine if the classic academic path is right for them.

Fundamental issues and challenges

1. Salary
2. Substandard benefits—ie no access to retirement, childcare etc types of benefits.
3. Long term job projects after doing a post-doc are daunting since success rates are low.
4. The NIH modular budget limit of 250K per year. This affects postdocs in a roundabout way b/c faculty cannot afford to pay postdocs unless they do a non-modular budget which increases faculty administrative burden.

Existing NIH policies, programs, or resources

Just pay them what they are worth. This isn't complicated. Institutions will go with the NIH minimums, so just raise the NIH minimums.

Proven or promising external resources or approaches

No response

Response 324

Perspectives on the postdoc roles and responsibilities

The postdoc role is intended to support young scientists as they work towards building their own research program, or whatever scientific career they have chosen to pursue.

Fundamental issues and challenges

Salary. I have had a postdoc position open for 5+ months now with only 4 applicants. You can not survive in [redacted for anonymity], on a salary of 54K and there is no-one willing to move here to try. I can't blame them. I am working towards turning this into a remote postdoc position instead.

This becomes even more difficult now that some institutions are starting to pay 70K+ salaries, which is entirely appropriate, but it means the rest of us absolutely can't compete.

Existing NIH policies, programs, or resources

This survey is a little disingenuous. There have been several editorials in the last month in Science and Nature alone detailing proposed solutions to this issue. I find it hard to believe the Admins at NIH have not been following this discourse for the last 10+ years that it has been going on?

Minimum postdoc salaries need to be increased to 70K and NIH needs to set this bar. You have known this information for years.

Proven or promising external resources or approaches

No response

Response 325

Perspectives on the postdoc roles and responsibilities

I view the purpose of academic postdoc positions to primarily fill three roles:

1. To train early career scientists how to advise students and run an academic lab.
2. To refine their current skill set as well as gain new ones.
3. To perform as much research as possible to gain a foothold in the scientific community that they are a part of.

Fundamental issues and challenges

Purely financial. I am starting a family, and I simply cannot afford continuing to be a postdoc at NIH recommended salary ranges. I made slightly over 20k/year as a graduate student for many years, which put me into massive credit card debt. I now have to work several side jobs (DoorDash, tutoring, etc) to be able to afford a decent quality of life and child care, and I am still living off of credit cards. Scientific careers are not 9-5 jobs, but time outside the lab for me is now spent doing other jobs to supplement my

income. That, on top of the stress of being able to afford my bills takes away from that work that I want to be doing. I cannot afford to put the number of years into my postdoc required to get a highly competitive academic professorship position, and I feel forced to go into industry as soon as possible.

Existing NIH policies, programs, or resources

We need increased salary ranges for postdocs. Not 10/15k, but like 25/35k to even come close to being competitive against industry jobs. Also, loan repayment programs that are accessible to basic science researchers would be helpful.

Proven or promising external resources or approaches

No response

Response 326

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is a professional experience where I'm learning to be an independent creative scientist while supported by someone who already knows what that means. I show up every day eager to learn and do great work. My mentor gets lots of productivity out of that, and in turn, is preparing me to go off and continue to do that on my own.

Fundamental issues and challenges

Simply put, I could leave and go to any pharma company right now and my 2.5x my salary. I've been recruited probably a dozen times over the pandemic. The pay is bad, but the greatest challenge is the dismal prospect for a future in academia or government research. So, postdocs get scared because the powers that be have made no future for us. When we get scared and someone is offering us 2.5x our salary and to actually have weekends off, 70% of postdocs will take that offer. At NIH I am a number in a folder somewhere. No one cares about us here, other than our mentor (if we have a good one). All the places trying to recruit us actually pretend to value our insight, perspective and expertise.

Existing NIH policies, programs, or resources

There should not be 100x more postdocs than staff scientists. Fund a future for us or we will just leave. There is very, very little point in doing a postdoc if I want to go to industry. Give me a future so doing a postdoc makes sense again.

Proven or promising external resources or approaches

Honestly, just look at good practices in the public world for support and retention. It seems like NIH has never really enacted any of that. You all just took us for granted, and now we are all leaving.

Response 327

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The main issue with recruitment and retention of postdocs, is that postdoc's salary is too low and in most academic institutions postdoc do not have access to benefits such as a retirement plan. The majority of PhD students I interact with in my institution wants to pursue a career in industry after completing their PhD. Although they value the training and mentoring experience they receive in academia, they are not willing to put up with the low salary and the amount of free work faculty are asked to do in academic institutions to be eligible for promotions later on.

Existing NIH policies, programs, or resources

NIH salaries for postdoc have to increase significantly.

Proven or promising external resources or approaches

No response

Response 328

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary, temporary positions with little opportunity to stay at same insitution

Existing NIH policies, programs, or resources

Salary.

Create postdoc to TT mechanisms.

Proven or promising external resources or approaches

No response

Response 329

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a period of additional training and time to solidify future research interests for an independent academic or industry group lead position.

Fundamental issues and challenges

One of the most fundamental issues regarding the recruitment, retention, and overall quality of life of postdoctoral trainees is the salary, especially given their Ph.D. credentials. This salary and lack of benefits (lack of contribution to social security, no retirement benefits for workers in their 30's, and no childcare aid) make it hard to stay in these academic or government style postdoctoral positions. This is especially true for women who face a hard choice of deciding if and when to start a family during this career period. If they do have a child they will have a very hard time finding and being able to financially pay for daycare. But on the other hand, if they decide that they are not financially able to support a child then many women have to wait for the next face of their career, for example an assistant research professorship, to have a child. At this point many women are considered to have geriatric pregnancies that pose health risks for themselves and their offspring.

Additionally, because of the "trainee" designation of postdoctoral fellows there seems to be less recourse or access to an HR department if there are large issues with their mentor. This can seriously derail a postdoctoral fellows career and places international trainees in an even more precarious position.

Existing NIH policies, programs, or resources

The NIH offers childcare aid to federal employees, this could be expanded to include trainees.

The NIH could change the status of postdoctoral fellows from the nebulous trainee to employee, this would allow us to pay into social security, access 401k retirement benefits, and pay into unemployment if an unresolvable issue arises with our mentor.

The NIH could increase the minimums of their policy on postdoctoral fellow stipends, and within the NIH make sure that the difference in pay for postdocs across institutes is immediately resolved.

Proven or promising external resources or approaches

Some academic institutes hire postdoctoral fellows as employees so they can access retirement benefits, unemployment benefits, and pay into social security.

Some academic institutes have childcare centers on campus for their trainees and professors to use, and notably is actually accessible by trainees.

Response 330

Perspectives on the postdoc roles and responsibilities

In my opinion a postdoctoral position should be an early investigator stage, a hybrid between a student and a professional. Is the first step after your PhD in which you start working in a field that is different to what you had been working on so far. When you are a Postdoc you have so far the knowledge of how to work in a lab, how to do your experiments and how to analyze data so you are only student in the sense of the new field that you are working on now but not in the sense of learning how to work in a lab because that you got it with the PhD. In this stage a postdoc is also able to give some ideas and help with designing projects, they shouldn't be just a technician that also analyzes date, postdocs can give their own ideas too.

Fundamental issues and challenges

In my experience as a postdoc there are two big issues that affect recruitment. First one is that postdocs are treated as senior techs, their ideas are not being listened, they just do the experiments that PIs tell them to do but they don't really listen to new ideas. Postdocs do the experiments that most techs don't know how to do, they fix the issues that might be happening when performing some experiments and they analyze the data, but they are not treated as researchers or they PhD background is not being taken into account. The other, and major, issue is the salary. Postdocs are paid equal as techs in the academia labs, which is not motivating and doesn't make us feel valued if someone with a lower level of education is equally paid. In addition, pharma companies pay double or even triple to PhDs so is more likely that people are going to choose those positions, only foreigners who don't have postdoc opportunities at their own countries take these jobs in academia but after a while they discover that in companies they can make way more money and have a better life quality while being more valuated at their jobs. In fact, the salary for postdocs is considered underpaid in some States.

Existing NIH policies, programs, or resources

It is not a matter of changing the policies, is a matter of applying them. Most of the research institutions don't have these programs or resources into account, they don't help their postdocs to grow as researchers, they use them as senior technicians.

Proven or promising external resources or approaches

NIH should do an overview of what the salaries of postdocs are compared with jobs outside academia and maybe there they find their answer for this question.

Response 331

Perspectives on the postdoc roles and responsibilities

Postdocs continue researching in a academic setting, publishing papers, mentoring graduate students, and bolstering their resume to prepare for a faculty position.

Fundamental issues and challenges

Postdoc salaries are simply not high enough to live in most cities, have savings, contribute to retirement, and potentially get married and start a family. the salaries have barely kept up with inflation and graduate students are starting to realize their worth. By the time you graduate with your PhD, you are 28-32 years old, have a doctorate, have 6-8 years of research experience, and potentially numerous publications and you are still only told you are worth 50-60k. Postdocs also have no established maternity leave, childcare, limited vacation, and shaky benefits. It is very dependent on what university and mentor you have. If postdocs are so vital to academia then they should be compensated as such.

Existing NIH policies, programs, or resources

Expand how much money PIs can receive from grants and increase the portion that can go to salary

Proven or promising external resources or approaches

No response

Response 332

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

This can all be easily solved by paying postdocs the industry standard or close to it. Half the industry standard for poor life balance does not compare with a job in industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 333

Perspectives on the postdoc roles and responsibilities

I see the postdoc as an opportunity to develop my own research path under the guidance of a skilled PI so that I am competitive on the tenure-track job market. The important aspects for me are learning new skills, finishing projects that I am leading, and strengthening my publication portfolio.

Fundamental issues and challenges

The main factor for lack of retention is salary. The salary is abysmal for someone who has spent years completing their PhD at a low or non-existent salary and now must take on another role that is underpaid. When does an individual get to start a family and save money and care for their family? Once they have a tenure-track position?

For many fields, often more than one postdoc is required to become competitive on the job market, so institutions are essentially asking postdocs to put 5+ years of their life (when they could be having a family and reaching financial stability) to continue working toward a goal that may or may not happen. Moreover, a lot of postdoc insurance plans are very minimal and do not cover essentials like fertility treatment and PPO plans, which are typically available to graduate students and faculty. We also do not get any retirement plan or other benefits available to employees.

Overall, what is inhibiting recruitment and retention is the lack of treating postdocs as essential employees that are integral to the function of an academic institution. We can get paid much better in industry with great benefits and still do research, so why stick around for a postdoc position or two or three?

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 334

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I will speak from personal experience to the two biggest challenges I have encountered that threatened (and continue to threaten) my own retention as a postdoc:

1. the lack of adequate parental leave policies and more flexible allowances for partially reduced effort on NIH training grants (F32 in my case); and
2. the absence of cost-of-living adjustments to salary and childcare supplements. Expanding on the first point, the classification of F32 recipients as "trainees" means that at many institutions we are not considered employees and thus are not eligible for equal benefits. This is a monumental issue particularly for women who wish to have children. As a concrete example, I had a first child while on my mentor's grant and as an employee, had access to generous institutional leave policy (4.5 months fully paid). I worked hard to get an F32, only to realize that I am now not considered an employee of my institution and not eligible for either the university-based leave or state-based leave. The F32 offers only 3 months paid leave but does not extend the grant timeline, thus imposing a productivity penalty on fellows who do take the leave. The amount of time is also the same whether or not you are the birthing parent, which does not account for medical recovery and penalizes female trainees disproportionately. This leaves trainees, especially women, in the position of choosing whether to pursue a family or pursue their career. Regarding the second point, the NIH salary levels are not enough to sustain a family of even 1 child in high-cost cities. In my personal case, when I do the math for childcare for 2 children as compared to my salary, it just does not make sense for me to continue working despite years of training and investment.

Existing NIH policies, programs, or resources

My suggestions are tailored for the F32 mechanism, as that is the one I am most familiar with:

1. Allowance for 6 months of paid absence for birth + bonding with a child AND/OR mandate that institutions class trainees as employees and ensure eligibility for all institutional leave policies and other benefits (e.g., equivalent medical insurance, time off, etc). Anything else disincentivizes postdocs to pursue an independent grant.
2. Coupled with above, mechanism for the extension of the grant timeline corresponding to the period of absence or other methods to ensure a productivity penalty is not levied against postdoc taking leave.
3. Option for at least a short term reduction in effort (e.g., to 75%) for personal and/or family circumstances. There are many unforeseen life events (illness, caregiving responsibilities) that may require an adjustment of time but for which a full leave of absence is not needed. The reduction of effort ought to come with extension of grant timeline accordingly.
4. The elimination of the payback clause. For all of the reasons above, postdocs often find themselves in difficult situations wherein they have to choose between supporting a family and pursuing a research career. For many, it will be necessary to change course—this should not come with a further financial penalty.
5. Raising of the NIH salary minimum, with adjustments made for cost-of-living. Postdocs are highly skilled scientists with many years of training and salaries ought be at least enough to support a family as part of a dual-income household, which they currently are not. For women in particular, retention will hinge on the economics of salary vs. childcare costs.

Proven or promising external resources or approaches

No response

Response 335

Perspectives on the postdoc roles and responsibilities

Postdoctoral investigators are a key component of any research academic institution. They are critical for small and mid size groups where they could serve as an intermediate figure between the PI and more junior component of the team. Having a good postdoc(s) could profoundly impact the productivity of a group.

On the other side, postdoc are the next generation of PIs. Investing in their training and attracting them to academic institutions is crucial for the survival and solidification of the excellence in research for these institutions.

Fundamental issues and challenges

I am sure the current struggle for PIs finding postdocs has a multifactorial explanation. However, I believe the main factor is that postdoc salaries (and benefits) in most academic institutions is not competitive with the industry standard.

Existing NIH policies, programs, or resources

As academic institutions will start increasing postdoc salaries to try to competed with industry positions, grants would need to account for this increases in a way that an awarded PI could maintain the same number of postdoc without compromising the research goals for financial reasons.

Proven or promising external resources or approaches

No response

Response 336

Perspectives on the postdoc roles and responsibilities

The role of an academic postdoc as I understood it entering into my current position was to manage, facilitate and execute research independently. Aside from performing research independently, the main responsibilities include training other junior lab members, make scientific intellectual contributions, write manuscripts, share, communicate and advocate science performed in the lab, and secure funding through various grant mechanisms.

Personally, I viewed the position as a stepping stone towards becoming an independent scientist by allowing me to perform research within the general guides of the lab.

Fundamental issues and challenges

Postdocs are over-worked (due to explicit and implicit pressure) and underpaid. I believe one of the primary issues that lead to low recruitment are:

1. cost of living where many opportunities exist in comparison to other opportunities in the same regions.
2. Lack of opportunities following a postdoc tenure

Through my personal experience and those shared with me by others, retention is inhibited by both lack of opportunities (4 years to submit a K is not always realistic) and bad mentorship. I find that too often, PIs, even successful ones, are poor managers, poor mentors, and often times have tunnel vision that prevent creativity. This is not a work environment conducive for a scientific exchange of ideas or to conduce science and create a negative work place. In these situations, a better paying job in a similar environment, where expectations are laid out in the beginning, is much more alluring. I have a firm belief that PIs are a major contributors to the problem. Even in the absence of a great pay, a positive experience would help improve retention. As I see it, the NIH would never be able to compete financially with tech and pharma, so it is essential to identify other factors that can be modified, bosses being one of them.

Existing NIH policies, programs, or resources

In my view, a way to improve the postdoctoral training ecosystem and academic research career pathways revolves around improving training environment and relax the time restrictions imposed on path to independence awards.

K awards deadlines should be extended to 5-7 years or match the amount of time the NIH allows for a trainee to be considered a postdoc.

Add a lab retention criteria to grant funding mechanisms to identify PIs with poor track records. That being said, PIs are likely to manipulate and re-write history when asked to do that, perhaps an unbiased way to identify these would be helpful.

Proven or promising external resources or approaches

No response

Response 337

Perspectives on the postdoc roles and responsibilities

I view the academic postdoc position as a staff scientist position where individuals are seeking to expand some skillset and acquire additional research experience. While there are goals to expand training, I do not perceive postdocs to be "trainees", in that they have their PhD and have sufficient training and skills to be a scientist. I see responsibilities including leading research projects, mentoring undergraduate and graduate trainees, conducting analyses, and writing papers and grants.

Fundamental issues and challenges

The biggest issues are financial, including low salary, lack of ability to participate in employee-sponsored retirement programs, inequity across institutions for paid sick leave, paid parental leave, and paid vacation. Compared to what PhD's can earn and have as benefits in industry positions, the NIH payscale is woefully low. The inability to supplement salary funding from other grant sources if funded off an NIH NRSA is also extremely limiting. Additionally, the need to relocate for a temporary position for 1-5 years is difficult for individuals with families.

Existing NIH policies, programs, or resources

NRSA fellowship stipend levels need to be raised significantly. NIH can require institutions to provide NRSA fellows with a minimum number of paid sick days, paid vacation days, and paid parental leave days. As many institutions view the NIH postdoc fellowship pay scales as a *maximum* for paying postdocs, changes to the fellowship structure will likely have an impact across postdocs, even those not funded by NIH fellowships. Additionally, the annual maximum amount awarded for R01 must be increased. The dollar amount has been stagnant since 1999, and prices for equipment, staff, participants, etc have increased exponentially. This severely limits what PI's can pay postdocs and other staff, leading to wage suppression.

Proven or promising external resources or approaches

Providing adequate financial support for postdocs, both at the fellowship level and by increasing award amounts, will substantially improve recruitment, working environment, and job satisfaction of postdoctoral scientists. Many PhD's need to make practical considerations, including how to support their families and/or start families, pay back loans, save for retirement, and build a life now that schooling is complete. Insufficient wages and benefits are a huge detriment to recruiting and retaining postdoctoral scientists, and leads to increased stress, decreased job satisfaction, and decreased job performance when scientists are worrying about how to make ends meet. The NIH can lead by increasing fellowship stipend levels, increasing maximum funding for large grants, and stipulating minimum benefits for postdoctoral fellows.

Response 338

Perspectives on the postdoc roles and responsibilities

Seems very underpaid as a researcher and technical expert. Opportunities for growth minimal.

Fundamental issues and challenges

Short term contracts, required in-person, low stagnant wages, minimal flexibility

Existing NIH policies, programs, or resources

More $

Proven or promising external resources or approaches

No response

Response 339

Perspectives on the postdoc roles and responsibilities

Postdocs are senior research staff responsible for developing/working on a research project to compliment their existing experience and launch their own independent research program as a PI. Postdocs also take on many leadership responsibilities including mentorship of other lab members.

Fundamental issues and challenges

Postdocs are severely underpaid as research professionals. Starting salaries need to be much higher especially in high cost of living cities and areas. The typical biomedical postdoc also needs to be shorter or have a built in option to transition to a different job title (eg staff scientist, instructor) or junior faculty after four years. The goal posts for how long a postdoc takes in order to publish a high impact paper for an academic position is unsustainable especially if wages are not competitive. This also impacts diversity in the postdoc population.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 340

Perspectives on the postdoc roles and responsibilities

The primary role of a postdoc in a lab is to spearhead research projects in a lab without needing constant oversight. Postdocs have been trained to conduct research in a rigorous and thoughtful manner, so they are able to conduct experiments and analyze results mostly independently. They have the skills to search the literature to aid in their project development and direction, and understand their findings into the scope of the field. They are then versed enough to discuss next steps with their PI, providing valuable insight. As has been seen with the current postdoc shortage, postdocs are essential for lab functioning. There are not enough academic research scientists (or they are too expensive) to drive the research that is needed to get papers, grants, etc. Papers, grants, and research from postdocs is as valuable to the PI as it is to the postdoc. Postdocs are essential for a PI just as a PI is essential for a postdoc.

While the goal of some postdocs is to continue to a faculty position, I disagree that they are "trainees". Gaining experience to move to a higher position is not the same as training. In my experience, postdocs are no different than a new employee at many other organizations—there must be guidance at the beginning of the employment because it is a new position at a new company. Other than guiding a project and maybe how to write grants, there is little training for faculty responsibilities, such as independent mentoring skills, budgeting, dealing with internal paperwork or applications (IACUC, etc.), department requirements, and more.

Fundamental issues and challenges

It comes down to two things: salary and environment. Salary is the easiest to address.

Industry positions no longer require post doc experience, which means there is another option for grad students after graduating. While it is unreasonable to expect to be able to keep up with industry salary, starting offers are often double what the current postdoc salary is, and the gap continues to increase with every year of experience. The current salary for postdocs is very low for someone with a graduate level degree, and extremely low for individuals living in large cities (where many institutions are located). I would encourage you to look at postdoc salaries compared with other disciplines like nursing, engineering, law, administration, business, or even those such as retail store workers and food workers. Not only starting salary, but salary after 3 years or 5 years.

Even if PIs would like to increase postdoc salary, many universities do not allow it. Another barrier is that PIs may not get enough funding from a single grant to pay for postdocs at a salary which would be competitive.

Existing NIH policies, programs, or resources

An easy place to start is not allowing universities with NIH funding to put a cap on postdoc salary.

Raising post doc salary "minimum" (which is what the vast majority of postdocs are paid). This would need to be followed up with an increase in project grant support (such as R01) so labs could afford it.

Increasing the funding received from an R01/ project grant. OR include postdoc hire proposal in the funding mechanism, and give additional support when the postdoc is hired. (for example, when proposing the timeline, state that two postdocs will be hired, one will focus on these experiments, the other will focus on these experiments. And then when they are hired, $50,000 more a year to the lab until the postdoc has independent funding)

Creating a funding mechanism for postdoc researchers that promises to increases their salary. This mechanism would need to be realistically achievable by 40-60% of postdocs and is applied for in the first year or two.

You could consider limiting the number of hours postdocs are allowed to work (like 80 hours a week), but I'm not sure how that would work. That may especially help labs funded by the NIH with non-citizen postdocs. However, it might then set a precedent that postdocs SHOULD work 80 hour weeks.

Expand tuition repayment system.

Support universities in expanding benefits to postdocs.

Proven or promising external resources or approaches

I would look at the success of postdoc recruitment at places that pay a greater % of the cost of living with a family of 4.

Response 341

Perspectives on the postdoc roles and responsibilities

The postdoctoral position for me has been about making connections, building "prestige points," and learning new skills. All done independently without meaningful mentorship, scientifically or politically. It's about "putting in your time" and building your reputation, so that you can benefit from the prestige bias in the minds of those who hold power. The ability to get hired as a TT faculty is largely dependent on the papers you produce in your postdoc—but not their quality—it's based on the perceived prestige of the journal along with the prestige of the host lab and institute. After struggling to get my own paper published (because it directly contradicts works produced by), I was told by many more senior academics, that "high school never ended" and that the journal editors want to be liked by the "cool kids" ([redacted for anonymity] etc,—all the institutes that benefit from prestige bias). So if your work contradicts theirs, the gate-keeping editors will be afraid to even consider it. After being desk rejected by an IF:~5 journal, I was fed up & put it on bioarxiv, after which it went viral, and I realized that virtually everyone in the field agreed with my work, and had seen the same issues (including those changing patient care!), but no one had publicly raised them because of the politics behind it. After my BioRxiv post went viral, it was immediately reviewed at Nature Biotech. I've learned so much about the way that science actually operates through this experience, but the most important lesson, is that academic science is mostly politics & truly not reflective of merit, and because of the politics and ring-kissing in science, *cannot* prioritize human health.

Fundamental issues and challenges

Lack of compensation and overwork, especially in comparison to industry. I have personally had to make difficult decisions related to food security because my rent (for a *rent stabilized* studio) was over half of my salary. For the first three years of my postdoc, I was "breaking even" without the ability to save a dime for my future because of the subsidized housing provided by the institute; however, they only give you three years, meaning that when I reached the end of my third year, and moved into my rent stabilized studio, my expenses rose by nearly $450/month. I asked for a raise, but was told my my "mentor" that because I had my K99, my work wasn't critical for theirs because I was doing my own independent work, so they had no real incentive to raise my salary (even though it could have been self funded through the K99). I lost 15 pounds in the first 1.5 months, while I learned how to be able to buy only the very bare essentials, switching my diet to roughly half rice and beans. My friends started asking if I was okay

because I was looking gaunt and unhealthy, but the honest truth is, I was struggling to make ends meet because of the poor pay. In this time, I really learned the privilege that I had growing up without food insecurity—without needing to hustle in any way to feel safe and secure in my ability to survive.

I cannot think of a single reason why I would recommend doing a postdoc to anyone; despite the fact that I am close to securing a TT faculty position. I don't plan to employ any postdocs because it seems truly unethical with current working conditions.

Existing NIH policies, programs, or resources

NIH policies could improve the quality of life through having a dynamic postdoctoral minimum pay based on location. $56k may make sense in Indiana, but it is literally unlivable in NYC; simply tie it to the cost of living. For reference, the federal government defines "rent burdened" as paying >30% of income to rent. However, this will also dramatically increase costs for PIs. The next logical conclusion is that the modular budget of an R01 must also be increased, which will mean giving out fewer awards (in the absence of a substantial increase in funding by congress). This will in turn make it even more challenging (to impossible) for less established PIs to get grants, meaning even fewer available positions for TT faculty in academia. Ultimately, this is a problem that will need to be fixed by congress, or we have to accept that we need to do less science, more ethically.

Aside from pay, the postdoctoral position should be dramatically altered (or ended), if it's purpose is to prepare those of us who wanted to continue in academia, ready to be a PI. If that's the purpose, then it should be a position closer to a non-tenure track assistant professorship, where it is required that you will begin mentoring younger scientists, and actually learning that aspect of of the positions. As it stands now however, it's just a continuation of graduate school, under the guise of "training" to rationalize poor living conditions.

Proven or promising external resources or approaches

https://www.science.org/content/blog-post/time-fix-trainee-salaries

Remove accreditation for institutes whose administration threaten the visas of our immigrant postdocs as retaliation for unionizing. This also happened at my institute and others (with appropriate wording generated by lawyers for plausible deniability).

Support the creation of a nation-wide postdoctoral union. Then listen to them. The last 4 years of my life have left me so crestfallen from the scientific ideals I grew up with. I used to be such a purist, being driven by the pursuit of knowledge, in whatever direction it brings you. But now I know that academic science has such strong structural disincentives to that. These disincentives include peer review requiring the approval by those in positions of power, with something to lose. The requirement for "high impact" papers, that include gate-keeping by editors who have inside friends and favorites (that track with prestige bias). The requirement for having an "in" with the chair of a department to get a TT faculty position, again fuels the anti-merit political nature of science.

Lastly, related to the pay: Can you really expect those from genuinely disadvantaged backgrounds to forgo meaningful wages until they're in their mid to late thirties? Nearly all postdocs that I personally know who are either on visas from countries that allows for 2-3 year tax-free wages, or are being helped by their parents financially. If you want to confront the role of privilege in science, then you have to make this an *actually* viable, thrive-able, career path. Poor pay systematically advantages those who come from financial privilege.

I so, so, so miss the ideals I once had. I thought of doing science as a truly beautiful pursuit, and one worth dedicating a life to. But seeing how the sausage is made has been nauseating. Please help.

Response 342

Perspectives on the postdoc roles and responsibilities

I personally see my postdoc as a temporary, transitional learning opportunity. This is an opportunity to receive further training, to publish and enhance my CV, to teach and mentor students, to be mentored, to take additional classes and workshops, to sharpen my research skills (e.g., learn new methodology, practice use of statistical software, etc). This is an opportunity to see what academia an research would look like full-time, and to decide what industry to enter after the postdoc period.

Fundamental issues and challenges

The following challenges make it very hard to pursue and stay in a postdoc, and they make me think twice about academia after my postdoc period:

1. Salary is very low and creates/ exacerbates financial hardship.
2. Low salary and unspoken perception of postdocs as worker bees makes individuals in these positions vulnerable to exploitation and abuse.
3. The aforementioned dynamics create unhealthy life-work boundaries.

Existing NIH policies, programs, or resources

1. Increase in salary caps for postdocs
2. Provide a more substantial raise for second and third year postdocs. I got a raise, but honestly cannot tell.
3. Provide individuals in NIH-funded postdocs with built-in research funds for postddocs to pursue their own projects. This will make them feel more independent and provide opportunities to publish, enhance CV, etc. It could be a $10,000 supplement on top of salary.
4. It would be a dream is postdocs were prioritized for the Loan Repayment Program, or automatically granted the LRP. I dont know how in the world I am to finish paying my loans on my salary, if loan payments resume. And I am fortunate to only have less than $30k. I cannot imagine for others with more loan debt and living on the low salary of a postdoc.

Proven or promising external resources or approaches

No response

Response 343

Perspectives on the postdoc roles and responsibilities

There are two sides to this—what I view the roles of an academic postdoc SHOULD BE, and what they ARE IN PRACTICE, based on my lived experience and those of my peers. In my view, the responsibilities of an academic postdoc should be centered around the development of an independent research program and the pursuit of basic scientific research. In contrast, the actual responsibilities of the academic postdoc based on my observation are wide-ranging, and include mentorship, lab management, and execution of research projects beyond the scope of an independent researcher (e.g., performing assigned tasks more closely aligned with the goals of the postdoctoral mentor, rather than in service of the postdoctoral trainee's career path).

Fundamental issues and challenges

1. Pay: Stipends for postdoctoral trainees are far lower than salaries for positions in industry that require comparable levels of experience (~$55k for NRSA F32, vs. $90-120k for industry job out of PhD), and also lower than sustainable living wages calculated for most urban areas (~$65k living wage for Boston, New York, Seattle, Los Angeles, etc.).
2. Career Uncertainty: ~65% of life sciences PhD students begin their graduate training with a desire to continue on an academic track (Sauermann and Roach, 2012), but only ~10 to ~20% of postdocs are able to advance to tenure-track faculty positions (Sauermann and Roach, 2016; Kahn and Ginther, 2017) which means that a majority of trainees are faced with exploring career paths other than what they intended.

Existing NIH policies, programs, or resources

1. Stipends for NIH postdoctoral fellowships (NRSA F32, etc.) could be raised to reflect the current cost of living in the US to make postdoctoral training more palatable and sustainable. Many universities set their postdoctoral payscales based on the NIH F32 payscale, so national average postdoctoral stipends are unlikely to change unless the NIH leads the way.
2. Support for alternative academic research career paths, such as staff scientists, could be a potential retention mechanism to keep highly trained and talented researchers in basic life science research—a strategy for this was proposed in Alberts, et al., 2016.

Proven or promising external resources or approaches

No response

Response 344

Perspectives on the postdoc roles and responsibilities

I think postdocs are the head of the labs, we run orders, we maintain the lab and we still do experiments for our projects. I think that we should be trained more in the transition to another job too

Fundamental issues and challenges

Salary is the biggest problem, if you are hired in your 1st year as a postdoc in a lab and you stay in that lab for years, you continue to receive a first year salary, that shouldn't be allowed

Postdocs only different salaries related to their level of expertise if they change jobs.

Existing NIH policies, programs, or resources

COSTAR is pretty good but it needs to include more and allow postdocs to stay in the program for longer

Proven or promising external resources or approaches

Improving training in career development is what the postdoc really need

Response 345

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is a step closer to a faculty position and the training required in learning scientific rigor, grant writing and reviewing and having more scientific publications as first authors to build a strong foundation as a academic scientist.

Fundamental issues and challenges

No work life balance. Lot of work load. Despite lot of work, sometimes failures ensue coz of lack of expected hypothesis leading to early burn out with 12 hour work shifts. Less appraisal and less money compensation for the hours worked. People with lesser degrees and qualification and less work load making a 3 times more money with a strict 9-5 and job satisfaction with benefits.

Existing NIH policies, programs, or resources

Appraisal given for work done, compensation for extra hours worked, pay raise and extra benefits similar to industry. More paid holidays alloted.

Proven or promising external resources or approaches

Compensation for work not just defined by papers but defined even by results that don't align with hypothesis. Pay raise and benefits.

Response 346

Perspectives on the postdoc roles and responsibilities

The postdoc is a time to become an independent researcher, driving projects and focusing more on mentoring and learning more of the soft skills. We're trained scientists but this is a time to focus on peer review, grant writing (and management) as well as how to run a research lab. I view it as a stepping stone to a position either in academia as a PI or industry, though I think the two have different purposes. For industry, the postdoc is usually to gain a new skillset. While that is also useful for academia it is about springboarding your own career.

Fundamental issues and challenges

The stipends are not comparable to industry jobs. My friends with BA degrees make significantly more money than I do as a post-doc. I spent my 20s and early 30s working as a research tech in an academic

lab and then as a graduate student. I did not receive raises and promotions nor could I jump between jobs to make more money. My retirement account has suffered and the relatively low pay and job prospects does not make it feel like it will ever improve. I generally enjoy being a post-doc as it is nice being able to just focus on research but going on the job market has been incredibly stressful as it feels pointless—there are too few jobs for the supposed dearth of postdocs. Also, my university HR controls my raises and salary despite being paid from an NIH grant. There is no universal "post-docs must receive the appropriate raise on their date of hire anniversary" as would happen for fellows, leading to a disparate experience. There is also nothing forcing PIs/universities to pay the NIH level for non-fellows.

Existing NIH policies, programs, or resources

Increase the limit on the K99. Extensions were given for COVID but the people who were given the longest extension were the ones who had already had 4 years before the pandemic started. As someone who started their post-doc in 2019 it felt like my research was just getting off the ground when the pandemic started yet that was not adequately reflected in the extensions. Additionally, I think expanding the MOSAIC program to include the F32 would be beneficial. My F32 was not funded and it felt like the reviewers did not adequately read my proposal. It was incredibly discouraging to receive excellent scores for me and my advisor and then receive a low score for training potential. As a first generation researcher from a disadvantaged background it's a bit disheartening to feel like I don't belong. There was concern over my advisor's funding, which should have been irrelevant. The entire point of the fellowship is to fund me and my research so if my advisor did not have a grant, wouldn't that be more of a reason to fund me? Given that there are so few post-docs expanding the budget of the F32 to increase the number of people who receive them would make it feel more likely that I had a future in academia.

Proven or promising external resources or approaches

No response

Response 347

Perspectives on the postdoc roles and responsibilities

In the US means do everything: functioning independently, designing, organizing and conducting experiments and procedures and in some cases designing new protocols; summarize findings and publish results in research journals; assuming general responsibility for scientific operations of the laboratory; providing supervision and guidance to junior technicians, students, and researchers, applying for funding. All these, in most cases, with any kind of technical support. It is a person with all the jobs of the lab: mini PI (just for his/her projects), researcher, technician and mentor.

In Europe, postdocs usually have the respect of the PIs. They are really aware of how much they need them and they usually do not treat them as technicians too, they know that it is much more valuable what they can do out of the bench. The US PIs, expect postdocs to spend 10-12h/day doing bench work, and analyzing data, writing papers and grants the other 12 h of the day. It results so unproductive and people wasting time and money doing meaningless experiments because they did not find the time and perspective for finding the right question.

Fundamental issues and challenges

The salaries are too low and not competitive with those in equivalent education-level jobs in other fields, and really close to grad students' salaries. Postdoc salaries should be regulated area-wise, in NY even with housing from our institutions, we spend 50% paying rent, plus groceries and commuting, we barely make it.

We all understand people leaving academia as if they were running for their lives because it is what they are doing. Postdocs do not judge other postdocs for leaving academia anymore. The ones that still stay are even jealous and ask themselves why to keep trying. Considering the demanding conditions of our work: countless hours to keep our research projects going, non-technical support at all (really different in Europe), we all understand that most people ask themselves if they want this for their lives (non-having a life, non-being able to even consider to raise a family for both absence of conciliation at all and economical obvious reasons).

The academic system has to be reviewed, at all points. It is more than old-fashioned for the reality of modern life, it does not fit at all with society and people's needs. In the past, academics were living lives

in their "own world", science was their life. Nowadays, we are all overexposed to what we are missing. The internet and social media over inform us about what life is for others and how you can be much more successful and enjoy life doing a much softer effort. So, on top of postdoctoral conditions, that makes us feel stupid. Academia is going to suffer a huge crisis in the next years if the system is not reviewed and find ways to conciliate science, ambition, and life.

Existing NIH policies, programs, or resources

Not Applicable

Proven or promising external resources or approaches

Improving salaries and conciliation benefits

Response 348

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are an opportunity to expand one's research portfolio, train in new techniques, and establish more professional connections before securing a more permanent position

Fundamental issues and challenges

First would be money. I started last year and making $54,000 after obtaining an advanced degree felt disheartening, particularly as it forced me to have to move in with roommates in order to afford to live in the city where my job is. I think about constantly about quitting my postdoc for a higher paying job that is not related to research because it will allow me to make more money. The second issue is having to move for the job. Although in many areas of research I can understand why someone will need to work in person, for my postdoctoral position in psychology, everything can (and is currently being) done virtually. This is frustrating because one of the biggest deterrents for being a postdoc was the idea of moving to a new place away from my family, friends and partner for a couple of years. To do that for very little money, and then find out that it is not actually needed for the job is frustrating. Finally, once I moved for my postdoc I realized that postdocs are basically separate from the rest of the department, making it a very isolating job.

Existing NIH policies, programs, or resources

First pay more. Everyone uses the NIH stipend levels to determine postdoc pay, and increasing this rate will help postdoc everyone. Additionally, taking seriously the postdoctoral mentoring plan in grants and actually discuss whether the postdoc will need to be in person or could be remote. Other things to evaluate is how the PI will work to help the postdoc establish professional connections and help advance the postdoc's career. Finally, there should be a survey when a postdoc leaves a lab that asks about their experiences and reason for leaving. PIs that are flagged for not creating toxic environments that pushes postdoc to leave should have to show that they have taken steps to correct the issues or not be allowed to have more postdocs.

Proven or promising external resources or approaches

No response

Response 349

Perspectives on the postdoc roles and responsibilities

Postdoc is an excellent opportunity to develop learning, logical thinking, gaining experience to be an independent researcher. Postdoc is a stepping stone for the academic professor position and any other job.

Fundamental issues and challenges

Visa issues for international fellows to attend conferences outside the country. Some limitation in writing grants in particular for immigrants.

Existing NIH policies, programs, or resources

No

Proven or promising external resources or approaches

Satisfaction

Response 350

Perspectives on the postdoc roles and responsibilities

A postdoc should be a fully competent scientist capable of planning and executing experiments in their field of choice with their PI acting as a manager and resource. Postdocs should be well-versed in the literature and methods of their project; if they are shifting fields they should get up to speed as quickly as possible. A postdoc is responsible for training and mentoring junior trainees on their project (ie graduate students, techs, undergraduate students). I believe a postdoc should be treated as a project lead under the PI in the same way that a project lead would be treated by their immediate supervisor in a healthy industry context ie as a peer who can benefit from the leadership, feedback, and experience of the supervisor, but whose expertise and abilities are trusted and valued.

Fundamental issues and challenges

Academic training is long and poorly compensated compared to easily attainable market alternatives. When you are already 5-6 years behind your peers in income and retirement savings due to PhD training, it is unappealing to continue in a low-paying postdoc position for several more years when you could get a research job that pays 2-3 times more in industry. The academic postdoc is viewed by many as a prerequisite for tenure-track academic jobs only, and for a variety of reasons (negative academic environment experiences, work/life balance, compensation, geographic stability) many trainees are no longer interested in pursuing tenure-track academic jobs. Also, some people get burned out by moving, and the prospect of moving again for a

Existing NIH policies, programs, or resources

Guidelines for how many hours should be worked for what salary in addition to current salary recommendations.

Proven or promising external resources or approaches

Many benefits that are offered by private companies to increase their recruitment could be applied to the postdoc such as relocation packages to defray moving expenses, child care subsidization, access to retirement funds. I think postdocs should be recognized and treated as full employees of their institutions as much as their PIs, with access to retirement funds, full insurance benefits, etc. They are producing valuable labor and work products and their low compensation already reflects a sacrifice made in the name of additional training, there need not be any additional humiliations in the name of training.

Response 351

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is two-fold. First, the postdoc should support the projects of the lab and mentor they’re working under. Second, the postdoc should gain new skills and experience to assist them in preparing for a long-term position in industry or academia. Depending on the funding (e.g., postdoc being funded from a PI’s grant for a specific project vs. bringing in their own funding for a specific project vs. being part of a T32 training program), the balance between supporting the PI/lba and the postdoc pursuing more independent projects, interests, and training may shift, but both sides should be included in all postdocs.

Fundamental issues and challenges

I was a postdoc for 3 years. For me, the greatest struggle was the uncertainty of the position—I applied for academic jobs during all three years, and it was difficult to make long term plans or feel settled because of the temporary nature of the postdoc. I luckily avoided many of the struggles I saw other postdocs deal with, but frequently, the costs of moving (yourself and potentially a partner/family) for a short-term position can be taxing, postdoc salaries do not allow for a decent standard of living in some regions, expectations for the postdoc may not be clear or may differ from what they expected coming in with no avenues for redress, and postdocs may be isolated from other potential collaborators and department members.

Existing NIH policies, programs, or resources

NIH sets the standard for postdoctoral salaries. Raising this, or explicitly tying salary to cost of living, would help postdocs maintain a good quality of life. Encouraging relocation funds as a standard part of a postdoc package would also be appreciated. Providing models for developing IDP's for postdocs can help clarify expectations and provide a good avenue for communication between postdocs and mentors. Increasing funding for programs that create a community of postdocs can help prevent isolation.

Proven or promising external resources or approaches

See above.

Response 352

Perspectives on the postdoc roles and responsibilities

I view a postdoc as an extension of my training that has only become popularized in the last thirty years as a way to maintain cheap labor of highly educated and highly skilled people in academic and industry labs. Realistically it will not lead to a tenure track position, but one can hope.

Fundamental issues and challenges

The idea of retention of postdocs is absurd because it is by definition a temporary position. If you want to retain people give them a regular job with regular benefits.

Existing NIH policies, programs, or resources

The NIH should mandate cost of living adjustments in postdoctoral salaries. By disproportionately funding projects in high cost of living areas, the NIH pushes postdocs into extended poverty. Additionally, for as long as postdocs do not receive normal benefits, there should be a mandated time limit on the number of years an individual is a postdoc before they must be transitioned into a permanent role. Alternatively, you could give postdocs a normal benefits package.

Proven or promising external resources or approaches

Norway has a much better policy for postdoctoral training. Ultimately, there needs to be more funding in academic posts in order to support the people that have already invested time.

Response 353

Perspectives on the postdoc roles and responsibilities

Academic postdoctoral positions should be a stepping stone in a scientific career that allows scientists to transition to positions either in academia, private industry, or beyond. A postdoc position should be tailored to the needs of the scientist and the career path they are moving towards. For postdocs who want to stay in academia and begin their own lab, their postdoc should reflect that through good publications, independent funding sources and a body of research they can begin their future lab with. If a postdoc is more industry oriented or does not want to run their own lab, then their postdoc should be tailored to help them develop skills needed for those roles, potentially with more soft skills and networking with industry positions, where perhaps strong publications, funding etc are not as important since those often are not necessary for obtaining a job with those roles. Most importantly, a postdoc is NOT a trainee. Postdocs are adults with terminal degrees and should be treated as such with work life balance, pay, employee benefits and everything else offered to other working professionals who spend 10+ years earning their degree.

Fundamental issues and challenges

The two most obvious challenges postdoctoral researchers face are

1. Amount of pay and
2. Prospects for a job in academia.

Academia operates in an apprenticeship format, with graduate students, technicians and postdoctoral researchers being severely underpaid for their contributions to labs, institutions, and federally funded research. Postdoctoral researchers should be paid enough to support themselves and their families, regardless of the cost of living of their respective cities. Their pay should reflect the time spent training

and should afford them the ability to pay for a good quality of life wherever they live. I will refrain my previous statement: postdocs are adults with terminal degrees and should be treated as such with work life balance, pay, employee benefits and everything else offered to other working professionals who spend 10+ years earning their degree. The second issue of job prospects is no secret. Academic positions are extremely competitive, with postdocs needing to apply to hundreds of positions for even a chance at getting an offer for a faculty position. And, once in these positions, obtaining funding with paylines for grants hovering between 10-15 percentile is a bleak prospect for a sustainable career. Outside of faculty appointments are staff scientist positions, but these typically do not pay as well as a faculty position and it is too easy to find a similar but better paying position in industry to justify staying on the academic side in these positions long term. I am approaching middle age and have not been able to establish long term financial stability for myself because of low pay and zero benefits. Treat us better and we will stick around.

Existing NIH policies, programs, or resources

The solution is actually very simple. Give research more money. Expand grant paylines, increase budgets for stipends in grants which have not changed in nearly 20+ years. Guarantee positions for postdocs if you are truly concerned about losing us to better paying industry positions. Treat us like the trained, professional adults that we have worked to become.

Proven or promising external resources or approaches

Ask industry what they're doing to retain their employees. Hint: It starts with money and job prospects. Pay us better and we will stick around.

Response 354

Perspectives on the postdoc roles and responsibilities

A postdoc is supposed to be a transitional/ extra training position on the way to gaining a tenure track position. During a postdoc you will work on a project that is focused on your scientific interests that you hope to expand upon once in your own lab upon gaining a tenure track position and establishing a lab where you are the principal investigator. It has become vital during a postdoc to "prove you're fundable" by being awarded some sort of training or research grant.

Fundamental issues and challenges

An academic postdoc used to be a short approx. 2 year transitional/ extra training position on the way to gaining a tenure track position. Now, early-career scientists interested in remaining in academia are regularly expected to do a longer postoc, 4-5 years, or take two or three 2-3 year postdoctoral positions for a stagnant, low salary with a tenure-track position far from guaranteed at the end. Additionally, academia in general has become so funding focused that you can expect to spend a large amount of time writing grants rather than exploring interesting research questions. It is also an expectation that you be willing to work long, odd hours and after 5-6 years as a graduate student this leaves many early-career scientists feeling tired, underappreciated, and burnt out. My significant other works a standard academic postdoc while I work as an industry postdoc. Starting these positions immediately after grad school my salary was 10k more (with a 3-5% raise yearly), I worked 9-5, and I did not have the stress of writing/ depending on grants for my livelihood.

Existing NIH policies, programs, or resources

Academia needs to accept that it is not just competing with fellow academic institutions for talent; they are competing with industry. You want to recruit and retain talent? You have to offer competitive salaries, there's no two-ways about it. People are no longer willing to sacrifice their livelihoods to chase a "passion for science", and many of us have had that passion burned out of us by the end of grad school anyway. We're good at what we do and we want to be compensated fairly. The length of a postdoc/ the expectation that people do multiple postdocs in order to have a shot at a tenure track position also needs to be changed. The training period has gotten excessive and people are tired and bored. 10-12 years and approaching 40 before you have a shot at a reasonable wage and the STARTING POSITION (assistant professor) toward the job you desire as a highly educated individual with several advanced degrees? No thanks, I'll take the easier job, with nearly guaranteed career advancement opportunities, and more money.

Proven or promising external resources or approaches
No response

Response 355

Perspectives on the postdoc roles and responsibilities
No response

Fundamental issues and challenges
An increase of salary to match MIT minimum (65,000) is reasonable considering the inflation.

Also, standard paid time off (at least 15 days) may be applied for a Postdoc

Existing NIH policies, programs, or resources
No response

Proven or promising external resources or approaches
No response

Response 356

Perspectives on the postdoc roles and responsibilities
Protected to build your own program of research and pursue training and career development activities to achieve this goal.

Fundamental issues and challenges
Pay is not nearly as good as industry positions. Salary increases are not commensurate with increases in student debt that many of us hold. Position title is often treated as a staff member rather than an investigator or equivalent to entry-level faculty. Because we are in a weird in-between phase of grad student and faculty, our needs often fall through the cracks and institutional support resources are low.

Existing NIH policies, programs, or resources
Lack of eligibility to apply for most NIH grants. Salary raises

Proven or promising external resources or approaches
Recognition as principal investigator. Joint appointment as Research Assistant Professor

Response 357

Perspectives on the postdoc roles and responsibilities
Terminal degree with [redacted] pay

Fundamental issues and challenges
Salary

Existing NIH policies, programs, or resources
More money

Proven or promising external resources or approaches
More pay

Response 358

Perspectives on the postdoc roles and responsibilities
The academic postdoc position is for a recent doctoral graduate to gain additional training and time to increase their research output and write grants, all with the goal of increasing their odds of obtaining a

research-oriented faculty position within academia. This position additionally fulfills many roles for the PI, including mentoring junior researchers, teaching, writing grants for themselves and the PI, and pursuing independent research.

Fundamental issues and challenges

The postdoc period can be an indefinite holding pattern until a grant or faculty position is obtained, which can often take many years and has low odds of success. During that time there is considerable job and financial stress. The postdoc could be putting in long hours writing grants or papers and the pay for postdoctoral trainees is quite poor. This poses a challenge for supporting the cost of living and raising a family. In some cases the pay is just above that of a doctoral student but does not typically come with subsidized housing or on-campus housing options, forcing trainees to move off of the university campus into the community, pay community cost-of-living rates, and extends the commute. High housing costs and low pay make recruitment difficult in high cost-of-living areas. Further, sustained periods of stress can lower retention within academia as postdocs leave for industry careers.

Existing NIH policies, programs, or resources

Higher minimum pay for postdoctoral trainees, postdoctoral trainee support within industry or for academic-industry partnerships to encourage training within an industry setting.

Proven or promising external resources or approaches

No response

Response 359

Perspectives on the postdoc roles and responsibilities

The postdoctoral position needs to be re-imagined. The goal of the postdoctoral "training" is largely to prepare individuals to run their own independent research laboratory, and yet, postdocs receive no formal training in budgeting, personnel management, and many of the other skills required to run a lab. For me, my first year of postdoctoral training was learning a new field, but after that point, the "trainee" designation was no longer justified. I was directing my research projects at the bench, mentoring students, and writing grants to support my research. I obtained an F32 fellowship that included new directions for the lab, which required my optimization of two new techniques. When I brought up writing a K99 two years into my postdoc, my PI was "supportive", but dismissive and said I would be more competitive if I got my paper out. I continued to bring this up, but also got derailed by COVID and birthing my first child. Finally, after nearly four years of my postdoc, I published my paper and was now generating data the final new directions that I had proposed in my F32, but it became clear that my PI wanted to hold on to that line of inquiry. At that point, I did not want to write a K99 and invest another 1-2 years in developing another new project and so, for this and other reasons, I did not pursue the TT route. We need to find ways to accelerate postdocs transition to independence and give them ownership over their ideas and work. I might have applied for TT positions after 2-3 years, but the norm is for postdocs to spend an additional 5-7 years "training". It's unnecessary and all of this extra "training" feels like a pyramid scheme to benefit the mentor.

Fundamental issues and challenges

Pay is the main reason I transitioned out of my postdoc. I might have stayed attempted the TT route if I had been making 75-85k (and my university like many others does not allow postdocs to take the 75k limit for K99 but rather whatever the NIH minimum is for their years of experience). I am now making >110k (same COL) and working less. After years of putting off saving for retirement, I simply couldn't afford to stay in a postdoc position. Also, I learned in informational interviews that my additional years of postdoctoral training was not benefitting my career progression/salary pay band outside of academia. Moreover, when I transitioned to my F32, I lost my employment status and was taxed on the full cost of my healthcare benefits. My university did not offer any retirement match for postdocs and I couldn't even invest in a 403b when I was on my F32. When I had my child, the on-campus childcare had a two-year waitlist and was almost half of my post-tax salary, and thus, we had to use a daycare that was more affordable but farther away, which meant I spent more time commuting. In order to attract and retain the best people in science, we need to:

1. pay postdocs more and adjust for COL,
2. reduce the "training period" or include more actual training in necessary skills,
3. create a mechanism for postdocs to have more ownership over their research that doesn't rely on the mentor,
4. require universities to treat postdocs as employees regardless of funding (retirement benefits, etc),
5. offer more services or rebates for childcare and maternity leave, and
6. enforce institutions to allow trainees to take the max salary on grants

Existing NIH policies, programs, or resources

If NIH really cares about diversity then the academic route needs to be sustainable for people from all socio-economic backgrounds. The majority of colleagues of mine that have pursued TT options are from very privileged backgrounds where finances were not a concern. Postdocs should only be considered trainees for 1-2 years max (if at all) and then they should all move to FTE designation regardless of funding status. I would eliminate the F32 and encourage earlier submission of the K99 and/or create mechanisms in which postdocs can apply for their own grants. I would also create more postdoc-TT type grants to retain postdocs at their current institution (expecting PhDs to continually uproot their lives especially when they start families is a major barrier for young mothers). I did take advantage of the childcare supplements, but $2500 per year is not enough.

Proven or promising external resources or approaches

The academic ecosystem should be modified. PIs have too many job responsibilities and not enough time to effectively perform them. Thus, NIH should reduce the cap for faculty salaries which would free up more money to pay for staff scientists etc who could help share the responsibilities of the PI. There need to be more sustainable career paths in academia to more effectively distribute the accountability. In my opinion, part of the "reproducibility crisis" is due to an utter lack of oversight by PIs who do not put in the adequate time for training/mentoring and quality control of their research. Creating stable positions in academia to help provide some of this oversight would help ensure that the research NIH funds is high-quality and robust

Response 360

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary

Existing NIH policies, programs, or resources

It's simple. Pay postdocs a fair salary

Proven or promising external resources or approaches

No response

Response 361

Perspectives on the postdoc roles and responsibilities

My view of this position has changed dramatically during my time in it. At first I viewed a post-doc as a training position and a pathway to research independence. However, in practice it amounts little more than a glorified technical position. Training is often lacking and resources for post-docs vary by institution. Employment status can be easily muddled depending on funding sources and actual independence within a research group varies wildly. A lack of clear expectations and training outcomes make the position difficult to understand in contrast to PhD training.

Fundamental issues and challenges

I believe many people see post-docs as a source of cheap, skilled labor. Many positions lack training and expectations are unclear. Independence is not a goal. The main motivators in an academic environment are the career aspirations of a PI and not the post-doc. Given this structure, jobs with higher pay and more clear expectations are infinitely more appealing. Without clearly defined roles, benchmarks, and training plans a post-doc is simply an underpaid position. Even with independent funding, a post-doc is at the whim of their advisor in a number of ways. This amounts to be locked into a position with the only options being to start over in a new post-doc position or leave academic science entirely.

I believe that post-doc positions should transition to be more like junior group-leaders, and less like extensions of a PhD training program. This change would empower post-docs to make their own decisions about their careers and allow them to apply for additional funding on par with PIs. This would be create additional avenues for independence and provide a more clear training relationship between the post-doc and their primary advisor. It would also place the post-docs employment squarely within the university system and not with a specific group. Changes to the group may not result in changes to the employment status of the post-doc which would provide much needed certainty.

Existing NIH policies, programs, or resources

Force NIH fund receiving institutions to allow post-docs to apply for independent funding as PIs. Allow post-docs to become great stakeholders in the research program within their labs and the institution as a whole.

Proven or promising external resources or approaches

No response

Response 362

Perspectives on the postdoc roles and responsibilities

Post-doctoral researchers are professional scientists who are in a transitionary role to

1. learn a new skill while applying their expertise to a particular project/line of research OR
2. produce publications or funding resources to bolster a resume to be viable on the current academic job market.

Fundamental issues and challenges

Pay and benefit access are paramount. Post docs have usually just completed 4-6 years of graduate school, where they are often paid at minimum wage and can have unstable access to healthcare, mental health resources etc. They graduate with the highest level of a professional degree, are professional scientists, and yet most postdoctoral positions make 50-65K a year and it’s extremely variable as to whether they have the protections of employee status.

Many grad students also don’t want to enter the academic job market and so the question becomes, what would a post-doc even do for them?

Existing NIH policies, programs, or resources

Raising the pay limit, working with institutions and PIs to appropriately fund post-doctoral researchers through granting agencies.

Proven or promising external resources or approaches

No response

Response 363

Perspectives on the postdoc roles and responsibilities

Being an academic postdoc, I must say it gives confident to be an independent researcher. Postdoc implements his/her ideas and explore new avenues in science. From project planning to execution, everything belongs to postdoc.

Fundamental issues and challenges

There are many issues with postdoc like:

1. Salary is very low,in spite of being highly educated.
2. Disparity among salary in different universities, even in different departments of sam euniversity.
3. Salary should be given as per experience , eg. if one is 5th year postdoc, he/she should be given more salary than 1st year individual.

Existing NIH policies, programs, or resources

There are several Grants which are only open for Permanent residents/citizen, which is not good. As postdocs comes from all over the world, so grants opportunity should be given equally to every postdoc irrespective of immigration status.

Proven or promising external resources or approaches

No response

Response 364

Perspectives on the postdoc roles and responsibilities

For me, the academic postdoc has been a time to

1. Achieve scientific independence and
2. Develop a research program that I can use to start my own academic lab.

Fundamental issues and challenges

1. Stipends that are often below the cost of living.
2. Lack of support for childcare.
3. Lack of retirement benefits.
4. Lack of funding mechanisms for international postdocs

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 365

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should be a pathway of additional training to become a more independent biomedical researcher. Such training is vital to keep us at the leading edge of science and technology and these individuals will matriculate into many areas of science (not just academia).

Fundamental issues and challenges

The system is not currently working. Pay levels are too low compared to industry. For example, I have lost 3 postdocs to pharma over the last several years and they were hired based only on their PhD training (none of these postdocs had papers of their own out of our lab yet). Although NIH has been increasing the pay rate for postdocs over the last several years, they have NOT increased our grants to accommodate these changes. I don’t know how on earth we can pay more when our grant levels don’t change to allow us to pay more. Note that many R01s from NIGMS are being knocked down to 200K/year.which is the exact same amount I was given 15 years ago! Our ability to do the project or pay reasonable salaries is literally knee-capped by the amounts we are given. I feel it is not fair to ask us to increase postdoc salaries without it coming with grant increases along the way to do so. And we really need to do more for our postdocs. But if we don’t turn things around, we will have very few US citizens becoming more highly trained with a postdoc to feed academia/industry make future advances and discoveries. Yet, China is

pumping tons of money into science and we will just fall behind and loose our standing of being the leaders in science and technology. We REALLY need to change the system. I don't think I'm off the mark here and feel very frustrated with the current system. Related to this, T32s are broken as well.

Existing NIH policies, programs, or resources

Pay more, not just postdoc salaries but the grants at the same time to allow us to pay those amounts.

Proven or promising external resources or approaches

No response

Response 366

Perspectives on the postdoc roles and responsibilities

As a an academic postdoc, I am looking to expand my independence as an investigator by taking on more mentoring and teaching responsibilities than I did as a graduate student. Ideally, a postdoc's research focus should have a component that is significantly different from their PI's so that they can prepare to start their own lab.

Fundamental issues and challenges

Postdocs are generally in their late 20s and early 30s, at time when many of their peers are getting married and having children. The current structure of an academic postdoc is almost prohibitive to this lifestyle (unless your partner is the one carrying the child and has a job with actual benefits and maternal leave). You cannot take a break to have a child because every grant eligibility is based on how long it has been since you completed your Ph.D. Meanwhile the institutions we work for consider us trainees or employees when it works for them (not having to provide retirement matching, transit benefits, health insurance or leave offered to employees, while not giving us access to benefits undergraduate/graduate students have such as access to student health, on campus fitness).

Because postdocs generally have to select their institution based on what labs/ PIs meet their research needs, we to not have much choice in the institution we work for based on the benefits they provide. The institutions know this and have us essentially hostage while offering every group around us better benefits.

Existing NIH policies, programs, or resources

1. Include minimum requirement for benefits in addition to just salary in your requirements for postdocs, or at least a requirement that postdocs receive benefits commensurate with other employees at the institution with the same level of education and experience
2. Go through the current F award application and streamline it so postdocs can spend more time actually doing research and less on writing grants. For example, in an F32 application there are three separate sections that require you to describe the available equipment and "Research Environment and Commitment to Training" and parts B and C of "Applicant's Background and Goals For Fellowship Training" can cover much of the same ground.
3. Allow R grants to incorporate increasing year over year direct costs. The NIH raises the minimum salary for grad students and postdocs, yet somehow over a 5 year R35 my PI's direct costs are expected to remain the same? Even without accounting for inflation increasing supply costs, we are struggling to have any money for actual research after salaries are paid, and yet as a postdoc I am now getting paid LESS than the minimum salary for a technician with no PhD at my institution.

Proven or promising external resources or approaches

No response

Response 367

Perspectives on the postdoc roles and responsibilities

I view a post-doc as a semi-independent position that is the culmination of your trainee period. You take on a research project that is almost completely driven by yourself with consultation by your postdoc

mentor. You should be able to use your critical thinking skills, laboratory skills and other skills learned from your graduate period to apply to your post doc to show that you can perform as an independent researcher in the future.

Fundamental issues and challenges

Lack of competitive pay with industry and other non-postdoctoral positions; uncertainty in the stability of future grant funding availability; perceived lack of tenure-track jobs that might be available after a post-doc; general decline in the prestige of being a scientist in the view of the general public—mostly due to polarizing political views

Existing NIH policies, programs, or resources

Put more emphasis on non-traditional career paths (deemphasize tenure-track research PI positions); ensure that postdocs at non-NIH institutes are paying post doc positions at competitive pay levels

Proven or promising external resources or approaches

No response

Response 368

Perspectives on the postdoc roles and responsibilities

My position goes beyond the scope of a trainee, to be designated as such is an insult and an opportunity for institutions like UPenn to exploit postdocs. A postdoc is a position that does have an element of training, but we are experts in our field, we are simply expanding that knowledge. Just like a PI on any other project. Should PIs discovering new science be considered a trainee? Apart from conducting research projects, there are responsibilities beyond that including mentorship of undergraduate/postgraduate students. We are expected to conduct outreach and be involved in academic service in order to enhance our CVs to survive and have a chance for tenure. We write grants. However, because of the NIH's discriminatory and exclusionary policies to only allow international postdocs apply for a handful of grants (and education opportunities) we are not able to enhance our CVs and demonstrate our independence unlike our US citizen counterparts. While I am at a wealthy institution, I can't help but recognise that the plight of postdocs in less well-off institutions have it even worse than me and their possibilities to gain a K99 or lobby for salary increases are even less than my own. This is a total system failure perpetuated by the NIH and exploited by US academic institutions.

Fundamental issues and challenges

It really is simple:

Poor SALARY.

This is obvious, most postdocs live paycheck to paycheck and would not be able to afford surprise bills. Furthermore, you are taking advantage of people at the prime of their lives in their early 30s who may be thinking of having a family, owning a home, or having children. How do you expect people to stay in a post that limits their quality of life. A lot of PIs play the card of "well you are getting experience and training you have to sacrifice salary". This is nonsense. Why should anyone have to sacrifice their livelihood, health, wellbeing and happiness for a job. Furthermore, in my institution, grad students earn more from their stipend than we do after tax per month. Therefore, the grad student I mentor earns more . make sense of that. Do better NIH.

Poor BENEFITS.

As a consequence of "trainee" status we have poorer health, dental and eye insurance benefits compared to our non-postdoc co-workers. Families have to pay awful high fees, which all comes out of your abhorrent salary.

VISA Issues.

Stating the obvious, the US immigration system is poorly managed causing visa issues. This is compounded by institution only offering 1 year visas that have to be renewed every year. This causes great cost to postdocs. I have to return every year to Europe. Between the costs of travel ($800-1500), accommodation ($~400-800) and visa related costs (~$400) I spend over $2000 dollars to renew my J1 visa. Who pays for that? I pay for it. Where does that money come from? My abhorrent salary.

LACK OF JOB PROSPECTS.

This is simple, most postdocs go to industry because of lack of salary and benefits. I truly want to research and teach in the US, but it won't happen. Your benefits hold us back.

Existing NIH policies, programs, or resources

I think the feedback above gives you something to work on.

Increase salary.

Extend visa length.

Provide relief for visa renewal costs.

Set a minimum standard for health benefits.

Change postdoc status from trainees to employees.

Promote staff scientist positions.

Increase international postdoc eligibility for grants and training (you can't on one hand be all about inclusion, and then show us the door when funding opportunities arise).

Proven or promising external resources or approaches

I am going to use this space to tell you that despite the negativity in my responses, I care about the future of postdocs and the role of the NIH in their development. The problems are obvious, the solutions are obvious. Please take immediate and meaningful action. Furthermore, put the opinions of younger early career researchers in your organization first. They understand the problems better and they will have to deal with the consequences of the decisions the NIH makes today.

Response 369

Perspectives on the postdoc roles and responsibilities

When I chose to pursue a postdoctoral position, I was grasping for a position that allowed for further training in techniques, lab budgeting, teaching opportunity, and lab management. A postdoctoral position should be treated as a preceptor to becoming academic faculty.

Fundamental issues and challenges

1. Salary. I think this is the biggest issue. It is very difficult to convince graduate students who are overworked and extremely underpaid to then sign on to another 3-5 year commitment of being overworked and still underpaid. Many graduate students look at the work/life balance and large paycheck of industry, and postdoc positions simply just can't compete. Ask yourself—why would you get underpaid, no bonus, no raise, when you can begin your career in industry making double what an academic postdoc receives plus yearly bonuses and raises. It is honestly surprising that people are still pursuing postdoc positions.
2. Work/Life balance. In many institutions postdocs are treated as 'free labor'. We are given massive, extensive projects with short time lines. This leads to extremely poor work/life balance (sometimes working 60 hours a week with no overtime pay!). It also leads to a lack of time available to work on professional development.
3. Professional development. Postdocs are not given opportunities to grow professionally. There is a lack of training on how to budget, grant writing, opportunity to serve as a reviewer, serve on a committee to plan a conference, how to manage a lab, how to deal with conflict, etc. Everything that a research faculty might encounter, we should be getting trained for. There is also a lack of opportunity to teach which is a skill that is VERY important if pursuing a professor position.

Existing NIH policies, programs, or resources

SUNY has a program—PRODiG—that allows grad students and postdocs to serve as a 'faculty' member at an institution for 2 years to gain experience in teaching and professional development. If there were more funded opportunities like this—to gain hands on experience—that would be GREAT!

Proven or promising external resources or approaches

[redacted for anonymity] has a postdoctoral organization that meets monthly that encourages support of each other and socialization. GREAT!

Response 370

Perspectives on the postdoc roles and responsibilities

As an international trainee, I expected to master neuroimaging methodology, and develop a research question on substance use disorders or related areas, then become an independent researcher in 3-5 years.

I think NIH didn't lead the postdoc training in the Biomedical research field. The quality of postdoc training is varied a lot, relying solely on PI, and not being supervised AT ALL other than by the PI.

Fundamental issues and challenges

International trainees are likely to be treated as a technician + research assistant + project manager. They have less opportunity to write grants, less network, and secure time to explore and develop skills

Changing lab or PI for an international postdoc is very challenging, even being treated improperly, many of them chose to bear with it to secure their visa status.

Existing NIH policies, programs, or resources

I think the problem is many postdocs are hired by PI, and only supervised by PI. Some PIs will require postdocs to work on multiple projects, not only the ones to support them.

Postdocs have very few grant opportunities and support, it gets worse if their mentors want them to work more on their projects.

Suggestions: Postdocs should have external support and supervision outside of PI, to make sure they are on the track toward their academic goal.

Proven or promising external resources or approaches

NIH have training programs that only for citizens or permanent residents. However, many postdocs are international and therefore do not qualify for these training programs. I wonder if NIH is aware of the number difference between U.S. postdocs and international postdocs, and how competitive NIH-funded postdoc programs are. I hope the NIH can either accept international trainees (especially those who are already in the U.S.), supervise all postdocs, and provide help to postdocs to match/switch PI when needed.

Response 371

Perspectives on the postdoc roles and responsibilities

Academic postdocs are highly skilled, doctoral level researchers that contribute to moving scientific projects forward under the guidance of a principal investigator. Considering the postdoctoral role as a "training" period is discounting their contributions and value to their lab. It is also misleading to consider postdoctoral "training" to be in preparation for a faculty position given the increasing competitiveness of the faculty job market. If all postdocs that will eventually be unsuccessful in this job market left academic research, there would be a massive productivity issue as postdocs are often the employees that are progressing the research on a day to day basis.

Fundamental issues and challenges

1. Postdoc pay is too low for the level of expertise they bring to labs. This is particularly true in high cost of living areas (NYC, SF, LA, Seattle).
2. The academic job market is too saturated for most postdocs to remain, so due to the low pay and low job security many are opting out of postdoctoral positions entirely to go into industry positions that often pay 3x what an entry level postdoc job offers.
3. The suggested pay range from NIH is so low that in high cost of living areas, non-PhD roles in the lab (i.e. research techs, etc) are often being paid the same or more than the postdocs that help oversee their work
4. In WA state, state law now requires (as of Jan 2023) that overtime exempt employees make a minimum of $65,500. This number is projected to increase over the next 5 years. Faculty are having to stretch grant budgets to meet this new salary requirement. This new salary requirement also disincentivizes applying for F32 or similar awards that pay below the state minimum threshold.

Existing NIH policies, programs, or resources

1. We need a higher cap on R01 budgets to support increased salaries.
2. Raise the suggested minimum pay scale for postdocs.
3. Consider paying postdocs based on geographic cost of living adjustments. Currently a postdoc in Mississippi has significantly more spending power than a postdoc in California.
4. Raise the salary allowance on postdoc fellowship awards (F32, K99, etc).

Proven or promising external resources or approaches

No response

Response 372

Perspectives on the postdoc roles and responsibilities

When I joined the lab as a postdoc, my role was related to developed my supervisor idea. As I became more senior, I have enjoyed the intelectual freedom of deciding my own projects and developing my own ideas

Fundamental issues and challenges

Salary is terrible and immigration paperwork makes the life of a postdoc in the US miserable. Fear to not get your visa granted, fear to leave the country (just in case you have problems re-entering the country), always on and edge. I LOVE science and I have enjoyed every minute of my postdoc, but as an immigrant mother of 2, married with another postdoctoral fellow, I feel I have jeopardized everything else just to get me doing science. It should be this way

Existing NIH policies, programs, or resources

It should be easier to get a faculty position. Besides K99 should be other mechanism.

Proven or promising external resources or approaches

Increase salary and benefits. Visa paperwork should be Free for the postdoc and visas should be more flexibles to allow the postdoc to switch jobs (many people stay in a toxic environment because of the visa). More faculty positions and More representation—in my current lab (made up of several research groups there are 0 PIs that are women and the las hiring: a white man! Is this equity? I have felt support by my mentors and colleagues but I don’t see INSTITUTIONAL support

Response 373

Perspectives on the postdoc roles and responsibilities

My postdoc was intended to be a scientific role only. I am the lab coordinator, lab manager—I handle ordering, maintaining budgets and maintaining inventory. I also need to coordinate with grants manager for funds allocation.

Fundamental issues and challenges

The salary is the major limiting factor. Like most other countries, postdoc salaries should be consistent on the city they are working in. Boston is the 2nd most expensive city and someone working in Kansas/Boston is veing paid the same salary. This is not sustainable.

Career progression is another reason. PI should be trained in promoting postdocs to better roles in their labs as time progresses, regular salary revisions. Incentivizing PIs who do this could be one way to go about it.

Existing NIH policies, programs, or resources

Put the onus on PIs and not on postdocs for career development. PIs who show that postdocs have made progress with PIs support should be given higher ranking in the NIH system for future grants.

Proven or promising external resources or approaches

A good postdoctoral programs office and competent people running it will definitely help.

Response 374

Perspectives on the postdoc roles and responsibilities

My understanding of a postdoc is that it is supposed to be a time when an early career scientist gains additional training prior to moving into an established scientist role (career-track faculty, research/senior scientist, government staff scientist, or industry positions). In practice, the postdoc is often treated as a senior scientist in the lab with additional duties training students and technicians, establishing new protocols, writing grants and papers, and troubleshooting equipment and protocols within the lab. The smaller the lab budget, the more reliant upon postdocs the lab seems (they often have few or no technicians).

Fundamental issues and challenges

The responsibilities of labs, departments, and institutions to their postdocs are ill-defined. While postdocs at well-established labs from coastal institutions may have success obtaining funding leading to careers (coastal schools have better rates of F32 and K99 awards), postdocs training at state schools generally don't. Instead, the postdoc period seems to extend indefinitely, with few raises and often no avenue to the next career phase. Even at state schools, they seem to only interview candidates from the coasts.

Additionally, despite the discussion of NIH payscales being inadequate for cost-of-living, PIs pay well under these rates and generally do not support benefits. For those of us "lucky" enough to have benefits, if we earn a fellowship that brings us up to NIH rates, we lose benefits. We might consider this worth it if at the end of our training we had job prospects, but many faculty searches have over 100 applicants and they hire 0-2.

Another issue I feel strongly about as a postdoc is watching MDs with little to no scientific training given PI status over labs. How is an MD with maybe a 2-year scientific fellowship more qualified to run a research lab than a postdoc who has minimally completed training as a graduate student and as a postdoc (often more when you include the undergraduate and post-bac research required to get into grad school today)?

This brings me to the final dominant issue facing postdocs: time to career. I have been a trainee in labs for 18 years now (2 in HS, 4 in undergraduate, 7 in GS, and now 5 in postdoc), and I'm still considered a trainee. I can think of no other profession that perpetuates this level of infantilization to justify the lack of careers for those being trained.

Existing NIH policies, programs, or resources

F32s and K99s need to be more equitably distributed. In their current state, they simply funnel more money into the big name labs and perpetuate the bias against postdocs from non-coastal or Ivy league institutions.

Proven or promising external resources or approaches

Internships. Internships are a common portion of training for CS and engineering students and help them build industry contacts facilitating careers post-training. In the life sciences, postdocs are expected to work exclusively for a PI without any tangible requirements of the PI to help them build their future career. Its basically an extension of grad school in its current state, allowing PIs to keep inexpensive labor in their labs with no real responsibilities to the trainee.

Response 375

Perspectives on the postdoc roles and responsibilities

My perspective stems from my own experience as an NIH supported postdoc, supported for 3 years and 3 months on an NRSA F32 (with small COVID extension). By choice, I am not participating in academic research at this time—though I have bench space available in previous laboratories should I wish to contribute.

A postdoctoral position, to me, should enable an individual to ask and answer a research question through gaining new skills, training and expertise in addition to utilizing the skills attained from previous training. Ideally, an academic postdoctoral position would help an individual explore and expand an area of research that in the future they can use as the basis for starting their own laboratory.

Fundamental issues and challenges

From my perspective, it is not cost effective for a postdoc to follow an academic path, especially since the path itself is uncertain and will likely only end in disappointment. During the beginning and throughout doctoral studies at an R1 university, it was stressed that no one was going to get an academic job. We were coached to think about alternate career paths from the first semester of study onward, though a few of my cohort now run labs.

It is IMPERATIVE to ensure that universities support their postdocs during their investigations, as they promised to do. In my own F32 supported postdoc, my research greatly suffered from my university's lack of accountability. During my project, I was consistently misadvised on how to spend my funds and how to order supplies with my funds, despite being able to successfully do this as a graduate student at the same university. Access to my grant funds was not allowed until near the end of my project to "spend down" funds, since no one seemed to know what funds I had. For the majority of my grant I was limping by on whatever supplies I could borrow. I was specifically not allowed to use my funds to pay for my mouse facility costs and this led to overdue facility bills and a grumpy PI since I had no other way to pay for my mice. I spent the majority of my postdoc writing grants (submitted 4! federal) to pay for the postdoc I was already doing. Eventually, IACUC refused to renew my protocol, citing lack of funds, leading to termination of my mouse colony prior to the end of my grant. I applied for and received a COVID extension, but without my mice, could only justify a few months time.

Existing NIH policies, programs, or resources

Expand the financial resources available for supplies and specify that funds need to be used by X time in allotments for X thing on the grant. For example, by 6 months in on the project, X% of funds need to be spent in the supplies budget (based on individual grant items, justified in the grant submission). If a project calls for mouse work, allow for $ to be spent on facility costs. If a project calls for mouse breeding, support the facility costs for breeding.

Require yearly documentation from the PI about what projects they are asking you to contribute to—and specify a percentage of time that should be devoted to projects that are not in the grant you are responsible for. For example, while working on other grants the PI has is beneficial for learning new techniques, less than X% of time should be devoted to work on other grants. I am grateful for the extra training, however, this cost time on my own grant.

Specify the postdocs can only mentor X number of students. Personally, I mentored half a dozen undergraduates for my entire postdoc, which were enrolled under my PI for their university research credits. Require documentation from the university from NIH supported labs for X students per grad, per postdoc. I did not need an undergraduate army and did not yet know how to say no.

Coach postdocs on when and how to say no! Hold a mandatory training session on what a postdoc is supposed to be doing. Tell them it's okay to say "NO" to extra students, etc. and enable your postdocs to advocate for themselves or position an NIH advocate to deal with university communication/purchasing/ordering/etc.

Proven or promising external resources or approaches

Fund the entire project on F32's, even if this means reduced numbers of F32s awarded—since clearly there are not enough academic research positions to go around for trainees. Eliminate the push for PIs to use their own research funds to support a postdoc on their own project—especially when mice are involved—since this leads to time misspent on grant writing for the PI and resentment from other lab members, etc.

Push accountability for spending funds in a timely fashion—require receipt of necessary supplies in yearly documentation and review it. If a grantee is not spending, require justification—and pull funds if necessary. Empower your postdocs by training them on what they should and should not do to succeed in an academic role (eg. how to spend grant funds, how to talk to universities, how and when to write a K99) at the BEGINNING of their postdoc.

Assign and publicize the availability of an NIH individual to interface with the university on behalf of postdocs—to circumvent issues of spending availability, spending concerns (how to pay for the facility costs for the genetically modified mouse colony specified in the grant???). Introduce this person to postdocs at the start of the grant, perhaps at an "all hands" style meeting.

Hold a required yearly Zoom meeting with all postdocs for advice based on year of progress, Q&A, etc. to expand mentorship. Do workshops to increase camaraderie. Connect people in similar fields in breakout rooms—increase networking. Force interactions by requiring low key 5 min quick talks (oral presentation) of progress on grants to a group followed by Q&A for years 2+ and promote troubleshooting among peers.

Response 376

Perspectives on the postdoc roles and responsibilities

I see the postdoctoral position as a transition to independence, in terms of research, administration, and mentoring. This means that the most valuable postdoc positions only last as long as is necessary to publish and gain funding for attaining an independent position in academia or industry.

Fundamental issues and challenges

Too few postdoctoral positions are a true path to independence, and are often treated by supervisors as "secondary graduate training", with limited-to-no abilities to pursue independent funding, primary mentoring, and administrative training opportunities. Very few postdoc positions are also meaningfully coupled with industry work, making them seem like a narrowing of the career path (with few "final" tenure-track positions available at the end). Coupled with the relatively low pay of these positions relative to comparable industry roles, postdoc positions are not seen as worthwhile by many newly-minted PhDs.

Existing NIH policies, programs, or resources

First and foremost, the NIH postdoctoral payscale should be increased and should scale based on the local cost-of-living (COL). It is impractical to expect academic institutions in e.g., NYC to compete with industry positions in the same area that pay three times as much. This would also (hopefully) encourage many institutions in high COL areas who use these scales as guidance to increase the wages of postdocs who are not supported by NIH fellowships.

NIH postdoctoral fellowships should also preferentially target new PhDs, rather than those who have already established themselves in a postdoc laboratory (following the NINDS F32 format, for example). These fellowships should promote research and academic independence more than they currently do, rather than simply being a slightly modified version of predoctoral equivalents (e.g., the F31/F30 mechanism). Alongside these changes, it would be very encouraging to see small-to-medium sized research grants available to postdoctoral researchers, perhaps even as a "supplement" to fellowships—this would allow postdocs to build their research portfolio, while also allowing them to develop collaborations orthogonal to those with their supervisor.

Proven or promising external resources or approaches

The NINDS F32 format is a good starting point for providing fellowships to postdocs at a stage where they are deciding whether to transition to industry or remain in academia.

The European system for postdoc independence is more enticing (although it has different problems that should not be emulated)—small grants for postdocs to lead their own projects and the ability to act as MPI on major grants would make postdoc positions seem more like a true pathway to independence.

Response 377

Perspectives on the postdoc roles and responsibilities

I am currently an assistant professor in a 60% research position. I was a postdoctoral researcher from October 2013 to March 2018 at [redacted for anonymity]. Throughout that time I was supported exclusively out of R01 funds awarded to my mentor. Here are my main thoughts from that time:

For the early part of my postdoc I held an H1B visa. I only obtained permanent resident status through marriage (as an LBGT person that was only made possible by the supreme court repeal of DOMA). As an H1B holder I was unable to apply for any NIH training awards other than the K99/R00, which made my resume seem less competitive than peers (I have observed this now in search committees as a faculty member). When combined with the highly restrictive (and open to workplace exploitation) nature of H1B employment, this puts non US postdocs (a SIGNIFICANT portion of the postdoc population) at a double disadvantage in terms of career progression.

A postdoc is a job. The idea that it is "training" is deeply demoralising. As a faculty member I recognize that skilled lab members (ie, postdocs by and large) are essential to run a modern extramurally funded lab. Thus, they do work. That these are also stepping stone positions to other jobs doesn't negate that. Many positions are. But postdocs should be treated as employees, with the attendant benefits, job protection and remuneration.

The cost of living factor. I was on the NIH pay scale at the time ($43,000 a year initially). Where I lived (rural northeast [redacted for anonymity]) this was more than median household income. That said that amount (in particular with dependents, poor health insurance, etc.) was inadequate in Boston or San Francisco. The concentration of Postdocs in large, expensive urban areas exacerbates the cost of living issue.

Fundamental issues and challenges

- Job prospects. Graduate students now are aware that academic research jobs are difficult, rare and stressful. No grad students I have spoken to in years are interested in pursuing academic jobs. The postdoc is perceived as only necessary as a stepping stone to those jobs. Thus, no graduate students are interested in postdocs. Anecdotally I will note I ended my postdoc with 15 published papers. I applied to 45 tenure track faculty positions. I obtained 1 offer.
- Quality of life. Postdocs are in their late twenties/early thirties and often trying to start the "adult" phase of life with partners and children. Work-life balance is extremely important to current young people (see also how Med student interest in high burn out specialties is dropping off lately). Yet the expectation remains that postdocs will work any and all hours to get work done. This is combined with the resume arms race to get high profile papers and funding. Again given the low chance of success (as defined by getting a tenure track academic position), the lifestyle of the postdoc is unnatractive
- Concentration of postdocs in unnafordable coastal cities.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Postdoc advocacy

- https://www.futureofresearch.org/

Unions that represent postdocs

- https://columbiapostdocunion.org/
- https://uaw5810.org/

Response 378

Perspectives on the postdoc roles and responsibilities

A postdoc is a position for academic researchers to conduct more research in order to get an academic position. Despite many labeling it as a "training position," there is relatively little training involved in the nuances of being a professor. Essentially, a PI has a grant that needs a scientist, but the project is too important/complex for a new PhD student, so a professor hires a postdoc to complete the project. The postdoc MIGHT receive training on grant writing, teaching, budgeting, managing, etc, but mostly the postdoc is solely used to build the CV to apply for academic positions (and be the PI's slave). Also, there is a good chance the PI is abusive and a terrible boss that doesn't care about their workers.

Many of my peers feel that a postdoc position is a "scam" position that academia has made to keep trained researchers but compensate them poorly. If you look at the history of academia, where postdocs only started because open professor positions started dwindling, you come to realize that it seems like further and further gatekeeping position to "haze" you on path of professorship. Now, academia runs on postdocs, and essentially the whole system has become a "suffer until you get a professor position." However, less than 10% of PhDs now become professors and most go to industry, where a postdoc is not necessary. This has led most PhD students to reject postdoc positions, and now there is a postdoc shortage where professors can't find enough qualified postdocs. Essentially, a postdoc has been a "kick the

can down the road" problem/position that failed to address the real issue: lack of positions in academia that aren't professors and lack of professor positions.

Fundamental issues and challenges

Postdoc positions rarely contribute to career advancement outside of academia, and there are barely any career advancement options for postdocs that do not want to be principle investigators in academia (few university research assistant professor or staff scientist positions), making it essentially a dead-end position. Most postdocs will turn to industry, where they realize they did not need the postdoc at all and it was wasted time. To fix recruitment, postdoctoral positions need to have better incentives for people that want to go both to academia or industry. To fix retention, there needs to be proper career advancement options and actual career development. To fix quality of life, having better pay and longer contracts is important, but also actually punishing bad PI bosses who promote toxic environments. Academia has a mindset of: we invested in this PI, so we need to protect our investment over a postdoc or student that is temporary and doesn't matter. If you don't fix that problem, then retention and quality of life will always be poor.

Existing NIH policies, programs, or resources

Reducing large academic labs with many students that have a large number of grants. Most of these large labs run like companies that can get cheap labor every year. If you spread the wealth, there will be more positions and more reasons to stay in academia because of actual career advancement opportunities. Leverage universities to have staff scientist positions, or more research professors. Otherwise, I don't see the problem ever getting better.

Proven or promising external resources or approaches

I have only seen 2 places that postdocs are done well. One is at a national lab, where the pay is good, postdocs are 75% effort to a chosen project and 25% personal effort (career development, own research projects, etc). Many postdocs also stay on at a national lab after the position, where they can become a staff scientist. Second is in industry companies that allow postdocs to move to senior scientists (or Scientist II+), meaning that there is actual career progression.

Response 379

Perspectives on the postdoc roles and responsibilities

Functionally, it's a job. We are primarily highly skilled and productive members of labs, filling a broad set of needs for a lab including performing experiments, mentoring lab members, leading subteams, designing projects, and providing institutional knowledge and experience to address the myriad challenges that any lab faces. From my perspective, it's clear that we make an outsized impact on the success of a lab. While we receive some informal training, it is a very small fraction of our time spent in the lab. The vast majority of "development" we achieve is driven by our own experiences in the lab. I therefore think it is far more accurate to describe us as employees rather than trainees. Obviously, we are not financially compensated in line with our extensive skill sets and productivity.

Fundamental issues and challenges

1. Low salaries.
2. Lack of secure job prospects.
3. Lack of respect relative to our importance/skillset.
4. Well-known rampant abuse by the majority of lab heads regarding work life balance, support for postdocs raising children, mismanagement of projects.
5. For demographic groups underrepresented and undersupported at the PI level, there are very few actual policies used by the NIH or academic institutions that seek to remedy these issues. There are tons of words being thrown around in support of these groups but almost no mechanisms that either provide financial support or that impose consequences on institutions that fail to substantively act on the problem.

We are mostly in our thirties, often trying to raise families or at least establish a secure career and lifestyle. These goals are largely incompatible with most postdoc experiences.

Existing NIH policies, programs, or resources

Pay us better (raise the postdoc minimum salary). Do more to restrict lab sizes (fewer R01s to big labs, spread the funding around) so that smaller labs can afford to pay postdocs better.

Extension of K99 etc deadlines for new parent postdocs is really good. These deadlines should be extended farther.

Motivate PIs to find co-mentors for postdocs and reward PIs that agree to serve as co-mentors for postdocs.

Proven or promising external resources or approaches

I don't understand the question so I will just bring up a topic that I think can help postdocs a lot. Collaboration. It makes no sense for postdocs to learn how to physically perform 30 different types of experiments in 5+ disciplines. Papers have more types of experiments/analyses than ever before. Science is more complex than ever. It is very difficult to become an expert in so many technical disciplines (examples: microscopy, bioinformatics, behavioral neuroscence, machine learning, molecular genetics), but it is common to see a single postdoc try to cram all of these types of skills into their 5+ year postdoc and combine them in one paper. For some reason PIs and the community seem to perceive this as a good way to train postdocs. As soon as these postdocs become PIs, they will stop using the technical expertise they worked so hard to gain, and instead will have to rely on higher level project design and management skills that they didn't get a chance to develop as postdocs because they were busy trying to learn all this technical stuff. I think the NIH should financially reward postdocs that write (and PIs that support) fellowships and grants that are truly collaborative. (Not just statements about the postdoc receiving training and advice from other labs.) I would like to see a funding mechanism for postdocs from different disciplines that propose a project together. This would speed up postdocs and might also foster relationships that will continue to be fruitful when these postdocs start their labs. This could also be incorporated at the level of PI grants if they're willing to specifically identify cross-lab postdoc joint projects.

Response 380

Perspectives on the postdoc roles and responsibilities

To be honest I wasn't sure the postdoc was something I wanted. I was encouraged to consider however because it was promoted as a "protected time to get papers published." This has been true and I am grateful for the time. I also have come to see it as a time to reflect on my dissertation work and to actively think about the next steps. I say actively because, during the predoctoral phase, this time didn't exist. I've come to believe it is a time for recovery (from the PHD process), reflection, and refueling. I am meeting other experts in the field, establishing mentored relationships, teaching a little, and learning about the policy and practice of the academy. I am also restoring my soul. All of this is happening at a pace that is manageable.

Fundamental issues and challenges

My research is heavily focused on social health and its relationship to physical health in women and gender-expansive people. Research informs us that social support positively impacts a myriad of physical and mental health outcomes. The opposite of this, social isolation, negatively impacts health. I believe this is the same for academia. The power play between gender, race, and other sociocultural norms are upstream factors impacting social health, leaving many postdocs isolated and lost. I am fortunate to have solid support in my space but when that is lacking, it makes it difficult to really understand how one truly "builds their own program of research." This lack of support can be seen in all aspects of academic duty and is discouraging to the postdoc. Although not a biomedical researcher, I was invited to complete this questionnaire. The siloing nature of some academic spaces also affects the quality of life for the postdoc. I am in nursing but my academic institution is heavily focused on medicine postdocs, adding a feeling of exclusion. Interdisciplinary work and team science are what I believe we need to effectively advance research but if our institutions don't recognize this in our training then we are likely to miss a valuable lesson in working together.

Existing NIH policies, programs, or resources

Perhaps building interdisciplinary postdoctoral training teams or creating early career investigator grants that are interdisciplinary. I'm still learning NIH policies, and resources myself but this seems like a useful

addition. Currently, through the school of medicine, we are required to attend the RCR series offered by NIH. I'd like to see a collaborative effort among the leaders/coordinators from all of the schools to present this content. Research misconduct occurs in all areas of research and it would be nice to have presenters share cases and experiences from areas other than bench science. Mentor matching when postdocs begin their time but with someone in another discipline with similar interests. Perhaps this already exists but it just came to mind. Start-up funding also matters. Ensuring that postdocs have ample financial support to begin projects is always attractive.

Proven or promising external resources or approaches

I am not familiar with any promising external approaches.

Response 381

Perspectives on the postdoc roles and responsibilities

To me, it seems like a postdoctoral position is an unnecessary position that academia has deemed necessary for not many other reasons than that they can pay postdocs less than full scientists or professors. It is almost always necessary to get a position in academia but not industry, and seems like it functions the same as just extending your PhD in many ways.

Fundamental issues and challenges

I think the fundamental issues all relate to how postdocs are treated. They are treated as being more knowledgeable than PhD students, but not worth paying much more money. A lot of times they are treated as a resource for teaching lab members skills and helping lead the lab when the PI is too busy. They don't get all the benefits of being a PI but are expected to almost have the knowledge of one. As with PIs, they are often also expected to be good mentors/teachers, without having any training in how to do so. They are expected to be okay with moving long distances for short periods of time. Overall, I think postdocs are severely undervalued.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Giving postdocs better pay, better training, better benefits, and more stability in their positions would help increase their retention. Also potentially formalizing career pathways (some people need a postdoc to get a position, some people don't, etc.).

Response 382

Perspectives on the postdoc roles and responsibilities

My postdoc training has been so important to me. I got essential training in running an experiment from getting IRB approval, recruiting, performing experiments, data analysis, and publishing. This gave me basic knowledge and experiences in doing responsible and rigorous science, and pave new avenues for my career.

Fundamental issues and challenges

The relatively low salary is absolutely a drawback of choosing post-doc work over entering the industry.

Existing NIH policies, programs, or resources

Not anything in my mind.

Proven or promising external resources or approaches

It will be helpful for postdocs to focus on science if the salary of postdoc can be increased.

Response 383

Perspectives on the postdoc roles and responsibilities

Post-docs are absolutely essential in the research process. I also train doctoral students, but there is many tasks that require the degree of specialization that only a post-doc has.

Fundamental issues and challenges

- NIH postdoctoral stipend levels: The current NIH post-doctoral stipend levels are about $10k too low to be competitive (i.e. to keep the best graduating doctoral students in an academic setting, rather than have them go to industry)
- Professional development funds: a post-docs is not a job; it is a training position. Training requires professional development, which comes with costs. NIH grants only allow the salary to be charged to the grant, but post-docs need to attend–workshops (content focused or professional development focused) and conferences (sometimes not directly related to the purpose of the grant). $2,000 per year would go a long way.
- Moving costs: graduate students taking post-doctoral positions are often not in the position to have enough savings to pay for a national or international move.

Existing NIH policies, programs, or resources

allow for budgeting of professional development for post-doc in a grant.

allow for budgeting of moving costs in a grant.

increase post-doc stipend.

Proven or promising external resources or approaches

universities now often offer "presidential post-doc programs". These programs can inform the NIH post-doctoral program.

Response 384

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

- Salary is too low for positions in most cities in america
- Training is variable based on PI
- Expected time it takes to become independent and transition takes way too long to be successful
- Too difficult to land a PI job
- Most funding is funneled to the top; postdoc attitude is that there is a low chance of success even if you land a PI job

Existing NIH policies, programs, or resources

- Limit number of grants funded and staff a PI can have; PI does not need a team of postdocs larger than they can adequately train
- Blind grant reviews; do initial review on grants; pool the grants together that are sufficient quality, then blind lottery; need to prevent funneling money to the top; new PIs will provide more hands on training of postdocs if given the opportunity
- The career outlook for postdocs is abysmal and they would rather go to industry than academia
- Higher salary to allow postdocs to start families without destroying the PI's research budget

Proven or promising external resources or approaches

I do not have a proven approach, but maybe implement a blind system for postdocs to submit reviews of their mentors to the NIH; this will negatively or positively impact their grant acquisition to prevent poor postdoc training from being further funded and festering; just an idea

Response 385

Perspectives on the postdoc roles and responsibilities

To me, the postdoc is a necessary step to obtaining a tenure track faculty position as an independent researcher. It's a way for me to be further trained as a scientist, both technically and professionally, but it is also required to 'prove myself' in a competitive job market with few open positions. In my view, I am responsible for developing and executing a project that can be expanded upon in a future research program. Included in executing this project is writing at least one peer-reviewed manuscript. While I recognize that my research contributes to the larger research program of my current lab, I mostly view it as my own independent work. Within my lab, postdocs are also expected to mentor junior postdocs, graduate students, and technicians, apply for fellowships, and help write grant applications. The postdocs are the engine of the lab.

Fundamental issues and challenges

Regarding recruitment and retention, the postdoc position is becoming less relevant in the scientific enterprise, particularly in the United States, where biotech is booming. Unless someone is strongly considering staying in academia, a postdoc position, in its current form, provides little to no benefit. Recent PhDs can continue to do fulfilling, exciting research in industry for much more pay, with the structures that normally exist in corporations to protect workers (regulated hours, HR departments, good benefits, etc.). The length of postdoc positions are far too long and only increasing--at this point they are a second PhD. Living off of a postdoc salary for that long is not sustainable, particularly for the stage of life that many postdocs are in (starting families or already with children, wanting to settle down, supporting other family members, etc.). The "unique" training environment is not enough to make up for the financial strain, which has current and future consequences. Many postdocs can't afford to contribute to retirement plans, and holding out for a rare tenure track job is just not worth it for many. Another aspect of quality of life involves the quality of mentoring. Many postdocs are expected to be very independent, and the actual mentoring received directly from the PI is minimal. Nevertheless, there remains an expectation to produce top-tier research with little to no guidance. Thus, postdocs not only deal with the stress of the PI's expectations, but they are also not adequately supported to reach those expectations.

Existing NIH policies, programs, or resources

For the F99/K00 program, graduate students should not be rushed into a postdoc right away. Many students finish the PhD burned out, and starting a postdoc immediately only sets them up to struggle. While the policy is intended to hasten the path to independence, it has the opposite effect, rushing trainees into a new position without adequate rest.

In general, postdocs need more pay and/or shorter postdocs. In theory, the NIH can continue to raise the minimum postdoc salary or shorten the time of fellowships and transition awards. However, this would have a negative ripple effect if the expectations from PIs and academia as a whole doesn't change. A big paper in a top-ranking journal requires years of work and lots of funding, so such changes in policy might only hurt the ability of postdocs to obtain competitive faculty positions, or might make it difficult for PIs to afford postdocs. Addressing the postdoc crisis in isolation will not be enough.

Nevertheless, one potential improvement would be a fellowship for those who want to do a short postdoc (1-2 years) for the purpose of learning a specific skill. The goal would not be a paper but rather, technical training, which could be useful for a future job in industry. This could also benefit new PIs struggling to recruit traditional postdocs, as this would allow them to have paid, PhD-level scientists getting projects off the ground.

Proven or promising external resources or approaches

- The academic path can be very isolating. One thing that helps with such isolation in grad school is the fact that students enter with a cohort. They immediately have a group of people who are experiencing that same ups and downs of grad school alongside them. I've been thinking that something similar would be helpful for new postdocs. Of course, this would have to be done on an institution-by-institution basis.
- Improving mentoring and job satisfaction requires more accountability on the part of the PIs. Some postdocs have great experiences with their mentors, and some quit academia entirely because of their mentors. There is too much variability and too little accountability.

Response 386

Perspectives on the postdoc roles and responsibilities

I view it as the final step of training before a career leading a research group

Fundamental issues and challenges

1. Money
2. Money
3. Money
4. Money
5. Money

The NIH baseline level for postdocs salary is not at all comparable to what one could make in an industry position. Some people have undergraduate loans which must be paid off after the PhD; this introduces another financial strain. I had these loans; in my case I would not be able to make monthly payments on rent, food and loans if I were to take a postdoc paying the NIH salary, which would have precluded me from an independent research career simply because of money, not because of any lack of qualifications. In the end, I found a postdoc that will pay much more, and that is the only reason I can pursue this career.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 387

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is the best way to get hand on training to explore a different field of a research area with simple supervision of the PI/professor. As a postdoc researcher, it is expected to perform different experiments, supervise a junior student, and participate in the manuscript and grant writing. I considered postdoc training as the initial stage of preparation to get a professor position in the academia/university. It is the best way to learn how to organize your lab in the future and gain deep knowledge of how to supervise students who has a several backgrounds.

Fundamental issues and challenges

The socio-economic burden of COVID-19 throughout the world is a big challenge for recruiting very competent postdoc. In addition, due to inflation and less salary payment for postdoc researcher, majority of postdoc trainees are looking for other job options. Recently, there are biotechnology and biopharmaceutical industries that can pay two or three times more salary than a postdoc position. Maybe the salary of a BSc holder in the company can be more than the Ph.D. holder postdoc researcher. Most of the postdoc researchers are forced to leave their position to earn more money to improve the quality of life of their families. As the result, to increase the retention time of postdoc researchers, the salary must be improved. In addition, similar to other workers, a postdoc researcher must earn bonus money at the end of each semester.

Existing NIH policies, programs, or resources

NIH must scale up a salary range for postdoc which is really very low in comparison to other campanies. In addition, It is not easy to receive or win NIH grants as a postdoctoral researcher and there is less chance to get external funds to support and establish your labs to conduct research. In addition to conducting research of PI, a postdoctoral researcher must participate in lecture activities (i.e, teaching activities, and mentoring students) for which he/she must get extra payment. There must be oportunity for postdoc to be promoted to assiatant professor. This activity is very important for acquiring experience and improving postdoc academic research career pathways.

Proven or promising external resources or approaches

No response

Response 388

Perspectives on the postdoc roles and responsibilities

A hired researcher that holds a doctoral degree to perform research-oriented tasks to further their academic career with scientific publications.

Fundamental issues and challenges

Low salaries. Difficult to recruit and retain postdocs since we must compete with industry, especially after 2 years and for those in the computer science field.

Visa issues. Postdocs spend a lot of time worrying and making efforts to ensure they can stay in the US.

Existing NIH policies, programs, or resources

More grants for postdocs to apply for funding their research to accelerate their academic career, especially smaller grants that can be more easily obtained vs more competitive ones like the K99 and K01.

Proven or promising external resources or approaches

Dedicated funds for postdoc travel to conferences, better mechanisms for postdocs to get academic credit for grants, more grant systems that promote postdocs to build an individual career within the same PI lab.

Response 389

Perspectives on the postdoc roles and responsibilities

The traditional post-doc is a training position, for an individual who is already exceptionally trained. It serves as a stepping stone to an academic position. seemingly as a formality, rather than providing additional skills necessary for a professorship (i.e., management training, lab budgeting, administrative expertise, teaching). This does trainees a disservice.

Importantly, there are academic post-docs beyond the bench. Currently, I am an NIH post-doc in technology transfer. This provides a unique training experience completely different than that of the PhD, where there is a greater opportunity to diversify a skill set and specialize.

Fundamental issues and challenges

Salary, work-life balance, benefits, duration of fellowship, uncertainty of a tenure-track position afterwards

Existing NIH policies, programs, or resources

- Increase minimum salary requirements. Current rates are laughably low.
- Implement a more holistic approach to the training experience that better prepares for a professorship: management training, lab budgeting, administrative expertise, teaching
- It’s possible that more remote work flexibility could help. This could lessen the burden of challenging decisions around relocation/ cost of living, family planning, etc.

Proven or promising external resources or approaches

I am not familiar with any proven, successful approaches.

Response 390

Perspectives on the postdoc roles and responsibilities

A post-doc is primarily responsible for driving progress on 1-3 specific scientific projects within the context of their mentor’s laboratory. A post-doc may also be responsible for training graduate, post-baccalaureate, or undergraduate students in scientific techniques related to their projects. As I see it, a post-doc position typically has one of two purposes:

1. Training in how to manage a scientific laboratory (progress on specific projects vs. a longer-term vision for a field, training others vs. conducting research, etc.), or
2. Training in a specific technical skill set to later apply in other laboratory contexts (inside or outside of academia). A post-doc and mentor ought to agree on the purpose, even if it is not one of these two typical examples.

Fundamental issues and challenges

There can be a stigma that post-docs are "cheap labor" to conduct research, or a cog in a machine that is designed and run by the lab head. After spending ~5 years as a graduate student, perhaps under the same stigma, some graduates may be reticent to experience that for another 2-5 years. Up to 10 years of total training while largely feeling unvalued can feel too high a cost for the chance at someday being a lab head yourself. Discouragingly, it can feel as though the amount of respect/authority you receive as a scientist is binary: 0 as a graduate student and post-doc, and 100 if you ultimately attain a lab head position. Many post-docs may have been treated poorly (made to work many hours beyond 40 each week, not given credit for their results, etc), reinforcing this discouraging feeling. However, in my personal experience, I have felt that the respect/authority I've received as a scientist has gradually increased with each year of training regardless of my title, and I have not experienced any mistreatment. Nonetheless, I still sense the "cultural norm" among post-docs to view ourselves as unvalued. Overcoming this cultural norm may be just as important as rooting out actual cases of mistreatment when it comes to improving post-doc recruitment and quality of life. Changes in job title and/or pay that gradually improve with experience, rather than taking an enormous leap between the stages of post-doc and lab head, might begin to rectify this cultural norm.

Existing NIH policies, programs, or resources

In my experience, the NIH post-doc experience is already excellent. The gradual pay increases with each year of experience, the opportunities to train post-baccalaureates or graduate students, and the events for post-docs to showcase their research (e.g. NIAID fellows workshop) all provide a sense that post-docs are valued and are facilitated along a positive career trajectory. That said, individual dynamics between lab heads and post-docs may leave some post-docs feeling unvalued or mistreated. I have had only good experiences and I know how to report and seek help if I were to have bad experiences, so I have a very favorable view of what the NIH already does. But I recognize that I cannot speak for everyone.

Proven or promising external resources or approaches

No response

Response 391

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs are highly trained individuals with an advanced degree, and yet are not offered benefits or pay reflective of their training. The average postdoc is in their mid thirties, and do not want to continue living a student's life. Many want to start families and be financially solvent. Continuing training in a postdoctoral position for little pay, long hours, and no benefits (retirement, etc) is not an attractive alternative to jumping into industry, being paid adequately and receiving benefits. If the NIH wants to increase postdoctoral involvement and retention, they need to pay these individuals in a manner reflective of their training and capability and in a manner competitive to the positions they can obtain in industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 392

Perspectives on the postdoc roles and responsibilities

Postdocs are to acquire new skills during their training, as well as further their professional development through publications, talks, and grants. They assist with existing grants/projects attained by their PI/mentor, as well as applying for their own funding in efforts to demonstrate their grantsmanship, scientific ideas, and application of training. Lastly, postdocs may mentor and train others, though service should be minimal.

Fundamental issues and challenges

Low pay and cost of childcare. I currently make about as much as a senior research tech with a MS, though I have way more education and research experience. Because my salary is less than double minimum wage, I am overtime eligible, however, the process to file OT is arduous. OT has to be approved by my PI, and there is no direction from my university on what is considered OT eligible so it is left to the PIs digression which leaves opportunities for inequity. Additionally, my income hasn't adjusted for inflation, but all other life expenses have, to include child care. My university does not offer on campus care and the cost for child care in my city has increased 30% in the last 2 years. When inquiring about increasing my pay, I am told that NIH grant budgets currently funded don't accommodate a higher postdoc salary and that the department/university isn't in a place to cover the difference. It feels very much, from the NIH down, that postdocs are seen as cheap labor when we contribute significantly to scientific progress/thought, support of ongoing grants, and securing future grants. My low salary (after 12+years of training) is not only problematic for my daily functions today, it compromises my earning potential for years to come. There is little motivation to stay in academia between the low pay **and challenges** with work/life balance.

Existing NIH policies, programs, or resources

A program in need of modification is the re-entry supplement. Immediately following graduate school I moved abroad to support my family during a military tour. I could not secure employment/postdoc abroad due to a NATO restrictions with my military visa (prior to covid and remote work), and could not secure a postdoc in the States for after our tour because we didn't know where we would be stationed (and too far out). I secured a postdoc immediately after I returned to the states and tried to apply for a reentry. However, I was told I wasn't eligible because I didn't have to leave a job to assist my family (my graduate student status didn't count). Had I had a postdoc when I moved I would have been eligible. The reentry supplement should accommodate circumstances unique to military spouses.

Proven or promising external resources or approaches

Though I am not happy with my salary and how the university handles recognizing postdoc contributions, or parents' contributions (ie not providing affordable care for children on campus), I am very happy with my PI/mentor. Work/life balance has been accommodated as much as it can and I feel supported mental health wise. This was especially true during the pandemic. Our department and lab is very team oriented on all all aspects of research, from poster, talks, papers, to grants. By team, I mean we write papers collaboratively and secure funding together, so papers get out faster (divide and concur) and there is shared burden to secure funding (not all on one PIs shoulders). Having a supportive work environment is the only reason I am considering staying in academia after my postdoc.

Response 393

Perspectives on the postdoc roles and responsibilities

Postdocs are supposed to be trainees. This typically means trainees to one day run their own labs. Training should reflect all that this entails, not just doing bench research. There should be a holistic training that includes mentorship, lab management, and a heavy dose of scientific communication skills. Mentors need to communicate the EXPECTATION that the postdoc will seek and participate in these trainings. Too often, postdocs believe, correctly or incorrectly, that their mentors only want them working at the bench. I do not view a postdoc as being critical for roles other than becoming a lab head. There are ways that postdoc training could better prepare PhDs for other types of jobs, but it remains fuzzy whether the postdoc training is needed or primarily serves a networking role.

Fundamental issues and challenges

The KEY issue is that academia has done a terrible job of communicating and executing what training means. Consequently, postdocs across institutions view themselves as underpaid workers, not trainees. There is too much push from grad school mentors to do a postdoc as the natural next step. That should not be a default. Grad students should think long and hard about where they want to end up and how postdoc training will help them achieve that goal. Labs and institutions need to communicate how they will robustly accomplish postdoctoral training goals and needs. This requires much more than institution wide powerpoint presentations. Based on my own experience, lab heads and even committees of lab heads need to directly coach postdocs. The other major issue is convincing postdocs that there is a benefit to doing a postdoc. It shouldn't be a letdown to not get a faculty position or even expect to get one. There's simply not enough positions to go around, so there needs to be a reframing of the rationale for recruitment and why people should do a postdoc. If the answer is to supply labor, then postdocs are getting a pretty bad deal.

Existing NIH policies, programs, or resources

The NIH should require grant applicants to describe their postdoc training plan and then have some confirmation that the plan is happening. Currently, one simply gets money to employ a postdoc to execute the grant, so not surprisingly, doing work at the bench is more or less the extent of postdoc training. NIH could also require institutions to demonstrate a commitment to postdoc training. Having postdoc offices is nice, but there needs to be individual coaching of trainees. If a PI or an institution cannot demonstrate dedication to this idea, then NIH should forbid labs/institutions from employing postdocs. That's a strong financial incentive to do something more substantial in terms of training.

Proven or promising external resources or approaches

Coaching. Can't say it enough. Plenty of postdoc offices provide counseling and bring in speakers of varying usefulness. I know some places are also doing something programmatic that results in a certificate. I personally think this is misleading at best. At this career stage, everything is about genuine mastery as evidenced by writing papers/preprints, presenting at meetings, writing for fellowships, giving chalk talks, teaching, etc. What communicates is mastery is actually doing these things, not simply showing up for a workshop. Great to have workshops, but I feel sad when a postdoc tells me that she attended a workshop on X, but clearly is not any more capable of writing a grant or presenting an elevator pitch. Until there is a genuine commitment to training these things, who really cares about recruitment? Mentoring is definitely integral to postdoc training and job satisfaction will only come from knowing that doing a postdoc is going to be both engaging AND help the trainee get ahead. There needs to be a well articulated justification for taking a "training position" instead of taking a well paying career job. I don't think the answer ultimately has to be about high pay. People will do internships for free or minimal wages if they think it will clearly benefit them. Not suggesting postdocs not be compensated, simply that the value proposition of postdoc'ing needs to be made by NIH, academic institutions, and labs.

Response 394

Perspectives on the postdoc roles and responsibilities

I believe a postdoctoral position should be an opportunity to advance your scientific training and enable exploration of a new field of research/technical skill. For those expecting to transition to a faculty position, this is a critical time for establishing a new area of research on which to build a future lab. For those transitioning to positions outside of academia, this position should be focused on expanding the skillset of the postdoc.

Fundamental issues and challenges

Many postdocs are severely underpaid compared to industry positions. Similarly, postdocs tend to lack many benefits that even graduate students receive. For example, I am a post-doc at the [redacted for anonymity] and I am unable to access the campus gym, do not receive any mental health coverage, and my ability to access a dental hygienist is severely limited. I am not counted as a "benefits eligible employee" so typical benefits do not apply to me (e.g. employer matching on retirement accounts). The lack of benefits and pay disparity significantly reduce my excitement about my post-doc position.

Existing NIH policies, programs, or resources

Please raise the minimum pay for post-docs as well as ensure basic benefits are provided. Gym access, health coverage, parental leave, retirement matching/bonuses, childcare supplements, etc. are all critical for post-doc recruitment.

Proven or promising external resources or approaches

No response

Response 395

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Lack of pay. Industry jobs offer 2-3x the salary coming out of graduate school. Many universities are pushing to raise graduate student stipends while postdoc salaries are being left behind since the NIH minimum is used as the standard for many places, including where I work. Postdocs have PhDs and should be paid significantly more than graduate students and that is just not the case anymore.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 396

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Unlivable wages, lack of incentives. Unequal compensation in different areas with different cost of living.

Existing NIH policies, programs, or resources

Pay them more.

Proven or promising external resources or approaches

Pay them more, stop disregarding the fact that postdoctoral wages have not increased the way rent has increased.

Response 397

Perspectives on the postdoc roles and responsibilities

The roles of a postdoc to me, as someone who is about to finish their time as a postdoc, needs to be more defined. In some areas I'm expected to lead, other areas I'm really just the grunt laborer. I am in a weird position where the university doesn't treat me as faculty or a student and get the benefits of neither. I would really focus on ensuring that future postdocs are more specified in their defined roles. That said, I would advocate for the removal of the existence of postdocs. I'm about to take on a faculty position. I will never recommend that a student take on a postdoc unless they specifically want to go into an academic setting. There is now ROI for being a postdoc outside of wanting to be a professor. I personally did not want to be a professor, I just happen to end up in an academic setting where I liked the job opportunity. I applied to one academic job, got the job, and took it. Postdoctoral positions should mean professor training. If they don't want to do that, then no one should be a postdoc. It just isn't worth it.

Fundamental issues and challenges

The fundamental challenge is that the NIH and all government entitites just do not pay enough. Making 60k a year in major cities that house postdocs is fundamentally flawed. I had the opportunity to be recruited to a government organization and they were offering only 80k for a job. For people with PhDs and other advanced degrees in a postdoc world. Especially for those who may have had a full career outside of academia and went back to school like I did. Postdocs are just not worth it. The ROI for going into industry, or really any place outside of academia just doesn't care about things like publication counts. I personally think postdoc positions should be eliminated all together. And that is from someone who did one. Hindsight 20/20, but I would never recommend a postdoc position for anyone who didn't want to be a professor. Post docs are antiquated and if I had to do it over, I wouldn't do it again. I spent the last 2 years being miserable in my life and job, and would not want that for others. Living paycheck to paycheck. Getting more in debt. Living in a city I didn't want to be in because I was affiliated with a major university. I will forever going forward be the person telling people not to do a postdoc without very specific goals to be a professor somewhere, so I personally will pose a challenge for you, because I will advise most to do something else. The ROI just is not there.

Existing NIH policies, programs, or resources

The policy that needs to be changed is the salary scale. Eliminate it. Start paying people what they are worth, that is competitive with business and the private sector. If you want the best people, then they need to be paid like the best people. A post doc is a glorified PhD student that universities can flaunt around. Ensure that working remotely is an option for everyone if possible. But overall, I'd say until a payscale is eliminated and capped at a tiny amount of money, post docs are not the place to go.

Proven or promising external resources or approaches

Literally any private sector can tell you. Post doc jobs just don't pay as well. The training is good for grant writing and paper counts. Stop focusing on these things. They don't matter to humanity. Advise people to make the right decision for themselves and what they want to do in the world. Not because we need skilled grunt workers.

Response 398

Perspectives on the postdoc roles and responsibilities

I love my postdoc, but the stipend is unlivable in any major city without an additional job/external monetary support/partner monetary support. The only reason that I can afford to do my postdoc in my current city is because my partner makes enough money to support our living expenses. We are in our early thirties and still renting, I cannot afford to put away money every month to save towards a house or even consider having kids soon. I will be leaving my postdoc so that I can actually afford to move forward on life goals like buying a house or having kids.

Fundamental issues and challenges

These contract positions exist in a liminal space between faculty, staff, and student/trainees. We are not supported enough at either the federal or university level because of this. Why would anyone finish a PhD to take a contract position making so little money after committing already at least 5 years to low wages. At my university, there is also no 401k matching for postdocs, only other faculty. This makes NO sense that universities are not required to start 401k matching, especially with low pay already. How is any adult supposed to choose between a postdoc with low pay and no retirement considerations when you could leave for industry with better pay/retirement matching at this stage in our lives?

Existing NIH policies, programs, or resources

The stipend needs to increase, and the NIH should require universities to match 401k contributions for postdocs as they do for faculty.

Proven or promising external resources or approaches

Increase the pay so that postdocs can feel like this is actually the next step in academia, rather than an elongation of the graduate student period. We want to feel like we can be set up for life successes. Right now it feels like taking a postdoc is trading off between your academic dreams and the desire to work towards other life goals.

Response 399

Perspectives on the postdoc roles and responsibilities

Contribution to scientific work

Fundamental issues and challenges

Job security, Salary, Paid leave, and work stress

Existing NIH policies, programs, or resources

Increase the base salary, Increase postdoc benefits, and increase internal post-doc grants and training opportunities.

Proven or promising external resources or approaches

To mproving postdoctoral recruitment more visa assistance and tract for legal employment, increase training opportunities and transition into fields , PI should be trained to treat postdoc more respectfully rather than work donkeys in working environment, PIs should be get proper training how to mentor just not being selfish at their personal growth , Paid leave and vacation days to be increase for better job satisfaction

Response 400

Perspectives on the postdoc roles and responsibilities

Time to publish papers in a specialty area adjacent to my training in an effort to make my line of research more distinct from what it was during the PhD.

Fundamental issues and challenges

Low pay, particularly for clinicians. I am fortunate to be paid at the NIH level for year four upon matriculating into my postdoctoral fellowship. Still, this salary is weak in high cost of living areas. It does not consider prior relevant experience and is half of what I made prior my PhD training. The opportunity costs of a 4 year PhD and 2 year postdoc exceed $350,000. When the stipend barely affords rent, combined with these opportunity costs, it is not logical for many hard working and intelligent people to put themselves in such a situation

Existing NIH policies, programs, or resources

Please consider modifying NIH loan repayment program to permit repaying spouse’s loans in addition or instead of trainees. I worked professionally prior to PhD training and paid off my loans. My spouse still have significant student loans that are a burden to our family. If I would have known about this opportunity, I would have paid off hers and never touched mine. Broadening the loan repayment eligibility would significantly improve our family’s quality of life if I were to be awarded this prestigious benefit.

Proven or promising external resources or approaches

Please peg the annual stipend to consumer price index and raise the base stipend based on area-level cost of living

Response 401

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a transition position from PhD to faculty. It is aimed at providing training to develop the skills to become an independently funded researcher. I have come to both hate and love the position. Doing my research, asking scientific questions, teaching, mentoring are what keeps me going. But being able to stay in the postdoctoral position is one of privilege. Not everyone can do it—the pay is low, hours are long and prospects of staying in academia are less. I have spent years being away from my family (two-body problem) and working long hours as that is how the system is set up. I was able to do it (with SO much support) but it was not easy and it is not sustainable.

Fundamental issues and challenges

The fundamental issue is that the systemic problems in academia make this transition career filled with stress, uncertainty and distress. This is not something a PhD student or a faculty would feel because these positions are more permanent with guaranteed benefits from the institute.

Being a postdoctoral parent on a temporary position is even harder. It is not possible to retain women if this position is anti-parent. You cannot expect every women in the field to choose career over family constantly. Fellowships are great for the CV but they make you self-employed which means you are no longer qualified for University insurance rates or retirement benefits. This is hard on families as family insurance plans skyrocket. Most universities provide benefits such as subsidized childcare to faculty but not to postdocs. Mental health resources like counsellors are subsidized for faculty but not for postdocs. Rents are subsidized for faculty and not for postdocs. Many postdocs are well into their thirties hoping to have a house, a child, a family, but everything about the position creates an environment that makes it impossible. It is as though the position is built to increase mental and financial distress and decrease any kind of work-life balance. How can we then wonder why postdocs are leaving in large numbers?

Existing NIH policies, programs, or resources

Make it mandatory and provide funding for support structures like Postdoctoral Associations, Postdoctoral Offices and Career Offices in every institution. A support structure in the institute and someone who can ensure postdocs receive the benefits they deserve and have their voices heard is necessary.

Make it mandatory for guaranteed maternity leave that is at least 10 weeks. 6 weeks is garbage and it is not even enough time to recover from a c-section. It is great that NIH grants now include a 1-year extension for parental leave, please keep that going.

Make it mandatory that institutes provide supplementary stipends to postdocs on fellowships—more if they have families.

Make it possible for postdocs to apply for childcare related expenses, more for economically disadvantaged, single parents, URMs—I know NIH provides $2000 a year, but you have to realize that is garbage. It costs me $2000 a month for daycare. I am lucky to have a spouse who earns too, to be able to afford this, if only for my postdoc salary I won't be able to afford a kid. This is not sustainable. Again it is like the position is built to cause mental and financial distress and is hostile to those that want families.

Proven or promising external resources or approaches

Funding for support structures in the institute is extremely important. PDAs and PDOs do great work for postdocs and every university must have them. Provide mental health support—this has proven time and again to be important to retain employees across the board. This must be granted by institutes.

The skills being learnt as a postdoc are a must, that is impossible to garner as a PhD student before making the transition to faculty. However, the temporary nature of the position is hard. Make postdoc a proper career path which is not one that is temporary, without yearly renewals and guaranteed benefits whether or not the postdoc is on fellowship. This is especially important for international postdocs whose visa depends on the position and yearly renewals are just a way to attract mentors that take advantage of this.

Response 402

Perspectives on the postdoc roles and responsibilities

A post doc is a highly trained professional, post docs are responsible for the bulk of scientific work in the United States.

Fundamental issues and challenges

Temporary nature of a post doc—discourages one from "settling down" in an area. Post doc pay. retirement benefits, and health insurance is poor compared to industry.

Existing NIH policies, programs, or resources

Post doc NIH minimum salary should be raised from $55,000 to 70,000-75,000. This will discourage hiring many post docs to compete for few faculty positions and although post docs who do get hired to have a better compensation.

Proven or promising external resources or approaches

No response

Response 403

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

NIH sets the national standard for post doc pay, and in many parts of the country this salary is insufficient. Many people do not take a post doc because it is a financial burden or they have to depend on loans or support from others. This is not a sustainable way to recruit the best of the field to participate in science.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 404

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Need for higher salary.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 405

Perspectives on the postdoc roles and responsibilities

I think the purpose of a postdoc is to

1. gain more training under a different advisor and in a different area of science and
2. to prove that you can be successful in a different environment, meaning your graduate school success wasn’t only because of your advisor or other environmental factors.

You show you can adapt, learn, and succeed. This type of position is good for most jobs that come after, not just academic. Also, doing a postdoc does not close any doors. You are still free to pivot to most career paths afterward. All of this makes a postdoc seem like it makes sense and is an attractive path for a lot of graduate students who are finishing up their work. The responsibility of a postdoc would be to learn, develop more independence and leadership in a lab setting, and be mentored by their advising professor as to what next career step makes sense for them.

Fundamental issues and challenges

Issues:

1. Applying is largely "who you know" which is extremely discriminatory toward students with limited networks (i.e. small school, young grad school PI, etc.).
2. No protections; most schools don't categorize postdocs as students or faculty, so we have no job protection, no means to negotiate benefits, no benefits occasionally (I had zero maternity leave during my postdoc when graduate students received paid leave).
3. No oversight or upper management; I understand it's difficult to ask a PI to be some many things, including a mentor for postdocs, but then why don't schools assume that responsibility? There are almost no postdoc specific offices, also no path forward if a postdoc is having issues with their PI. It's like being a graduate student but worse.
4. Pay. Usually people in a postdoc are around 30 years old, give or take a few years, which is when most people start a family. After being in school for 10 years, undergrad and grad school included, accumulating debt, postponing our lives, we have to accept a level of pay that is so embarrassing and laughable for the amount of training we have had. Why would anyone continue to take a postdoc position when they could go to industry and make a six-figure salary in an entry position? We do not want to struggle when there is a better option, one that allows us to afford good childcare, a small home purchase, and to start living a normal life.

Existing NIH policies, programs, or resources

1. Increase pay to match industry positions for postdocs and faculty, including teaching faculty. People deserve to live comfortably. We're not talking buying a boat and going sailing in the Caribbean here. 85-90k per year starting, plus benefits, is only enough if both parents are working. If you have one earner in a family of four, that amount won't be enough. I live in a 1200 square foot small home in a medium cost of living area, and we could not live on that amount with two children. Seriously.do some research into the cost of living.
2. Paid parental leave, guaranteed healthcare benefits, moving allowances, cost of living salary increases, etc. It is literally that simple. Pay more money so that we don't have to leave for industry to be able to afford a normal life.

Proven or promising external resources or approaches

Stop making faculty do everything. Somehow professors are supposed to be good teachers, good mentors, good researchers, good writers, good presenters, good article reviewers, good board members, good volunteers, good fellowship application reviewers, good conflict resolvers, etc. It's no wonder that they are struggling to give grad students and postdocs what they need. Start funding paid positions for all those things that faculty are forced to do for free, and that'll be a good start.

Response 406

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary needs to be increased drastically. Financial support for childcare. The $2500 (pre-tax) a year that is included in F30/F31 awards for childcare costs barely covers the cost of one month of childcare in most cities.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 407

Perspectives on the postdoc roles and responsibilities

A postdoc is a step in the career progression of a scientist. It is an opportunity for the scientist to become more independent than what usually occurs during graduate school. Mentoring is still an important part of this step. This is also an important time for growth as a scientist. Usually it does not include as many administrative or teaching responsibilities as there are for a faculty member, therefore allowing a high level of focus on the research itself.

Fundamental issues and challenges

Low salary is probably the #1 issue for postdocs. They are often at a stage of life where they want to start a family, buy a house, or do other things like an adult rather than a student. The relatively low salary, especially for the level of education, is the major barrier to improving postdoc quality of life.

The next major issue is the "trainee" aspect of the postdoc. This makes them both disposable and dependent. As a "trainee" they are usually given short term appointments (1yr) that are completely at the whims of their mentor. It is much easier to fire a postdoc then most real employees. Similarly, employment benefits are not always in line with other employees. This is particularly evident at some institutions where postdocs who get an NIH (or other agency) fellowship may have a lower salary and worse or no benefits than other postdocs without a fellowship. Having a fellowship puts them into a different employment category at the institution because their salary is coming from a source other than the institution itself. Furthermore, since postdocs are "trainees" of their mentor their career progress is almost entirely linked to support from that mentor. A bad mentor can completely sink a career. Even just a mediocre letter of support from a mentor can prevent academic career progression. This dependence creates a system that is rife for abuse.

It should be noted that postdocs were not always a step in career progression for scientists. Just a few decades ago, many scientists got faculty positions directly after their PhD training. These positions, and the perception that more training is necessary, are primarily because there were not enough faculty positions available for all of the PhD graduates, so more "training" became the norm.

Existing NIH policies, programs, or resources

Increase NRSA stipend levels. Most institutions use that as the standard for a postdoc salary, and often it is not possible to pay an individual postdoc a higher salary than the NRSA level because the institution wants pay equity across all postdocs at the institution. In this way, postdoc salaries are not competitive and are not set by market forces.

Providing more support or programs for scientist to avoid a postdoc and get a faculty position right after the PhD could also help.

Changing the postdoc fellowship into something more like a true funding award that is given to the postdoc could help them become more independent and eliminate the "trainee" badge. It may be necessary to get rid of the "fellowship" name and rather call it a grant, more like an R grant. Making the grant portable would make them less dependent on the mentor, and could allow them to escape an abusive mentor if they are in that situation. The K99 is somewhat like this, but there are not enough K99 awards available and they still require too much preliminary data.

Proven or promising external resources or approaches

The TRIUMPH program at MD Anderson is a promising approach. In this program, many of the postdocs are hired by the program prior to joining a specific lab. Since the program gives them salary support, the lab choice is truly about finding the best research environment. The postdocs also have a mentoring committee that provides support outside of their chosen lab. The program also actively supports the postdocs and makes sure they have everything they need for success. These postdocs are less likely to get off track during their research and are less dependent on their primary mentor.

Response 408

Perspectives on the postdoc roles and responsibilities

1. No job security (most of the contact for 1-2 years), uncertain position and every time look for next
2. No working hours
3. Lowest salary
4. Highest work stress
5. No work life balance
6. No define holidays (leave rules)
7. No respect, no recognition

To me, PostDocs are just personal slave of PI. I am in the 4th years of my post doctoral training (2nd postdoctoral position) and my current salary and starting salary (3 years back) difference is only 3K, I have a 4 members family and we are just surviving somehow.

Fundamental issues and challenges

To me, the main issue of postdoc scarcity in US academia is job uncertainty & lowest wages. For example, my friend who joined in industry after completing Doctoral training, has almost double my salary , we live in the same city. I preferred academia, finding independent grant and independent Faculty position becoming difficult. I wish to stay in academic research (accepting that my salary will be low but I need to survive with my family) but afraid, in academia, postdocs have no promotional opportunities, no salary hike, no satisfaction and aftercall no recognition.

Existing NIH policies, programs, or resources

I wish, postdocs will have long term research grant opportunities (internal/external) even though they don't want to accept faculty role and will have promotional opportunities like, scientist/research scientist.

Will have define leave rules, fixed working hours.

Proven or promising external resources or approaches

No response

Response 409

Perspectives on the postdoc roles and responsibilities

Traditionally, the postdoctoral roll was meant to supplement an individuals graduate training before advancing into a permanent academic position. Currently, these days it serves as a secondary stage for research development and and building a track record of success before meeting the criteria for professor and primary investigators.

Fundamental issues and challenges

Primarily finances. As post docs we are encouraged to work long hours and be more productive than our colleagues in order to edge out competition in the sparse job availability of an academic primary investigator. We are vastly underpaid and individuals without additional support (ie single, or lack additional funds) barley make a livable wage. Thus forced to sacrifice things like owning a car, buying a house, or even purchasing professional attire for the workspace. Furthermore, we are encouraged to get independent funding, but once received the institution drops us as employees and we lose benefits, such as retirement matching amongst other benefits. Most post docs have nearly a decade of research experience, and its far more appealing from a financial and career longevity perspective to leave the academy.

Existing NIH policies, programs, or resources

Increased salary stipends, retirement benefits and student loan support would go a long ways.

Proven or promising external resources or approaches

No response

Response 410

Perspectives on the postdoc roles and responsibilities

The post-doc was vital in developing the skills to become a faculty member.

Fundamental issues and challenges

The lack of stability during the postdoc and uncertainty about the future took a toll on my mental health. The financial penalty of moving to a very expensive city and getting a car under a post-doc salary led to debt that I am still recovering from. Isolation as a post-doc, coming in on your own into a zone where the university doesn't care about as you are not a student or faculty. Lack of job opportunities in academia

Existing NIH policies, programs, or resources

Increase post-doc salaries, increase funding opportunities for post-docs as PIs (beyond K99R00 and F32). Small postdoctoral grants (R03 or R21-like)

Proven or promising external resources or approaches

Setting salary levels adjsuted to cost of living in the respective location

Response 411

Perspectives on the postdoc roles and responsibilities

Mentored position to further build skills, begin to individuate scientifically, and collect data and publish for future funding and jobs.

Fundamental issues and challenges

Time commitment (often years) in the role

Work hours

Pay, pay, pay (and lack thereof)

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 412

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

This is not a difficult question. The issue is money. E.g., for computational biology, candidates could make 2-3x on a DARPA grant. They could get 5 times as much working for industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 413

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Very simple: Financial instability and career uncertainty

1. Salary is nowhere near the amount needed to:
    a) sustain a reasonable lifestyle and
    b) to plan for the future financially (retirement savings, family planning, owning a home, investing, etc.)
2. Realistic chances of becoming a PI are slim for most and average time for postdocs is increasing, but even if one does become a PI, life does not get "easier" (e.g., R01 modular budget has not increased since 1999)

At least one of the two needs to be solved/addressed, otherwise conditions will only worsen over time.

Both are financial problems, fundamentally.

Existing NIH policies, programs, or resources

Everything ultimately trickles down from funding, so:

- Increase R01 modular budget
- Increase minimum postdoc salary
- Expand ESI programs/opportunities
- Expand postdoc fellowship programs

Proven or promising external resources or approaches

No response

Response 414

Perspectives on the postdoc roles and responsibilities

While I am a T32 postdoctoral fellow, my responsibilities often require me to do simply whatever my mentor deems necessary on his projects. This ultimately obstructs my ability to advance my own career goals. A postdoc, to me, is a servant for faculty members and simply perpetuates an elitist system of science that has existed for the past 100+ years within the US and Western Europe.

Fundamental issues and challenges

1. Being overworked. While my mentors often assume being a postdoc is a "fun time" to engage in research and little administrative work, I end up having to complete so many administrative tasks for them and working on their papers that I get little credit for as third or fourth author that in order to also advance my own goals, I end up working between 50-90 hours a week.
2. The salary is too low. Asking a postdoc to live on $50,000/year in major urban cities in the US is difficult. It was already difficult before the exorbitant inflation of 2023, but it is even more difficult now to afford transportation, housing, food, and other things needed in order to succeed.
3. The temporary status of a postdoc with the requirement to move cross-country. A postdoc is generally a 1-3 year position during which one must move temporarily to a new location. Moving is extremely costly, and some individuals cannot move due to family or disability. The reality is a postdoc can generally be completed anywhere. Unless one is engaging in basic science or carrying out the actual work of an efficacy trial, they shouldn't be required to move. It should be an option.
4. We are not guaranteed faculty positions afterward. Faculty positions are more and more rare. The amount of work we do in a postdoc is meant to assist us on that pathway, yet the reality is that it remains just as difficult to obtain a faculty position at one's postdoc institute let alone any other institution.

Existing NIH policies, programs, or resources

The requirement that one be a citizen or on a particular type of visa in order to an NIH-funded postdoc is racist and xenophobic and counter to the realities of science. Science is transnational and supersedes

borders. Faculty members, themselves, are often immigrants from other countries, let alone many graduate students in the sciences across the U.S. We should not preclude immigrants from accessing NIH-funded postdoctoral or predoctoral training.

Proven or promising external resources or approaches

Increase funding, develop a postdoc-to-faculty transitional pipeline, require mentors allow their postdocs to work remotely unless absolutely necessary to fulfill job duties, allow all immigrants to receive NIH-funded postdoctoral training, and require mentors to create a better work-life-balance for postdocs.

Response 415

Perspectives on the postdoc roles and responsibilities

Postdocs conduct research, provide mentorship to graduate and undergraduate students, may have limited roles in teaching courses, publish and write up their projects, write grants

Fundamental issues and challenges

Postdoc salaries are too low to provide a living wage. Postdocs are people with PhDs and likely close to a decade of experience, they should be compensated as such. Furthermore, postdocs need increased leave time to at least 4-6 weeks per year. Postdocs should not be considered trainees and should be considered as professionals and treated as such. Postdocs are an integral part of research and are widely undervalued. Postdoc positions should have the option to be longer (3-5 years) as no one wants to relocate their life after one or two years, while being a postdoc is often seen as a stepping stone, often folks have to postdoc for more than one year, and making this transitional role more livable will help. Also, offering more permanent research positions (e.g., research associate for a person with a PhD) is critical, there are not enough faculty positions for all postdocs, but many are happy to continue conducting research in that fashion and this role should be expanded upon and valued.

Existing NIH policies, programs, or resources

Pay postdocs more, substantially more, the minimum postdoc salary should be at least 75k/year. Provide more paid time off. Respect postdocs more and treat postdocs as professionals and not as trainees, in any other field a person with as much experience as a postdoc would never be considered a "trainee".

Proven or promising external resources or approaches

No response

Response 416

Perspectives on the postdoc roles and responsibilities

Due to my drastic change in research topic, I sort of feel like a rookie trainee, rather than the confident mentor I was in graduate school. However, I still view this as an opportunity to learn new techniques and background to hopefully enable me to be a tenure-track faculty at a university one day.

Fundamental issues and challenges

The major one is salary, which isn't sufficient to allow for one salary to provide sufficiently for a growing family. And this is a MAJOR thing, since a lot postdocs are certainly trying to start their families after the graduate school years.

Existing NIH policies, programs, or resources

Salary increase, and more benefits to aid in childcare.

Proven or promising external resources or approaches

No response

Response 417

Perspectives on the postdoc roles and responsibilities

I think an academic postdoc can be both training for a future career as an academic scientist OR a chance for a recent graduate to shift gears/switch fields/gain experience in order to find a job outside academia. I think both paths are equally valid and not enough is done to help individuals who want to keep their options open to identify a PI who is open to assisting in that. Not all PIs are interested or helpful in helping their postdocs do this. They mostly consider postdocs to be "mini Mes" in training. Having a database of PI trainee outcomes might be helpful (i.e. X% of this PI's mentees went to a job outside academia after graduating/finishing their postdoc)

Fundamental issues and challenges

The number one issue for any postdoc with computational skills is that industry salaries are FAR higher than postdoc salaries. Very few people, especially from an under-represented background, can justify turning down a $150,000-$300,000 industry salary with for $50k as a postdoc (AND you can't even legally save for retirement in a Roth IRA as a postdoc). Similarly, when industry jobs come with 3-6 month paid parental leave, it's hard for prospective parent postdocs to stay. This results in a situation that perpetuates inequity and inequality in outcomes and retention rates as the people who stay in academia as postdocs are those who can afford it financially and/or can easily delay having children (i.e. males).

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 418

Perspectives on the postdoc roles and responsibilities

Being postdoctoral is crucial in medicine and science. The pay is absolutely ridiculous and reason why I quit graduate school after I witnessed how awful researchers are paid. Moved onto industry and I feel like I get paid my worth. Postdoctoral pay is a joke and so many people no longer want to do it.

Fundamental issues and challenges

HORRIBLE PAY. no work like balance

Existing NIH policies, programs, or resources

Better pay. How would you like it if you lived off $3000 a month and want a family but you can't because of inflation. You want science done and NIH takes the credit but what about the actual minds and excessive training ? Pay more and you will get better results

Proven or promising external resources or approaches

If you pay better, you will have happier employees and better science. I did all of my science in a bad mood because of the awful Pay which made me hate it. It's free labor and slavery.

Response 419

Perspectives on the postdoc roles and responsibilities

Conduct independent research within the broader mission/interest of a hosting institution, lab, or team. Receive professional development opportunities to propel into an independent career in the field. Gain project management, fund acquisition, and other skills that are needed to excel in academic or research positions that may not have been obtained during graduate program.

Fundamental issues and challenges

Pay. Postdocs do not get paid for their worth and the value they bring as experts. Currently, there are ALOT of STEM jobs outside of academia that easily pay over double the average postdoc salary. With the

limited percentage of PhDs who end up getting a full time (tenure track) job in academia, many PhDs are starting to look at jobs outside of academia or similar (e.g., NIH) right after graduating. Additionally, postdocs are not really treated like experts. The culture remains hierarchical with postdocs unable to access the same benefits and funding opportunities as research scientists or faculty, and are not treated with the same respect. They are in a temporary position and have to spend time looking for a permanent job, and may lack the motivation to invest in a project because they know they will not be there long-term.

Existing NIH policies, programs, or resources

NIH table on minimum postdoctoral salaries. This table is referenced by many institutions and these salaries are not high enough to support a postdoc. Many postdocs have families, loans, and are in a phase in their life when money matters. For me, personally, as a postdoc, one of the top two reasons I am applying for jobs outside of academia is because of the postdoc salary being so low. NIH has the position to change this across the country at least within academy and possibly beyond.

Proven or promising external resources or approaches

No response

Response 420

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The post-doc should serve as a bridge to more stable/long-term employment. Universities should be able to offer career pathways at their own institution, or partner with other institutions to secure/make clear what options post-docs would have. That way, postdocs are more likely to be a career step rather than a trap (getting stuck in research associate limbo)

Existing NIH policies, programs, or resources

NIH should change its postdoc funding policy to enable location specific adjustment of their salaries (e.g, the way WHO provides salary increases depending on location). A cost of living tool, such as MTI's living wage calculator (https://livingwage.mit.edu/), can be used to provide both a base salary and adjustment depending on location.

Proven or promising external resources or approaches

No response

Response 421

Perspectives on the postdoc roles and responsibilities

The post doc position for me when I came from my country was like I would get independency to work. I will have my own opinion and my own way to work on the project. But the scenario here is totally different. Your PI is everything who governs what you have to do and what not. Its upon your PI who decide whether to go with your opinion or not. And after giving so much time to the lab, science and research as you are not a US citizen you have no right to write a grant. This is the biggest frustration. I never thought that after such a hard work in Phd i will have to work just like a Phd but with a mere tag of postdoc. Perhaps Phd's at last will get a doctorate degree but a postdoc will not even get a job.

Fundamental issues and challenges

The salary of the postdoc is just like peanuts just go and talk to any person a mere graduate earns more than a postdoc. This is why we chose to devote our time for science. I know money is not everything but to live a descent life you have to have some money with savings. I think the minimum starting salary should be atleast 65K and with 10% increment every year.

Secondly, retention, this is the biggest problem after you complete your postdoc or if your PI is no more funded the postdoc is the first person to be thrown out of the lab. If the PI doesnt have grants NIH should hold the postdocs for certain time.

NIH should come with some policies for the people who are not US citizens to give them right to apply for grants and secure a permanent position as soon as possible.

Existing NIH policies, programs, or resources

NIH should change their salary structure it should be increased right away. More projects should be funded to retain the postdoc instead science. More money should be given in the grants. A postdoc should be given atleast 10K yearly irrespective of the salary and grant for conference, visits etc

Proven or promising external resources or approaches

No response

Response 422

Perspectives on the postdoc roles and responsibilities

In the academic field, the postdoc is the major power to generate papers. For each individual, the postdoc is the time to learn new skills and get more achievements to prepare them to get the PI position or a leading position in the industry field. Considering it takes usually a long time more than 4 years for people to finish their postdoc training, a decent life quality should also be provided.

Fundamental issues and challenges

1. The academic field is very competitive, which shrinks the chance for the postdoc to become PI and extends the time required for postdoc training.
2. The skill set of postdoc and industry is not necessarily matched. Making postdoc position not comfortable but gambling.
3. The low salary and benefits of a postdoc cause pressure on life quality, children’s education, and worries about future income, and life after retirement.

Existing NIH policies, programs, or resources

1. In general more funding should be available for PIs and postdocs, especially if the postdocs are not citizens or permanent residents in the US.
2. Increase the amount for each funding according to the inflation.

Proven or promising external resources or approaches

No response

Response 423

Perspectives on the postdoc roles and responsibilities

The roles of an academic postdoc are to train undergraduate students, drive multiple projects (and publish findings), generate key portions of data for high-importance studies, and perhaps most importantly, receive training and experience otherwise lacking in their career development up to that point which will allow them to extend their career either further along the academic path or transition out of academia.

Fundamental issues and challenges

I believe that I speak for all postdocs when I state that if the pay were fair (and reflective of the specific cost-of-living of a specific region), the benefits were comprehensive, and work hours/environments were heavily standardized, many more individuals would consider a postdoc or remain in a postdoc long term. With many postdocs (aged 30 years+) having families, the lack of adequate remuneration and benefits is even more of a challenge and is a deterrent to remaining as a postdoc long-term. Faculty positions and funding are also increasingly hard to come by, facilitating a bleak outlook for potential applicants hoping to continue in academia. Lastly, as a large (if not the largest portion) of postdocs in the US are from other countries, the process of applying for, maintaining and renewing visas can be a huge hurdle. As a

minimum, institutions, particularly public institutions, should hire postdocs under an H1B or similar visa status. Temporary visas such as J1 etc., are counterproductive to work, and have detrimental financial sequences (frequent renewals required) and only add to the stress of doing a postdoc in the US.

Existing NIH policies, programs, or resources

There is a lot of funding (both from the NIH and privately) available to US citizens and very little (other than the F05) available to foreign postdocs that would facilitate long-term stay. Further, what is available is extremely competitive, with rejection rates being very high and applications needing a significant amount of pilot data, to begin with. Additionally, while underpaid, postdocs are still a significant financial expense to any laboratory. Thus, the lack of external funding opportunities for foreign postdocs significantly shortens the feasibility of long-term retention while increasing the pressure to be productive; which can lead to negative health consequences (stress-related disorders, burnout etc.) and questionable scientific practices. Ultimately, while there are many great mentors and labs facilitating career development for postdocs, the salaries, benefits and expectations have not changed to reflect the working/living conditions of the time.

Proven or promising external resources or approaches

The following would significantly assist in improving the postdoc experience and result in increased retention:

Fair pay (and benefits) that is competitive (if perhaps slightly less than entry positions in the industry) (https://www.science.org/content/article/postdocs-need-raises-who-will-foot-bill),

Access to additional sources of funding to lower the burden on the host lab/institution

Expedited access to institutional-sponsored visas such as H1B etc. (https://www.whitehouse.gov/briefing-room/statements-releases/2022/01/21/fact-sheet-biden-harris-administration-actions-to-attract-stem-talent-and-strengthen-our-economy-and-competitiveness/)

A standardized set of rules for work hours and a respectable amount of leave. Life is more than the lab, and academia needs to adapt to this idea to create a productive, but most importantly, healthy environments in which trainees can be productive and thrive. The era of 6-day work weeks has only served to push underpaid postdocs away from academia to more balanced (and financially lucrative) opportunities.

Response 424

Perspectives on the postdoc roles and responsibilities

My main motivation for becoming a postdoc is to improve my research skills and get training on high-level leadership skills for becoming an adaptive PI in the future.

Fundamental issues and challenges

The payment disparities for postdocs are abysmal and need to be addressed. Although our skills and work are appreciated, used, and important for the University our pay-rate force us to delay personal and professional goals.

Existing NIH policies, programs, or resources

The current barriers for non-Americans to apply for grants impose an unfair disadvantage for immigrants to properly collaborate with scientific advances in the US. While we are allowed to become postdocs most NIH funding mechanisms prohibit us to advance our research and put us in an impossible comparison with our colleagues.

Proven or promising external resources or approaches

No response

Response 425

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdoctoral pay is not sufficient to cover the cost of living in most major US cities. Institutions in these cities often rely on their name brand as their selling point, and offer no additional support. Within institutions, postdoctoral salaries and raises are dictated by the individual PI, who has a vested interest in keeping costs low. If a postdoc could be making 4x the salary by entering industry or stay in academia, and struggle to pay rent, the decision is an easy one.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

NIH grants evaluate the quality of the institution for most, if not all, grant applications. One aspect of the institution's quality should be an objective measure of postdoctoral quality of life. This could be implemented by requiring that NIH-funded institutions request feedback from current postdoctoral trainees about their salary, quality of life, and career opportunities. If an institution, or a department within an institution, has an overwhelmingly negative rating by its own postdoctoral trainees, it should negatively impact their ability to gain future funding. This would provide a financial incentive for the institution, department, and individual PIs to improve the quality of life for postdocs. Alternatively, if an institution supports the generation of a postdoctoral union or has a record of maintaining a high quality of life for its postdoctoral fellows, it should be rewarded by increasing their funding probability.

Response 426

Perspectives on the postdoc roles and responsibilities

To do science.

Fundamental issues and challenges

salary. Postdocs do not get paid enough and the NIH modular budget has not changed to reflect this. NIH should award more money per grant, even if it's at the expense of labs funded. Better to have fewer high functioning groups and retain postdocs in academic science to continue these groups versus training the biotech workforce.

Existing NIH policies, programs, or resources

NIH modular budget should be larger with requirements for salary. Some percentage may only be used on salary.

Proven or promising external resources or approaches

increase NIH modular budget, pay postdocs higher salary

Response 427

Perspectives on the postdoc roles and responsibilities

As an academic postdoc, I view my position as an opportunity to continue developing my research skills and expertise while contributing to the advancement of knowledge in my field. I see my role as a critical part of the research team, responsible for conducting experiments, analyzing data, and communicating findings to other researchers and the scientific community. The postdoctoral position provides a valuable opportunity to work with leading experts in the field, collaborate on interdisciplinary projects, and participate in professional development activities. I also view the postdoctoral position as a stepping stone to a future career in academia or industry, where I can continue to contribute to scientific advancements while mentoring and guiding the next generation of researchers. Overall, the postdoctoral position is an essential and exciting phase of my career, and I am grateful for the opportunity to contribute to the scientific community in this role.

Fundamental issues and challenges

One of the primary challenges is the lack of career prospects for postdoctoral trainees. Many researchers spend several years in postdoctoral positions with no clear path to tenure-track faculty positions or other

long-term career opportunities. This lack of job security can lead to stress, burnout, and a loss of motivation among postdoctoral trainees.

Another challenge is the relatively low pay for postdoctoral trainees. Many postdoctoral researchers are paid significantly less than other professionals with similar levels of education, despite their vital role in advancing scientific knowledge. This low pay can make it difficult for postdoctoral trainees to support themselves and their families, and can lead to financial stress that affects their overall quality of life.

Additionally, postdoctoral trainees often face challenges related to work-life balance. Many researchers work long hours, including evenings and weekends, and may be required to move frequently to advance their careers. This can make it difficult to maintain relationships, raise families, and engage in other activities outside of work.

Finally, there are cultural and systemic issues that can inhibit recruitment, retention, and overall quality of life for postdoctoral trainees. These can include gender and racial bias, lack of mentorship, and institutional policies that do not adequately support postdoctoral trainees.

Existing NIH policies, programs, or resources

While these policies, programs, and resources are valuable, there is always room for improvement. One potential improvement would be to increase funding for postdoctoral research and career development programs. This would help ensure that postdoctoral trainees have the resources they need to conduct high-quality research and develop their skills and expertise.

Another potential improvement would be to create more opportunities for postdoctoral trainees to engage in mentoring and leadership activities. This could involve creating formal mentoring programs or providing support for postdoctoral trainees to serve as mentors to undergraduate or graduate students.

Proven or promising external resources or approaches

No response

Response 428

Perspectives on the postdoc roles and responsibilities

In my institution, postdocs are the main researchers responsible for generating and analyzing the research data. Their activities are critical for the success of their PIs e.g. grant submissions.

Fundamental issues and challenges

Despite holding the burden and primary responsibility for the research data generation and analysis, postdocs are often paid less than technicians (B.S.) whose responsibilities are much lower!

Existing NIH policies, programs, or resources

Increase postdoc salaries.

Make health insurance, paid sick leave, paid vacation days, and other benefits mandatory for postdocs. Match what "industry" offers.

Expand funding eligibility to non-citizens/non-green card holders in all grant scheme

Proven or promising external resources or approaches

" What can you be with a PhD"

Response 429

Perspectives on the postdoc roles and responsibilities

Protected time to develop research skills and to get ready to submit a career-development award (CDA) application, such as a K award.

Fundamental issues and challenges

As an MD post-doc, the salary for post-doctoral fellows makes this a hard sell, particularly among people not still in training.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 430

Perspectives on the postdoc roles and responsibilities

I am a second year post-doc in an academic institution. Although I am happy with the job on an academic level, it is intellectually stimulating, collaborative, and creative, I am unhappy with most of the resources surrounding the job. I am inspired by my medical research, I get to make discoveries about the world around us and help people by inventing new medical therapeutics. However, I am deeply dissatisfied with the state of the vocation to the point where I am actively now looking to leave the field of my passion and find a job elsewhere, anywhere that will support what I produce at work. However, I find this vocation isn't supported effectively enough by academic institutions world-wide (same problems occurred in European academic institutions).

Fundamental issues and challenges

The main point is that we as postodocs do not get back what we put into our work. This is evident in the literal sense (salary, stipends, jobs, lack of career progression), as well as in the figurative (how postdocs/lower career-level scientists are viewed and treated). Our PhD degrees equal and rival the years and effort invested into training to MD and engineering degrees, yet our salaries are between a 1/4th to a 1/10th of those other vocations. It's so ridiculous that my friend works as a maid turning beds at a hotel in Los Angeles and earns more than I do when I obtained a summa cum laude Bachelors, two Master's and a PhD. The main fundamental issue is that academic salaries are absolutely laughable and job retention is low when every other week I am looking at job posts from big pharma companies that offer a 3x salary for the same exact post. I stay because I love my lab and our research, but any logical person would've jumped ship a lot sooner. The salaries for PhD's must match and be as competitive as the biotech and MDs salaries to give the PhDs the full support that they need. I often work long hours (12+ hour days) on a salary that makes it difficult to live with 3 other roommates in a city like Los Angeles (I couldn't afford a car for the first 10 months). However, to stay competitive, to obtain data and publish to secure the next position, I have to work those hours. My other friend (that works for a film company) asked if we get paid overtime or get other compensation and I just started laughing because our industry has strayed so far away from the modern norm that it is ridiculous.

Existing NIH policies, programs, or resources

I am not too versed with the existing policies but I would simply suggest more funding for postdocs, whether that is salaries and/or grants. Research career pathways can be supported by more jobs and more support at existing research institutes. The main problem is that the whole system, which is based upon publications selects people willing to handle the pressure of these overworked labs. The use of publications as a measure of success in our industry is deeply flawed and has been address previously, and likely unable to be changed. However, more funding to academic career positions and more support is much easier obtained in the short term.

Proven or promising external resources or approaches

The training is fine, we obtain that on the job. The postdoctoral recruitment would be in a much better state if there was a centralized PhD/postdoc recruitment system as there is in Europe. The main thing is that the working environment must change, we must get the proper support and recognition that most research institutions do not provide to their research staff. At some institutes things are fine, but in others even having a cafe or a coffee corner would be a huge improvement. I am not even talking about support in the form of subsidies for a gym membership or other incentives that would improve the quality and health of the employees. How come the big pharma, biotechs, and tech companies strive? Because they provide food, a gym, and financial support to their employees. In turn, that makes the employees happy and satisfied in the job that they perform and they work efficiently and continue in that job. It really isn't that complicated. However, we still have this ancient, orthodox state of our academia industry as if it is the 1950s where a PhD could do a postdoc for 2 years, buy a house, become a professor and live happily.

In our modern world, a postdoc earning the NIH 60,000 USD salary is unable to save up (I live in Los Angeles so I understand the costs are higher, but the point remains), unable to plan for the future when there are no jobs and no progression, and the jobs that are available are insanely competitive and pay basically nothing when compared to their equals in other industries. Nevermind buying a house, that is an illusion. How is that okay? It's an underpaid, overworked, unsupported, and un-cared for labor force practice that somehow is still legal.

Response 431

Perspectives on the postdoc roles and responsibilities

An opportunity to learn techniques, writing skills, and leadership, to prepare me for an independent role in academia or industry.

Fundamental issues and challenges

Extremely low pay for the level of experience which is unsolvable because NIH is not increasing overall funding to PIs (their boss).

High pressure and workload vs low recognition in the society.

Few chances of becoming independent.

Existing NIH policies, programs, or resources

In this great recession, fewer Americans would choose postdoc, so instead of pouring money on T and F grants, focus recruit more international researchers.

Proven or promising external resources or approaches

U.S is losing competitiveness in biomedical research to China and India. It is inevitable and there is nothing NIH can do about it.

Response 432

Perspectives on the postdoc roles and responsibilities

The Postdoc position is an opportunity to further my research career by gaining more experience in advanced-level analyses and accumulating more publications. Also, during the postdoc position, it will be important to have experience in writing a grant proposal for the preparation of further funding applications. Additionally, I also see the postdoc position as a period of incubation of research ideas. I personally think that postdocs should have more time on focusing on developing their own future in academia.

Fundamental issues and challenges

The first and most important issue is the salary for postdocs. Most postdocs when starting their postdoctoral position are already in their late 20s and most probably in their 30s and the financial load on them is a lot higher than when they are in graduate school. Considering the past 3 years of COVID and the historically high inflation rate, the money gets to postdocs' hands worth less than ever. When industries can easily provide compensation at least 2-3 times what postdoc positions can offer, it only makes sense that more and more PhDs moved to industries after graduating. Furthermore, the available faculty positions are only a fraction of the number of postdocs positions, meaning the possibility of getting into faculty positions is statistically impossible even if you already had a very impressive research track record. Last but not least, like the tech industries, lots of postdocs are foreign individuals who heavily rely on visa sponsorship. It is very rare that institutes will sponsor postdocs for green card applications compared to most of the companies out there, making it even harder for them to see the future to stay in the US after getting into academia. The restriction of non-citizen postdocs in applying for NIH grants also limits their hope of getting external funding which is a key factor to get a faculty position in most cases.

Existing NIH policies, programs, or resources

Increase salary significantly for postdocs and include mandatory annual adjustments for inflation rate and living cost for different locations (e.g., Boston area, NYC, SF bay area). Provide more funding opportunities for non-citizen postdocs. Enhance job security for postdoctoral appointments.

Proven or promising external resources or approaches

No response

Response 433

Perspectives on the postdoc roles and responsibilities

I see the role of a postdoc as someone who is an independent scientist working on a larger project within a lab. It is common for postdocs to be involved in methods development or producing a large dataset that can be mined for many years. Typically they play a mentoring role to undergraduate and graduate students. A postdoc fellowship is a jumping off point or place to acquire more skills before moving on to the next thing. For me, it is not something I'm particularly excited about doing although I think I want to do a short postdoc closer to the geographical location I'd like to settle in for networking purposes. Postdocs are dramatically underpaid for their skillset, productivity, and other various responsibilities they take on in the lab. They are treated like students and employees, but only whichever role is more convenient for the university in a particular context. For example, trainees at my institution get free healthcare, but postdocs do not. Postdoc positions can be exploitative when hiring international Ph.D. holders, as their visa is tied to a postdoctoral fellowship in what could be a toxic lab environment. I have seen several professors with unrealistic expectations for their trainees convert to a lab of primarily international postdocs. Graduate students and postdocs in the US benefit from a whisper network that is not available to international trainees. To me, the primary function of a postdoc is to prepare a person for a career as a tenure track professor, although some people may use postdocs for other reasons as well.

Fundamental issues and challenges

As a senior graduate student, my peers and I frequently discuss our next steps. I was adamantly against doing a postdoc because of the pay, but I think I will be forced to do one to get to where I want to go career wise. I know many people who are going to industry because we know academic jobs are scarce, independent funding is difficult to acquire (but often required to be hired as a tenure track faculty member), and the compensation is MUCH lower than a Ph.D. could receive from an industry job. Higher pay, better benefits, more tenure track job availability, tailored career training for post-docs who don't want to stay in academia, and improved mentoring could improve recruitment and retention.

Existing NIH policies, programs, or resources

Raising the NIH minimum postdoc salary would be a great start. Increasing coverage of childcare expenses for F32 recipients. Increase T32 slots for postdocs and encourage T32 applications that facilitate skill development aimed at a job in industry.

Proven or promising external resources or approaches

No response

Response 434

Perspectives on the postdoc roles and responsibilities

It is an opportunity to do exciting cutting-edge research and expand the frontiers of knowledge. And gain the networking and soft skills to transition from academia to Industry or to another full-time academic position.

Fundamental issues and challenges

Post-docs are not 'my trainees'. This is highly offensive, as post-docs have a PhD and have cutting edge skills and most often than not, know more about the intricate details of latest research. Language matters. We are junior colleagues to be treated with mutual respect, not 'your trainees'. NIH should remove this language immediately.

Pay is abysmal and laughable. $55k vs. more than $200k if someone chooses to go to Industry.

Lack of permanent staff positions; Faculty positions do not justify the number of PhDs churned out every year. Only way to retain post-doc talent in academia is to offer them multiple options, such as hard money staff scientist positions.

Power imbalance between P.I and post-docs.

Existing NIH policies, programs, or resources

For appraisal of faculty and deans etc., either for grant or tenure or other reasons, they should be evaluated not only on their publishing track record but also on the feedback given by their junior colleagues. If a faculty's success is dependent on the evaluation of junior colleagues, it alleviates the power imbalance and provides an incentive to do good by junior colleagues.

Proven or promising external resources or approaches

No response

Response 435

Perspectives on the postdoc roles and responsibilities

Postdoc is a pivotal step to gain additional training in preparation for an independent career as a researcher. It is particularly important for those who want to pursue a career in academia so that after learning basic research skills in graduate school, they can gain additional research independence as well as skills in grant writing, manuscript preparation, personnel oversight, etc.

Fundamental issues and challenges

I think the single greatest issue affecting postdocs is the relationship between work effort / hours and salary + benefits. To be clear, this is a significant problem for academic researchers beyond the postdoctoral level but is particularly acute at this stage in training. Postdoc salaries have improved significantly but could still be improved further. Benefits are still lacking and there are a lot of often unforeseen built in penalties for postdocs as they advance in their career. For example, it is often the case that postdocs who are hired on R01 or similar funds are hired as official university employees but transition to a non-employee status upon receiving support from an F or T fellowship award. Instead of experiencing this as the accomplishment that it is, trainees often experience a "penalty" during this transition that includes loss of health care, retirement benefits, and resulting lower net income as they must gain benefits out of pocket (e.g., via ACA). Universities are frequently unprepared to navigate these kinds of transitions yet postdocs are often required to endure such things in order to gain the most training and be most competitive for academic positions (an F begets a K begets a TT position). This comes at a time when those trainees who are interested in children are often considering expansion of their family. Yet doing so frequently comes at a cost to the trainee's time, flexibility, and overall income as healthcare and childcare expenses skyrocket. Many choose income and/or family plans over enduring these setbacks that only seem necessary if one wants to remain in academia. Inevitably, those that are willing to endure the financial hits are those who come from greater means—typically those of higher socioeconomic status and/or with greater familial support.

Existing NIH policies, programs, or resources

A lot of the above issue would be resolved in NIH were able to cut the university out completely from the employment aspect of postdoctoral training and develop a plan where trainees are considered federal employees or NIH fellows (I don't know what the appropriate classification would be). If postdocs could be hired by PIs at a university but paid through a federal system it would ensure equity of pay (at NIH designated minimum with option for universities to supplement if so desired), continuity of health benefits (e.g., through ACA or other federal employer/employee plan), and availability of retirement contribution options. The government/NIH doesn't even have to consider contributions to such a plan but simply the availability of plans that postdocs could enroll in pre-tax. Having said this, I can't see why NIH cannot negotiate with universities to facilitate health care premium and retirement contributions as they do for standard employees.

The equity and continuity this would provide would eliminate inappropriately low pay (often experienced by foreign postdocs in particular), repeated changes to benefits coverage, loss of university retirement contributions when postdocs transition away from standard university employment status before contributes are vested, etc.

Separately, raising the NIH minimum salary for trainees is great but we are reaching a point where continues to increase for postdocs in particular, NIH will also need to instate a minimum salary for faculty by rank by university classification. I am all for increasing trainee salary but there is little incentive to

remain in academia if the transition from postdoc to faculty does not also come with an appropriate increase in salary and assurance of continuity and equity as well.

Proven or promising external resources or approaches

No response

Response 436

Perspectives on the postdoc roles and responsibilities

The postdoc is an extended training period which, ideally, should end with the postdoc being completely independent. The postdoc should have the freedom to pursue their own ideas, learn skills independently and drive impactful projects to completion. The postdoc should not be a means of recruiting skilled scientists to do heavily supervised or production-oriented work that could be done by a staff scientist. Trainees should choose to do a postdoc because they want to acquire additional skills and independence, rather than being forced into a postdoc because of a lack of other options.

Fundamental issues and challenges

Usually, there is a nuanced answer to these sorts of questions. But, in this case there is not. The fundamental issue that limits the recruitment, retention and QoL of postdocs is simple: lack of adequate compensation. Inflation, especially in high cost of living cities where most science research is concentrated, combined with intense need for talent in industry, has made the postdoc a losing proposition.

Existing NIH policies, programs, or resources

I have a few thoughts:

- The size of investigator-initiated grants should be increased so that adequate compensation can be offered. I realize this is a throwaway comment, but, honestly, that is what limits my ability to pay postdocs more money.
- The NIH should abolish the policy that prevents training grant and fellowship recipients from having their salary supplemented with Federal funds. At best, t limitation prevents PIs from supplementing the salary of meritorious postdocs who earn these awards. At worst, it creates a perverse incentive whereby postdocs cannot accept these awards.

Proven or promising external resources or approaches

No response

Response 437

Perspectives on the postdoc roles and responsibilities

To me, postdoctoral position means a training role (in the capacity of a transient, mid-level staff scientist) supporting the research mission of an academic lab. Key responsibilities involve generating data, producing publications, and pioneering an area of research to then be able to leverage those training experiences into establishing his or her own academic lab. It serves as a stepping stone to apply for faculty positions. Although many companies offer postdoc training, it first and foremost implies an association to an academic or government institution.

Fundamental issues and challenges

The biggest challenge inhibiting recruitment, retention, and overall quality of life is the NIH pay scale, and the “publish or perish” culture of academia. It is not sustainable nor realistic for young professionals (who are highly trained—they are all PhD level scientists!) to thrive on a 55-60k salary. Many postdocs are young professionals who are looking to get married, start their own families, and fulfill other life goals beyond the bench. This salary cap is a major hurdle in incentivizing talented individuals to stay in postdoc training.

For example, I am a PhD candiates and my partner is a postdoc. I am having to take a medical leave near the end of my training, and a sole 55k income was not enough for us to feel secure about our future.

Thus, my partner decided to transition into the industry to be able to provide for our family. This was devastating—both of us had imagined ourselves one day applying to tenure track positions. We realized this was simply not realistic given our circumstances that were out of our control. We did not want to ask for financial assistance from our family and friends in our early 30's, especially after having earned both of our PhD's at a competitive R1 institution. What if we were to start a family? Faced another medical emergency, a tragedy or an accident? All these questions discouraged us from continuing with postdoctoral training.

Life happens, and the rigors of postdoc training and the lack of financial compensation simply leaves no room for mistakes or safety nets that are not only necessary but rather critical for the well-being of young professionals. The lack of support for aspiring scientists who are postdocs is truly astonishing and detrimental.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 438

Perspectives on the postdoc roles and responsibilities

The postdoc position should be a *short* training position to gain new technical and career development expertise and to transition to a PI-like role, where they direct their own research. In reality, the postdoc position has become an avenue for PIs to get cheap physical and intellectual labor with almost zero commitment from the University.

Fundamental issues and challenges

The entire academic system is damaged, and postdocs are the most vulnerable for multiple reasons. First, we are underpaid. My monthly rent is more than my salary. If I did not have a partner with a non-academic job, I do not know how I would eat. Second, the expectations for postdocs staying in academia are untenable. We are in a position of precarity in that most of us will not get the opportunity to have a faculty position, so we are working for a reward that we will likely not receive. Our job is thus inherently unstable, which is extremely stressful. We are taught that our labor is not transactional and that daily suffering is in fact necessary for success. All of this radiates from the current demands of publication and faculty search, which require an enormous amount of work to put on one person's shoulders. We don't have a system set up for postdocs who are good scientists but who don't get faculty jobs to move forward. Further, current PIs, especially those who are older, often have very little training in good mentorship practices. Most are bad, if not emotionally abusive to their trainees, and as we are transient but the PI is permanent, universities have no interest in real discipline.

I, as a 4th year postdoc, would never recommend that a graduate student start an academic postdoc. I know very few postdocs who are more than 2 years in who have a good quality of life.

Existing NIH policies, programs, or resources

At this point, the only thing the NIH can do is get more money overall so that more people can be successful at the faculty stage/open up more positions. But the entire system and culture needs to change, likely starting with the universities becoming nationalized.

Proven or promising external resources or approaches

No response

Response 439

Perspectives on the postdoc roles and responsibilities

A step towards professorship.

Fundamental issues and challenges

Low pay.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 440

Perspectives on the postdoc roles and responsibilities

Post-doctoral training is extremely important and effective for training the next generation of academic researchers. Post-doc research serves two important purposes.

1) It gives already trained scientists an opportunity to drive research projects effectively. Without post-docs, too much of our time would be spent on basic skills training versus more high-level critical thinking training. I did my most intense project-focused research as a post-doc, resulting in great research productivity for myself, team, and community.
2) Second, it provides the opportunity for post-docs to learn advanced research skills. I learned many of the collaboration and grant-writing skills that I would need to succeed as a faculty member.

Fundamental issues and challenges

There is really a singular issue. Low salary. Most PhDs can make much more money elsewhere. Increasing post-doc salary is especially important for retention of female scientists, as post-doctoral years can overlap with child rearing years. During my post-doc, I was losing money by working because I had two kids in childcare. The only reason I was able to continue is because I was fortunate to have a spouse that was not a scientist, and because I was extremely committed to my long-term goals. This is not the case for everyone.

Existing NIH policies, programs, or resources

Continuing to increase financial support or reimbursement for childcare costs. Continuing to increase postdoc salaries (using a transformative rather than incremental increase).

Proven or promising external resources or approaches

Not sure.

Response 441

Perspectives on the postdoc roles and responsibilities

Post docs have an advanced degree in an incredibly specialized field of study, and some might have the only skillset necessary for their research in the entire world. They have to write, do research, and be human beings (but that is treated as something to joke about and is a weakness).

Fundamental issues and challenges

Post docs have an advanced degree in an incredibly specialized field of study, and some might have the only skillset necessary for their research in the entire world. And they are paid less than an entry level worker at many fast food chains.

They are expected to work much harder than they receive monetarily, and the pressure to publish and to work destroy people in their graduate studies, so why would people want to do it during their post doc?

Existing NIH policies, programs, or resources

Pay. Pay. Pay. Pay.

Workers rights. Increase the quality of life and work for post docs.

Proven or promising external resources or approaches

Just pay them more. They worked hard to get their degrees and get paid like trash and treated worse than it. Other advanced degrees like an MD or a law degree get you much more monetary compensation with a guarantee of a timeline and end. Post-docs don't get a guaranteed timeline or anything.

Response 442

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is still a trainee position, but I think it is training in a different capacity than graduate school. In graduate school we learn how to conduct experiments and think critically, but as a postdoctoral fellow, I want to be trained as an independent investigator who will set up their own laboratory. This training should include how to budget, write grants, manage students/staff, and teach. I know this is also a time for postdocs to get a lot of science done with less restrictions, but I think there should still be a balance of training and experiments. We put too much pressure on postdocs to publish high and fast, but not enough effort on training for a professorship. A lot of early stage PI's struggle with this aspect because they were not trained.

Fundamental issues and challenges

Because postdocs have their PhD and are highly trained scientists, they should be compensated as such. I think there is a big draw to industry because of the money alone. If postdocs would get $80,000 (or more!) as salary, there would be more recruitment at that stage. I also think retention is down because of the work-life balance that postdocs face. There is a pressure to publish in high impact journals quickly or else you will never get to be a professor. This, along with the low salary, make postdocs want to leave academia for industry or other positions. If they cannot get a job as a professor, they feel as though all of the years being paid abysmally weren't worth it.

Existing NIH policies, programs, or resources

Higher NIH minimums for salaries and more grant opportunities. Potentially more training opportunities for teaching and mentorship.

Proven or promising external resources or approaches

No response

Response 443

Perspectives on the postdoc roles and responsibilities

The postdoc should be a high-functioning training position where the postdoc utilizes current skills to manage and advance scientific projects while also receiving mentorship and resources to pursue additional training opportunities, career exploration, and guidance on achieving research and professional goals

Fundamental issues and challenges

Advisors pay lip service to training but in many cases are almost exclusively focused on research output and productivity, especially that influences their own abilities to receive grant funding, at the expense of postdocs being allowed to develop their own research directions. I have carried out research that supports my PI's grants but that has not been published in an academic journal. This type of work, which is very common for postdocs, advances the career and research prospects of their PIs but does not help the postdoc advance his or her career. There are numerous institutional barriers that prevent postdocs accessing equipment housed in different departments without payment for service. If a postdoc wants to learn and apply a new technique, there should be less institutional barriers to them pursuing new methodological training and applications to advance their research project. Annual reviews with a mentoring PI often either are ignored, only carried out on paper, or focus almost exclusively on a postdocs research progress; there is a severe lack of professional development and strategic career planning to prepare postdocs to pursue the careers they desire. Postdocs also lack power over deciding when and how to publish; even when completely capable of acting as independent PIs, postdocs are highly dependent on the power dynamics and relationship they have with their supervising PI.

Existing NIH policies, programs, or resources

Postdocs need more power and resources to chart their own training and research pathways. Too often, PIs use their postdocs as cheap labor to increase research output instead of working with a postdoc to strategize how to advance the postdoc's research program and career trajectory. Many industry positions I have applied to have almost no respect for my years of postdoctoral experience. The NIH needs to do some deep reflecting on why the biomedical and biotechnological industries devalue postdoctoral experience. If the goal is to prepare the majority of the postdoctoral workforce for positions in industry, since it seems like there are fewer academic positions and funding is increasingly competitive, then perhaps postdoctoral training should work more like industry. Multi-disciplinary projects could be proposed with multi-PI leadership and more defined roles for postdocs within these projects. If postdocs have an increasingly small chance of resulting in a faculty position, and faculty positions come with a plethora of administrative and service duties that impede or interfere with ones ability to pursue high impact research, and postdoc positions don't help people get good jobs in industry, then why would anyone do a postdoc?

Proven or promising external resources or approaches

Lab safety is not prioritized in many academic labs. Instead of paying lip service to this in grants, then not actually prioritizing lab safety, the NIH should support professional positions in academic institutions that encourage and support lab safety (not through penalties and regulation enforcement, but by serving as experts in chemical and biological safety that help plan and design methods while taking protocol safety into account from the beginning of the experimental design). Being told we are trainees as highly experienced and trained workers, then denied employee benefits such as retirement matching that other employees are eligible for is extremely distasteful. The power of individual PIs over their postdocs, especially international postdocs who may be relying on a visa for their ability to stay in the country, is untenable.

Response 444

Perspectives on the postdoc roles and responsibilities

Postdocs are a critical piece of a skilled workforce in an academic lab. Having a well developed skillset and more independence than other trainees is critical and the motivation to accomplish goals before moving on makes postdocs uniquely productive (although I do not ascribe to the idea that they are work horses who should be treated as such). Having done a 5 year academic post-doc, those years were some of my favorite research years because I had freedom to work independently without being responsible for funding and also knowing I could move on if it wasn't the right fit for me or I wasn't learning. I was only able to do this long of a postdoc because I was unmarried, did not have children and had a relatively low COL. Knowing how rewarding and FUN postdoc years can be, it saddens me that this is not at all even considered by many students and I can't blame them for feeling that way.

Fundamental issues and challenges

The payscale is challenging, however without changing the paylines for grants, this is a double edged sword. I think the bigger issue than pay is the outlook beyond the postdoc. A 3 year postdoc that leads to being perhaps LESS qualified to move into industry, unable to gain independent grant funding and no longterm stability in an academic lab feels very worthless, especially when the pay is not particularly competitive. I think at the current pay level, there needs to be a better long term outlook for postdocs AFTER they're done. Whether thats creating more stable, full benefits eligible, staff roles within academic labs or having pathways toward that in other areas, something needs to change. Its hard to convince someone who does not want to be a PI (and MANY PhDs are not interested with the current funding climate, academic job availability and geographic stranglehold) that spending 3-5 years making $55k is worth it when they are able to go make more elsewhere and gain more relevant long term skills.

Existing NIH policies, programs, or resources

If NIH Postdoc payscales are moved up, the grants must also change. I now serve as a research program manager in a fairly big academic lab and I see the budgets and the grant amounts are low for the amount of time/effort that goes into an R01. Make non-citizens eligible for T32 slots.

Proven or promising external resources or approaches

NIH should support/incentivize the research associate or staff scientist track within academic labs to give long term stability that would benefit both the labs and the staff—No one benefits from a 7 year postdoc especially when the benefits associated are generally garbage (no retirement, subpar health insurance) except mentors who are typically not treating their people well.

Response 445

Perspectives on the postdoc roles and responsibilities

As a postdoc I have done most of the types of work required of faculty: committee memberships, mentoring students, developing projects, writing grants, writing papers, reviewing grants and papers, organizing laboratory maintenance, making purchasing decisions. All of this is in addition to conducting bench work for my own projects. As a postdoc, I am already an expert in my field (more so than my advisor), and though I am learning a lot, there is little "training" involved. I see this as a temporary position that is required for my goal of attaining an independent position in academic research. I accept that the career is competitive, however I feel that the idea of "postdoctoral training" is a ruse.

Fundamental issues and challenges

Both graduate school and postdoc take longer and the expectations are higher than in years past. Furthermore, the publication process can now take a year or more (my last paper took 500 days from submission to acceptance). As the pathway to independence in academia has lengthened, salaries have contracted relative to cost of living. Coupled with the increased competition, I notice now that most graduate students dread the idea of doing a postdoc as they see little value in it unless they are 100% committed to an academic position and willing to take on the risk of things not going well.

Existing NIH policies, programs, or resources

The payscale could be adjusted to put postdoc pay more in line with that of staff scientists or research assistant professors, reflecting the actual work and expertise that they provide. This would cause a dramatic change: it would be a calamity for faculty who are used to having 5 or more postdocs. Maybe they should have 3 or 4 instead of 5, pay them better, and provide closer mentorship. These labs would appear less productive, because paper output is in general a function of the size of the lab. This might also make postdoc positions desirable for excellent scientists (currently they are not). With a good PhD, you can get a job as a postdoc in any lab you want, because faculty are desperate for competent postdocs. This indicates the value of a competent postdoc is well beyond the cost for the lab. Most people I know get offers from every lab they apply to. A postdoc job opportunity is not seen as much of an opportunity, it is simply a choice.

Timelines such as the K99 clock were I think intended to help postdocs by discouraging faculty from hanging on to productive postdocs. In reality, these timelines do not prevent abuse by PIs because the postdoc is almost entirely dependent on the PI to win these awards. I have several colleagues whos mentors prevented them from applying for K99. Again the notion of K99 "training" is a ruse, and the writing about additional training is almost entirely an exercise in grantsmanship. Instead, the K99 timeline and others like it place unnecessary stress on the postdoc: punishing nonconventional paths and enforcing rigid structures that provide no benefit.

Proven or promising external resources or approaches

Dont know.

Response 446

Perspectives on the postdoc roles and responsibilities

Most PI treats postdocs as cheap labor. they just squeeze them to get many papers to support their grants. look how many post doc become PI by training. it is a very small percentage because of no clear commitments from NIH to force PI to implement a clear transition plan for this poor postdoc

Fundamental issues and challenges

I was postdoc, for 2016-2019, with many promising plans from my PI to support my career, the truth is the postdoc is just a waste of time. NIH must implement a clear transition plan for postdoc trainees.

Existing NIH policies, programs, or resources

Policies should change. PI should submit a transition plan to the NIH to show them how the mutual benefits between PI and postdoc happened.

Proven or promising external resources or approaches

Just enforce a plan to implement IDP for postdoc and PI should agree to advocate for their trainees.

Response 447

Perspectives on the postdoc roles and responsibilities

Postdoc year is an opportunity to solidify skills and provide a transition year from being a trainee with limited responsibilities to being a full-fledged faculty member. And in my field (Clinical Psychology), accrue hours towards licensure.

From a systems' perspective, it provides a workforce with enough skills to operate more independently than grad students for example and who are less expensive.

Fundamental issues and challenges

What I've heard across fields is that postdocs, particularly in the hard sciences, are treated like "slaves" (actual quotes) and get paid very little. Sometimes, particularly for international students, they feel stuck in labs without options if they want to remain in the US. Higher salaries seem essential as well as better working conditions.

Within my field (Clinical Psychology), the shortage of postdocs has led placements to hire postdocs as unlicensed psychologists (in much better positions--higher status, greater salaries) while earning hours towards licensure. So, this means that someone with the very exact same credentials could be on a postdoc position earning $55K whereas someone else can be in an unlicensed psychologist position or an assistant professor position (where they get to accrue hours towards licensure all the same) earning around $80K. The choice is easy to make! So, we are having more and more difficulty recruiting postdocs. It can also create great inequities where two people with similar qualifications are in drastically different positions.

Existing NIH policies, programs, or resources

Higher salaries. I also think that T32s with a focus on preparing postdocs for an academic path makes a lot of sense. I think the LRP options also make it a lot more appealing to be a postdoc financially. However, a lot of T32s are only awarded to power house academic institutions that have the amazing infrastructure. This often ends up overlooking postdocs at institutions with fewer resources/more diverse pool of postdocs, thus perpetuating existing differences.

Proven or promising external resources or approaches

I see a lot of initiatives by NIMH that are steps in the right direction: webinars and conferences geared towards junior/new investigators, LRPs, etc and these should continue. However, to make a systemic change, you may need to "throw money" at the problem:

1) Higher salaries for postdocs of course.
2) I think that providing NIH-based financial reimbursement to MENTORS for just training postdocs would go a long way to improve mentorship. Oftentimes, mentors don't have the time/bandwidth to just train postdocs and institutions often do not really compensate mentors/allow the time for this role. What I've witnessed across the last 25 years in this field is that if people are pressed for time, often, training is the first thing to be neglected. If NIH provides compensation for just training (as opposed to requiring in-kind matching by institution), this would elevate training tasks to a different tier of priority and would help recruit mentors who are good at training and have a lot of experience.

Response 448

Perspectives on the postdoc roles and responsibilities

Faculty rely on postdocs as catch-alls to do most of the heavy lifting in implementing the faculty's research agenda. Postdocs are expected to manage and troubleshoot project development, data acquisition and

analysis, keep up with modern developments in methods and analysis, handle dissemination of the faculty's research program through papers and presentations, on top of mentoring and smoothing over any issues with the faculty's junior trainees or other research staff, and handling coordination with the faculty's collaborators. It's a great deal for faculty (lots of value for little money), but not so much for the postdocs.

Fundamental issues and challenges

Postdocs are overworked and underpaid for the expertise and management they provide. All this extra work frees up the faculty sponsor's time to do the fun parts of the work—planning next research directions, networking and building collaborations, traveling for conferences/speaking engagements, and angling for better positions at better institutions. But it leaves postdocs little time/energy to pursue independent training, develop their own research ideas or grants, or travel/network for their own careers. After a few years, postdocs are burnt-out. When it comes time to enter the faculty job market, we consider how much work goes into preparing faculty applications, how many people are competing, how long the search process is, the relative chance of success, relative pay, etc. and it feels futile. For people from underprivileged backgrounds, our trajectories have already been long and difficult—we know we stand less of a chance landing one of these positions than a more privileged peer, and we're tired of working as hard as we have for so long with little pay off. Especially with many faculty positions being filled by faculty from other institutions. There isn't space for us, and we want to get started living our lives. Doing grad school and postdocs puts you at a financial disadvantage compared to your peers. Few institutions provide retirement matching to postdocs, and people often leave graduate school with no retirement savings. It's also hard on your health—I know many postdocs who developed serious chronic health problems vs. folks who left academia after grad school or got jobs after undergrad. Many have had to make the difficult decision to leave academia for their own health and wellbeing; since many folks from underprivileged backgrounds have a greater risk of health problems, it's a double-whammy.

Existing NIH policies, programs, or resources

If faculty take postdocs on grants, there needs to be some evaluation of whether they are doing enough to support postdoc training and development toward independence. There should also be guidance or incentives for academic departments to factor in the diversity of postdocs in the gatekeeping process (i.e., in departmental review—deciding which postdocs get to submit grants from the department). It doesn't matter how much the NIH improves funding opportunities for under-represented folks if the departments are restricting who gets to even submit an application, especially if it's in a manner that disadvantages or prevents those candidates from getting applications out. Limits on how many years of postdoc experience applicants can have when applying for NIH funding disadvantages people from underprivileged backgrounds—it often takes these folks longer to get to a place where they are competitive for funding, and by the time they get there they find out they aren't eligible anymore. It would be great if there were dedicated funding opportunities for people who have had more difficult or lengthier academic trajectories. The mentored clinician scientist postdoc fellowships seem really great—but it would be wonderful to have a parallel fellowship track for basic scientists to get clinical training, especially in the psychology/neuroscience fields. Many of us are in a catch-22 of wanting to work in clinical applications of our cognitive psychology or neuroscience areas of expertise, but not having the clinical expertise or credentials to do so. Few of our cognitive psych or cognitive neuroscience graduate mentors know how to help bridge this gap. We need a dedicated pathway to get the training to establish our research programs. It would also be great to have a pathway for folks with lived experience of the diseases they are studying.

Proven or promising external resources or approaches

Increase salary guidelines, require academic institutions to provide retirement matching for postdocs at least (preferably also for grad students)

Response 449

Perspectives on the postdoc roles and responsibilities

I see the postdoc position as an occasion to:

1. Acquire additional skills and knowledge that complement my PhD ones, to have a broader view and set of tools to draw from when leading a research project as a faculty/research scientist
2. Learn practices and culture from another continent/domain
3. Expand my network to another continent/domain

I also see the postdoc position as the last and short (2-3 years long) step before a faculty/research scientist position.

Fundamental issues and challenges

1. Salary is awfully low, at least for my area (Boston, MA)
2. Most US grants are not accessible to non-US citizens/permanent residents
3. Many contracts/fellowships are for less than 2 years
4. The position does not guarantee access to tenure-track or tenured positions
5. Possibility of having a tenure-track position are in general extremely low (in my field we're speaking of ~300 applicants per each position, with few positions each year), making the hardship of a postdoc salary not worth it for many
6. By looking at demographics of candidates shortlisted for tenure-track positions compared to phd and postdoc demographics, DEI policies disregard nationality (in other words: the share of US citizens among tenure-track faculty is overwhelmingly high compared to the share of US citizens among graduate students and postdocs), again discouraging the pursue of more time in a postdoc position for foreigners

Existing NIH policies, programs, or resources

NIH should extend eligibility for Fellowships to non-US citizens/permanent residents, or have dedicated fellowships for them (e.g. Marie-Curie fellowship in Europe).

NIH could also envision promoting fellowships that lead to permanent positions, e.g. a postdoc fellowship that after 3 year allows the postdoc to submit a research proposal which would support the starting of a group; since the start of the postdoc, NIH would require the hosting institute to commit to grant the postdoc a tenured or tenure-track PI position at the end of the first 3-year phase should the proposal be accepted.

Proven or promising external resources or approaches

No response

Response 450

Perspectives on the postdoc roles and responsibilities

This position is one in which a highly skilled researcher further develops their research portfolio through publication and learning of techniques needed for long term research goals

Fundamental issues and challenges

Compensation, it is unreasonable to expect a skilled and credentialed individual to be paid a sub—professional starting salary. This alone would mitigate financial pressures and stress that many individuals feel working challenging hours in lab while still struggling to make financial ends meet.

Existing NIH policies, programs, or resources

Lengthen the time of eligibility during postdoctoral training for F99/K00 awards. If the financial issue isn't fixed this could be a helpful alternative to reduce the pressure of publication in early years of postdoctoral training, especially for individuals that are struggling with financial or family issues

Proven or promising external resources or approaches

No response

Response 451

Perspectives on the postdoc roles and responsibilities

I see the postdoc as a chance to learn and expand scientific and training repertoire, via three major aspects:

a) Learning new techniques, ideas, organisms, etc. For me, the transition from one organism to another really opened my perspective and allowed me to do stronger science at the interface of my prior training and the new lab.
b) Taking on more risky or ambitious projects. Grad school provides the central training of how to troubleshoot, how to organize data, what the key concepts in a field are, etc. With those skills in hand, postdocs are often well placed to put more of their effort into big picture, ambitious directions.
c) Taking on greater independence in one's projects and career. Postdocs should be helping with manuscript reviewer roles and doing some independent manuscript reviews. They should take on more grantwriting efforts as appropriate, mostly for their own grants. They should be attending conferences at least once a year, and developing their own networks both with and without the PI.

Fundamental issues and challenges

Because science projects are long-term, postdocs often feel trapped in a bad environment because they "can't" leave without a paper. This problem is far worse for foreign nationals, because the visa literally traps them. There is often a conflict of interest between the PI and postdoc; if the postdoc wants to go on the job market, some PIs are supportive but some say, "You can't work on job applications in lab and you can't take work time for interviews." Worse, the PI sees the postdoc as a competitor and refuses to write them letters. Finally, the pay of postdocs is well behind industry, most institutions don't give postdocs retirement benefits, and the huge uncertainty of the academic job market makes it difficult to see the postdoc as a healthy career choice. Unfortunately, the pay of professors is not so much higher than that of postdocs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

- Requesting an annual statement from all postdocs funded off of a PI R grant, submitted at the same time as the RPPR, but only visible to the PO, not the PI or the administrators. This statement could include a short questionnaire about postdoctoral treatment in the lab and an open-ended response section. This information would be collected by POs, stored in an NIH-wide database, and could inform future funding decisions for the PI especially regarding grants that are being considered for funding outside the payline. Just having the threat of this information being used against the PI could be enough to improve a LOT of PI behavior.
- Explicit requirement from NIH to the host institution that NIH-funded postdocs be treated as staff positions with equivalent benefits, regardless of whether the postdoc is funded by an NIH grant to the PI or by the postdoc's own NIH grant. I don't know if this is even possible, but NIH makes a lot of other fairly burdensome requests of institutions, so why not?

Response 452

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdoc salary and benefits. We lose good postdoc candidates to industry because there is no way we can compete on salary.

Existing NIH policies, programs, or resources

Changing this would involve increasing the modular R01 budget and/or NIH postdoc salary structure to increase pay.

Proven or promising external resources or approaches

No response

Response 453

Perspectives on the postdoc roles and responsibilities

I have been on two different T32 mechanisms and what I find is that there is very little communication about expectations, support, or training. The roles and responsibilities are ill defined and there seems to be little oversight of the professors who run the T32. This leaves room for a lot of toxic behaviors and even abuse. While I know each postdoctoral trainee has different goals, it is also frustrating to receive very little actual training. I pursued a postdoc to be trained, and there was no structure in place to support my training. I had to fight for training and sort all of it out for myself. There has also been no support at all from the T32 for my career beyond the post doc. The expectation is to write a K award and that is the only path that has been laid out for me. This is far from the only path that the academic postdoc should be preparing one for. Especially considering how difficult it is to get a K. We need alternatives. Finally, T32 and LRP mechanisms are extremely restrictive in their contractual obligation for postdocs to continue to do certain kinds of "qualifying research." This does not reflect the reality of the job market or the extreme difficulty associated with finding employment that will fulfill NIH obligations. Especially when postdoctoral funding is often very time limited. Two year time limits on postdocs are often not enough to facilitate people having successful academic careers. Maybe they were in the past, but not anymore.

Fundamental issues and challenges

I mentioned a lot of issues with postdoctoral positions and contracts above. I've also noticed there seems to be no mechanism in place for postdoc retention. Racially minoritized, first gen, and disabled postdocs especially are enthusiastically recruited and then just kind of left to our own devices. The rigid expectations for certain kinds of productivity and achievement within postdocs also greatly disadvantages marginalized scholars, and I have personally seen scholars pushed out because they needed "too much" support or were not producing "enough" even though they were not receiving adequate support. Postdocs are given no assistance in terms of navigating academic career trajectories, and NIH efforts to support career development simply feel like they are pushing us to crank out papers with no regard for what they mean, what our work does in the world, or how this helps us advance as scholars. The focus on metrics rather than meaningful work makes being a postdoc feel like working in a publication mill. I could go on about this for a while, but I will refrain. The last thing I will say is that NIH salary scales do not come anywhere near providing us with thriving wages that account for our many years of experience and expertise. Framing postdocs as just "trainees" who can be poorly compensated while we often receive little to no training and while we already have PhDs and many years of experience does us a disservice. It also significantly disadvantages low income people and people supporting families.

Existing NIH policies, programs, or resources

You need to update your salary scales. Nearly every postdoctoral position I'm aware of bases their salaries on your scales. Even those who are not NIH funded. This is a serious equity issue. You also need to remove contractual obligations that penalize researchers for what is an incredibly difficult and inequitable job market. You need to explicitly build support and retention mechanisms into postdoctoral positions for marginalized scholars. There also must be some kind of mechanism in place that ensures that postdoc positions include very clear expectations, provide the training they say they will provide, and that postdocs who need more time on their contracts can get it. You need to do more to offer support for various research paths other than just T32-K-R which is just not realistic for everyone. The last thing I will mention is that there MUST be a mechanism in place for mentees to provide ANONYMOUS feedback on mentors. There is so much toxic behavior, bullying, gatekeeping, and pushing out of marginalized researchers that happens that just is not covered by traditional mechanisms of reporting overt harassment or assault. These factors lead to hostile environments and I honestly don't think that mentors who engage in these behaviors should continue to be allowed to run T32 programs.

Proven or promising external resources or approaches

There is so much evidence from other countries with better social safety nets that shorter working hours, more vacations, better pay all improve job satisfaction, employee retention, and the work environment. We need to do more to ensure that we are offering these supports to employees and fighting the extremely toxic culture of academic overwork. Churning out paper after paper at the expense of doing deep, meaningful research and maintaining a balanced life is something we should explicitly discourage.

Response 454

Perspectives on the postdoc roles and responsibilities

An academic postdoc should include teaching responsibilities and mentoring of students that will be incorporated in their research project and will need supervision and guiding. Teaching should be in areas where the postdoc excels and the mentoring should include discussions to incentivize critical thinking in the mentee, like the establishment of a journal club. But it should be defined and restricted to 20-40% of the time. The research responsibilities should take a 60-80% of the time. This should include manuscript writing, design and doing experiments, data analysis, professional development and traveling to conferences/annual meetings.

Fundamental issues and challenges

One of the challenges is defined roles when hiring and assign time/effort for each role. Also, established clear expectations in responsibilities and how much time will be use in the exchange of knowledge and training of both parts involved.

A postdoc faces a new environment with unique dynamics that are difficult to navigate without guidance. As a postdoc, you come to fill the gaps of roles in administration, laboratory management, supervision, mentoring and teaching, diluting the time doing research. The expectations of solving all the problems, is inherent in the hiring process, but the consequences in postdoctoral training and the effect on research turnaround is not acknowledged. The principal investigator many times pass their own responsibilities to the postdoc. The training expected is a challenge when the PI do not have time, and no one else is available or able to train. The department at the hiring institution, ask to fill roles and responsibilities from a trained professional (postdoc) taking advantage of being authority figures and having seniority. The balance between providing the expertise to the laboratory and be trained in new techniques is disrupted, when the laboratory asked for more for the trained professional.

How can you sell this complex environment?—you cannot! Better communication is a key to recruitment, retention and overall success. Starting with establishing concrete and detailed expectations for the role in the hiring process with responsibilities of each part of the contract, as well as subsequent re-evaluation after each year of postdoctoral work.

Existing NIH policies, programs, or resources

Remove limitations in applications for postdoctoral fellows, like recent graduate (completed doctoral degree within the past 4 years) or early career (< 5 years from obtaining your PhD) What happens when you are looking for a second postdoc to be train in something new but the timing requirement does not work?

Add restrictions of the kind of work you can do under the funding period to eliminate some of the unexpected responsibilities falling on postdocs or define such roles as part of the compensation package to the institutions hiring postdocs, and/or add compensation to roles gained after the first year as a postdoctoral fellow. How to fix the problem of an oversaturated system? by slowly incorporating new talent to the department to fill those gaps.

Look for better ways to make accountable the principal investigators in their role as trainer of the fellow, maybe by asking the postdoctoral fellow to also submit a report. By acting as a moderator to asses communication between principal investigator and postdoctoral fellow, who better than the funding agency to make everyone accountable?

Proven or promising external resources or approaches

No response

Response 455

Perspectives on the postdoc roles and responsibilities

I was a postdoc for 3 years and now I work as a staff scientists in a lab at a different institution that has many postdoctoral fellows. I am married to someone who is still a postdoctoral fellow. Despite having the exact same amount of experience and training, simply because I chose a staff route and he decided to remain a postdoc, he makes $20,000 less than I do and his benefits are much worse. He loves being a scientist, but it is difficult for him to reconcile wanting to continue his academic training with feeling like he doesn't have a "real job". I also felt this way as a postdoc so I decided to switch to a more stable job as a staff member. Postdocs are often viewed as extensions of graduate school instead of as independent staff members which is compounded by lower salaries than corresponding staff scientists.

Fundamental issues and challenges

- Low compensation and poor benefits, not attractive to retain people in academia when many postdocs are in their late 20s or early 30s and want to have stability and may be looking to expand their families or buy homes
- Being viewed as "better" for postdocs to move to a new institution for their training—this is extremely disruptive for many people again who may want to be starting to settle down and remain in a certain city due to family or personal reasons
- Being viewed as trainees similar to an older grad student instead of a real job (a postdoc should not just be viewed by the PI as another 5-6 year grad school on repeat)

To be balanced, many benefits to being a postdoc at this time in life, including flexibility and ability to make your own schedule to a reasonable extent, which is very attractive for many people at this time!

Existing NIH policies, programs, or resources

Truthfully, the bottom line is the postdoc salaries need to be raised and therefore R01 budgets need to increase. As an academic scientist and parent, the benefits of academic life are amazing, but given the economy and the de-stabilization after COVID it's just not enough for many people anymore.

Proven or promising external resources or approaches

No response

Response 456

Perspectives on the postdoc roles and responsibilities

Post docs are acquiring skills and techniques to become independent scientists.

Fundamental issues and challenges

PhDs are expected to have the knowledge of an mba, the technical abilities of an MD, and the abilities of a wizard for less than the pay of a high school dropout working any job whatsoever.

Existing NIH policies, programs, or resources

All post docs should get fellowships. You shouldn't have to apply.

Proven or promising external resources or approaches

Post docs get few to no benefits while working. Except it is a real and difficult job which has none of the upsides and many more downsides than other jobs.

Response 457

Perspectives on the postdoc roles and responsibilities

Ideally, an academic postdoctoral position would be treated as an entry-level PhD scientist role in a robust, publicly-funded research system. Academic postdocs would have several options for career progression within academia and government agencies, especially as senior research scientists (non-professor) in addition research professor, teaching professor, and full-fledged tenure track professor.

Academic postdocs would be treated with the dignity of a working professional, including being guaranteed fair compensation in terms of salary and benefits, such as paid family leave. Academic postdocs would have a level of intellectual freedom that would be the envy of their counterparts in the private sector. Academic postdocs would be seen by the scientific community and by the public at large as an investment in scientific excellence and a prosperous future for the country.

Sadly, the current role an academic postdoc does not meet these ideals. Instead, academic postdocs are treated as 2nd-class scientists. They are not afforded the the intellectual freedom or financial freedom they deserve. They described as "trainees" when they demand fair employment practices and "employees" when they demand adequate training. In some fields, academic postdoctoral positions are treated as a cost-effective dumping ground for PhD scientists which are grossly overproduced by irresponsible graduate programs. The extended length of time that someone may be a postdoc without promotion has generated a sort of professional purgatory of poorly compensated and overworked intellectuals, contributing to the burnout and exodus from academia we have seen over the past several years.

Fundamental issues and challenges

To quote previous answer: "Academic postdocs are treated as 2nd-class scientists. They are not afforded the the intellectual freedom or financial freedom they deserve. They described as "trainees" when they demand fair employment practices and "employees" when they demand adequate training. In some fields, academic postdoctoral positions are treated as a cost-effective dumping ground for PhD scientists which are grossly overproduced by irresponsible graduate programs. The extended length of time that someone may be a postdoc without promotion has generated a sort of professional purgatory of poorly compensated and overworked intellectuals, contributing to the burnout and exodus from academia we have seen over the past several years."

The drastic gap between public and private sector opportunities for PhD scientists is a disgrace. The size of this gap is a consequence of, among other things, the fact that the value generated by academic research is unfairly diverted away from researchers, including postdoctoral researchers. What remains for postdocs is pennies. Postdoctoral researchers are often so burdened by high cost of living and that they are unable or unwilling to start a family.

Some would argue that improving the postdoctoral experience through compensation and benefits would be a waste of public funds. I would argue that it is instead a waste (and a foolish, shortsighted one at that) for a society to force some of its brightest minds out participation in public life (including becoming parents!) through the status quo of the academic postdoc role.

Existing NIH policies, programs, or resources

1. Raise base pay for any postdocs paid via NIH grants
2. Mandate paid family leave for any postdocs paid via NIH grants
3. Do not classify post-docs as trainees
4. Incentivize universities to create non-professorial roles for PhD scientists (core facilities, etc)
5. Create more non-professorial roles within NIH, at Maryland sites and possibly embedded within other publicly owned research sites outside of Maryland
6. Require annual meeting with PI, postdoc on NIH grant, and program officer (or someone within University grant office) with report submitted to NIH
7. Stop PIs from wasting NIH grant money on summer salary for themselves
8. Put greater restriction on "overhead" cost skimmed from NIH grants by universities

Proven or promising external resources or approaches

1. It is proven that when employers guarantee paid family leave, their employees are more willing and able to become parents
2. It is proven that when employers pay their workers a living wage, the workers tend to stay around longer
3. It is proven that when employers provide mentorship and career advancement resources to their employees, the employees tend to stay around longer and blossom into more productive and efficient workers

Fixing the postdoctoral experience is not rocket science. The balance of power and resources must be shifted away from the universities and the PIs and towards the researchers themselves. The funding agencies control all the levers and can fix the problem without any cooperation from universities or PIs. The people losing power will be unhappy but it will create a more just and prosperous scientific career pipeline. The culture glorifying the scientist as a "starving artist" is a quickly dying. The early career scientists of today reject the tradition of labor exploitation and demand to be treated with respect.

Response 458

Perspectives on the postdoc roles and responsibilities

The post-doctorate scientist has a major role in improving knowledge and innovations. This position requires doing hypothesis-driven experiments, performing experiments, analyzing data, bringing technologies and innovations to the lab, writing grants or participating in grants (experiments, writing, analyzing), and also presenting the data in the scientific community. The postdoc will also have a major implementing collaboration in the lab!

Fundamental issues and challenges

- Low salary
- Low benefits (housing issues (time, unsanitary, expensive), not protected by basic rights such as harassment, access to a retirement account, and access to childcare)
- Poor visibility (grants and reviewing always under the PI's name)
- Low number of vacation days
- Visa issues
- Expensive green card application process
- No access to training like mentorship training (which should be mandatory for everyone!)

Existing NIH policies, programs, or resources

- Increase the minimum for salaries (minimum should be 90K/year) to be competitive with the industry
- Render a number of mandatory vacation (25 days should be the minimum)
- Increase the number of post-doctoral grants
- Open new grants for international postdocs
- Create a transitioning postdoc-PI grant

Proven or promising external resources or approaches

- Approach all the union organizations which speak for all the postdocs!

Response 459

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

We struggle to recruit postdocs because the cost of living in our city is so high, and the NIH stipend is so low. It would be wonderful if the stipends could vary based on the cost of living in different cities. In fact, our postdocs are unionized and have negotiated a salary that is higher than what NIH provides; this means that we have to have separate non-federal funds with which to supplement the stipends, which is a substantial barrier for our school. Similarly, the annual child care allowance the NIH offers doesn't even cover one month of full-time child care in our city.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 460

Perspectives on the postdoc roles and responsibilities

Often, the job market envisioned by PIs (and institutions, postdocs, and funders) is the academic job market. But, we know that there are far too few good/non-adjunct/TT academic positions—the academic job market is not good in many fields. So, a low postdoc stipend with potential entry into academic positions is not a good bet.

If NIH is trying to foster the biomedical workforce or innovation or public health, then postdocs who subsequently go into industry, policy, or other related positions would also contribute to that. If there are not enough NIH grants for faculty to get funded and not enough faculty positions for postdocs to get jobs, then there should be explicit recognition and encouragement of non-academic careers AFTER the postdoc as well as right out of grad school. This would mean changing the metrics for success during the postdoc period. Not every postdoc should develop a project pipeline and apply for grants if their goals are to transition to industry or other related fields; mentors and funders should be more appreciative of the types of training and experience that best prepare postdocs, tailored to the postdoc's specific goals.

If there is not a shortage of stellar people applying for scarce faculty positions, why worry about fewer people applying for postdocs? Probably because labs rely on postdoc labor. This means those positions could be filled by techs/research scientists. Tech/research scientist positions in academia could be, in fact, much more desirable positions than time-limited postdoc positions since they would have more stability/longevity (pending lab funds and performance). It would in fact make more sense to worry that academia can't compete with industry for highly trained techs, rather than to complain that PhD grads decide to become techs for industry rather than do a postdoc.

Fundamental issues and challenges

Postdocs are under-compensated, struggle financially, and have poor resources. Postdoctoral salaries should be increased and postdoctoral fellows should have benefits similar to other university employees (postdocs often fall through the cracks of being considered neither students nor employees—can't access student services, can't access employee services, can't contribute to retirement accounts, etc.).

The job market in academia is not good. Why stay in academia, why do a postdoc, if there won't be jobs at the end? We justify lower salaries/benefits because a postdoc is a trainee who benefits from mentorship etc. with the idea that they will later have access to a better job market.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 461

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

NIH postdoc stipends significantly undervalue the work that postdocs do and the training that we already have. It is also frustrating not to be able to contribute to certain retirement savings accounts throughout graduate school and then again during postdoc. In my opinion, changing these financial issues is essential to recruiting postdocs.

Existing NIH policies, programs, or resources

The NIH T32 payback policy limits what postdocs are able to do and their timeline for doing it. Eliminating this policy or allowing for more flexibility would be helpful.

Proven or promising external resources or approaches

No response

Response 462

Perspectives on the postdoc roles and responsibilities

In an ideal condition, Postdocs provide a bridge between graduate students and faculty, as well as a source of innovation and creativity for research and teaching. As such, postdocs are expected to fulfill many roles and responsibilities.

1. Research: Postdocs are expected to conduct and lead research projects, either independently or as part of a larger team. Postdocs are expected to produce meaningful results and publish them in peer-reviewed journals.
2. Mentoring: Postdocs are expected to mentor and guide graduate students, both in research and teaching. Postdocs should provide guidance and support to ensure that graduate students are successful in their research projects and courses.
3. Teaching: Postdocs are expected to assist faculty in teaching courses, either through lecturing or providing teaching assistance. This can involve leading discussions, developing new materials, and providing feedback to students.

Fundamental issues and challenges

Postdocs in the often face a number of issues, from limited job opportunities and job security to low salaries and limited benefits.

Low salaries: Postdocs in the US often make less than their peers in other countries, with median salaries ranging from $56,484 to $68,604

Limited job opportunities: Postdocs are often limited to research positions in academia, and may find it difficult to transition to industry jobs.

Job security: Postdocs are often employed on short-term contracts, and may face uncertainty when their contracts expire.

Limited benefits: Postdocs often receive limited health and dental care, as well as limited vacation time.

Limited career development: Postdocs often lack access to mentoring and professional development opportunities, and may lack access to resources such as job postings and networking opportunities.

Existing NIH policies, programs, or resources

Restructure salary first

Proven or promising external resources or approaches

If you are looking to provide additional money for postdoc training in a grant, there are a few options available to you. Depending on the grant and the funding agency, you may be able to request an increase in the budget for training or travel costs. You may also be able to use a portion of the grant to pay for a postdoc training program or to hire a consultant to provide training. Additionally, some grants may allow for the use of a postdoc training supplement to pay for training-related costs. Finally, you may also be able to apply for a separate grant specifically for postdoc training.

Response 463

Perspectives on the postdoc roles and responsibilities

My postdoc is a job. A job I am underpaid to perform. I lived on a poverty wage all through my 20s to complete grad school. Now as an adult who wants a family, security, and independence I live off of a shameful stipend. The NIH pay rates are deplorable. They make academia untenable to folks from lower income background. Salaries fail to account for local cost of living. There is nothing you can do to make a postdoc more palatable that erases the harm you do with low pay. It’s very simple: Increase the pay.

Fundamental issues and challenges

The pay rates set forth by the NIH are shameful. Postdocs are adults. Stop infantilizing postdocs with shameful pay rates under the guise of "providing further training". Many post docs skills are superior to the PIs that they work under. Postdoc positions may result in career advancement but many do not. Many PIs hoard power and resources. The skills of postdocs enrich PIs. The fact that grant mechanisms handicap postdocs is ridiculous (i.e., R21 grants making early career scientists ineligible for K awards). The entire premise that F and K awards rely upon PIs and "training" perpetuate a hierarchy in academia that actively harms early career scientists, indenturing them under senior PIs and limiting the pursuit of opportunities at other institutions. Increase postdoc pay so that the pursuit of grants is not necessary.

Existing NIH policies, programs, or resources

More money for postdocs.

Create more grant mechanisms that actually foster independent development in postdocs, rather than arduous grants that shackle postdocs to toxic, prestigious universities/institutions and senior PIs with bloated resources.

Stop treating postdocs as "trainees" and give them actual resources.

Proven or promising external resources or approaches

Increase salaries for post docs.

Response 464

Perspectives on the postdoc roles and responsibilities

Protected time and resources (including funding, mentorship, facilities and equipment) to refine one's research direction, and to gather and analyze data which may be used to support grant applications for further training or to become independently funded.

Fundamental issues and challenges

In general, postdocs are poorly compensated for their level of skill and work hours, compared to non-academic jobs. This also includes worse benefits, including health insurance and paid parental leave, compared to non-academic jobs (especially those in the tech industry).

Existing NIH policies, programs, or resources

Increasing paid parental leave up to 6 months, especially for mothers who bear a larger burden of child-rearing responsibilities due to biology (e.g. breastfeeding) and cultural norms. Many women leave academia due to perceived or actual discrimination against mothers, and lack of financial and structural support during the most demanding period of infant-rearing.

Proven or promising external resources or approaches

No response

Response 465

Perspectives on the postdoc roles and responsibilities

It is a training stage, and it should enhance my experiences of science, however, if I am not appreciated, then I will escape and move to industry.

Fundamental issues and challenges

work like a slave with a very low salary.

The salary is a mess unfortunately.

Existing NIH policies, programs, or resources

We need more appreciation to the postdoc not to the PIs.

Proven or promising external resources or approaches

No response

Response 466

Perspectives on the postdoc roles and responsibilities

I'd say postdocs provide a dedicated opportunity for early career researchers to build an independent research program and establish credibility for implementing that program and should involve direct training from a supervisor on both scientific and non-scientific aspects of running a lab. I do not think postdocs should be required or encouraged for trainees who don't want to become academic faculty members—PhD training should be of sufficient quality for positions outside of academia (and if that's not the case, PhD training should improve).

Fundamental issues and challenges

- Low pay. My graduate school classmates in industry make 2x what I make, and I live in a high-cost area with one of the highest postdoc minimum salaries in the country. It is very unlikely I will recover my lost income in the future.
- Disruption to personal life when having to move to take on a postdoc
- Lack of adequate support, guidance, or mentoring from supervisors
- Lack of institutional policies that protect postdocs from abusive supervisors
- Lack of institutional policies or incentives to improve mentoring quality
- Lack of institutional power for postdocs in general. Often your choices are just to put up with unfavorable conditions or leave.
- Perception that academic faculty positions are difficult to get and not worth the effort or the loss of income that comes with a postdoc
- Availability of other career paths that do not have these problems

I may be the only student out of my PhD cohort of 10 at a high-tier US program to do a traditional academic postdoc, which is largely due to the poor pay and general disenchantment with academia, compounded by several negative experiences with supervisors and the institution. The perception is that postdocs aren't at all worth the pain and that doing a postdoc is a pretty stupid decision.

Existing NIH policies, programs, or resources

- Mandated increased pay for NIH-funded postdocs, possibly adjusted for cost of living
- Mandated mentorship training and employment protection for postdocs for NIH-funded labs or training programs
- Mandated review of mentorship quality and student/postdoc outcomes (including confidential interviews with *ALL* current trainees) for initial award/renewal of non-project-based grants (e.g., U54)
- Collection/publication of data on student/postdoc outcomes from individual institutions (and preferably individual PIs), including mental health outcomes. This should be mandatory for receiving NIH funding.
- Reducing funding for large, high-profile labs in which there is no way the PI is actually adequately supervising all of their trainees. Increase funding for early career PIs instead, so postdocs in these labs can instead get independent positions (which they already functionally occupy) where they get the pay and respect commensurate with what they are actually doing day-to-day.

Policy changes will only be effective if they actually have teeth—optional things like mentorship training, etc have quite frankly proven to be ineffective. The most effective way for the NIH to step in is to tie these goals directly to funding. If there is no financial incentive for change, it will never happen.

Proven or promising external resources or approaches

No response

Response 467

Perspectives on the postdoc roles and responsibilities

It is a required position if I want to be tenure-track faculty. It is working under a professor and learning how to run a lab, manage people, and still produce high-quality science.

Fundamental issues and challenges

Money. That's it. I'm sure someone on your team has access to the Internet and is aware of this at this point, but that's it. It must be painful for some people to know that they can earn so much more and have their work more highly valued in a private environment, but that they must do an academic post-doc to pursue academia. Which I guess is fine, I understand that giving up earning potential is part of the process, but we exist in a capitalist economy—if you want your top talent to be happy, you need to pay them. Speaking candidly, I am wealthy and my partner is wealthy and also not an academic. I have fewer issues earning less—all that paying post-docs low wages does is widen the gap between privileged researchers and non-privileged researchers.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 468

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary is too low for the expertise we as postdocs have. For expensive cities (ie boston), the cost of living adjustment is a joke. Having to pay for childcare is a huge burden on the person, especially if the other parent can't/doesn't work. There are not enough PI positions for the postdocs. NIH needs to recognize the importance of staff scientist positions in the academic lab and have funding mechanisms to support these (ie NCI R50 staff scientist awards).

Existing NIH policies, programs, or resources

There are not enough PI positions for the postdocs. NIH needs to recognize the importance of staff scientist positions in the academic lab and have funding mechanisms to support these (ie NCI R50 staff scientist awards).

Proven or promising external resources or approaches

No response

Response 469

Perspectives on the postdoc roles and responsibilities

It's a position where a PhD holder expands their expertise and experience in a related field or subfield. They learn to develop more skills making them prepared for their future career

Fundamental issues and challenges

Low pay in comparison to industry.

Lack of job security.

For International postdocs visa options are limited which affects future employment opportunities.

For International postdocs, less opportunities to get NIH funding.

Existing NIH policies, programs, or resources

Increase minimum pay stipulated by the NIH.

Open grants/fellowships to International postdocs.

Proven or promising external resources or approaches

No response

Response 470

Perspectives on the postdoc roles and responsibilities

An academic postdoc is a training position with more seniority and independence than a graduate student, but less than a junior faculty member. A postdoc should fundamentally be a temporary position to enable the trainee to gain experience and credentials necessary to obtain a permanent position in academia or elsewhere.

Fundamental issues and challenges

Limits placed by NIH on the ability to apply for grants based on time in the postdoctoral stage are harmful to those whose careers do not follow a smooth and traditional path. The postdoctoral years are a time when many female trainees must have children, and NIH policies on application limits for career-development awards and for the timing of career development awards themselves (e.g., the two-year K99 phase) result in an impossible balancing act. I am a K99 awardee who has recently given birth, and my institution has been unable to apply for a maternity leave extension on my behalf. I run the risk of losing my ability to transition to R00 because I took time away from the lab and from my job search to care for my baby. I also lost time at the beginning of my K99 phase because of the pandemic, when I did not have childcare for my older child. As a postdoc, and in my faculty job search, I am expected to move away from my family and other resources I could have used for childcare, but I am penalized in multiple ways for my children requiring ongoing resources and time to raise. I am nearly 40 years old and could not have delayed having children until after I was in a faculty position. The limits NIH places on the length of the postdoctoral period have the effect of winnowing the faculty application pool only to those who are able pursue a traditional, uninterrupted path, and to those who were lucky enough, or in labs with enough resources, to have successful projects early in the postdoctoral period.

Existing NIH policies, programs, or resources

K fellows should have access to childcare supplements as F fellows do. Policies on childbirth leave for trainees on K grants should be made more clear to institutions, and childbirth should result in an automatic extension of the K99 phase to enable parents to recover from birth and care for their newborns. NIH could expand or simplify the application process for supplemental awards to K99 recipients to make it easier to apply for funds to cover the cost of a technician or other support while the K99 awardee is on parental leave. The K99 phase should have more flexibility during the postdoc-to-faculty transition so K99 recipients are not pressured to take subpar faculty positions in order not to lose their R00 funding. NIH should encourage institutions to retain their K99 fellows so that junior faculty are not severed from their community and support systems at this critical point in their careers.

Proven or promising external resources or approaches

No response

Response 471

Perspectives on the postdoc roles and responsibilities

In an R1 institution, the roles and responsibilities of an academic postdoc are to

1. Understand the research landscape in their area of expertise and synthesize new ideas and hypotheses,
2. Carry out research to test these hypotheses, and
3. Author scientific publications.

Postdocs may also support their PIs

- Mentoring trainees,
- Writing grants to support research.
- Fundamental issues and challenges
- Postdocs get paid poorly, often have insufficient healthcare support and don't have long-term financial security such as retirement benefits.
- Academic PIs overwork and mistreat postdocs. There is a glaring lack of accountability such as a HR department in industries. Further, the power disparity between a PI and postdoc, where a postdoc heavy relies on the good graces of their PI, promotes abuse.
- Postdocs are always forgotten in the support services provided by universities. For instance, universities will regularly provide housing for students, staff and faculty, but not consider postdocs in any of these categories. Same goes with other benefits and support structures in universities. Therefore, postdocs are forgotten and let to slip through the cracks,

Therefore, the current structure treats postdocs as temporary and dispensable labor.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

a) Improve NIHs scale for postdoc pay.
b) Create the equivalent of "Ratemyprofessor" to support sharing feedback on trainee experiences with different PIs. This will enable postdocs to make an informed choice.
c) Create clear guidance towards suitable work environment for postdocs, and portals to lodge complaints. This will help stem abuse of postdocs.

Response 472

Perspectives on the postdoc roles and responsibilities

I feel the postdoctoral scientist is a very important role in academic research. They are often the glue of the lab and play a large role in mentorship and teaching/inspiring younger students.

Fundamental issues and challenges

The single biggest issue with recruitment and retention is low pay. Especially in high cost of living cities, people do not want to spend 5+ more years barely making ends meet after going to graduate school. At our institution postdocs are not eligible for retirement matches and it is very clear in the US this is an important topic. Postdoctoral scientists deserve to be paid more.

Existing NIH policies, programs, or resources

Grants to cover childcare and housing offsets programs to help people in their late 20s/early 30s not have to choose between postdoc roles and life events.

Proven or promising external resources or approaches

No comment

Response 473

Perspectives on the postdoc roles and responsibilities

A postdoc is generally a short-term research position that provides further training in a field or even a very different field and opportunities to develop as an independent researcher. For me, the postdoc year(s) can be an opportunity to develop independence, hone technical skills, focus research interests and develop leadership and project management skills.

Fundamental issues and challenges

I live in the Washington D.C. area (Rockville) and I am supporting my partner and two kids. It's really hard to pay all of my monthly expenses on one income. I'm often stressed about finances due to high inflation and it's really mentally tiring. As far as I know, the St. Jude Children Research Hospital has increased its employee's income to $70,000 each year since last October, 2022. Living in Washington D.C. is really expensive for a family. NIH should consider improving or changing this situation for the postdocs immediately.

Existing NIH policies, programs, or resources

None.

Proven or promising external resources or approaches

NIH should consider providing financial aid or support for the postdocs(especially for the postdocs living with family) to find economical apartments.

Response 474

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 475

Perspectives on the postdoc roles and responsibilities

Mostly independent research.

Supporting and mentoring in lab group.

Training new skills.

Applying for an interviewing for new opportunities.

This position is a nearly independent position; research should be mostly guided by the postdoc's own research instincts, while aware that other people will have to ultimately be the responsible party. The reason why pay is lower, in my opinion, is that there should be protection for the trainee—this means that the PI is ultimately responsible for any mistakes, the postdoc should have protected time for professional development, paid opportunities to continue training, and paid to further their careers in whatever way makes sense.

Fundamental issues and challenges

Low pay for highly trained position.

No guarantee for funds to do training/attend essential conferences.

No guarantee for funds to start independent research project.s

Most likely involves moving, possibly far distances with little support and relocation stipend hardly ever supported.

Not every institution has protected days off/parental leave/sick leave.

Not easy to get a mortgage because it often technically a year-to-year contract position.

Confusing taxes with training grants.

International people often rely on the position for visa status, so can easily be put in a bad lab with a toxic PI and not a good way to move.

Not enough academic positions to hire all postdocs, but training for other positions is limited.

Often the workhorse of publications in a lab, but there needs to be reasonable hours (appx 40 per week) and protected time to develop and train for the next stages of their career.

PI is in charge of your fate—if you don't end up with a good one, you could loose out on an essential recommendation.

Existing NIH policies, programs, or resources

T32 and F32s should have higher minimum salaries (at least and funding to support 1x relocation fees). Minimum salaries should be 80% of the average starting professor salary (to represent the slight difference in ultimate responsibility) and there should continue to be a set yearly fund to pay for other training/small research projects/conference fees (I think it is close to $5k right now). Contracts for these should include minimums sick days and paid time off.

Postdocs should have a way to report PIs that break contracts (parental leave, hours worked, time off, commitment to training opportunities), and there should be yellow/red card system that will instate fines for these PIs. Postdocs subject to other workplace harassment (discrimination or otherwise) should be placed on paid administrative leave while the PI is investigated.

Contracts should offered to be at least 2 years (unless the postdoc does not want).

Contracts off NIH supported grants (R01, P30, R35 etc) should abide by these same criteria, with dedicated funding to support the postdoc's training.

Proven or promising external resources or approaches

haven't seen any yet

Response 476

Perspectives on the postdoc roles and responsibilities

I think the roles and responsibilities are not clearly defined and this depends on the lab and PIs. That said, I view the postdoctoral fellows as an upgraded PhD student. Although I view postdocs are bringing new ideas, mentoring students, writing grants, essentially postdocs are playing the same role as PhD students, but with more skills.

Fundamental issues and challenges

1. Low salary. There is not even a job guarantee after a postdoc training, so low salary as an introductory salary is not excused. Most people I personally know went directly into industry or more teaching-based universities after graduating primarily because of this reason. Training with low salary with job guarantee will be completely fine, but the current system does not do this.
2. Job availabilities. In line with the first point, there is too much uncertainty in job search. Most people who go into postdoc training would look for tenure-track positions, but there are limited availabilities in the first place. If then, there is really no reason to go into postdoc positions with low salary knowing that the job search will be devastating.
3. Rigid funding mechanisms. As an international student, it's almost impossible to get any government fundings. Considering the high number of international students who are doing a phd program in the US, there are very limited number of fundings available. This further hinders willingness to take postdoc training, even stay in academia at all

Existing NIH policies, programs, or resources

F32: open to all PhDs without nationality restrictions. Also increase the time limit since graduation.

Proven or promising external resources or approaches

No response

Response 477

Perspectives on the postdoc roles and responsibilities

Doing a postdoc at [redacted for anonymity] gives me a lot of freedom, which I enjoy. Freedom to figure out what I want to research, how I want to do it, and why. This is the greatest part of being a postdoc. I do see a postdoc position as a temporary position between a PhD student and faculty and ideally, I don't do this for more than 3 years. I also enjoy the mindset of the people and the network of ambitious people that I've built.

Fundamental issues and challenges

It is very challenging to be an academic postdoc. First of all, being an international from Europe, the process for the visa is long and time-consuming. The salary and benefits are absolutely minimal and a big downside of academia in the US. I am considering moving back to Europe to receive a proper academic salary including benefits like health care and pension. Academia in the US is extremely underpaid, and this is a shame. Without the job of my partner, I would not be able to survive on this salary. Combined with the skewed work-life balance, I'm strongly considering moving to industry at the moment.

Existing NIH policies, programs, or resources

I find the NIH programs too strongly focused on US citizenship

Proven or promising external resources or approaches

Postdocs in the US are seen as students, but there is very little training and mentoring provided, this is an area of improvement.

Response 478

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is to be further trained and to perform research with the goal of becoming an independent scientist (whether or not the career goal is an academic career).

Fundamental issues and challenges

Fundamental issues are low salaries, poor benefits at many institutions, a lack of overall support from institutions, and in some cases, active disdain from upper administration. Regarding low salaries, many postdocs cannot afford to live near their home institutions due to living costs. Further, the average age of postdocs seems to be rising (I have personally seen new postdocs well into their thirties). As a result, postdocs very often put off major life events (marriage, children, etc) or choose to leave postdoctoral training for jobs with more better salaries and benefits. I, as a postdoc in his late thirties, have put off having children and have had medical issues become worse because I am continually denied care by the only affordable insurance option our institution gives us. Even worse, despite being a postdoc in a medical system ([redacted for anonymity]), many of our own physicians do not accept our health insurance. I have heard similar situations from other institutions as well. Taken together, if these conditions continue, I can only predict postdoctoral recruitment and retention will continue to dwindle.

Existing NIH policies, programs, or resources

First, salaries must be raised significantly ($70-$75K, minimally). With the current economic climate and inflation, being a postdoc is extremely difficult. We were already living from paycheck to paycheck and inflation has made this even worse. Second, there needs to be some minimal standard for health insurance. Postdocs are the backbone of academic research. We should be focusing on our work in the lab and not worrying about what bills we should pay and which to put off or about how long we can put off a necessary medical test or medication until we have better health insurance. To be clear, I love being a postdoc and I love what I do, but I don't know how much longer I can safely be a postdoc and continue to be financially unstable.

Proven or promising external resources or approaches

Working environment and job satisfaction are both important, but the main issue driving new PhDs and existing postdocs away from postdoctoral training is the poor salary and poor benefits. Some kind of oversight regarding how institutions communicate with and treat their postdocs would also be very

welcome. As it sits, my experience has been that we are generally ignored or get push back when asking for things like better medical coverage or for our own medical system to accept our health insurance. How can anyone be expected to stay in an environment where they are not paid well, where their well-being is of no concern to the institution, and where your life is essentially put on hold for an open ended period of time?

Response 479

Perspectives on the postdoc roles and responsibilities

Do independent research, participate in collaborations, train new talent joining the lab, and develop organizational and problem-solving skills.

Fundamental issues and challenges

Low salaries are the main issue inhibiting the recruitment and retention of postdocs, together with long working hours. It is extremely hard to have a family and buy a house with a postdoc salary and we are talking about people with a PhD, doing stuff that few people in the world can achieve. It gets worse when on top of that, the projects were not well thought out or involved techniques that had to be developed, therefore taking a long time to get any type of results, which is discouraging even if doing this for vocation. As an international postdoc, it is even worse for us. On one side, we are living far away from our families making it hard to get that important emotional support. Then, given that many PIs don't know or don't care about the complexity of the immigration system -and many times, even human resources-, we feel alone trying to figure it out, resulting in more anxiety and uncertainty. For example, there are PIs who won't give enough time off to be able to renew visas when traveling abroad, resulting in the inability to travel back home to visit family.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 480

Perspectives on the postdoc roles and responsibilities

The Postdoc roles means I have the opportunity to further my career development in a safe (protected) environment.

Fundamental issues and challenges

Quality of life: inhibiting factors include the paygrade; it is hard to live on the NIH postdoc salary amount.

Also, interaction with mentor; it sometimes feels very isolating from my mentor.

Existing NIH policies, programs, or resources

Postdoc paygrade—increased to better support postdocs.

Proven or promising external resources or approaches

No response

Response 481

Perspectives on the postdoc roles and responsibilities

I primarily think of the postdoctoral position as a "middle management" equivalent for academic labs. They have enough experience with experimental design and project execution that they can work productively with little input from their principal investigator (PI). The purpose of a postdoctoral position is to gain the skills needed operate an independent lab.

Their specific job functions are:

1. Design and execute a project with minimal input from the PI. At this career stage the advice from the PI is usually focused on project choice and lab operation skills (such as grant writing, reviewing, presentations, ect.)
2. Provide hands-on mentorship to junior mentees. The PI is typically unable to completely fulfill this role, and it falls to the postdoc.
3. Instilling lab culture. The manner in which the PI's policies are translated into actions depends largely on the culture in the lab. A postdoc has a critical role of leveraging their experience to create a productive lab culture that aligns with the PI's policies.

Fundamental issues and challenges

Put briefly, the problem with postdoctoral positions is that they are training individuals for jobs that don't exist. A single academic PI position can yield more than 100 applicants. Hiring committees search for the most qualified candidate. From the perspective of the postdoc, the criteria for obtaining a PI position appear increasingly arbitrary and outside the control of the candidate. Successful candidates have assets that are difficult to obtain. High impact papers and awards have a major luck component. Continuous productivity (especially during the pandemic) requires the postdoc to prioritize lab work over family and health obligations. Obtaining a good academic pedigree typically requires the postdoc to move to coastal areas with a very high cost of living. In summary, the postdoctoral position demands major personal sacrifices to obtain a position that is statistically unlikely to exist.

All of the above concerns could be ameliorated if postdoctoral positions offered alternative careers that could justify the sacrifices they demand. This does not appear to be the case. Among my colleagues it is well-understood that industry does not financially reward people for postdoctoral training (see: The Price Of Doing a Postdoc publish in Science 2017 and The Impact of Postdoctoral Training on Early Careers in Biomedicine published in Nature Biotechnology 2017). Put simply, if a person were to commit to a 5 year postdoc ($50,000/year) and then transition to industry ($120,000/year), that decision will cost them $350,000 up front plus losing 5 years of their time. That gap has been growing rapidly the last few years.

It appears that the pandemic has given trainees the opportunity to critically evaluate their career path, and the postdoctoral position is no longer a competitive option.

Existing NIH policies, programs, or resources

Unfortunately, the problems outlined above are mostly outside the control of the NIH. The core problem is a mismatch between the number of people being trained and the number of positions available.

1. Remove or lengthen the eligibility timelines for career transition grants (such as the K99/R00). The initial goal of discouraging "forever" postdocs is worthwhile, but in practice these grants are awarded to trainees that don't require additional training. The timelines end up excluding the trainees who would actually benefit from more training.
2. Increase the resources allocated to K grants and decrease the amount given to F grants (F31 and F32 specifically). The pipeline clog is at the postdoc level, not the graduate student level.
3. Increase pay. This might help, but in all likelihood the postdoc exodus is driven by the gap between industry and postdoc pay. Increasing pay may help a bit but starting pay rates in industry have been growing so quickly that I imagine the gap will continue to grow even if postdoc pay is increased.

Overall, I feel that the NIH does a good job at supporting postdocs where they can.

Proven or promising external resources or approaches

Encourage or require universities that hire foreign postdocs under J1 visas to sponsor them for an H1B visa or a green card. The NIH should offer the support labs need to achieve this goal.

The postdoctoral workforce includes a large number of foreign workers. The steady flow of foreign talent into the US is critical to overall health of the NIH's scientific endeavor. However, the current model is problematic. Foreign workers usually have a J1 visa. This arrangement is detrimental to many members of the scientific community. The J1 visa worker is severely limited in employment options and is vulnerable to exploitative working arrangements. Other postdocs suffer because J1 workers are unable seek employment on the open marker, which artificially swells the ranks of postdocs. The primary beneficiary of the current policies are labs that require extremely cheap lab that is unsupported without the aid of monopsony.

Response 482

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are absolutely essential to the conduction of science. In our lab, they are responsible for the data collection and analysis, manuscript writing and generate critical preliminary data for grant proposals. Our postdocs go onto successful scientific careers in academia or industry and we work hard to prepare them for either path.

Fundamental issues and challenges

Cost of living is rapidly increasing and salary scales and benefits are not keeping up. Postdocs also need paid maternity/paternity leave as they are at a stage when they want to start families.

Existing NIH policies, programs, or resources

The most fundamental change that NIH can make is to raise the modular budget. It has been at $250,000 since 1999—24 years with no adjustment for inflation means scientists have lost ~45% of purchasing power while having to cover an increasing portion of salary and costs. Institutions look to NIH to set postdoc salaries so raising the scales for fellowships would also improve retention of postdocs in academia. The immense pressure for postdocs to continue on to academic careers must also be addressed. Fellowships that are directed at mentoring postdocs for industry careers is also important.

Proven or promising external resources or approaches

All of these are band-aids—postdocs must be able to make a living wage. If they are financial stable, then everything else will come.

Response 483

Perspectives on the postdoc roles and responsibilities

A postdoc is a full-time entry-level position for someone with a doctoral degree. It is similar to a research scientist position, except that there should be more independent research/creative control in a postdoc (ex: developing new grant proposals or leading new analyses and manuscripts). It is only a "training" position in that any early-career position involves training. A postdoc's supervisor should also serve as their mentor, and the postdoc should be gaining new professional and scientific skills. The roles **and responsibilities** of a postdoc are negotiated between the postdoc and their supervisor, in order to meet the needs of both the postdoc and supervisor. But fundamentally, it is a full-time job for a highly skilled expert and should be compensated accordingly.

Fundamental issues and challenges

Recruitment I imagine is challenging due to a lack of centralized, systematic approaches for advertising postdoc positions. It was difficult to find postdoc positions that I was suited to, even when actively searching for them. Also, salary and moving cost reimbursements are rarely noted in the job ads, which would greatly help people make decisions on whether to apply.

Quality of life issues are largely related to salary and supervisor/university admin policies. As a postdoc, I work full-time on research and student mentoring. Due to new [redacted for anonymity] State laws on salary and overtime, and my institution's refusal to pay overtime to postdocs, the hours I spend on academic service (ex: peer reviewing, serving on a postdoctoral association) are uncompensated. Research not directly related to my postdoctoral position (ex: publishing my dissertation research, continuing collaborative research from my PhD) is also uncompensated. So I end up working as many hours per week as I would as an assistant professor, but at a fraction of the pay. All postdoctoral positions should be only slightly below the salary of an assistant professor in the same department and all moving costs should be fully reimbursed.

Additionally, it is a huge challenge to move sometimes across the country for a 1 year postdoc. I would have declined any postdoctoral position that was 1-year only due to the expenses and massive life upheaval of moving twice in a year.

Also, the lack of unions for most postdocs makes those positions less enticing.

Existing NIH policies, programs, or resources

The NIH LRP should be advertised and funded more. It would also be nice to have a shorter turn-around time on the application period—people will mostly qualify for those awards when in a postdoc, but will probably not know where their postdoc will be in time to apply for the first year of the postdoc. I could not apply until I was already in my postdoc, and then that did not go into effect until the second year (a challenge for people whose postdocs are only 2 years, given the required 2 year commitment for the NIH LRP). Knowing that a postdoc could also come with substantial loan repayments would make postdoc positions more enticing, but the timing of the NIH LRP does not work well with the typical hiring schedule and contract length of a postdoc.

Otherwise I think the NIH programs and policies and resources are generally good. I am glad to see increasing stipends for postdocs.

Proven or promising external resources or approaches

Providing a network of external postdoctoral mentors would be helpful, as well as a community of postdocs across universities to compare experiences. NIH should also have clearly communicated opportunities and plans for if a postdoctoral position goes awry—for example if a supervisor is abusive or negligent and the postdoc would like to leave the position and pursue a postdoc elsewhere.

Response 484

Perspectives on the postdoc roles and responsibilities

Academic research is hindered in the scope of its expertise. These positions require highly specific training that doesn't overlap with other fields. When a project requires multidisciplinary approaches, areas outside of expertise are often patched over with the postdoc needing to learn the bare minimum as they go. As an example, an electrophysiologist needs knowledge in animal models, animal behavior training, electrical engineering, software engineering, computer science, etc to successfully run an experiment. However, it is difficult to be an expert in all these fields and depending on the environment, the postdoc may not have the support to be able to adequately run the experiment, data collection, and analysis in an efficient manner.

Fundamental issues and challenges

Postdoctoral associates are still viewed as "trainees," and as such there is less (or no) incentive to provide a competitive salary as compared to industry. In many ways, the term postdoctoral "trainee" is not associated with gainful employment and more with continued education, despite the many years spent in graduate school. Coupled with the NIH-posted stipends for postdoctoral fellows, PIs are given no incentive to provide a salary beyond the NIH-mandated minimum, which also goes against the grain of providing a salary commensurate with skill/ability and relies more on years of experience.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

View the postdoctoral associate position as highly skilled, gainful employment and provide benefits as such, including benefits existing in industry such as providing retirement matching.

Response 485

Perspectives on the postdoc roles and responsibilities

In my view, postdoctoral position means continuation of a training in research with opportunity to generate ideas, be further trained in data processing, presentation, grant application. At the end of the postdoctoral training, one should be comfortable being an independent scientist.

Fundamental issues and challenges

Overall system lacks in many aspects:

1. One major problem is that lab environments are not regulated at all. PI is the primary and most powerful figure in the lab. HR tells you: it's to the discretion of the PI. Universities are not exhibiting any source of regulation of the PI's management. Therefore, a lot of labs become toxic workplaces where postdocs leave as soon as they can and pass the message to other possible candidates not to join. I believe if universities had a way to get PI's reviewed/graded on some scale by postdocs/employees and had a proper HR system that had repercussions for "malfunctioning" labs/bad managing PIs—it would be a huge positive change in the system. There could be ranking for best labs to do a postdoctoral training at across the country. Maybe ranking system would make universities care to have better labs.
2. Also, because labs are not regulated by any means and the PI is the sole manager—unethical science can be performed easily. I believe there needs to be a system in each university that checks the draft of publications (at least for the western blot images) before the paper is published. Research misconduct workshops should be enforced yearly among PIs and postdocs/students.
3. Many PIs do not see postdocs as trainees, but rather as technicians executing their tasks. PIs must be required to pass mentorship and management workshops. Postdocs should have "learning funds" to use for conferences or whatever classes towards their training.
4. Salary and benefits need to be increased.

Existing NIH policies, programs, or resources

NIH representatives should go to universities and present these programs and resources and talk to postdocs at least once a year. PIs do not promote this information and most of postdocs have no idea about such opportunities.

Proven or promising external resources or approaches

Increasing salary would be number one proven approach.

Response 486

Perspectives on the postdoc roles and responsibilities

A postdoctoral position that would be funded by the NIH should prepare the postdoc for independent research as a principal investigator. I would actually, ideally, eliminate the postdoctoral training system altogether, as postdoctoral researchers should not be considered trainees, but colleagues.

Fundamental issues and challenges

As postdoctoral researchers are currently defined they are trainees, which leads downstream negative effects: Low pay (especially as compared to industry positions), lack of benefits (401K, health insurance, sufficient leave policies including parental leave), perpetual postdoc-ism where fully qualified individuals have trouble accessing their career path, and two year positions that are distributed across the US. This leads to people leaving the profession for better pay, benefits, job security, and life stability. In the end, it leads to a system where individuals are obtaining their first faculty position at ~35-40 years of age, which is an incredibly long, unnecessary training period, sacrificing years of earning potential and other important life milestones such as buying houses, having kids, etc.

Alternatively, there should be space for researchers to not necessarily be PIs on projects, but instead be respected as colleagues that are contributing to research productivity. Not everyone wants to be forced into obtaining funding individually in order to contribute to research.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 487

Perspectives on the postdoc roles and responsibilities

Supposed to train you for a professorship, but most won't make it that far as most labs do not publish the necessary type of journals to secure a faculty role. So for 90%+ of postdocs they are essentially a staff scientist with lower pay and less job security.

Fundamental issues and challenges

Money.

Money.

Money.

Opportunity for advancement.

Toxic advisors and no accountability.

Existing NIH policies, programs, or resources

Increase pay and limit postdoc positions in grants to labs with a history of placing them in faculty roles. Alternatively, require alternate career training as a part of any postdoc position in a grant.

Proven or promising external resources or approaches

No Response

Response 488

Perspectives on the postdoc roles and responsibilities

Roles: I few a postdoc as a person who is furthering their training/gaining more experience before obtaining a faculty position or similar with full responsibility over a lab. A post doc can work independently on a project they design themselves, can entertain various leadership and mentor roles, while also still being a mentee—especially in areas in which the postdoc is less experienced than their PI. The postdoc has full responsibility over the work he/she conducts but can turn to the PI or other more experienced peers with questions without losing credibility.

Fundamental issues and challenges

Postdocs appear to be cheap labor for many PIs that they can order around and disrespect. They are overburdened with work—often work that a well trained lab tech can and should do. But well trained lab techs seem to be even harder to find than postdocs, so postdocs end up doing the work, whether it helps their personal career or not. I feel like it should be mandatory for PIs to create a milestone plan for the work with their postdocs that is mutually beneficial and this plan should be reviewed by other PIs and the milestone progress should be checked by other PIs to hold the postdoc and his/her PI accountable. I feel extremely fortunate that I am a postdoc in very nurturing lab with extremely experienced PIs who put all focus on the training of their PhD students and postdocs and through that they are extremely successful with their research as well.

Existing NIH policies, programs, or resources

To be honest—I am not to familiar with these.

Proven or promising external resources or approaches

I believe that the above mentioned milestone plan would be great. Also, there could e.g., be incentives to train more lab techs and to train them at a higher level so that postdocs can do postdoc work and lab techs can flourish in their job. The application for a postdoc position should include more than a CV and a 30 min interview. PIs should ask themselves if they are willing to train somebody who is from a slightly different field or if they are looking for someone to bring their expertise to the project. In the latter case there is no room for micromanaging and there should be mutual respect between postdoc and PI.

Response 489

Perspectives on the postdoc roles and responsibilities

As Ph.D, I was expected that a postdoc position will be form me a beginning of a promising career in research. Unfortunately, postdocs are just exploited by academic research, we are used as super technician to generate data for PI's grant. In this whole story, we put a lot of efforts working without any compensation or a slight promotion to reward our work. From my point of view, it doesn't worth it to be a postdoc, I will quit ASAP.

Fundamental issues and challenges

High competition with Indian and Chinese makes recruitment hard, those are cheaper for academic research then a US citizen/resident. The second point and the most important one, is the salary. It's shameful how Postdoctoral salary is nowadays. The salary of a postdoc is indeed considered to be low income in today's society, which let us Surviving and not live comfortably as we should, which is shameful. the salary is not proportional to the number of years of studies carried out, a Doordash delivery guy can make the same or even more that un postdoc in a 4 hours work!!!

The last point is also the fact that a BS technician with one year experience is payed same or more than a postdoc, which is not acceptable.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 490

Perspectives on the postdoc roles and responsibilities

Being a postdoc to me means bringing a very specific skill to a lab (usually learnt as part of the PhD) while also acquiring new skills from the PI and other lab members. It involves contributing to and extending research programs of the lab, supervising junior scientists, and building ones own research program to move on after the postdoctoral phase.

I love my job very much but the financial strain and lack of security make it not sustainable to do this job much longer. Starting a family means that I will basically work for free because child care costs and rents are so high that I won't be able to cover them with my income.

Fundamental issues and challenges

Usually people are going into postdoc programs when they are at the beginning of their 30s. For many this coincides with the time when they want to build a family. The low pay, lack of support for childcare and maternity, lack of job security, inability to travel because of visa related reasons, and poor social security make postdoc programs very unattractive. It's hard to uproot partners and find new jobs every 2-3 years, especially when the working rights situation for partners is the way it is currently. While the US is actively trying to get rid of foreign postdocs after program completion (i.e., home-rule after J1 visa), they make it incredibly hard to actually go for jobs outside of the US by requiring you to renew your US visa in your home country *every year*. This rule is so silly and actually means for many of us that we cannot take up opportunities to interview somewhere else because it would mean we are unable to re-enter the US (renewing a visa required a 3-week stay abroad and involves significant cost —something that is hard to do with the low income and any sort of family responsibility). You cannot actually live on a postdoc income in most major US cities, so it feels like we are undervalued as "trainees" who are in actual fact highly skilled workers who have a huge contribution to the US as a research hub.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

- Academic systems and funding bodies in the EU support young families much more (e.g., https://www.humboldt-foundation.de/en/apply/sponsorship-during-your-stay/sponsorship-during-your-research-stay-in-germany/further-benefits-to-support-families)
- Postdocs are employees not trainees and should be paid/treated like this (basically any other western country)

Response 491

Perspectives on the postdoc roles and responsibilities

Advance science using groundbreaking techniques or asking challenging mechanistic questions

Fundamental issues and challenges

My trainees look at how hard it is to get the first R01 as a junior investigator and say 'no thanks'. I don't blame them but it is causing a lot of trainees to not even want to pursue a postdoc

Existing NIH policies, programs, or resources

The ridiculous condition that postdocs can only be funded if the PIs are funded. This creates a system of more wealth to the wealthy. Get rid of timelines. It takes longer to get published and then get fellowships

Proven or promising external resources or approaches

If PIs grants can't pay a living wage for trainees, what's the point? It's absurd that NIH doesn't even pay COLA. No supplementation of grants when inflation hits (like it has now at the highest levels in history).

Response 492

Perspectives on the postdoc roles and responsibilities

A postdoc position is meant to give a person more experience, training, and opportunities to build upon their graduate education and further prepare them for a faculty position.

Fundamental issues and challenges

Postdoc positions do not pay enough. The pay is not reasonable given the level of education and cost of living. These same amazing candidates can get jobs in industry with better hours and 3x the pay.

Existing NIH policies, programs, or resources

Increase the minimum stipend amount by at least 30%.

Proven or promising external resources or approaches

No response

Response 493

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral process as a stage during which a research trainee can explore their scientific and professional interests without the limitations to which graduate student researchers are subject. Personally, it has thus far proven a valuable experience during which I have become acquainted with the ins-and-outs of academic administration and the process of running a lab. I also believe that postdoctoral positions are crucial for the natural lifecycle of expansion of research fields—a postdoc taking their project from a lab and establishing their own group to focus on that subject is necessary to continue the growth and development of that field.

Fundamental issues and challenges

I believe the core challenge facing postdoctoral trainees is, frankly put, inadequate financial compensation. Especially during a prolonged period of economic hardship for the majority of American residents, the prospect of making nearly half as much as colleagues who have gone on to senior scientist positions or

other similar non-trainee career opportunities is extremely unattractive. Then, once in a postdoctoral position, attempting to live on a limited salary is difficult, considering that many training institutions are located in areas with high cost-of-living and rarely compensate in line with local costs. All of which is compounded by the financial stresses of student debt and attempting to raise and support a family. Many who pursue a postdoc choose to do so out of a desire to enter academia, better understand their strengths, and give back to the broader academic community. I believe that a higher postdoctoral stipend is required such that this choice is made easier and less existentially threatening.

Additionally, I believe that the current state of biomedical funding in academia discourages trainees to pursue the academic track overall, the postdoctoral training step included. A highly competitive environment in which academics compete for faculty positions and funding, neither of which are anywhere close to assured, results in a postdoctoral position at times feeling like a lost cause—sacrificing financial gain elsewhere for the opportunity to be one of the many professionals to fail to gain a foothold in the academic sector.

Existing NIH policies, programs, or resources

As stated earlier, I believe that the most impactful step that might be taken to improve the postdoctoral ecosystem would be to increase the postdoctoral stipend such that pursuing a postdoctoral position and an academic research career feels less exploitative. Compensating postdocs in line with experienced professionals who have received their terminal degrees would go a long way to attract and retain trainees.

In terms of the broad ecosystem of academic career pathways, the difficulty of establishing oneself as a new Principal Investigator is a major bottleneck to continued growth and innovation in academia. While not specific to postdoctoral trainees, I believe that increasing grant funding such that fewer grants are required to fund new research will increase the pool of postdocs willing to take the risk of applying for tenure track faculty positions (and subsequently increase the attractiveness of postdoctoral positions.)

Proven or promising external resources or approaches

No response

Response 494

Perspectives on the postdoc roles and responsibilities

Postdocs are not students!

Postdocs are not trainees!

Postdocs are not technicians!

Postdocs are highly skilled employees that bring their unique skillset to the lab to beyond the current scope of technicians, students and PIs.

The postdoctoral career is a transitionary stage that should fully support (through mentorship, visa, training) to take the next step, wether that is academia, industry, non-profit, governmental or a combination thereof.

A postdoc should offer the chance to learn or advance techniques/skills beyond the scope of the PhD within the context of conducting novel research.

There is only one responsibility of a postdoc: Bring value to the lab. This can be a combination of the following: funding, teaching, mentorship, publications, novel techniques, etc.

This responsibility immediately ties in to the different roles a postdoc may have. These roles should be with an absolute freedom of choice and preferable with mentoring from a PI that is accepting and directing towards all possible career opportunities.

Fundamental issues and challenges

Take a governing stance at the NIH to re-identify postdocs as employees, not students. A fundamental issue with classifying postdocs (still) as students is that they will not be able to have any benefits that regular employees do have (such as contributory retirement plans, wellness perks, child care, discounts perks, etc.).

The many strict ruling and policies of NIH and government are too limiting in the freedom of the postdoctoral role. Institutions often have more strict rules around the rules set forward by government. There are many limits and regulations that seem to be driven to protect the institutions from "bad postdocs". Regulations such as location/residency of postdocs, role definitions, obligations, mandatory courses etc. Many of these could just as easily be agreed upon between the PI/postdoc and their expectations (both ways). A postdoc generally is more mature than undergrad / grad students and the current policies can be limiting in making life choices that could be very important for the postdoc to be generally happy (e.g. work where possible, child-care support, consultation/interning outside of academia).

These regulations are even worse for non US permanent residents or citizens that are here on a J visa. These postdocs are severely limited in having the same opportunities and transition possibilities as H1B or other visas. Spouses are not able to work on J2. The postdoc is completely tied (golden handcuff) to the institution through the current visas.

The salary & benefits—If a postdoc is interested in solely conducting research, no longer Academic institutions are competive as opposed to research oriented industry. Conducting similar research and publishing in industry, without the bureaucratic hassle often required by academic institutions, easily offer 2x—2.5x the postdoc salary, in addition to the many benefits (retirement, bonus, vacation time, etc.).

Existing NIH policies, programs, or resources

Better visas that are not tied to the institution

Classify postdocs as employees and not as trainees or students. Too often this is abused by institutions to offer lesser pay and benefits.

Better salary definitions (make it more compitetive to academic industry).

Correct grant awards for inflation.

Proven or promising external resources or approaches

No response

Response 495

Perspectives on the postdoc roles and responsibilities

Carry out independent research under the guidance of Principle investigator.

Develop skills to become an independent investigator.

Help to move research projects in the lab forward.

Fundamental issues and challenges

Most of the postdocs work on projects to get more funding for the lab. PI does not think about how PostDoc going to evolve and become an independent researcher. All PI want to get more and more RO1s and expand the labs, which I think in fact is ridiculous. Each scientist should focus on one untackled question and really try to solve unanswered questions in that area rather than hopping and jumping on multiple projects. The rate of transition from a PostDoc to an independent faculty position is dismal. Most American Citizens do not want to do a postdoc at the payscale that academia offers as they get better jobs in the industry. Whereas for international PostDocs it is mandatory to work as per PI's wish in order to fulfill the visa requirements. Isn't it modern-day slavery?

Existing NIH policies, programs, or resources

Increase Post-Doc salaries comparable to the industry level.

Increase funding opportunities for senior post-docs who are not US citizens.

Fix PI to Postdoc ratio.

Limit the number of people that can work in one lab.

Limit funding of PI who work on multiple projects without significant contribution to the science.

Proven or promising external resources or approaches

Post-Docs should get independent funding and should be based on the number of RO1s each university gets. Which then should get distributed amongst the PI. Like Ph.D. each year there should be a recruitment process for PostDocs and international PostDocs should get mandatory training exposing themselves to funding opportunities and career development plans. Out-of-turn PoStDoc recruitment should be prohibited and future funding of the PIs should be based on how successful PostDocs perform in their career in terms of first-author publications, representation in conferences, and transitioning to independent careers. Unless academia starts valuing the efforts of the Post-doc, fewer and fewer Post-Docs will join academia.

Response 496

Perspectives on the postdoc roles and responsibilities

Doing a postdoc was one of the best career decisions I have made. I am leaning in an immersive and supportive environment. That said, even though my experience is positive, there are an abundance of things I would change. See below.

Fundamental issues and challenges

There are several key issues posdocs face.

1. The pay is abysmal. Almost all entry level scientist positions in industry pay significantly more than a postdoc. I personally feel like my financial goals have been put on hold while I am in this position. How can any postdoc expect to contribute to retirement, save for a house/wedding/pet/baby etc. on this salary? The poor pay is exacerbated by the routinely long hours.
2. The mechanisms for human resources are poorly defined. The NIH makes no mention (to my knowledge) about sick-time, vacation, 401K contributions etc.
3. The prospects for a career after a postdoc are poorly defined. Most advisors seem only to know about academic positions and are keen to push their trainees in that direction. There is little to no representation from those outside of academia.
4. I feel somewhat dehumanized at the [redacted for anonymity]. We are explicitly referred to “trainees” and not employees. This precludes us from access to certain employment benefits.

Existing NIH policies, programs, or resources

It is difficult to comment on these. These were never mentioned to me previously. Navigating the myriad of information thrown at us can be overwhelming. This was not covered in new postdoc orientation.

Proven or promising external resources or approaches

It is difficult to navigate applying to a postdoc. Very few are advertised.

Response 497

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is primarily a job with a training component. The goal of the position is to gain skills and knowledge and to demonstrate productivity for advancement to the next career stage.

Fundamental issues and challenges

There is a push-pull here. In order to recruit and retain and improve the quality of life of postdoctoral fellows, salaries need to be higher on the order to compete with the private sector. However, there is an unrealistic sense of generational entitlement that is undeniable and requires a culture change. Many modern postdocs simply have no desire to work hard in this type of position, which is a requirement for success. A few postdocs do, but there simply are not enough of them to support the work funded by the NIH.

Existing NIH policies, programs, or resources

Individual F32s and T32 slots for postdocs should be eliminated and RO1 funded laboratories may seek a supplement in order to hire a postdoc at slightly improved salary bands from the current rate. This would be a 3-4 year position with the intent of training to become a future PI. At the same time, staff scientist

positions (PhD or MD level) funded by RO1 grants should be massively expanded. A staff scientist would be paid much better than a postdoc commensurate with industry-paid positions. The net effect would cut down on the number of postdocs a lot (and the associated so-called exploitation of post-doc labor to run labs) and provide much needed continuity for RO1 funded labs. It is untenable for all of the postdocs in the current system, but also untenable for PIs. Having a revolving door of disgruntled postdocs that come and go is a broad, colossal waste of NIH funds due to the disruptive effects on RO1 research projects. Staff scientists would provide this continuity and be happy people paid properly for their efforts and provide better research continuity. Those few serious postdocs would also be happier in their temporary training positions and be more competitive for a faculty position due to the smaller pool of applicants.

Proven or promising external resources or approaches

With the massive reduction in the total number of postdocs mentioned above and the massive increase in well-paid staff scientists everyone will be more satisfied. More money needs to be paid to R grants in order to fund the staff scientist positions.

Response 498

Perspectives on the postdoc roles and responsibilities

- We need clear-cut and mandated institutional deadlines on postdoctoral training to prevent perma-docs (in the guise of instructors/senior postdoc and similar change of titles).
- NIH should promote more funding opportunities for quick postdoc-to-faculty transitions or postdoc-to-industry transitions (immersive stint with industry) to prevent stagnation

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

NIH needs to encourage a more cross-institutional pollination, for example trainees/fellows in NCI training branch should get to interact with trainees/fellows in NIAID. With a framework such as NCI's Center for Cancer Training AI-driven app, NanCI, or with broader tools such as Slack, we could be encouraged as postdocs to form deeper peer networks across institutes so we can get help/advice/information/collaborations etc.

Proven or promising external resources or approaches

Encourage more direct PhD-to-faculty fellowships (like UCSF Sandler Fellowship program) to improve retention and incentivize quick transitions.

Response 499

Perspectives on the postdoc roles and responsibilities

There is no role for a postdoc in a lab. I will elaborate on this in the next question.

Fundamental issues and challenges

The postdoc position is an indication of failure of PhD programs as a whole. The message upon being received into a postdoctoral position is that after up to 8 years of graduate education, you are still "not ready" to be a truly independent scientist. This message means that it is wiser to take a position in industry where your graduate education is appreciated through a quicker pathway to leading positions with high salaries.

Existing NIH policies, programs, or resources

Eliminate all "postdoctoral" fellowships to encourage the movement away from this position in the first place. No fiscal support means that labs will have no reason to sustain the position.

Proven or promising external resources or approaches

There is no reason for post-doctoral training, the trainees do not benefit from it and trainers find them time consuming and exhausting.

Response 500

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a transition period to build an individual program of research and supplement graduate training. I also view the postdoc as a necessary step to secure tenure-track positions at a research-intensive organization.

Fundamental issues and challenges

I believe three main issues are driving decreased recruitment for postdocs. First, the exclusion of non-US citizens for T32 programs is limiting the number of applicants who are eligible for this position. To drive diversity in our healthcare workforce, the NIH need to eliminate this policy. I believe that our scientific workforce would be greatly improved by having diverse perspectives from around the globe included. Second, the low stipends and the work-life balance for postdocs drives many to look at industry careers instead of pursuing a postdoc. Many people with families, without partners, or who come from households with low incomes cannot justify another 2-5 years with a stipend around $50,000 when a career with better money and an improved work-life balance is available. Third, there is a clear exclusion of racial and ethnic minority groups from academia. In my experience as a PhD student, I have witnessed numerous tenured faculty making clear racist statements to students, not considering diverse student perspectives unless a large group of students repeatedly bring the concerns up to them, and lack of support and consideration for the unique challenges that diverse students may face when achieving academic success (e.g., writing support and extra time for those whose first language is not English). These issues lead these students to believe academia is not for them and that they cannot succeed in this environment.

Existing NIH policies, programs, or resources

The NIH needs to change its policy regarding the need for students to be US citizens to apply for postdoctoral training fellowships. The NIH also needs to consider ways that prior trainees can submit feedback related to mentor's ability to build a diverse, equitable, and inclusive lab. This could be done via T32 program re-evaluations where trainees can be involved in scoring the grant. These individuals have a unique first-hand experience regarding their mentor's ability to make them feel included and valued. Finally, I think the scoring of grants based on institutions builds on historically racist policies. Giving certain institutions high scores based on their training environments builds a loop where certain institutions (e.g., ivy league schools) consistently receive funding, whereas other institutions (e.g., state schools) which are more likely to enroll individuals who experience health disparities do not receive funding. Changing the scoring related to the institutional evaluation would allow for individuals who experience health disparities and are likely to be enrolled at state schools might be more likely to receive funding then stay in the pipeline of academic research.

Proven or promising external resources or approaches

The NIH should look into some of the literature related to building healthcare work environments that are free of systematic racism and that build teamwork and reduce burnout. Some of these interventions (e.g., https://www.samhsa.gov/resource/ebp/addressing-burnout-behavioral-health-workforce-organizational-strategies, https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8000324/) may be applicable to building training environments that support growing academics.

Response 501

Perspectives on the postdoc roles and responsibilities

I view it as a stepping stone to the next stage, whatever that stage may be. With a PhD jobs we have to be prepared in a variety of different ways to reach the next stage. That includes research abilities, technical abilities, management of projects and personal ability.

Fundamental issues and challenges

The first big issue is quality of life is fairly low compared to peers who did not do a postdoc. The cost of living is high. Post doc income is considered near poverty level for the county. People with jobs outside academia are making double/triple the amount of money with less experience. This is also extremely unfair postdocs of different institutes have different pay scales. Long days/night/weekends for very little compensation. We feel extreme pressure by NIH PIs to work these schedules. This is a systemic issue of

science related to how funding works. The PI wants a nicer grant/renewal application and thus pressures the postdocs to work more. The pressure extended by the PI often comes in the form of emotional abuse to some extent. This is demonstrated by yelling/ negative remarks/ public embarrassment. This is a issue systemic to the sciences in academia and not NIH specific. Postdocs laugh at the "training" videos we watch with examples of hostile work environments and inappropriate comments. The NIH is checking a box that we watched a video.

Many of the facilities are horrible. And horrible working conditions. Visit building 6, a building that is literally crumbling around us. Leaking every week. Damaging/ destroying equipment. Broken heating / cooling for a year. 55-60 F as a working temp in the winter. So many things breaking / failing around, people to fix things takes 5 weeks to come investigate. The facilities are horrible at the NIH in general. Even though the NIH has many opportunities for additional trainings / experiences, these are frowned upon by the PIs. Encourage more US citizens to join the NIH. There are very few of us. Diversity is a good thing. But balance is key to diversity. It is not balanced the way it is currently.

Existing NIH policies, programs, or resources

Pay the postdocs a more competitive salary. Not competitive with academia, but with industry jobs. If I have a PhD and my worth is 100k to a company, why am I only worth 60K to the NIH? In Bethesda. One of the most expensive areas in the US. Set the example of higher salaries for universities. Some universities are starting to offer more money.

Pay us equally. There should be a rule that we all get the same amount of money as others in various institutes.

Give us more protections for things like pay time off/sick leave. Why is my sick leave combined with vacation time? That is generally unfair practice.

Why aren't we considered real employees? If I had an MD, I would be considered a real employee. I miss out on benefits like retirement, and having to pay quarterly taxes.

We should have more connections with companies/ other agencies to visit and talk to them about job opportunities. We should have more resources to be able to do a bit of career exploration. It is still impossible to know other roles outside of lab work. Even though we see so many seminars that say they are out there. Why not have people we can discuss with or visit in other parts of gov.

Set working hours. The FDA has more strict working rules. Why doesn't the NIH set the same types of working regulations. This would greatly improve the mental health of the postdocs.

Proven or promising external resources or approaches

By setting examples. Postdocs will want to come to the NIH if it sets examples in higher pay, higher job satisfaction. As it stands postdocs just feel taken advantage of for a variety of reasons.

Response 502

Perspectives on the postdoc roles and responsibilities

A temporary position for the purpose of continued training and the execution of deliverables after PhD conferral that must be completed before securing a permanent position in academia. Roles and responsibilities vary but should move the academic postdoc toward independence in all areas necessary to be successful in a senior academic role, including but not limited to research, publishing, grant-writing, and mentorship.

Fundamental issues and challenges

I have almost left my postdoc several times because of the low pay and lack of family support. I'm a female first generation student who worked full time as an undergrad and still left with 60k of student debt which I am still unable to pay off. I live in a tech-heavy area and do computational biology. I get contacted by head hunters at least twice a month about jobs here offering starting pay that is x3-x5 what I am making now, with full benefits and retirement contributions. Why is my skill set so undervalued in academia? Worse, I have no hope that this will change once I become an PI: x3-x5 what I am making now is easily more than my PI is making after many years in the lab. I have put off having a family because of the lack of adequate family support (such as paid leave, and child care options) and the long hours required by my position. Every year this decision becomes more difficult and I resent having to choose

between being a scientist and being a parent, all while not having the money to pay off my debt or support my family.

Existing NIH policies, programs, or resources

Higher pay for PDs.

Higher pay and larger grants for PIs.

Better family leave support.

Proven or promising external resources or approaches

Student loan forgiveness.

Retirement contributions.

Response 503

Perspectives on the postdoc roles and responsibilities

When I was introduced to the idea of a postdoc, it was described to me as someone who works in a lab for a few years before moving on to a professorship. These professorship jobs are now so competitive that a postdoc is in a lab so long that they are essentially fulltime lab staff.

Fundamental issues and challenges

The low pay compared to the cost of living in the U.S. makes postdocs unattractive positions, especially given how long they last now. Maybe if the average postdoc was short and they were more likely to find a faculty position after, recruitment would be easier. Retention is harmed by this when postdocs want to start families but cannot afford to. Many appointments are also very short and need renewal every year, which ironically makes the job security quite poor as well. Academia is also notoriously protective of abusers of all stripes, making these environments less likely to recruit or retain marginalized folks in particular.

Existing NIH policies, programs, or resources

While NIH pay guidelines are supposed to be the minimum, many institutions use them as the target for postdoc pay. Raise the guidelines so postdocs can make a living wage while starting a family if they choose. Further, increase the size of grants provided to faculty (they haven't grown in 20 years) so they can afford to do research and pay their employees a living wage as well.

Proven or promising external resources or approaches

No response

Response 504

Perspectives on the postdoc roles and responsibilities

Postdocs are early career researchers who have completed a PhD and wish to continue conducting academic research. Postdocs are highly educated research scientists who conduct research under the direction of a principal investigator.

Fundamental issues and challenges

Academia treats postdocs as trainees rather than the highly qualified professionals that they are. The pay is abysmal and the lack of guaranteed benefits is appalling. As a soon-to-be PhD in my late 20's, I cannot afford to do a postdoc because this will set me too far back in saving for retirement and starting a family.

Existing NIH policies, programs, or resources

The minimum postdoc salary must be elevated to at least $90,000 per year, if not higher. Additionally, institutions must provide retirement and health insurance benefits similar to other staff.

Proven or promising external resources or approaches

Increase pay and benefits. To support this funding, lobby for congress to increase the NIH budget. Perhaps the military can cut back on fighter jets and tomahawk missiles and instead funnel this toward the NIH.

Response 505

Perspectives on the postdoc roles and responsibilities

Entering graduate school, going into a postdoctoral role was an automatic no. Now as a recent hire for a postdoctoral, some perspectives have changed though some issues are still present that make this role less attractive. First of all the postdoctoral position is almost a faculty position with training wheels (as per design). The postdoc is responsible for training new members, help with purchasing/lab maintenance (all dependent on a lab manager), help advance current research projects with experiments and writing papers/grants, and attending internal or external meetings all the while carve out a research direction to become a future faculty researcher or enter industry. These tasks can be manageable or overwhelming depending on laboratory environment, mentor's management style, department support, funding situation, and compensation. This is a lot of pressure to put on a recently defended graduate student when there are attractive alternatives that compensate 1.5-2x more and have improved work/life balances. While that pressure can be beneficial in helping someone become a successful faculty member or non-academic role, it has led to people feeling deflated, invisible, expendable, and not worth the headache. With that, some people will use the postdoctoral position to gain experience as a manager, learn a few new skills, and then after 1-2 years of networking leave to for a non-academic role.

Fundamental issues and challenges

Regarding the challenges and issues related to the postdoctoral position, I assume majority of responses will be related to the compensation, which is a major concern, but my response will trying to stray away it to highlight other concerns. While less so now than before, postdoctoral training is the default and finishing PhD students are to go to collaborating laboratories or it is on the PhD student to determine which postdoctoral position is right for them. From my experience, there are much more resources and opportunities to investigate roles outside academia through conferences, internal student organizations, Nucleate, or industry hosted/sponsored events than roles within academia. The marketing for non-academic positions are much more apparent, visible, and perceived to have much more improvements to someone's quality of life than that as a postdoctoral trainee. In addition, hearing, seeing, and experiencing the difficulties of becoming a faculty member and running a laboratory due to politics, funding, and other issues, is very deterring for graduate students in wanting to pursue a role and career in academia (even while some of those issues exist in industry). With the idea or perception that a postdoctoral position is only necessary if you want to become faculty, why would a graduate student want to pursue that route when becoming faculty is fraught with issues (as perceived by graduate students)? With all the tasks listed previously of a postdoctoral trainee, with minimal internal (i.e. mentor and department) and/or external (i.e. NIH) guidance, current postdoctoral trainees will recommend PhD students to look elsewhere and will transition to non-academic positions. Lastly, the increase of postdoctoral trainees needed 2 or even 3 postdoctoral positions before becoming faculty hinders the retention of other postdocs and hinders recruiting PhD students into becoming future postdoctoral trainees.

Existing NIH policies, programs, or resources

As a recent postdoctoral trainee, I cannot speak too much to this, however other than funding opportunities, I am not aware of career resources provided by the NIH. Also these resources were much present through emails and seminars at my previous institution that had a postdoctoral association where my current institution does not have an active one.

Proven or promising external resources or approaches

There are two external resources that help in deciding my future direction post graduate school. What Can You Be with a PhD conference (https://www.whatcanyoubewithaphd.com/) was one of the most informative things in determining my future direction after graduate school (that I had to personally pay for and would not be reimbursed). It provided a two day event to evaluate both academic and non-academic positions and how people enjoyed their roles, pros/cons of each position, and how they entered that position. The second external resource that had some promise is the Gordon Research Conference (I have attended the Proteoglycan conference and am co-organizing it for 2024). There was one panel

session to talk to professors about becoming faculty and discuss other non-academic opportunities. However, there was no panel members that worked in industry (only one professor had a startup company on the side) and when asked about work life balance and faculty position, answers were mostly negative or faculty members did not know what they were describing was not work/life balance at all. While this panel was not well received, PhD and postdocs saw the value of it and wanted to improve this session.

Response 506

Perspectives on the postdoc roles and responsibilities

The main role of an academic postdoctoral researcher is to conceptualize and execute research projects. This main role will almost certainly require assembling collaborative teams, building new research skills, and high level communication. Other roles may or may not also include applying for and earning external funding, laboratory and facility management, trainee mentoring, staff management, and classroom teaching.

Fundamental issues and challenges

Compensation (salary, retirement benefits, and insurance) is not serious or fair for the skills and experience required to work at the postdoctoral level.

1) Salary is insufficient for many postdoctoral researchers to survive and thrive, let alone support family members or other dependents. Many R1 research institutions are in large cities, and the salary simply does not keep up with cost of living. Postdoctoral researchers are specialists, and their labor (along with labor of graduate students) forms the backbone of biomedical research progress. They should be compensated as such.
2) Most academic postdoc positions provide literally zero retirement benefits. This follows years of graduate/PhD level labor which also provides zero retirement benefits. In fact, some graduate & postdoc fellows are legally not allowed to contribute to retirement savings due to their classification as non-comp. So postdoctoral researchers may be entering their late 20s and 30s (key saving years) with little to no opportunity to build retirement savings. Any attempt to recover the pace of retirement saving will contribute to greater out-of-pocket costs from the already-insufficient salary.
3) Comprehensive health insurance (including dental and eye) provided by postdoctoral research positions is often insufficient. Incomplete insurance coverage contributes to higher out-of-pocket costs for literal bodily survival during a postdoctoral research position.

Existing NIH policies, programs, or resources

1) NIH salary minimums are often used as the standard for academic institutions, rather than a true minimum. NIH should raise the minimums and include provisions for automatic cost of living adjustment. NIH minimums should also include required retirement compensation.
2) NIH policy should prohibit any NIH-funded institution from engaging in anti-union activity, including hiring anti-union law firms to implicitly or explicitly threaten negative consequences of unionization.

Proven or promising external resources or approaches

No response

Response 507

Perspectives on the postdoc roles and responsibilities

We’ve had several postdocs conducting research and providing clinical care as part of NIMH research over the past decade. As a university student counseling center, many of our postdocs accepted permanent positions with us and launched their careers in college counseling. We were able to recruit, train, and retain more qualified professionals as a result of our grant-funded postdoctoral positions, and postdocs were able to received high quality training and education.

Fundamental issues and challenges

Our state licensing board and the field of psychology have both been increasing standardized testing and other requirements for postdocs to become licensed, slowing their progress, and consuming additional non-clinical time without clear, certain benefits in protecting the public. A national mental health crisis is a

strange time to increase barriers to licensure. We would also love to compensate postdocs more during an era of escalating inflation and increased cost of living, but our budget and grants are not growing at the same pace. Suddenly, we are facing challenges recruiting postdocs for our grant research and have extended our search deadline.

Existing NIH policies, programs, or resources

Adjust grant funding to inflation.

Proven or promising external resources or approaches

No response

Response 508

Perspectives on the postdoc roles and responsibilities

I am a postdoctoral researcher at an institution that receives very significant NIH funding, and I previously worked as a research technician at this same institution prior to getting my PhD. I do not have faculty member ambitions. My postdoc position is an opportunity to keep engaging in academic research that I love, gain skills for potential future opportunities, and establish myself at a research institution that I may want to pursue a career at either as a staff scientist or as a administrator. A postdoc position is a transition role for individuals following a PhD to gain training, gain independence, and obtain mentorship. It is also a time to build reputation and become established after being a student for 5 or more years. However, I would have chosen to go to a staff position instead of a postdoc if that path existed in academia. For the university and research programs, postdocs are full-time research professionals dedicated to moving projects forward that the primary investigator (PI) has received funding for and do not have time to do the research themselves. Postdocs produce the necessary data, writings, and new ideas to support PIs receiving more grant money and ultimately the institution. Postdocs are the backbone of academic research and are the individuals driving ground-breaking findings through their cheap labor. We provide an asset that technicians cannot provide. We are trained professionals that can think creatively, solve problems technically and intellectually, and critically evaluate data and literature.

Fundamental issues and challenges

1. Compensation/Benefits. Many of my peers have not sought academic postdoc positions because of the pay. Many of my peers from graduate school make 50-75% more as a new PhD in industry than I do as. From a recruitment standpoint, salary differences strongly discourage scientists from pursuing postdocs, especially those not seeking faculty careers. From a retention standpoint, it is extremely hard to sit back and take a lower salary for more than 1-2 years despite an average postdoc period being 5 years. Postdocs are often 30+ years old that have real adult lives, and we have sacrificed wage-earning years to gain education and experience to change lives. My institution does not provide retirement matching, and if I transition from a postdoctoral associate to a T32 grant, I will lose my ability to contribute through my institution’s system. Not having any retirement matching is a huge drawback. Provide funding for paid 12 week maternity leave, which research supports for best outcomes for mother/child. As a postdoc, I have not had years to build up sick and vacation time to pay for maternity leave. Given our ages and poor salaries, paid maternity leave would help.
2. Postdocs are not generally respected in academic institutions. We are considered the bottom of the totem pole in the research professional world. We are expected to work for minimal pay to gain respect in our field, and this presumption often includes ridiculously long hours and no work-life balance. We aren’t recognized. We are often excluded from certain things. We are basically staff but not even paid like full time research professionals.
3. Lack of career path for individuals not seeking faculty positions.
4. Faculty positions are not appealing. Faculty positions require a lot of grant writing, constant meetings, lengthy tenure requirements, and general a culture of overworking.

Existing NIH policies, programs, or resources

Flexible T32 programs that allow for postdocs to combine their efforts between research and other training (project management, business, etc.) to prepare for a career in biomedical research across multiple potential positions regardless of faculty motivations.

Proven or promising external resources or approaches

No response

Response 509

Perspectives on the postdoc roles and responsibilities

An academic postdoc position is a transient position meant to foster independent research that is self-led under guidance of a PI. As an intermediate between graduate student and faculty, the academic post-doc is largely meant to be able to run their own projects, mentor students, and complete many manuscripts. All of this is done in an effort to demonstrate productivity and good science.

Fundamental issues and challenges

A large issue with post doctoral programs is the lack of financial incentive. Largely academic postdocs are understood to be underpaid for the time and expected effort of the position. Given the amount of training and expertise required to obtain these positions, moving costs (which can involve family units), and life stage delays due to work can lead to PhDs not wanting pursue postdoctoral positions in academia.

Existing NIH policies, programs, or resources

Additional training for PIs of postdoctoral students would enhance can enhance the training environment of postdocs. Given the non-uniformity of a postdoctoral position, there are many gaps that can be created in areas such as lab management, project design, grant applications, etc.

Proven or promising external resources or approaches

No response

Response 510

Perspectives on the postdoc roles and responsibilities

Streamlined advanced training undertaken by individual to obtain necessary experience to be able to move to next desired career level. This can include advanced/ new technique training, writing (grants and publications) training, experience working with various academic offices in a larger capacity, and management experience. Support should include job salary that reflects required knowledge and experience, as well as workload as well as non-research requirements such as mentoring. institutional opportunities should include programs to assist in progression of career and support to find additional funding. Institutional support for post-docs to run small pilot projects to initiate their own desired protects that can be transitioned into a K99 application with preliminary results would also be beneficial. While this job is typically limited in duration, it is critical to the survival and progression of a university’s research.

Fundamental issues and challenges

A post-doc, is not cheap labor. It is a critical period of development that will ultimately decide if an individual will continue into academic research. Considering post-docs already face great financial hardships and are not unaware that these continue as a professor–and depending on where you are, assistant professorships can actually be decrease in salary. Furthermore, studies have suggest that individuals stay at a job for just over 4 years–that’s shorter than the typical duration of graduate school or a post-doc. This means that while post-docs are going into a position knowing it is only for a short period of time, the turnover is not above the national average.

However, academia also faces a problem of low professor turnover, especially those with tenure track or tenured positions. The downside to non-tenured positions is the unknown duration of a research professor appointment. Moving a lab requires a large amount of money and time–and time away from the lab that will lower research production for months and after effects remaining for years. Willingly versus needing to move a lab are very different. Many institutions will use teaching as a way to support a research professor (at a higher rate above tenure-track), however, this then reduces their ability to focus on research.

Post docs require additional funding–critically in salary support and also in institutional support for pilot projects. Healthcare and retirement benefits are also critical. A better prospective future as a research professor–with or without tenure track–is also required, otherwise, academia will continue to lose

promising scientists to industry when they can easily work a 40 hour work with, great benefits, and a salary near or above $100,000 from the start.

Existing NIH policies, programs, or resources

Over half of my monthly stipend goes to paying off graduate school loans. I still require additional parental support financially in my 30s. PhDs, unlike clinical researchers, rarely qualify for the NIH loan repayback program. Expanding this program would greatly improve my financial standing.

Additionally, having NIH policies clarify the expected benefits of both the graduate school and post doc positions would be beneficial. I did not find out until 3 years after I finished my PHD program that I could have gotten retirement benefits during my PhD years from my school.

Having a cost of living adjustment for pay scale for graduate and post doc / A minimum stipend requirement and then suggested adjusted state by state is another alternative.

Proven or promising external resources or approaches

Increased institutional support for post docs. Transition money in case of PI emergency/ assistance with placement at same university. Small grants for pilot projects to increase success of K99/K08 applications.

Response 511

Perspectives on the postdoc roles and responsibilities

It means take the responsibility of success a certain research project, as published work.

Fundamental issues and challenges

Immigration issues mainly causes feel of instability and the rush to finish this period of training with best available resources.

Existing NIH policies, programs, or resources

1. Immigration policy and fee.
2. Health insurance and benefit coverage.
3. Support postdoctoral participation and presentation in scientific meetings.
4. Extra support to the activities of NPA to be like syndicate.so postdocs can feel safer.

Proven or promising external resources or approaches

Increase and expand the funding opportunities for non-American postdocs working in American institutions.

Response 512

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

1. Support for moving/relocation costs should be granted to NIH awarded investigators who recruit and support post-doc trainees. I had to shoulder the burden of a $6,000 cross country relocation for my postdoc
2. Timing limits on application for K awards (e.g. K99R00) are unfair and unproductive. These limits penalize trainees who relocate to new labs far from where they did graduate training
3. Postdoc F awards and K awards should be considered separately from R level awards in study section
4. Postdoc (and all R grants) grants from IDEA state institutions should be considered separately from historically well-funded institutions
5. NIGMS should extend co-funding support to K awards (not just R awards)
6. Given that age at time of first R01 has not substantially improved in the last decade, the window for ESI status needs to be extended from 10 years to 15
7. Allowing postdocs to be considered Co-investigators vs just Key Person on R grants
8. Adding additional funding mechanisms exclusively available to postdocs (pilot awards; development awards, etc)
9. Putting pressure on institutions to better support their postdocs (paid leave, benefits eligibility, min/max expected work hours, etc) and rewarding institutions that create pathways for career advancement from within
10. Mentors must provide evidence of their mentoring effectiveness to be considered suitable mentors for training awards (e.g. mentor letter of reference)
11. Broadening what is considered meaningful contribution to science beyond grants and papers in the biosketch. This can include classroom teaching, excellence in mentoring, community service

Proven or promising external resources or approaches

No response

Response 513

Perspectives on the postdoc roles and responsibilities

The role of an academic post-doc is to practice being a PI either through gaining new skills and/or refining existing skills in the safety of a lab environment where they are primarily responsible for research (ie. not be responsible for grants and/or administration).

Fundamental issues and challenges

Post-doc salaries are too low. Such low salaries prohibit advancement in other areas of life like purchasing a home or starting a family.

Existing NIH policies, programs, or resources

Increase or adjust the post-doc minimum salary with respect to each state's cost of living so that post-docs can maintain a reasonable standard of living. Currently, many post-docs rely on having a spouse and/or family that financially supports them.

Proven or promising external resources or approaches

No response

Response 514

Perspectives on the postdoc roles and responsibilities

I view my position as both a trainee and a scientist, but primarily as a scientist. Ideally, I drive the direction of my project and rely on my PI for advice/funding. I think there's a substantial difference between a postdoc (a highly trained scientist) and a graduate student, who is still a trainee and earning a degree.

Fundamental issues and challenges

Salaries are below the cost of living for major cities (I qualify for low-income housing, and yet I have a PhD). Salaries are FAR BELOW the value of work provided by highly educated scientists who are the only ones who can do this job. Accepting a postdoc is a sacrifice. Most postdocs are in their early 30s. This is a critical time to save for retirement, buy a house, etc. Those (especially women) who wish to have a family would not be able to afford one without the help of a spouse. Given that female fertility sharply declines around 35, this creates an impossible situation for many, where they choose career or family, but cannot choose both.

Existing NIH policies, programs, or resources

Requiring payback agreements for non-MD NRSA trainees is a terrible and discriminatory policy. Women are more likely to halt their careers to take care of family, and so are also more likely to fail to continue in a career for the second year. This puts undue burden on them to continue or face substantial financial consequences. The first year of an NRSA represents work from a qualified and highly trained scientist. It should not be free or contingent upon career choice. For any other employer, this agreement would be illegal.

Furthermore, paying NRSAs as stipends rather than salaries removes many benefits (retirement, payment into social security). Trainees are pressured to pursue and accept such funding for the benefit of the lab and their research. This is an unfair situation.

Proven or promising external resources or approaches

Pay us a living wage consistent with our job responsibilities and training. This is the only way to retain postdocs.

Response 515

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are a short position that should be a place for people to learn more about research (project design, experimental design, etc) in an academic setting. In addition, it should be a place for people to explore opportunities for future careers inside and outside of academia, with provided resources for getting the job that is a perfect fit for that person.

Fundamental issues and challenges

Compensation is a serious problem. Postdocs are generally in their 30’s and should be making enough to put aside and save for the future. Instead, they are living paycheck to paycheck with credit card debt just trying to break even. Nevermind PARENTS who are paying for childcare that is not subsidized. It depends on the postdoc to enforce a good work life balance, which goes against the culture of working until burnout. Too many postdocs are burnt out from poor work life balance and bad compensation. Really low vacation days are also a problem.

Existing NIH policies, programs, or resources

Provide more money in grants to pay postdocs better. Provide training programs for careers outside of academia. Normalize a career outside of academia. Normalize a healthy work life balance. Normalize taking mental health days to recover from burnout.

Proven or promising external resources or approaches

Provide more money in grants to pay postdocs better. Provide training programs for careers outside of academia. Normalize a career outside of academia. Normalize a healthy work life balance. Normalize taking mental health days to recover from burnout.

Response 516

Perspectives on the postdoc roles and responsibilities

Postdocs are treated by universities and, perhaps to a lesser extent the NIH, as simultaneously work horses and “trainees.” From the perspective of the university, they’re not given the same respect in tangible (salary or benefits) or intangible ways (academic freedom) as PIs, but also not given appropriate

training opportunities to set them up for future success. I feel in general that most postdocs are not trained to be PIs, they're trained to collect data under the guise of extended training needed to be a PI. As an ESI who recently made the transition from postdoc to PI, I feel I had a very supportive postdoc advisor and training environment, but I was unprepared for about 70% of what my job as a PI entails.

Fundamental issues and challenges

Salary and benefits that are not comparable with industry, and lack of appropriate job opportunities in academia once the postdoc "training" period is up.

Existing NIH policies, programs, or resources

Expanded funding for T32 and K99/R00 mechanisms.

Proven or promising external resources or approaches

No response

Response 517

Perspectives on the postdoc roles and responsibilities

Training to become independent or supporting research scientist in academic (or industry-see below) setting.

Fundamental issues and challenges

We don't pay postdocs enough. Being paid low salaries for half a decade or more and having little or no access to retirement savings through the institute makes academic path very financially challenging. Industry offers more money and benefits sooner and many are attracted to or choosing this path.

Existing NIH policies, programs, or resources

R01 budgets and NIH recommended annual salary pay scales need to be adjusted to support 75K starting (1st year) salaries for postdocs. This should adjust up with years of experience. NIH should encourage/support institutes to provide retirement savings for post doc career stages.

Proven or promising external resources or approaches

No response

Response 518

Perspectives on the postdoc roles and responsibilities

I'm interested in non-profit research for which the postdoctoral position allows me to gain additional skills and independence. It also is the first opportunity for international students / non-citizens like myself to apply for government funding which was not available during my graduate training. It provides experience with for research publication writing and for grant writing. Lastly, the environment helps narrow down the extent to pursue managerial, teaching, or more focused technical work after postdoctoral training.

Fundamental issues and challenges

Cost of living is the main factor. As a graduate student, 75% of my income went into rent, groceries, academic fees, commuting, and other essential expenses, even in a rural area, and with sharing living space with other graduate students. The pressure to start a family is currently most likely to make me consider abandon my postdoctoral training because of no child support: a postdoctoral colleague reported spending as much on child care as typical college tuition. University postdoctoral employers offer no support for the ~$15,000 net cost of a green card application. Green card sponsorship support is possible at later stages in my career if applying as an academic faculty member. My experience in industry with the green card application was unnerving; the company used its leverage to wait until the last minute to apply, and silently didn't apply for those employees that they didn't intend to retain. Those unfortunate employees only found out when they followed up, and then were required to leave the country soon after.

Existing NIH policies, programs, or resources

My colleagues in the U.K. gain automatic citizenship after 10 years of employment. Canada has a points-based system for citizenship. In the U.S. I still have a lottery with an EB-1 green card application. I've spent more years of my life in education, employment, and other training in the U.S. than I have in my home country but that adds no weight to my chances for residency. Just as loan forgiveness is offered to citizens, a pathway to citizenship for non-citizens would hold greater interest in pursuing academic research. The U.S. Military offers a pathway to naturalization without any fees. Only about 9% of PhD biologists will secure a tenure track job that sponsors a green card application.

Proven or promising external resources or approaches

No response

Response 519

Perspectives on the postdoc roles and responsibilities

Additional training for professional terminal degree holds that should be classified as employment with salary commensurate to degree received and contributions.

Fundamental issues and challenges

- Salary is below cost of living in many desirable geographical areas for postdoctoral training
- Institutions and departments have different expectations, classifications (employee/ non employee) of postdocs leading to lack of clarity of job role, performance evaluations, milestones
- Lack of support for non-academic careers, exit strategy
- Lack of training for PIs on how to properly manage postdocs
- Lack of institutional support, protection if environment is abusive or otherwise rampant with scientific misconduct or harassment, discrimination against underrepresented groups, and ways to preserve career if this is the case
- Exploitation of foreign trainees

Existing NIH policies, programs, or resources

Additional funding for salary support.

Standardization of postdoctoral contracts, classifications, expectations, benefits (similar to residencies for medical doctors).

Reviews and assessment of institutions, departments, grant recipients on their training/management.

Management training–how to support a postdoc career development.

Prevent abusers from employing trainees.

Proven or promising external resources or approaches

Working environment, mentoring.

Mentoring: many PhD programs offer more avenues of support in social circles, common interest groups/organizations, as well as research milestone tracking in the form of a committee. A committee for a postdoc could also help with accountability for postdoc and PI.

Response 520

Perspectives on the postdoc roles and responsibilities

I view a post-doc as being a career stage where the focus is to conduct independent research and gain the skills needed to successfully manage a lab or team in the subsequent phases of my career. It's odd that academia insists on this being a "training" position, considering all non-academic areas treat you as an "employee" immediately following a PhD. While the post-doc phase provides further experience and (ideally) widens or deepens our expertise, we are already highly trained and have skills that qualify us for higher-paying jobs outside of industry. For this reason, I consider a post-doc to be more about advancing

project management skills, leadership, and networking within our chosen niche. This helps us gain the expertise needed to become scientists in leadership positions rather than independent workers. As independent workers, we are already highly trained.

Fundamental issues and challenges

I wish the answer was more complex than "pay more". There are absolutely issues with toxic work environments, burnout, and discrimination. I hope those continue to improve. However, based on my interactions in graduate school and now at a major research university, the number 1 challenge is pay. I am 32 years old, I have $20k in student loans, and I have little saved for retirement. I now make $60k/year in one of the most expensive cities in the US, during a time with record inflation. I do not get retirement match, meaning I put more of my paycheck toward retirement than I would need to if I worked in a more traditional workplace. Further, it cost me $5000 to move to my post-doc city, and I had to find that money from my $34k graduate stipend.

I am one of the lucky ones. I have a partner whose income helps defray my cost of living, and we don't plan on having children. If my husband lost his job, I would need to leave for industry. If we wanted to have a child, or if we faced some sort of medical emergency, I would need to leave for industry. Being an academic post-doc comes with financial sacrifice.

No surprise that many people can't justify that sacrifice. This is not a "I want a nice house and luxury vacations" sacrifice. This is a "I need to afford rent, student loan payments, and retirement savings" sacrifice.

What is the incentive to stay in academia? The reality is that in current economic and cultural conditions, there is none. People will continue to leave for higher paying and lower-stress jobs unless academia lowers the emotional and financial costs of post-doc and faculty positions.

Existing NIH policies, programs, or resources

Policies and programs are less helpful than financial resources. A seminar on avoiding burnout is fine, but perhaps we'd be less burnt out if we had less financial burden. DEI is great, but perhaps diversity would improve if we didn't work in a field that's a terrible financial choice for anyone without family money or a high-earning spouse. Anti-bullying policies and protections are critical as well! But all of these initiatives need to be in addition to higher pay.

PIs cannot be left solely responsible for increasing post-doc pay during inflation and rising rents. As is, PI budgets are strained, and R01 and other grants do not provide flexibility for increasing costs of living. The NIH absolutely has to increase pay scales as economic conditions allow. I realize this is constrained by government budgets, but with every year that industry pay increases and academic pay stagnates, the gap grows, and more people leave.

Beyond higher stipends, even small allowances would be hugely beneficial. A relocation stipend would encourage post-docs to move to places with available opportunities. A computer stipend would mean we don't need to use 6 year old laptops in order to do our jobs. Some sort of retirement match would mean we aren't falling behind in retirement savings for the 10+ years of our graduate+postdoctoral training. Further, potentially some level of student loan forgiveness to stay in academia, even if small, could go a long way in supporting scientists from lower-income backgrounds.

Proven or promising external resources or approaches

No response

Response 521

Perspectives on the postdoc roles and responsibilities

To me the postdoctoral position has become nothing more than an extended pre-doctoral training period in which trainees do not do anything more or less than what they did during their graduate studies. As a postdoc I have not really received any knew knowledge or training that would suit me well in either an industry lab and certainly not for a tenure track position as I had anticipated moving on to (i.e. I still don't know about the grant submission process or day-to-day dealings as academic faculty)—I've pretty much done the same level of rigorous research studies in order to fulfill experiments proposed in a grant.

Postdocs are also (slightly) better paying pre-doctoral positions and are used to coordinate pre-doctoral training so that PI's can focus on other things.

The cynic in me also thinks that this recent push/idea from the NIH and academic institutions of trying to promote/encourage post-doctoral training positions is two-fold:

1) To delay the time and number of new applicants from applying to tenure-track positions so that full-tenured professors can delay their own retirement and
2) Allow PI's to recruit fewer pre-doctoral trainees since postdocs are usually more ready to complete work and require less bench/experiment training; thus they can complete grant work faster and more efficiently than new undergraduate/graduate trainees.

Fundamental issues and challenges

I think there's one main fundamental issue that is at the root of all postdoc issues—money/salary. If I were just now finishing my pre-doctoral training and earning my PhD it would take a significant amount of convincing that I should take a position that will pay a little over $50,000/year working ~80 hrs/week; most undergraduates with a STEM degree could make that salary only working 40 hrs/week without having to go to graduate school. I have no issues with putting in more work doing something that I love (biomedical research), but pragmatically there's a complete imbalance between the amount of time required to do a postdoc and the money I am making. I started my postdoc pre-COVID pandemic and was willing to put in this work because I loved it but now that the COVID pandemic has taught me that if you don't have money saved you are completely screwed to be able to support yourself. The only reason I stay with my postdoc is that I do not want to deal with the wrath of my PI for, as they've said, "abandoning" them and the lab with an incomplete paper which makes me miserable. If I could at least make a salary that's much more reasonable I would be less miserable because I don't have to spend my days wondering if I'll have rent money at the end of the day on top of all other costs. When I have contemporaries/friends who graduated at the same time as me with a PhD in biomedical sciences are making 6-figure salaries and working 40 hrs a week in industry it's really hard to argue the following: why I am doing a postdoc when I am nothing more than a glorified pre-doctoral trainee with a doctoral degree as a postdoc?

Existing NIH policies, programs, or resources

I really think that there's not much the NIH can do until academia writ large is ready to have a significant amount of institutional change that makes academic research more rewarding and less like a chore to do.

Proven or promising external resources or approaches

I'm not aware of anything from the NIH or academic institutions that suggest an attitude that they want to enhance the postdoctoral training ecosystem. I'm sure surveys/feedback requests like these are helpful (I have filled out similar forms before from the academic institutions I have worked at regarding diminishing postdoc returns) but there is nothing to suggest that either the NIH or academic institutions *want* to do anything about it. Until real action is done to try and improve the postdoc experience I doubt anything will be done.

Response 522

Perspectives on the postdoc roles and responsibilities

To me, a post doctoral position is training to become a PI. As it stands, there's no reason to be a post doc if this isn't your goal.

Fundamental issues and challenges

Limited upward mobility towards faculty position. Without the prospect of a faculty position, it's just a job with poor pay and incredibly high responsibility.

I have failed to obtain a faculty position after 2 years of trying, despite multiple high impact first author publications and prestigious fellowships. I'm now looking into industry because I have a family and can't keep putting this stress on them.

Existing NIH policies, programs, or resources

???

Increase the number of faculty / independent scientist positions so that there is a reason to stay in academia.

Proven or promising external resources or approaches

As of now, there is little oversight towards the treatment of postdocs. Having better systems of support and interventions for fair expectations would go a long way.

Response 523

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I would have loved to do a post-doc after my PhD. However, I graduated at the age of 35 and did not want to move somewhere new only to have to move again two years later. It's hard to make friends as an adult, especially if I'm pushing 40. Additionally, I'm carrying more than $50,000 in student loan debt and I worried about my ability to both pay it off and save for a house at the same time. Plus, the benefit of a postdoc is the opportunity to focus on research for a while and learn new research skills before entering a tenure-track position where I have to balance teaching and service, too. But

1. that protected time only lasts one year because the second year is spent on the job market, and
2. the level of protected time can vary, depending on the PI.

It's not always clear from the description how much opportunity you'll have to publish your own research, especially as a first-author. The low pay, high level of disruption to my personal life, and variability in protected time pushed me to apply directly to tenure-track positions straight out of grad school, skipping the postdoc phase.

Existing NIH policies, programs, or resources

1) Salaries for postdocs need to be substantially higher ($80k or more per year) and they also need to be indexed to the area's cost of housing. Housing costs often rise much faster than overall inflation and it represents the largest recurring expense for most post-docs.
2) If you don't want to raise salaries, then postdocs should be allowed to work remotely. I can fly in monthly for meetings, but if you're not going to pay me enough to live in San Francisco, then let me live somewhere else.
3) It would be nice if I could have a certain amount of guaranteed protected time to work on my own research.

Proven or promising external resources or approaches

No response

Response 524

Perspectives on the postdoc roles and responsibilities

Academic postdocs execute on existing grants, develop and test new ideas for personal research programs on the side, and develops mentorship and/or project management skills.

Fundamental issues and challenges

The minimum pay for Biomedical NIH postdocs is 1/2 to 1/3 what individuals can make in industry. It is an extreme financial sacrifice, often comes with little or no benefits (i.e. retirement, unemployment insurance, vacation time, etc.), and is tenuous / dependent on continued funding.

Existing NIH policies, programs, or resources

Minimum pay needs to be increased by at least $10,000/year.

Also, the Kirchstein Award Payback Agreement would be illegal in any other industry —why does it still exist? It creates situations where people working in toxic environments are less able to leave for fear of being unable to repay their "debt." It seems like a modern form of Indentured Servitude.

Proven or promising external resources or approaches

Increase pay. Require benefits.

Response 525

Perspectives on the postdoc roles and responsibilities

I view my post-doctoral fellowship as an additional training opportunity that allows me to gain additional expertise in certain areas (both conceptual and technical) while simultaneously doing science at a high post-graduate level of independence.

Fundamental issues and challenges

THE MONEY. PAY POST-DOCs MORE. I have dozens of friends from grad school who seriously considered doing academic post-docs, but the financial stability that industry or other opportunities offered drew them away. While I do l love my post-doc position and am happy that I have the opportunity to continue learning and growing as a scientist, the truth is that I am only able to afford it because of a spouse with a good income. This work is very hard and often demanding. You cannot reasonably expect most people to do it while being grossly underpaid.

Existing NIH policies, programs, or resources

The NIH post-doc payscale should reflect the difficulty and rigor of a post-doc job. More mentorship and support networks would also be helpful to increase academic retention.

Proven or promising external resources or approaches

No response

Response 526

Perspectives on the postdoc roles and responsibilities

Postdocs are the backbone of our academic research structure; highly skilled and trained researchers who pursue difficult research questions. They are meant to be experts in their research field, producing high quality research, while simultaneously working as mentors for junior lab members. They are at a point in their career where productivity is crucial in order to move on to the next step in their career.

Fundamental issues and challenges

Postdocs are barely paid a sustainable rate if they live in any city. Being a postdoc means you are underpaid and overworked while constantly pressured to work more. It generally comes at a time in ones life (late 20s-mid 30s) where they consider starting family, and neither of those are beneficial to family life. So you must choose to pursue research that interests you at the expense of financial stability, or departing from academia entirely so you do not struggle to purchase food every week.

Existing NIH policies, programs, or resources

Money is a resource. That is all that every postdoc asks for.

Proven or promising external resources or approaches

More and better funding opportunities, or recognizing that any national salary cap is not equitable.

Response 527

Perspectives on the postdoc roles and responsibilities

The postdoc is called a training position, but structurally often postdocs do not get a lot of training, and instead use the postdoc as a time to use training they already have and (hopefully) get some cool results and connections for future job applications. The main defining component of being a postdoc is that it temporary, and viewed as such. A postdoc-like research position that was not viewed as temporary, and that paid well (unlike current postdoc salaries), would be awesome for many people. The postdoc can be used to prepare yourself very well for what you want to do next, and that’s how I have used the time. I

also observe that sometimes people get guided, or drift into projects, to do work that is not preparing them for good future positions.

Fundamental issues and challenges

Postdocs are severely underpaid compared to non-academic career options, and also compared to the cost of living, especially in cities, especially for people of postdoc age who may want to start a family. I've seen this drive multiple people, especially URMs, away from a career in academia.

Existing NIH policies, programs, or resources

Better pay (need a dramatic increase). This is the only real way to fix a lot of the systemic issues (related to equity, harassment, power imbalances, leaky pipeline.)

Proven or promising external resources or approaches

Postdocs need to be paid more, for the health of our academic system.

Response 528

Perspectives on the postdoc roles and responsibilities

The postdoctoral position in my opinion is employment following completion of a PhD where the postdoc works as a qualified independent researcher to conduct research for an academic who has secured the research funding, in order to establish a greater personal research profile and better establish a position as an active researcher prior to applying for independent research funding or research exposure for non-academic purposes. I do not view the postdoc position as a 'trainee' position (as this very questionnaire states in the following question), as the postdoc is already highly qualified and holds a PhD. A postdoc is a qualified researcher, and any learning done throughout the role is done through the work and research the postdoc does, and the role is not a 'learning opportunity' and postdocs should not be considered analogous to graduate students.

Fundamental issues and challenges

The key issue for postdoctoral researches remuneration. Salaries for postdocs are not much higher than the average salary of bachelors degree graduates, despite possessing greater research and analytical skills. This undervaluation of postdoctoral skills is unique to academia, as PhD holders performing analogous research in any other type of institution may enjoy double the salary. In addition to abysmal salaries, the hours worked by the average postdoc are often greater than what they are employed for. This obviously reduces the attraction and retention and quality of life of postdoctoral researchers in all possible ways, and is especially a barrier to single parent postdocs, and postdocs who may not enjoy a family wealthy enough to supplement their living costs.

In addition to poor personal finances, the upward mobility in academia is overly competitive and funding opportunities too sparse. Applying for a K99/R00 following a postdoc is the status quo, and is the typical entry into the academic tenure track. The competitive nature of these grants is desirable but the success rate of ~25% dooms the remaining 75% to reassess their entire career if unsuccessful. The odds of success are too low to make academic research a worthwhile endeavor. Coupled with more attractive salary ranges available elsewhere, the most competitive and qualified candidates may not consider academia at all. I am a early postdoc and have no intention of ever applying for an academic tenure track position. In addition to the low success rate of grants, the value of grants are diminishing in value in real terms. The inflation rate for the 12 months to January 2023 inflation rate was ~7%, but the R01 value has not increased to match, meaning grants are more competitive and less valuable.

Existing NIH policies, programs, or resources

Simply put, the NIH needs to fund more grants.

The NIH need to increase the grant size.

The NIH needs to increase the salary minimum for postdocs.

The NIH should also address the fee crisis in the publishing industry (for example, $10,000 to publish in nature) by refusing to allow NIH funds be spent on journal publishing fees to make research outputs more

equitable. This would ensure capable postdocs in laboratories with less funding than others to publish in high-impact journals.

Proven or promising external resources or approaches

No response

Response 529

Perspectives on the postdoc roles and responsibilities

The postdoc allows for additional training or to rebrand one's choice of discipline, but offers few other benefits. Roles include research, teaching, grant writing, mentoring, management, and training.

Fundamental issues and challenges

Postdoctoral positions rarely offer compensation that allows for comfortable living. Additionally, most postdocs are required to work grueling hours in a given week. These grueling hours drive many potential candidates away, since they are often prohibitive to those with families, and likely leads to the gender mismatch among academic faculty, due to the perception of the USA's societal roles for women in child-rearing. Further, the actual experience gained is often little: a couple more techniques, a few more presentations, and several witnessed seminars, generally just making up for some deficits from graduate education. This is frequently observed from industry hirers, who frequently discount time spent as a postdoc as actual job experience. In those industry positions, the postdoc is typically in a role reserved for those with less than doctoral achievement, thus delaying the career for those that would consider industry as a career choice. All these negatives are in pursuit of a role that is typically underpaid, overworked, and one of the most competitive in the country. That competitiveness also carries negatives, since the stories of "eternal postdocs" are not entirely exaggerated, and many who continue to serve as a postdoc find that is the only position for which they can be hired. The postdoc position is also flawed. What should be a position that could lead the bleeding edge of research is being relegated to only the safest and uninteresting of projects since one's publication record during the postdoc is of the highest importance.

Existing NIH policies, programs, or resources

The NIH postdoctoral grants should be increased in financial compensation without reducing the number offered. Probably a minimum of 80k in 2023 USD would be appropriate with increases to match inflation. Grants should also provide some funding for conferences and travel. Additionally, an expansion of NIH grants to create a category for industry positions, or simply promote industry-academia-based partnerships. There should be greater oversight of postdoctoral progress, and a general reduction of hours through mandate, since many postdocs work 80hr weeks.

Proven or promising external resources or approaches

Providing external funding promotes postdoc positions.

Response 530

Perspectives on the postdoc roles and responsibilities

Ideally, where independent training happens. Responsibilities like drafting and submitting grants based on original scientific ideas, conducting bench science to meet those ends, publishing papers based on that work, and building the experience necessary to independently fund and run a lab.

Fundamental issues and challenges

PAY. The unavoidable truth is that the work of post docs often is used to build the primary mentors labs and or grants and this effort is not incentivized or rewarded with a livable wage. Many people are well into their adulthood with considerations like children, aging parents, cost of living, inflation, and quality of life. This balance between work and life is largely dependent on the generosity of the mentor, and there is a lack of balanced give and take from institution to institution about vacation days, paid time off, the daily work hours, childcare considerations, and over time pay. I've seen so many post docs work asinine hours with little to no vacation and still struggle to meet the daily cost of their own and their family's needs. This is not an attractive quality as a trainee weighing my options about my career options and trajectory. Additionally, once again, this effort may be turned to naught if the mentor inhibits these people from

publishing and effectively disrupting the post doc trainee's ability to advance in an academic career. There seems to be no other way that productivity, quality, and good science seem to be measured except in publications. This is a poor measurement of the environment and quality of science.

Existing NIH policies, programs, or resources

Resources that encourage and formally develop team management, project management, mentorship, lab management, funds management, hiring and firing practices, and creating safe workplace environments. It would also be beneficial to have follow up and review processes that help keep the persons responsible for this development accountable and a point of consequence.

Proven or promising external resources or approaches

Please pay post docs more. The minimum should be at least 75K in yearly salary, and if grant allocations need to be expanded because of it, so be it.

Response 531

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a role in which a scientist may gain additional experience in new disciplines as well as techniques and skills not explored during the doctoral training. The goal is to synergistically combine experiences from the doctoral and postdoctoral training to develop a new research theme to launch an independent research career.

Fundamental issues and challenges

Below are listed a number of identified concerns addressing this question.

1. The fundamental issue is that academic research works under a pyramidal system. A single principal investigator (PI) trains dozens of PhD students and postdocs that are expected to establish independent research careers, become PIs and run laboratories supported by extramural funding, being the NIH the principal funding agency for biomedical research despite a flat NIH budget since 2003 when adjusting for inflation. The numbers no longer support being a PI as a viable career path.
2. Postdoctoral pay is low when accounting for the level of educational attainment.
3. Amounting the low success rates in extramural funding there is a high level of funding inequality across laboratories, a phenomenon known as the Matthew effect. Research by the NIH has shown that additional funding secured by large laboratories does not translate to higher research productivity (https://nexus.od.nih.gov/all/2017/01/26/research-commitment-index-a-new-tool-for-describing-grant-support/). Also, one has to put into question the capacity of PIs running large laboratories to mentor effectively every lab member
4. The average age of the NIH-funded PI workforce is skewing older over time, which tends to be supported by multiple—3, 4, or 5 or more—grants in FY2020 than in FY1995 (Lauer et al. 2021 Elife. 10:e71712. doi: 10.7554/eLife.71712. PMID: 34477108). This plays against the odds of early-stage investigators to secure tenure-track faculty positions in academia necessary for sustaining stable PI roles.
5. There is no funding parity for gender or race for researchers in the workforce, which are unacceptable inequalities (Lauer et al 2021).
6. Postdoctoral training is narrowly focused on academic research. The power imbalance between postdoctoral trainees and principal investigators diminishes the success of postdoctoral trainees to seek additional training in careers outside academia.

Existing NIH policies, programs, or resources

1) Postdoctoral fellowships such as T32 and F32 do not guarantee that the postdoctoral trainees will continue a path in academia. The T32 and F32 programs (PA-21-048, PA-23-048) should be retired. Instead, the T32 and F32 grants should be reallocated to K99/R00 grants (PA-20-188) to accelerate the transition of postdoctoral trainees to independence.
2) The Grant Support Index (GSI) of a NIH-funded principal investigator (PI) should be no more than 21. PIs with GSI scores over 21 (the equivalent of 3 single-PI R01 awards) should include a plan in their applications for how they would adjust those researchers' existing grant load to be within the GSI limits if their application is awarded. In 2017 this measure was expected to free up to 1,600 new awards that would benefit an equitative distribution of funds (https://www.nih.gov/about-nih/who-we-are/nih-director/statements/new-nih-approach-grant-funding-aimed-optimizing-stewardship-taxpayer-dollars#10).
3) Incentivize the transition of PIs to non-PIs roles past the Full Retirement Age or Social Security Retirement Age. Develop an honorific mentorship funding mechanism to incentivize the transition of late-stage PIs to roles that focus on supporting early and mid-career sciences on mentoring.
4) Increase congressional advocacy for more NIH funding on the merits of keeping the United States at the forefront of biomedical research given the increasing competitive environment by other nations and to sustain the capacity to attract talent.

Proven or promising external resources or approaches

The NIH Faculty Institutional Recruitment for Sustainable Transformation program is an excellent resource to incentivize the recruitment of faculty from underrepresented and underprivileged backgrounds.

Th NIH Director's Biomedical Research Workforce Innovation Award: Broadening Experiences in Scientific Training (BEST) is another example of a successful program that is helping PhD students and postdocs find alternative career paths to academia given the current strenuous environment.

Response 532

Perspectives on the postdoc roles and responsibilities

This is essentially an apprenticeship to provide further training as an independent scientist.

Fundamental issues and challenges

Post docs have a PhD and are often in their late 20's and early 30's with spouses and families. They are not paid well enough to live in major metro areas and support a family. Coupled with the uncertainty of the academic track and the length of time expected, this makes this an unattractive option. Childcare costs alone likely cost us many, particularly women.

Existing NIH policies, programs, or resources

Better funding for postdoc salaries (raise the modular budget!). Funding for childcare costs for post docs that will actually cover real world childcare. Find more of the postdoc awards that are now required for an academic job.

Proven or promising external resources or approaches

Increased salary. Childcare benefits. Cost of living adjustments for salary?

Response 533

Perspectives on the postdoc roles and responsibilities

My answer is specifically for academic postdocs for people wanting to pursue a faculty position: I view the postdoc as a mentored time where you are generating the skills and the data to be able to start an independent research lab. For skills, you have an opportunity to mentor junior members of the lab with access to your mentor for suggestions/feedback. It is also a time to demonstrate ability to switch between projects/methods/organism and develop the ability to learn new research skills at the bench in a facile way. It obviously needs to be a productive time as well to qualify for transition grants, faculty positions, so it seems to be more demanding than graduate school where your focus was mostly on the science (instead of setting one's entire career up for a successful launch).

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

As a physician scientist, I think the K08 awards are designed to be awarded too late into a post-doc's time in the lab when they are already start their own lab (or for early assistant faculty who already have a lab) so it doesn't seem like it functions as a career transition award anymore. I think they should focus less on preliminary data and publications during the post-doc period and more on the potential of the trainee and the project in determining who to fund.

Proven or promising external resources or approaches

UCSF and USF have a joint workshop they host on 'inclusive mentoring for academic labs" that I participated in and found extremely helpful for informing my mentorship style currently and management style going forward as I hopefully start a lab.

Response 534

Perspectives on the postdoc roles and responsibilities

I'm gaining additional research training, publication opportunities, and professional development as I prepare for the faculty job market. I see the academic postdoc as a temporary position to help me increase the odds that I am viewed as a strong, attractive candidate for a TT assistant professor position.

Fundamental issues and challenges

The pay is pretty horrible. I think this is the driving factor for why labs are having a hard time with recruiting. Like many postdocs, I had to move to a new city after I graduated to start my postdoc, and I'm still feeling the financial squeeze six months later from all the moving expenses. In grad school, there was the shaky argument that we were also being compensated with tuition remission, in addition to our small stipend. As a postdoc, the training opportunities, while excellent, don't help pay the bills.

Existing NIH policies, programs, or resources

Increase the NIH minimum postdoc salary!

Proven or promising external resources or approaches

No Response

Response 535

Perspectives on the postdoc roles and responsibilities

I am extraordinarily lucky to work in an extremely prestigious lab in a very well funded research institute. If I had to make the decision to do a postdoc or not over again, knowing what I know now, there is no chance I would do a postdoc. There is simply no need for additional training after a PhD. This is evidenced by the prevalence of early independence options, including those supported by the NIH. If one is interested in having an academic career, they seem uniformly better served by one of these options. If one is interested in an industry career, it is well documented how detrimental doing a postdoc can be. There is irrefutable proof that postdoctoral training is financially harmful, and I would argue that it is also exploitive, even in the best environments. Please review PMID: 28072769.

I have had a very successful training period, with two dozen papers --many in flagship journals—and two NIH-funded grants. I am 38 years old and I have one child and a second child on the way. Starting in September, my childcare bill will be $45K/year. for two children. My current salary is below that of the average garbage collector. And this is AFTER the NIH increased the stipend levels. If I leave my postdoc, I have a highly desirable skillset and extremely strong professional pedigree, and I know that in the private sector, I will make at least 3x my current wage —more than a professor. I will be leaving academia this spring.

My professional credentials are very strong and I have been extremely successful while working with the most powerful and well funded scientists/mentors in the world. Still, I can't make this work for my family. The cost is too great. I'm leaving academia this spring.

Fundamental issues and challenges

1. No need for additional training.
2. Wages that are 50% below market value, or more.
3. Career disadvantage (PMID: 28072769)
4. Work for managers who have no management training
5. Work in environments with unstable funding/ funding stress.
6. Retirement/college savings disadvantage
7. Lack of work-life balance required.
8. Poor salary prospects EVEN IF a postdoc transitions to a faculty role.

Existing NIH policies, programs, or resources

The NIH already supports parental leave for NRSA funded postdocs. This needs to be enhanced by providing a childcare supplement that fully covers the cost of childcare. If you REALLY want to promote the advancement of women in science, don't make them choose between their families and their academic careers. Make it possible to have it all.

There has been substantial discussion about promoting diversity in the academic science workforce. It is no mystery that many scientists from underrepresented groups are from economically disadvantaged backgrounds. It is laughable that the NIH expects first generation scientists (who now have a degree that qualifies them to make $150k+ in pharma) to work for $60K as postdocs. Large companies are ALSO seeking to increase the diversity in their ranks, and the highly remunerative jobs are there. If the NIH wants to retain scientists from economically disadvantaged backgrounds they need to make it possible for them to train without needing to choose between continued poverty and almost immediate financial success.

The IDP program is a joke. I have never worked in an organization where even the administration or faculty took IDPs seriously. These should be either reimagined or scrapped. In their current form, they only serve to propagate the illusion that faculty is invested in the development of trainees.

The career transition programs are inadequate. There need to be more K99s, DP5s, etc awarded.

Proven or promising external resources or approaches

I have little hope for postdoctoral training. I think it's an outdated model that needs to be scrapped. Support staff scientists in academia and pay them a living wage.

Response 536

Perspectives on the postdoc roles and responsibilities

The last step of a career that allows scientists to become independent investigators

Fundamental issues and challenges

1. Increasing administrative and bureaucratic burden with no clear benefits and no clear reason to exist. Basically only to check newly created regulatory boxes.
2. Low pay

Existing NIH policies, programs, or resources

Decrease bureaucracy and increase stipends.

Proven or promising external resources or approaches

Just decrease bureaucracy and increase stipends.

Response 537

Perspectives on the postdoc roles and responsibilities

I'm a scientist with my own expertise. I work with other scientists, some with deep expertise in specific topics I want to learn more about. By being able to conduct research without the work of managing a lab one hopes to have the time and resources to build a useful and unique research program.

Fundamental issues and challenges

Among professions with comparable levels of education, the compensation that postdocs receive (salary or otherwise) is completely inadequate, to the point of not being able to afford housing and basic childcare, which speaks to a shortsighted devaluing of research and highly skilled scientists.

Along with the stress of the job, and highly uncertain job prospects in academia, the only people to survive in the system are those with numerous external advantages that buffer them from its effects

Existing NIH policies, programs, or resources

Grant budgets earmarked for salary increases

A system for formal scientific communication that bypasses corporate publishing houses.

Proven or promising external resources or approaches

Mentoring is key.

Fewer postdocs and more well paid staff scientists, fewer labs that function like sweatshops, and incentives to reduce the volume of research and improve quality of a smaller body of research output

Response 538

Perspectives on the postdoc roles and responsibilities

A postdoc position to me is a way to gain additional training after my PhD in order to develop an independent research niche. My goal in my postdoc was also to gain more skills that I would need to become a Principal Investigator, including learning about which grants to apply for and when, the different types of salary at academic institutions (hard vs soft money), grantsmanship, and networking. I view it as a temporary position, but I also view myself as a valuable addition to the institution, even though I am technically still in training. I have a lot more responsibilities than I do as a graduate student.

Fundamental issues and challenges

The primary issue is the pay. I am a single female living in a city, and I am just able to have a decent quality of life on the NIH minimum standards. I know for my colleagues who are single mom's/have families, they really are not able to make it work on a postdoc salary. I cannot imagine the NIH wants to exclude single mom's or the primary breadwinners from being able to do a postdoc, but the truth is that that is the case on the current salary the NIH sets. Even though they are the minimum, Universities use these as the standard pay. Furthermore, we are all coming from a grad school stipend, which most likely means we have little savings. A post-doc position often requires a move, which I found almost impossible to do without external help from family and friends, and I am about as frugal as they come. A post-doc comes with no benefits (no type of retirement benefits, I pay a lot to have health insurance), and it is likely you will have to move for the postdoc, as well as after the post doc. As people in their late 20's to early 30's, this is not ideal for personal relationships. Furthermore, to have the best chance of getting a job in academia, you have to get an F32 as well as a K99, which requires several years of a postdoc and begins to feel like a giant scam. This all happens while your peers go into industry with much better pay, work life balance, and 1,000,000X better benefits. Besides personal fulfillment, what benefit does doing a postdoc really have for our life? I love my research, but I am not sacrificing my life or well-being for a job that offers nothing back.

Existing NIH policies, programs, or resources

The NIH are the ones who would spearhead salary increases, since Universities have to decide if the PI or the school makes up the difference as the salary is now. Why can't the NIH increase the award amount so Universities don't have to have these conversations? Its really the NIH that is allowing us to be poorly paid.

Proven or promising external resources or approaches

No response

Response 539

Perspectives on the postdoc roles and responsibilities

It is only useful for people who want to be professors and not worth it for people who don't want to stay in academia. It's just like a second PhD except way more is expected of you.

Fundamental issues and challenges

The culture is still such that people don't expect postdocs to have a life outside of lab so their quality of life seems even lower than a PhD's. It doesn't pay well enough so why do it if you don't want to be a professor (which there aren't enough openings for anyway). I would rather just go industry and start making more money right off the bat and have a life outside of work. It's also intimidating not knowing if you will be a good fit for the lab, so you might be miserable for a few years, just to get a few more niche skills that would only matter if you plan on starting a lab with those skills. It also seems like a waste of time.

Existing NIH policies, programs, or resources

Current funding from the NIH doesn't track with inflation but I'm not sure what the source of that problem is.

Proven or promising external resources or approaches

I'm not clear what this section is talking about. But I think a cultural shift needs to happen in what is expected of a post-doc which would probably happen at the PI level.

Response 540

Perspectives on the postdoc roles and responsibilities

It's great opportunity to strengthen the skills and learn new methods or technique. Learn how to mentor.

Fundamental issues and challenges

The salary is very low to support the family and even individual needs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 541

Perspectives on the postdoc roles and responsibilities

I view this as a short term job to gain training and experience to prepare for the academic job market.

Fundamental issues and challenges

1) Salaries are typically not commensurate to the area for the level of education achieved. Postdocs can make much more in industry with their degree.
2) lack of structured PTO puts the entire management of time off on the relationship a postdoc has with their advisor. I routinely hear how strange it is that I get 0 sick days and 0 PTO days and there are 0 rules for hours worked. Which comes with a great flexibility but if the relationship between the advisor and postdoc is poor, it can easily lead to abuse of the postdoc.

Existing NIH policies, programs, or resources

Have a safety net in place that guarantees minimum PTO and sick leave for postdocs, in case a relationship sours.

Proven or promising external resources or approaches

Look at how much major companies pay people with PhDs.

Response 542

Perspectives on the postdoc roles and responsibilities

For over 30 years, my lab has relied on post-doctoral trainees for just about every aspect of our research. These folks have gone on to academic, pharma, government, and other commercial jobs and have been highly successful with important scientific findings and improving human health. They have matured in the lab to independent scientists, thinkers, and entrepreneurs, and along the way they have fueled the engine of innovation in our lab.

Fundamental issues and challenges

Even here in the midwest, starting postdocs are rarely paid what is defined as a living wage for a family with one child, and many are starting families. There is no band-aid that we can use to cover this wound.

Existing NIH policies, programs, or resources

Graduate students in biomedical research are generally paid $30,000+ per year for a half-time stipend (they are registered for thesis research the other 50% effort). When they graduate and take a post-doc, they are paid $56,000 for a full-time position, which translates to a 10-20% (or more) pay cut! One would think that $80,000 should be the minimum that we would consider fair for a starting PhD salary. If we did that and provided typical benefits, most everything else would be straight forward to address.

Proven or promising external resources or approaches

Pay a fair wage—that is why we are losing post-docs to industry.

Response 543

Perspectives on the postdoc roles and responsibilities

It’s a bridge between PhD and my next job. Hopefully industry because postdoc salary is unsustainable. I love the lab and my PI is supportive but it’s simply not sustainable.

Fundamental issues and challenges

Salary. And maternity leave. Benefits.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 544

Perspectives on the postdoc roles and responsibilities

I view it as employment after graduate training. While it will lead to an academic or industry positions, I am expected to work as an employee and not a “student” and therefore I should not be categorized as a “trainee” which does not help postdocs but only helps the employer evade responsibilities.

Fundamental issues and challenges

Unsustainably low pay for the work demanded. Many universities, including [redacted for anonymity], categorize postdocs as “contractors” therefore we are not allowed seek guidance from Human Relations, we are not allowed employee benefits, we are not allowed retirement contributions.

Existing NIH policies, programs, or resources

NIH must mandate that postdocs be treated as employees and not contractors which universities use to evade responsibility. NIH must also collect annual surveys from postdocs to rate their institution and

employee treatment to hold universities responsible. Even high profile universities such as [redacted for anonymity] take advantage and mistreat their postdocs.

Proven or promising external resources or approaches

Many postdocs, especially in biomedical sciences where PhD averages 5.5 years, are in the age group of starting families and need basic employee benefits that are essential to pay for mortgage, family health insurance plans and childcare.

Response 545

Perspectives on the postdoc roles and responsibilities

Gearing up for a faculty position. Helping with grant writing, producing a lot of data, at least one publication per year, mentoring students.

Fundamental issues and challenges

Salaries—pay is not enough for scientists with 5-8 years of post-bac experience. Students with Bachelor's degrees make more in industry jobs. There is simply no incentive.

Visa issues for international post-docs. A special visa category or treating post-docs as students for an F-1 student visa purpose.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 546

Perspectives on the postdoc roles and responsibilities

Extant characterizations of a post-doctoral position as a trainee position is, at best, misguided and, at worst, intentional in justifying their poor salary, job security and career prospects. Post-docs are highly trained/qualified individuals that provide essential labor (whether that be towards research, teaching or mentorship). The current system—directly informed by NIH's funding habits/norms—enforces low pay and high insecurity amongst post-docs, leading to high turnover in these positions. This disrespects their individual rights as workers, as well as being highly destructive for science.

Fundamental issues and challenges

The NIH modular budget has remained stagnant since it was introduced in 1998. Adjusting for inflation, this means PIs have ~50% less funds now than they did when the policy was introduced. This pits research costs/equipment against personnel. This means that fewer post-docs can be employed on a standard NIH grant, and those employed can be kept on for a shorter duration. There should be better pay offered to post-docs and, critically, a restructuring of science to afford them better career prospects. Given the shortage of available PI positions, staff scientist/research associate positions should be more widely recognized as a *secure* and viable long-term career option in Science. Otherwise, the brain drain from academia to industry will intensify, and publicly funded research will be made extinct.

Existing NIH policies, programs, or resources

See my previous response—funding to the NIH needs to be increased to allow for a higher modular budget than that which has remained stagnant since 1998. This will allow better pay for post-docs and longer contracts, as well as allow for staff scientist/research associate positions with better pay to become normalized as viable long-term career options for post-docs.

Proven or promising external resources or approaches

The issue is a monetary/material one as highlighted above—no amount of NIH-sponsored training, mentorship etc can rectify the fact that there is not enough money to pay post-docs, nor to provide them with a viable path to a secure future in science.

Response 547

Perspectives on the postdoc roles and responsibilities

Ability to explore the science one is passionate about

Fundamental issues and challenges

The payscale should be adjusted based on the location. Else, a subsidized facility for stay should be offered to every postdoctoral candidate

Existing NIH policies, programs, or resources

More grants for non US residents to compete for

Proven or promising external resources or approaches

Increased salary, and more grants to compete for.

Response 548

Perspectives on the postdoc roles and responsibilities

Cheap labor

Fundamental issues and challenges

Long time hard working but always treated as cheap labor.

Existing NIH policies, programs, or resources

First of all NIH needs to treat us fair. Postdoc salary is between 46-50k. Librarian minimum wage starts with 65k. During the inflation NIH never considered helping Postdocs thats why many of them are leaving including my self. After all the education and hard work No one doesn’t want to work for 46k.

Proven or promising external resources or approaches

NIH has to consider paying better

Response 549

Perspectives on the postdoc roles and responsibilities

I career transition period to gain additional and complementary training to independent faculty level positions.

Fundamental issues and challenges

Pay/stipend is very poor, not enough to have a decent lifestyle in major US cities.

Visa and international regulations are prohibitive for several fellowship applications.

Very limited faculty/ academic positions to apply fo.r

Existing NIH policies, programs, or resources

Many institutions follow NIH pay scale for postdoc trainees. Updating the pay scales by NIH to better support trainees will bring about changes in many major institutions

Proven or promising external resources or approaches

No response

Response 550

Perspectives on the postdoc roles and responsibilities

A hired scientist, the treatment to whom highly depends on the head of the lab.

Fundamental issues and challenges

1. Salary, relative to the work they already had posed on their PhD period
2. Instability even after they got a job as a faculty (e.g., lack of funds to run a lab, low possibility to get a grant.)

Existing NIH policies, programs, or resources

R01 could be expanded and it would be helpful as we think getting an R01 as an early-phase independent investigator would be hard.

Proven or promising external resources or approaches

No response

Response 551

Perspectives on the postdoc roles and responsibilities

a temporary position, building intellectual independence, learning how to mentor students, and obtaining problem-identifying and organizational skills necessary to establish a highly productive research laboratory.

Fundamental issues and challenges

The salary is way too low and has not kept up with inflation. Few academic jobs are available, which forces people to remain in postdoc roles for many years until they either land an academic position or until they can no longer afford it and leave to pursue careers outside of academia. Data shows most postdocs that land faculty jobs are frequently hired from institutions in major metropolitan cities, and the NIH minimum is not nearly enough to live by oneself in any one of these cities. I know many people often delay having children or have to leave academia entirely because the salary cannot support families.

Existing NIH policies, programs, or resources

Increase postdoc salaries.

Proven or promising external resources or approaches

No response

Response 552

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a training position that allows be to prepare to become an principal investigator while receiving mentorship from world class scientist. Additionally, it gives me time to broaden my expertise and expand my research scope into a new field. In this role I lead studies, apply for grants, write manuscripts, manage laboratory staff, present at conferences, and serve on committees. I essentially perform all the roles and responsibilities of a PI while still having access to mentorship and trainee opportunities.

Fundamental issues and challenges

The greatest barrier to postdoc recruitment, retention, and overall quality of life for postdocs is the low salary set by the NIH. The NIH stipend levels for postdoctoral salary have not kept up with the cost of living and is not commensurate with the education and experience of postdoctoral researchers. Postdocs typically work over 40 hours a week only to be compensated below the value they bring to the lab. If the NIH is going to retain postdoctoral researchers in academic research, especially those from disadvantaged backgrounds and those that don’t come from economic privilege, stipend levels need to be raised. I love my research and everyday I wake up excited to continue my academic inquiry. Academia is a calling for me but the pay makes it difficult to stay. When students ask about my PhD journey I tell them about the excitement of discovery and the satisfaction that comes from scientific competence. I leave out that doing a PhD is economically difficult and there is no relieve after graduation. If the NIH is going to broaden the talent pool of academic research the postdoc salary must be increased.

Existing NIH policies, programs, or resources

Raise the stipend amounts. Increase funding for career development awards.

Proven or promising external resources or approaches

No response

Response 553

Perspectives on the postdoc roles and responsibilities

Extended research beyond grad school with more independence in framing the right problems to solve.

Fundamental issues and challenges

No visa sponsorship.

No pathway to tenure track.

Low pay.

Professors have no management training

Uncertain temporary contracts.

Toxic environment

Unrealistic expectations on intellectual rigor.

Existing NIH policies, programs, or resources

Improve salary

Proven or promising external resources or approaches

No response

Response 554

Perspectives on the postdoc roles and responsibilities

I believe role and responsibilities of a postdoc entail keeping up on current research, mentorship of undergraduate/grad students, performing experiments and collecting data, writing grants and papers. Postdocs should still be receiving training to prepare them for becoming a PI

Fundamental issues and challenges

Money. Postdoc positions in academia are not as well compensated as in industry. While health benefits are usually well compensated it is University dependent. Postdoc positions in CA for example do not pay enough for rent and general living expenses. Ability to sponsor visas for international scholars is good but only for the first few years on J1 visas, however it can be burdensome on the institution to further sponsor an H1B or permanent residency.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 555

Perspectives on the postdoc roles and responsibilities

The expertise and labor is entirely out of line with the salary, particularly given that most postdoctoral researchers are in their 30s. I ran up credit card debt in [redacted for anonymity]; a friend at [redacted for anonymity] had to shoplift to eat. Saving for a home or having children was impossible, even as I inched toward 40. I still harbor significant anger about this time in my life.

I learned a lot as a postdoc and grew as a researcher. As someone without familial support.

Fundamental issues and challenges

As I mentioned above, the amount of work expected for the money paid and the educational experience (post PhD) is entirely unacceptable and will drive many working class people and people who want to have children out of the field.

Postdoctoral mentors have essentially full control of the postdoc's labor, and this can easily lead to abuse. This leads to the further degradation of working conditions. It's exacerbated in the postdoc over in the PhD because one cannot as easily change labs, there's fewer institutional supports, and no social cohort to support.

Existing NIH policies, programs, or resources

No. Pay more money. The system is broken and no number of "Alternative Career Seminars" or "Work/life Balance Workshops" will fix it. This is an embarrassment.

Proven or promising external resources or approaches

Pay more and have real and meaningful oversight of mentors that offer pathways out of abusive or hostile work environments without hurting the trainee's career.

Response 556

Perspectives on the postdoc roles and responsibilities

What it should be: A mentored transition from being a trainee to becoming an independent scientist.

What it currently is: A multi-year position with poor benefits, a poor job perspective, and only little training.

Fundamental issues and challenges

High pressure. Poor work-life balance.

Existing NIH policies, programs, or resources

1) Increase in pay so that a postdoctoral position is a real job that one, if needed, can do for multiple years.
2) Postdocs now get stuck in the 'academic pyramid', where the mantra is 'up or out'. There is not enough space in the pyramid for us to all go up. However, after spending ~6 years in grad school and 8 years as a postdoc, it is hard to decide to leave 'empty handed', without an independent lab, and being too old to start from scratch in a new career. Instead, we need fewer postdocs, and more long-term career scientists in labs so that people can stay in the field. This means that some graduate students will leave the traditional academic field, but that is not a problem: it is better to leave for a good alternative career before investing another decade in academia. Fewer postdocs also often means that labs become smaller, which should not be a problem if the people that end up staying long term are highly skilled at what they do (e.g. staff scientists).

Proven or promising external resources or approaches

No response

Response 557

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salaries are too low for the current cost of life, especially on the East and West Coast

it is very difficult for foreign postdocs to obtain a fellowship since for example most NIH and all NSF fellowships are restricted to US citizens or permanent residents (foreign postdocs represent or used to represent 50% of postdocs in the US) and this makes their chances of getting a tenure track position

unfairly low after just as many sacrifices as US postdocs if not more (distance from family and friends especially during the pandemic).

Foreign postdocs also do not have the possibility of having a 401(k) or equivalent retirement saving program.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 558

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows/researchers are just beginning their own careers as investigators. They partner with a PI who hires them as a contractor and they then work on a project for their PI in order to learn new skills they will need in pursuing their career and their field of research. Postdocs should be required to teach or advise students in some capacity (TAing, working with graduate students, et cetera). They should also work out an agreement with their PI as to what kind of contribution they are required to make as a member of the PI's lab. These are the only required responsibilities of a postdoc, but they may also review manuscripts for submission as part of their training. Posdocs are often required by their PI to apply for certain grants, but this shouldn't be a requirement of the position per se.

Fundamental issues and challenges

Postdocs are often paid far less than they would make if they took a position in industry. This greatly diminishes the appeal of a postdoctoral position and an academic career in general. Postdocs are also often offered 2-3 year contracts and this often necessitates taking a second postdoc position after the first is completed before attempting to apply for tenure track faculty positions. They may also be required to take on moving expenses which will not be reimbursed by their employer or which may be reimbursed several months later. Therefore, many postdocs make sacrifices in their pay and their family lives to pursue a postdoctoral position. Quality of life and recruitment of Postdocs is at a crossroads right not as many PhD recipients see no reason to pursue low paying and highly competitive contract positions for 3+ years just to get their foot in the door for an academic (maybe) tenure track position in academia.

Existing NIH policies, programs, or resources

NIH could increase all postdoctoral fellowship and training stipends by 30% and allow PI's to pay additional salary beyond the NIH pay caps. NIH could also increase the number of program awards (T, F, K, and R programs) given each year and decrease the burden to apply for grants by reducing paperwork across the NIH system, which would lead to more grant submissions and money available to pay for postdocs.

Proven or promising external resources or approaches

Improving the pay of postdocs is the single most important way NIH could improve recruitment and retention of postdoctoral candidates. Other improvements include allowing postdocs to make intellectual property claims on research findings and providing childcare support benefits and maternity/paternity support benefits in all grants as possible indirect costs.

Response 559

Perspectives on the postdoc roles and responsibilities

Postdoc years should be made to refine one's skills in view of an independent academic position and perform research as a highly-skilled individual without the burden of managing a lab.

Fundamental issues and challenges

The quality of life strongly depends on the lab culture and the salary with respect to the cost of living. For big cities, having 34-35 y.o. highly-educated Ph.D. (possibly with kids) paid less than a third of the median

salary for equally-educated workers (https://www.glassdoor.com/Salaries/new-york-city-phd-salary-SRCH_IL.0,13_IM615_KO14,17.htm) is borderline criminous. However, since there is no alternative path to an independent research career besides postdoc positions, and being the academic structure designed to hire 1/10th of the people it educates, people that are really motivated to become scientists are forced to stay in these paradoxical conditions for many years.

Existing NIH policies, programs, or resources

Salary, salary, salary. Postdocs should be able to afford a living, and salaries should be massively adjusted with seniority. Creating alternative paths for postdocs in academia to become independent researchers with a living wage besides the lab-head PI (which is an incredibly competitive market that results in a high rate of anxiety and mental health problems) would also help shorten the postdoc "training" period within reasonable boundaries.

Proven or promising external resources or approaches

No response

Response 560

Perspectives on the postdoc roles and responsibilities

A precursor (not strictly a training position) to gain experience prior to initiating faculty or industry positions.

Fundamental issues and challenges

A large barrier, and the only one I can truly think of, is pay. If I personally didn't have a spouse with an established career and high salary I would not be able to survive on my NRSA salary.

Existing NIH policies, programs, or resources

The timeline for independent postdoctoral (F32) funding needs to be accelerated. Even if you apply as soon as you graduate, and have your application funded on first submission, you are well into your postdoctoral training when you begin the grant.

Proven or promising external resources or approaches

Improving pay and benefits, in addition to flexibility within the role (e.g., payback requirements).

Response 561

Perspectives on the postdoc roles and responsibilities

Provides training and opportunities to publish that are integral to obtaining a tenure-track job.

Fundamental issues and challenges

Recruitment: Jobs are not well publicized, and it seems to be about who you know with introduces bias. The pay is also terrible. Several friends left for industry positions because they couldn't sustain 2/3 more years of poor pay (living in CA).

Retention: For me, the biggest challenge has been childcare. My university does not offer childcare support to postdocs, and maternity leave is very short. Several female postdocs have left their position recently due to the prohibitive cost of childcare and lack of support. In general, there is a lack of support for postdocs who are traditionally in a very active life stage (having children, saving for a home). It can sometimes feel like spending this time has actually set a person back financially, versus propelling them forward.

Quality of life: loneliness, lack of support, ambiguous expectations

Existing NIH policies, programs, or resources

Clarification on whether/what role postdocs can play on a grant application that still maintains early-career status and does not influence eligibility for a K-award (e.g., can they be a co-PI and still maintain status/eligibility). Alternatively, grant opportunities for postdocs who are currently employed. Most of the small grants/pilot-funding opportunities require individuals to be faculty.

Building a larger network of resources for postdocs that includes information on wellness, financial support, balancing work/life, etc.

Proven or promising external resources or approaches

Required mentor training provided by the NIH for PIs who employ postdocs!

Getting input from postdocs more frequently

Response 562

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a trainee position for post-PhDs to either gain skills or prepare for an academic career. Mentors have an obligation to their trainees to provide space, training, and research equipment/materials and guide them to meet their career goals.

However, this has not been what many of my colleagues and I have experienced: postdocs are often treated like independent workers with uneven access to space, training, and mentorship. Without these guardrails, it feels instead like a low paying, flexible job with a narrow path to a tenure track position and few tangible benefits over working in industry.

Fundamental issues and challenges

Postdoctoral responsibilities are so varied that it is hard to evaluate the desirability of a postdoctoral position. The obligations with respect to each of administrative tasks, mentoring junior lab members, writing grants, and attending meetings can consume most of one's time and effort or none at all. More broadly, there is a lack of accountability for PIs that fail to advocate for their trainees. I have a heavy service load of administrative work and mentorship, which hinders my career advancement much more than it helps. If I were appointed by a department, other faculty might see the work that I do, but as it is, my PI both insists that I do substantial service work while also suggesting that I am not productive enough in my research.

It's hard to ignore how visa status creates a fundamental power imbalance. I am lucky because I can leave my position at will. Many of my colleagues are trapped in undesirable positions because that is their only legal option.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 563

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

We need cost-of-living adjusted minimum postdoctoral scholar salary guidelines that ensure trainees can afford housing. This is especially true for immigrant researchers who do not have a credit history in the United States. The alternative is a series of strikes that disrupt postdoctoral training and incite waves of retribution from PIs and institutions.

Programs that assign postdoctoral scholars to a department rather than an individual lab would remediate some of the biggest issues. Immigrant scholars could not have their legal status threatened by a lone individual. Service work could be meted out more equitably and visibly. Departments could gain a reputation for successfully training tenure track professors or industry leaders. Given the sparse training and mentorship I have received in my postdoctoral position, I would have preferred an arrangement that

facilitated switching focus to other professors' labs in my department and having a community of fellow postdoctoral scholars who were similarly funded.

Proven or promising external resources or approaches

UCSD Postdoctoral scholar survey showing large disparities for LGBT postdocs as well as illustrating various other concerns: https://tritonlytics.ucsd.edu/_files/UCSD-ALL-S3.pdf

Response 564

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position to be a short (~2 year) temporary position where a PhD researcher learns project management skills necessary to lead a research team as a principal investigator. The postdoctoral position is also an opportunity for a researcher to develop skills that would better enable his/her long-term research plan.

Fundamental issues and challenges

The primary problem with postdoctoral positions in the US is the dismal pay. Recruitment has finally been inhibited by the low salary and poor academic job prospects that have plagued academia for years; industry offers in many cases >2-fold higher salaries and critical retirement benefits / vacation, all while expecting traditional work weeks of ~40 hours. No one enters academia with goals of "being rich", but when one cannot provide for a family, academia is not a viable career path. Many current postdoctoral researchers, myself included, have been effectively "priced-out" by the recent economic downturn, coupled with soaring inflation and stagnant wages. I cannot provide for my family of 3 on a postdoctoral salary, and my partner is not wealthy enough to subsidize my "poor career choice". Academic research has become a privilege solely for the affluent. Furthermore, my quality of life has significantly deteriorated since completing my undergraduate degree, and I am unable to afford the help I need to navigate the overwhelming stress I feel in trying to provide for my family. I would not recommend anyone pursue a postdoctoral position, and I would caution recent graduates against pursuing a PhD for similar reasons. The financial value is, in many cases, non-existent, and the mental toll is severe. It has become apparent the USA does not value academic research, and that researchers should look to foreign nations, such as Europe or China, for adequate funding and a more positive life outlook.

Existing NIH policies, programs, or resources

Pay a living wage, and adjust salaries annually to accommodate inflation. Until then, academia will continue to suffer "brain drain" as people leave for industry to earn more money, do less work and collect better benefits.

Proven or promising external resources or approaches

These various training grants are of little value. I am a current trainee, and I find zero value in the system. It exists solely to provide funding to my PI, and the training has been nonexistent.

Response 565

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low salary is a major challenge for postdocs that often live in expensive cities. Raising salaries however is not easy when grants are difficult to secure and are often cut.

Another thing I have noticed is that entry into graduate programs is increasingly competitive, requiring trainees to obtain masters degrees or postbac experience prior to entering graduate school. This trend further prolongs the time it takes for students to secure their first academic faculty position.

Existing NIH policies, programs, or resources

The K99/R00 program allowed me to continue an academic research career.

Mandating institutions to provide retirement benefits and providing meaningful financial support for childcare for postdocs would be very helpful.

Proven or promising external resources or approaches

No response

Response 566

Perspectives on the postdoc roles and responsibilities

Postdoctoral research is a way for those who have completed training to apply their skills (and degree) to their own independent scientific interest.

Fundamental issues and challenges

Salary. Like obviously it's the salary. The US is very expensive and most postdoctoral research do not get nearly the amount they are owed.

Existing NIH policies, programs, or resources

Salary.

Proven or promising external resources or approaches

Actually listening to postdoctoral researchers and not the mentors who often take advantage of the position they are in.

Response 567

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

International postdocs face a real problem with their salaries, which are significantly lower than what private companies, industries, and startups offer. Furthermore, to support their research, many universities sponsor postdocs on a one-year basis, with the option to renew up to five years for a J-1 research scholar visa. This creates a difficult situation for scientists, who can become 'stuck' in the USA and unable to return to their home countries because of the need to renew their visas. The process of visa renewal is both lengthy and stressful, especially for individuals from developing countries who may face long wait times for US embassy appointments. This strict visa policy poses a significant challenge for international postdocs.

Existing NIH policies, programs, or resources

I would suggest a modification to the current visa policy for J-1 research scholars occurring in many universities by extending the visa sponsorship from one year to up to five years. This change would prevent the current situation where international postdocs are 'stuck' in the USA as they need to renew their Visa if they leave the country.

Proven or promising external resources or approaches

Increase salary at the level of private companies, industries, and start-ups. Propose less strict visa policy for international postdoc scientists (stop the '1-year' policy, allow to up-to initial 5 years contract).

Response 568

Perspectives on the postdoc roles and responsibilities

A postdoc is an expected step before most positions I am interested in. It is a somewhat frustrating requirement, as I feel ready to do my own research, and overqualified for a "trainee" position.

Fundamental issues and challenges

It is an inappropriate requirement. Scientists who have already received years of training are expected to perform research for PIs who provide little to no actual training, for compensation well below what we would make in other positions, when we are already fully qualified to perform research of our own. This is essentially a pyramid scheme, where PIs run large labs which do research in their name. The postdoctoral role does not exist in non-lab sciences (eg economics), where there is less tedious but highly technical work to be done. Post docs are dramatically underpaid for the work we do, and only go through this because of hope we will get to do our own research one day.

Existing NIH policies, programs, or resources

Pay postdocs more

Proven or promising external resources or approaches

Establish non-trainee positions for PhD graduates outside of tenure track academic roles. Fund positions where early career PhDs with or without postdoctoral training can conduct their own research, but cannot take on trainees. Cap how many trainees NIH funded scientists can supervise, as one person cannot actually train a dozen scientists. 3 might be an appropriate limit. If a PI wishes to employ scientists to conduct their research, rather than training them as an act of community service, the "postdoc" should be paid accordingly.

Response 569

Perspectives on the postdoc roles and responsibilities

The postdoc position is an opportunity to continue scientific training. This could be to gain additional skills or expertise in another discipline. If the individual's goals are to establish their own academic lab then the postdoc is an opportunity to establish and pursue their own research interests and questions. In this case the PI's role is to support them, guide them and offer input, but ultimately the postdoc will take that research to their own lab. If the individual's goal to to move to industry then the postdoc is designed to gain additional skills and expertise. Finding their own research interests and developing projects they will take with them to their next institution is not relevant. In this case the PI can give the postdoc a project that needs to be completed and these projects tend to be shorter in nature. In this case the postdoc may be learning an entirely new field and may require additional 'ramp-up' time to orient themselves in a new field. Again the PI must provide support and guidance but should focus on connecting the postdoc with industry professionals.

Fundamental issues and challenges

Low-pay, low-pay, and low-pay. A postdoc has just spent years completing a challenging PhD. They are a highly skilled and qualified scientist. Yet, they are paid substantially LESS than a technician with zero-two years of experience in the industry setting. This signals to the postdocs that they are un-valued by the institutions that employ them. The NIH needs to increase the pay standard and account for regional costs of living.

Existing NIH policies, programs, or resources

Improve websites and navigation ease when finding information on these websites. I think rather than expanding the NIH needs to consider streamlining.

Proven or promising external resources or approaches

More pay would substantially improve job satisfaction. While many love the work they are doing they do not love struggling to afford basic necessities and pay bills. They do not love having to put their personal life on hold simply because they cannot afford to buy a house, buy a car, or start a family.

Response 570

Perspectives on the postdoc roles and responsibilities

I would like it to naturally lead to a PI position in the lab/Institute where I am a postdoc.

Fundamental issues and challenges

No permanent contracts availableb for junior researchers. One have to secure their own funding to continue having a job. Lack of stability and security leads to higher stress, less focus on research and a poor life work balance.

Existing NIH policies, programs, or resources

Changes should be globally applied in academia. It would be helpful if institutes provided permanent positions based on starting NIH funds.

Proven or promising external resources or approaches

No response

Response 571

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Pay.

Lack of journal publication standards.

Grant funding.

Existing NIH policies, programs, or resources

Increase pay.

Increased mentorship.

Proven or promising external resources or approaches

No response

Response 572

Perspectives on the postdoc roles and responsibilities

An independent research scientist-equivalent position with help on research funding and equipment/materials provided by PI/advisor. May help with training of graduate students and other junior trainees in the lab. Should continue growing area of expertise beyond PhD research with advising from PI.

Fundamental issues and challenges

Extremely low compensation especially compared to private industry and high COL in many college towns. This is often a role taken on when people have greater financial responsibilities (e.g., childcare, retirement planning, supporting parents) and potentially for much longer than graduate degree programs. Additionally, tenure-track positions are increasingly limited while adjunct/lecturer/other contract-based and short-term positions are becoming more common in academia, reducing the long-term career incentives for a postdoc. Finally, many postdocs are expected to be highly productive in a new topic with minimal training, potentially aid with funding the lab and training lab members, and essentially take on a PI-like role while not being compensated for it. Issues with PIs in general can contribute, such as a lack of a standard and effective management training program, limited use of industry-standard team-oriented tools such as project management and administrative support for all groups (not only well-funded ones), and the "publish or perish" culture which can incentivize PI abuse/mistreatment for the sake of productivity over strong mentorship. Additionally, small lab environments make it very obvious when a complaint is made about a supervisor; some thought about how to shield trainees from retaliation when making a complaint would make the work environment better.

Existing NIH policies, programs, or resources

Raising NIH salary caps closer to industry standards and to account for higher cost of living. Longer-term contracts. Modifying grant proposals to incorporate references from current trainees and/or students to

ensure PIs are incentivized to treat lab staff well, rather than rewarded for publication records and other individualized achievements. Requiring PIs to meet a minimum level of mentorship involvement and delineating reasonable expectations for workload in a given role.

Proven or promising external resources or approaches

Implementing required and effective management training programs for all PIs. Incentivizing strong mentorship and service records in addition to publications at different rungs of career progression (e.g., references from trainees). Tying institutional overhead costs to administrative support of labs (e.g., an administrative assistant assigned to a subset of labs in a given department.)

Response 573

Perspectives on the postdoc roles and responsibilities

As a postdoc, I am expected to train and mentor graduate students that join the lab, and to dedicate 100% of my efforts toward research/related activities. I am, and am expected to be, extremely independent. I view postdocs as the primary drivers of lab productivity and success.

Fundamental issues and challenges

We simply aren't paid enough. Many of us have multiple degrees and 10+ years of experience in our field, and our pay does not reflect nor appreciate the amount of experience that we have, the quality of work we produce, and the importance/integral nature of postdocs to a lab, especially to a lab with an established PI who has many other responsibilities. Many of us are at the age where we are supporting families, and this is nearly impossible to do on a postdoc salary with inflation and housing costs. I know many colleagues who have left academia for industry solely for monetary purposes.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase postdoctoral pay, more support for trainees with families/children

Response 574

Perspectives on the postdoc roles and responsibilities

I loved my time as a postdoc aside from the low pay and negative consequences of securing postdoc fellowships. I was given opportunities to expand and refine my research, mentoring, and communication skills. While it was important I generate data and publications, I was also afforded time and resources to grow as a leader and mentor. Those things are essential to the role, yet there is no oversight for investigators who do not support such opportunities.

Fundamental issues and challenges

Treat them more like employees with equal benefits. No accountability for investigators who treat postdoc a like cheap labor.

Existing NIH policies, programs, or resources

Make postdoctoral fellowships administered by institutions such that we are employees who qualify for retirement benefits and income tax withholding.

Proven or promising external resources or approaches

No response

Response 575

Perspectives on the postdoc roles and responsibilities

For context, I have a non-clinical degree. I went straight from doctoral training in a department of psychology to a non-tenure-eligible faculty position at a research intensive university (R1). I have been at

my current position for about 2.5 years. So while I am formally not a post-doc, there are similarities between my position and what is typically considered a post-doctoral position. I will comment on both my experience and my observations of post-docs in my department.

I believe the purpose of an academic post-doc is to obtain more experience in a particular area or to make a transition to a related area of expertise. Ultimately, the post-doc should be learning how to be an independent investigator, or if that is not the post-doc's goal, to better articulate and gain the experience and connections needed to make a leap into a support role within the biomedical enterprise. Many but not all in our department try to apply for K awards.

In practice, a post-doc fellow is sometimes used to do a variety of tasks that are necessary to the PI or the large research group, but lack programmatic threads of consistency. For example, a post-doc I know routinely does literature reviews on disparate areas of research, which can be helpful but generally do not lead to publications. Post-doc fellows are also sometimes used to develop the infrastructure for a long study (e.g., longitudinal, multi-site) but then rarely benefit from the fruits of that particular labor (publications and conferences come out well after the post-doc leaves). Are these all good research experiences? Perhaps in the long-run, but for short-term metrics (and post-docs are often quite short!), this does not serve the post-doc fellow well.

Fundamental issues and challenges

Low pay is an obvious one, particularly in large metropolitan areas. In some ways I feel that post-docs are treated well in my department as there is emphasis on getting them independent positions if that is their wish. They also get protected time. Post doc positions can be precarious and not well-designed in part because the positions are often opened conditional on the PI receiving a grant, and PIs needing to fill that effort almost immediately.

Existing NIH policies, programs, or resources

It seems to me some departments really value a K and some do not. If a post-doc is in a department that does value it, he/she will get the mentoring needed to develop a successful application. If they are not, then a post-doc likely has a more difficult time on the job market. Could incentives be changed so departments generally want to support their post-docs this way?

Job security is another big issue for retention. At the medical school I am at, some non-tenure-eligible faculty are on yearly contracts and some are on three-year contracts. However, this still feels very precarious. A PI has a lot of power to help or hurt post-docs. There needs to be a better check and balance at either the institutional level or the NIH-level to ensure that post-docs are not taken advantage of with little to no recourse. By taken advantage of, I mean a significant part of their day-to-day working on tasks that do not benefit their career, though of course there are other examples as well.

Proven or promising external resources or approaches

No response

Response 576

Perspectives on the postdoc roles and responsibilities

An academic postdoc should be seen as a training opportunity to develop the skills required to become an independent academic scientist. This includes receiving formal and informal mentored training in a scientific (experimental design, technical, etc) discipline of their choice, as well as career development training in teaching, mentoring, networking, grant writing, and laboratory management.

Fundamental issues and challenges

The fundamental issue inhibiting recruitment, retention, and overall quality of life for postdoctoral trainees in academic research is the complete lack of a fair or competitive salary. There is no incentive for Ph.D. scientists to do an academic postdoc with a starting salary of ~$56,000 annually (if they are even paid according to NIH stipend levels) when there are opportunities in private industry starting at 2-3X this amount. This low salary becomes even more inhibitory for scientists from historically disadvantaged or excluded backgrounds who cannot afford this "opportunity cost" or scientists who have to support families. It is a major DEI issue that the academic postdoc profession excludes any and all scientists who cannot afford to sacrifice salary or healthcare benefits for 4-5 years, not to mention job security. As a new (Fall

2022) tenure track faculty member at a costal institution, it is extremely challenging to recruit a postdoc. Not only do I struggle with the ethical quandary not being able to pay a highly skilled Ph.D. scientist what their labor is worth in the market, but it is not possible for a postdoctoral scholar paid according to the NIH stipend level to own a home or support a family in this state. I cannot in good faith advise a Ph.D. student who does not have generational wealth or support from a spouse, or someone who must also support children or other family members to give up financial security to pursue an academic postdoc position. This means that academic institutions are missing out on huge portions of the talent that could otherwise be available to advance research and teaching.

Existing NIH policies, programs, or resources

Additional allowances for housing and childcare should be included in training grants (T32, F32, K99), as well as increasing stipends. These funds should be adjusted accordingly based on local cost of living. Ultimately, increasing postdoctoral salaries for scholars not eligible for training grants, or those who are eligible but do not receive them in the incredibly competitive funding environment, will require cooperation between the federal government/NIH and extramural institutions. It is not feasible to simply declare that starting postdoc salary has been increased by whatever percentage is appropriate without providing PIs the additional budgetary support that is required to do so.

Proven or promising external resources or approaches

No response

Response 577

Perspectives on the postdoc roles and responsibilities

I view my postdoc position as an opportunity to obtain additional scientific training and prepare me for a tenure-track position in academia.

Fundamental issues and challenges

The prevailing wage is simply unable to afford postdoc scientists decent life quality that is commensurate to their education and skill levels. While postdoc makes moderately higher salaries than grad students, many postdocs have reached a later life stage when they may want to start a family. However, the child-rearing cost for someone on a postdoc salary is prohibitively high in postdoc-heavy areas like NYC, Boston, or SF. The post-COVID inflation has further pushed many postdocs to financial cliffs. Even in a perfectly supportive and vibrant lab, doing a postdoc is simply not financially sustainable except for the lucky few who are supported by rich partners or family trust funds. Saving a collapse of the American pharma/biotech industry, academic postdocs are increasingly unappealing.

Existing NIH policies, programs, or resources

I do not believe any incremental improvement would revert the ongoing hemorrhage of the postdoc-level workforce except for a substantial increase (more than 50%) in wages and benefits. It is clear to most postdocs that the chance of landing a tenure-track position is extremely slim, and most postdocs would have to end up seeking employment outside academia. Thus, for most postdocs, their best interest is to pursue an alternate career path directly out of grad school, or only stay in their postdoc position as long as it is needed to enable them to acquire the specific skills to land industry positions. I am not surprised that fewer and fewer newly minted Ph.D. scientists want to pursue postdoc training at all. In fact, what is truly remarkable is that this trend only becomes apparent in the past two years. Probably in the pre-COVID era, the steady influx of foreign-born and trained scientists has helped to stabilize the supply of postdocs. However, the deteriorating conditions for immigrant scientists and the disruption of travel during the COVID period make people less willing to relocate. I am convinced that a human resource crisis in American academia is coming. And I hope NIH will not be misled to believe that they will be able to fix this crisis with token gestures.

Proven or promising external resources or approaches

NIH should strive to convert more temporary postdoc positions to long-term research scientist positions, with competitive compensation. Hoping to lure more talented people to take poorly-paid, overworked, temporary jobs like the current postdoc positions would be a fool’s errand.

Response 578

Perspectives on the postdoc roles and responsibilities

An NIH postdoctoral position to me means a traineeship to support your emergining independence buying time between the PhD and receiving your first grant.

Fundamental issues and challenges

Lack of Salary

Existing NIH policies, programs, or resources

Improve salary structures for postdocs so they can focus on training and not worry about financial insecurities.

Proven or promising external resources or approaches

No response

Response 579

Perspectives on the postdoc roles and responsibilities

I believe postdocs mostly operate independently from their PIs, rarely receiving guidance or mentorship. They are professional researchers, and frequently serve as the primary mentors to graduate students in their labs. They are often responsible for the maintenance of complex systems (data storage, advanced equipment) that take time away from their own career development and do not receive additional compensation for this. Postdocs are considered trainees, but this is inconsistent with the work postdocs do and the responsibilities they have.

Fundamental issues and challenges

We are paid very little compared to our peers in industry. We also don’t receive competitive benefits. It is also well known that obtaining a tenure track position is highly competitive, so many postdocs feel that continuing for too long in the role is simply delaying the inevitable pivot to industry. Postdocs have trouble affording housing and child care. Postdocs put off major life events due to the financial constraints of their compensation.

Existing NIH policies, programs, or resources

Pay us more. Help us get real benefits from our host institutions like child care and retirement plans. NIH establishes a minimum salary for postdocs, but this does not scale with cost of living increases due to inflation or local economies. $54,835 might be acceptable compensation for a professional with an advanced degree in a rural community, but NIH funds many postdocs in places like Boston, New York City, Palo Alto, San Francisco, and Los Angeles. It is difficult to get by in places like that on such a salary. This is particularly true for postdocs coming from underserved communities, whose families may not be able to assist them financially.

Proven or promising external resources or approaches

Pay us more.

Response 580

Perspectives on the postdoc roles and responsibilities

To me, the purpose of this position is mentor-guided

1. development of expertise in a new field of study;
2. development of further independence in the design and execution of research projects;
3. acquisition of transitional independent funding (if academic plan);
4. optimally also mentorship experience (if academic plan) or job-relevant expertise (if industry/government/etc. plan).

Fundamental issues and challenges

1) Funding. Postdocs are not paid enough, period. They often work >60 hours per week, often in high-cost-of-living areas, for roughly half as much money as similarly trained industry peers, with fewer benefits.
    a. Benefits. Childcare resources are lacking in general in the US, and postdocs are often young parents.
2) The duration of a "successful" postdoc position is too long. In some fields, 6 or more years after PhD before true independence is expected. This is infantilizing, and combined with (1), financially impractical.
3) There are not enough accepted opportunities to prepare for the diversity of career options after postdoc period is over, e.g., networking/management for industry.

Existing NIH policies, programs, or resources

1. Salary and benefit guidance should be updated in several ways: minimum levels increased, local cost-adjustments implemented.
2. K (and similar) awards in practice seem to require significant (years' worth of) preliminary data, regardless of prior research experience and the mentor's expertise. Perhaps for PhDs (including MD/PhDs), the requirements for preliminary data in K applications could be minimized to shorten the already long postdoc period.

Proven or promising external resources or approaches

No response

Response 581

Perspectives on the postdoc roles and responsibilities

The salary is too low. There is no job security.

Fundamental issues and challenges

The salary is too low. There is no job security.

Existing NIH policies, programs, or resources

The salary is too low. There is no job security.

Proven or promising external resources or approaches

The salary is too low. There is no job security.

Response 582

Perspectives on the postdoc roles and responsibilities

Postdoc is a time to think deeply about science and develop a vision on what you want to add to your field and then start to show your ability to execute on that vision.

Fundamental issues and challenges

Major limitations are the limited number of interesting labs as well as low salary.

Existing NIH policies, programs, or resources

Main thing is increase pay. Should be possible through PI and should be able to make more if you receive funding.

Proven or promising external resources or approaches

No response

Response 583

Perspectives on the postdoc roles and responsibilities

I view postdocs as the people who lead the lab science, with intermediate experience in hands-on techniques in the lab and mentorship of students and interns. With guidance from a PI, they make the decisions about how to carry a project forward and carry out the work for that to happen. They are the next generation of scientists to lead labs, though opportunities for advancing to the next level are not as available as many would like.

Fundamental issues and challenges

Postdoc life is often time-intensive and frustrating. Between writing grants and manuscripts while also carrying out experiments and mentoring less experienced lab personnel, it is extremely exhausting and sometimes almost impossible to complete daily tasks within a normal 9-to-5 work window. This creates a poor work/life balance and incredibly high stress and pressure. To make matters worse, the pay for postdocs is atrociously low. NIH salary standards create an extremely poor threshold for how much money postdocs should make. As the NIH is the primary funding source for most academic research, setting NRSA stipend levels to below $60,000 when individuals who leave academia can receive a starting salary at twice that amount is absurd. The fact that these stipend levels also do not take into account the cost of living for the awardee also creates an incredible disparity between individuals at different locations. This is also the period of life in which many are starting their own families. Low incomes do not help with this. Another issue is that there are few academic faculty positions available, making the postdoc position one that is very indefinite and difficult to advance beyond. With all this considered, it isn't surprising that many postdocs are leaving academia to pursue other careers.

Existing NIH policies, programs, or resources

The programs, resources, and opportunities provided by the NIH are great. However, the lack of money for stipends is probably the primary concern for most postdocs. Until these are improved, many postdocs will continue to leave academia.

Proven or promising external resources or approaches

No response

Response 584

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I really appreciate what you are doing with this RFI. In addition to this RFI, I would like to suggest that quality-of-life in pre-doctoral work likely has a big impact on the number of graduates that go on to post-doctoral work. I bet there are a lot of PhD holders who got burned out before they could give postdoctoral work any significant thought.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 585

Perspectives on the postdoc roles and responsibilities

Work on one or more specific projects with minimal to no supervision.

Fundamental issues and challenges

"That's the way things are because that's the way things have always been." Faculty feel that changes to the workplace environment to help with recruitment, retention, or enhancing quality of life coddles postdocs and spares them of the gauntlet that faculty had to face when they were postdocs. I do not know a single postdoc that intends to stay in academic research. They are all either waiting for the right industry position or on their permanent residence because they are locked in their current position by a visa.

Existing NIH policies, programs, or resources

I do not know.

Proven or promising external resources or approaches

I do not know.

Response 586

Perspectives on the postdoc roles and responsibilities

A postdoctoral position has been seen as a transitional phase for individuals seeking to become independent researchers in academia. In particular, this means that as a postdoc, one should be able to:

1. Generate their own project ideas while working within the framework established by their PI,
2. Develop additional technical skills, and
3. Have the freedom to write postdoc career development research proposals (such as the K99 or K01) without restriction.

Fundamental issues and challenges

The primary issue with respect to recruiting, retaining, and improving the quality of life for postdoc trainees is the insufficient funding available to principal investigators (PIs). The persistently low salaries for postdoc trainees, in my view, are a result of the PIs' inadequate research funding. In addition, when funding is inadequate or overly competitive, PIs may assign a single postdoc with duties that would normally require the efforts of two or three postdocs or graduate students to complete within a feasible timeline, which leads to decreased quality of life of postdocs.

Existing NIH policies, programs, or resources

It would be advantageous to broaden the funding mechanisms available for postdoctoral career development. Nowadays, numerous institutions consider not only a postdoc's prior funding record, but also their current funding status and ability to bring in external funding upon employment. Expanding opportunities for postdocs to secure such funding would enhance their retention rate. Furthermore, the grant scoring process, particularly for postdoc trainees, should be revised. For instance, some grant proposals submitted by postdocs are rejected due to the perceived high risk associated with the proposed project. In my opinion, the system should encourage grants that involve high-risk, high-reward projects, particularly for postdocs who are transitioning to assistant professor positions. I believe that the NIH's cautious grant scoring approach needs to be reformed.

Proven or promising external resources or approaches

No response

Response 587

Perspectives on the postdoc roles and responsibilities

My incoming perspective to a postdoc was to learn new technical skills, and understand how to start my own lab with the developed skills from my graduate and postdoctoral training. My experience as a postdoc for several years now is that its graduate school without graduate school demands (classes, assisting professors with teaching etc). My perceived experience of postdoctoral training was only actualized after earning an NIH-NIGMS IRACDA award where the program actively trains post-docs professionally, and helps them with transitioning from that position to a faculty position.

Fundamental issues and challenges

Academia has made it a burden to maintain intimate relationships with loved ones, with no clear guidance on how to transition from postdoc to faculty without any other external aid outside of your lab. In addition, postdoctoral pay and benefits are not as competitive as industry or other nonscientific careers. A difficult realization about doing a postdoc is that it is more isolating/lonelier that doing a graduate program. You don't have a cohort to interact with, a program that can guide your or aid you with any issues that may come up and if your part of a large department you may not know/interact with other postdocs.

Existing NIH policies, programs, or resources

I believe the IRACDA program is an excellent program that successfully trains and builds a community of postdocs that can grow to depend on each other. I will admit that I was not aware of most of the other resources, programs and policies provided by NIH. But I don't believe that it would be as helpful as something like IRACDA. It would have to be something that is advertised in large conferences so that prospective postdocs or current postdocs can be aware of them.

Proven or promising external resources or approaches

Promoting more mentoring outside of postdoctoral lab (especially for required letters of recommendation for applications), external advisoray meetings to check in on postdoc candidates and their career training and mental well being. Higher wages to match industry.

Response 588

Perspectives on the postdoc roles and responsibilities

The postdoc is a mildly superfluous position mainly created by bottleneck towards permanent faculty positions. The PhD is already a training position, so there is no reason for the postdoc to be another training position. Especially in the US, increasingly longer PhDs and increasingly longer postdocs can hardly be justified as training anymore and is instead used as a tool to keep cheap labour.

Fundamental issues and challenges

Low pay, low job security, no control on how PIs treat their postdocs and students, little work-life balance, exploitation by PIs (especially based on visa status).

Existing NIH policies, programs, or resources

Increase permanent and well-paid professional research positions, maybe get rid of postdoc positions altogether? Almost 2/3 of postdocs in US are visa holders, give more grants that are open to all and not restricted by citizenship / residency status.

Proven or promising external resources or approaches

Create more opportunities for people to switch between industry and academia. Create a system that relies less on recommendation letters from your PI / supervisor (e.g. as in industry), protects against exploitation, and holds PIs accountable. Finally, as already said: Increase permanent and well-paid professional research positions, maybe get rid of postdoc positions altogether?

Response 589

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a very versatile temporary position that a scientist can use to strengthen their resume for whichever of many possible careers they might be building, whether their focus is on teaching, policy, academic research, industry, education, or many others.

I do not consider this a training position—training happens the first week you are on a new job, NOT the first ten (often quite productive) years of your career. I find the framing of a postdoc as a training period to be more and more misleading as phds and postdocs get longer. This framing provides cover for universities to exploit professional working adults with terminal degrees and plenty of experience, who also often have aging parents and young families to care for. Anywhere this type of exploitation is available (in the form of: low wages, insufficient benefits, and vulnerability to unchecked power dynamics), the most marginalized or underserved members of our community are the first to suffer and

drop out, and so I see the issue of postdocs infantilization as "trainees" to be directly related to issues of diversity, equity, and inclusion in science.

Fundamental issues and challenges

I work at a private university in [redacted for anonymity] and most of my colleagues cannot afford to live in their own apartment anywhere remotely close to the lab they work in. This is a housing issue, but it is also a salary issue.

Existing NIH policies, programs, or resources

At my university ([redacted for anonymity]), when a postdoc gets an external fellowship they lose their [redacted for anonymity] employee status (somehow???) in selective and ill-defined ways, and so the protections and benefits guaranteed to postdocs by the university drop away, including the [redacted for anonymity] adjusted postdoc salary minimum, the retirement benefits, and any family leave benefits. The benefits that we retain (health insurance) are not specified in a contract (we have no contract) and so if [redacted for anonymity] felt a financial pinch they could revoke those benefits without any recourse.

This is *crazy* and happens at lots of universities. It is a cost-saving decision that universities know they can make, because they know their postdocs are not going to turn down a prestigious fellowship, even if it comes with substantial financial losses. If NIH added a stipulation to their awards that says the host university was not allowed to use this award as an excuse to quietly revoke their responsibilities to the postdoc as an employee, that would make a huge difference, and other private fellowship-granting foundations would likely follow suit.

Proven or promising external resources or approaches

It is very weird to me that mentoring is such a relatively small and indirectly measured part of a PI's evaluations, both by their department and by funding agencies. It is complicated, of course, to avoid conflicts of interest, but I would love to see some sort of mechanism for mentoring to be considered (as reported by maybe former mentees?) as part of an applicant's academic merit. I don't know of other funding agencies that do this, but I know that some universities, including the biology department at Northwestern, have seemingly pretty effective strategy in place for evaluating PI's mentoring in their faculty evaluations, and there are some very basic things like 360Â° feedback that is common practice in business and might be adapted to academia.

Response 590

Perspectives on the postdoc roles and responsibilities

An important step to get the necessary training to move to an assistant professor position.

Fundamental issues and challenges

Salary is the biggest problem. The salary for postdoctoral trainees is too low.

Existing NIH policies, programs, or resources

All comes down to the salary.

Proven or promising external resources or approaches

Improving postdoctoral conditions.

Response 591

Perspectives on the postdoc roles and responsibilities

This postdoc position is an academic bridge to ultimately becoming a tenure-track faculty. In order to achieve my goal of becoming a faculty, I need to be very productive during my postdoctoral training in all facets (i.e., grant writing, applying and receiving postdoctoral fellowships, publishing papers and abstracts, etc.).

Fundamental issues and challenges

The fundamental issue is the low salary. Although postdocs are a very important asset to the university for conducting research, writing grants, and scientific thinking, postdocs are usually paid much less than other staff members (i.e., professional research assistants [PRA]). Also, they even get less vacation time. Some universities even do provide parental leave for postdocs.

Existing NIH policies, programs, or resources

Receiving a career development award is still very competitive. It would be very helpful to reduce the funding line for those who are applying for a career development award.

Proven or promising external resources or approaches

No response

Response 592

Perspectives on the postdoc roles and responsibilities

I view it as a training step like a medical residency. One has his/her terminal degree but wants to specialize more to obtain more skills. This can be in mentoring junior students, grant writing, or specific scientific technical skillsets. However, post-doc should not be exploited and treated like research scientists in an industry position. Working 80+ hours a week is not feasible nor is a salary of $54k after ~10 years of higher education.

Fundamental issues and challenges

With an increase in PhD graduates moving into industry roles after the completion of one's terminal degree this leaves post-doc positions unfilled (in some areas but not all). One reason I know people select industry is better compensation and maternity/paternity leave. As I enter my last year of my PhD I am contemplating applying for post-docs but am concerned I will not be able to make ends meet as I want to have a family during this time as well.

Existing NIH policies, programs, or resources

I think they should be paid more. Government post-docs at a national lab make ~$85k/year (National Renewable Energy Lab in Golden, Colorado). Also, if a person chooses to stay at an institution but move labs for a post-doc this should not be dinged on subsequent grant applications if the applicant makes the case of a reasonable training step. Expecting people to move multiple times (with significant others and children) is often not feasible.

Proven or promising external resources or approaches

Because post-docs are also going into industry there should be more training opportunities of how to get an industry job just like there are workshops for K99/R00s and K01s.

Response 593

Perspectives on the postdoc roles and responsibilities

It is like a training provided to a freshly minted doctorate to transition into an independent researcher.

Fundamental issues and challenges

The most important issue is the lack of sustainability due to an inexplicably low salary. This impacts the performance and mental health of a postdoc.

Existing NIH policies, programs, or resources

The minimum pay should be increased.

Proven or promising external resources or approaches

No response

Response 594

Perspectives on the postdoc roles and responsibilities

It is an invaluable time to have some independence yet also a nice safety net. For me, it was necessary to build experience and confidence. I view it as a learning experience but absolutely as a job and different from being a student.

Fundamental issues and challenges

Like everything else these days, cost of living, salary, and as a woman in stem, benefits like maternity leave. These are less than desirable.

Existing NIH policies, programs, or resources

Maternal and paternal leave policies and grant extensions made friendlier and more accepted. Grant writing opportunities made more available and at lower cost.

Proven or promising external resources or approaches

ASHA pathways is a great grant writing experience but so limited in the number it takes. NIH funding a much larger program would be great. ASHA also does a MARC mentorship program that's excellent and that i would love to see through the Institutes.

Response 595

Perspectives on the postdoc roles and responsibilities

Being a current second year PhD student in a very prestigious university in [redacted for anonymity], I decided to get a doctoral training because I want to learn the rigorous regimen of research, but I don't see any myself becoming a postdoctoral fellow since faculty positions are extremely scarce and working conditions such as postdoctoral wages, publication rights, postdoctoral benefits, teaching opportunities, and overall incentive to become a postdoctoral fellow is extremely poor. I therefore see the postdoctoral position as a hypothetically temporary but practically semi-permanent state during which an individual lacks the prestige and wealth that comes with a faculty position, has little to no prospect of a future academic opportunity, and gets paid a near minimum wage salary to produce life-saving science for the benefits of executives and lawmakers.

Fundamental issues and challenges

Regardless of the location of the institution, many institutes pay below to barely minimum wages to postdoctoral trainees as an academic standard is collectively established by the institutional leaders which fits the exact definition of anti-competitive behavior. It should also be recognized that postdoctoral fellows are considered to be trainees in some institutions. This poses a risk for them to receive proper benefits and insurances. Additionally, international postdoctoral fellows face heavier burdens since their employers who are citizens and permanent residents can be biased toward treating their foreign employees harsher, expecting higher output, and subjecting them to higher scientific rigor (extensively repeated experimental results, added workplace scrutiny, etc.). All these happen in unison with the ever-present increase of living costs and lack of sustainable living conditions for postdoctoral fellows. Many institutions provide temporary (1-2 years) postdoctoral housing, but recently due to the lack of faculty positions, postdoctoral fellowships tend to drag for longer periods of time which creates an added housing issue for fellows. It should also be mentioned that internationally accessible postdoctoral fellowships are next to non-existent in the industry, and they don't cover potential costs for nationalization efforts like Green Card applications and H1-B processes for many bright-eyed, cutting-edge scientists.

Existing NIH policies, programs, or resources

I am not a policymaker, and my training does not confer to identifying program details that should be improved. I have outlined the issues in detail in the previous two prompts, so I leave it in your capable hands to make tangible change for the gradually deteriorating life quality of postdoctoral fellows by identifying the lackluster policies, programs and resources.

Proven or promising external resources or approaches

A proven incentive would be to provide extensive tax breaks for postdoctoral fellows EXCLUSIVELY (not for any faculty or staff) during the FULL DURATION OF THE POSITION in any given academic institution. This would incentivize postdoctoral applications, and help retain them in academia with better living conditions. Additionally, I personally believe postdoctoral fellows should be able to publish articles in which they are considered "Corresponding Author" because after receipt of a doctoral degree, there is technically no reason why postdoctoral fellows cannot publish articles of their own. Since all publication companies artificially create demand exclusively for faculty members to publish, this leaves an untapped resource for scientific creativity both on the side of the fellows as well as academia as a whole. Finally, another proven method to incentivize sales positions in international corporations is to provide people with discernible life improvements, such as a personal vehicle, extensively enriched paid time-off (or optional remote working conditions in post-COVID working conditions), and most importantly competitive wages (above $120,000 which is the pharmaceutical industry standard). Academic institutions and corresponding resources that support them are to fund scientific advancement, not the 18th summer home purchased by CEO's and executives that sit atop the very same academic institutions.

Response 596

Perspectives on the postdoc roles and responsibilities

It's a time to learn new skills, write an NIH grant to fund me as a faculty member, and get clinically licensed

Fundamental issues and challenges

Pay. I am seeing 5 clients in a private practice next year during my first year of post doc. Even though I am practicing under the supervision of another provider, this private practice work will increase my post doc salary by 50%. I don't feel like the compensation adequately compensates me for my skills. Not sure if this is an NIH rule or my university, but faculty members aren't able to pay students more based on existing experiences.

I love research, but with more possibilities to make an impact in the growing mental health tech industry (and other industry jobs), academia becomes difficult to justify financially. I could make over $150,000 if I chose an industry job instead. Being expected to move for a 2 year position also is difficult, especially for clinical psychologists who just had to move for a 1 year internship.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 597

Perspectives on the postdoc roles and responsibilities

Postdocs mostly do faculty work for below faculty wages. There is little systematic professional development or support to advance to tenure track. Often a candidate will need to have 2 or more Postdoc positions before successfully applying for tenure. At this point I view the position as a mechanism to steal more cheap labor from future scientists after getting plenty of labor from them as graduate students.

Fundamental issues and challenges

There are just not enough "senior" or tenure track positions for all new PhDs to fill due to intentional understaffed from academic institutions. Tenure tracks are expensive so let's hire 20 Postdocs and 100 graduate students to teach and do our research. This leads to future scientists living on poverty wages for over a decade to have a chance at a "good" position. We are also expected to be able to move and live anywhere and keep moving till we get something permanent. This excludes anyone with strong connections to their extended family.

Existing NIH policies, programs, or resources

Raise the NIH minimum wage for Postdocs and graduate students. If needed let it be based on where the institution is located like a per diem. My salary does not come from the NIH but it is based on the NIH minimum. Stop expecting future scientists to be independently wealthy to survive.

Proven or promising external resources or approaches

No response

Response 598

Perspectives on the postdoc roles and responsibilities

To me, a postdoc is the final training stage before becoming a professor. It should allow room for some independence in thought, experimental design, and protocols but also still provide guidance and feedback. The postdoc is also a stage where individuals should learn more about how to be a PI—including things such as writing additional/more frequent grants, learning about budgeting, and learning how to manage a team.

Fundamental issues and challenges

The biggest issue is a lack of pay for a very high amount of experience. Going to graduate school already puts individuals at a financial disadvantage compared to their peers. On most graduate school stipends, it's challenging enough to afford to live, making it near impossible to afford to save or put money away for retirement. Postdocs are frequently expected to move to some of the most expensive places in the US without much of an increase in pay. Despite this, individuals are highly trained at their graduate institutions—often in skills that they bring with them to their postdoc. At many Universities, you're also punished for receiving external fellowships, as benefits such as health insurance are taken away if outside funding is used.

A postdoc is also challenging for women, as for many of us, this is when we would be looking to start a family, and taking time away for family life is generally frowned upon. On top of the low pay, there are few benefits for families and mothers.

Finally, the culture of academia as it stands makes it hard for many trainees to persist to the postdoc stage. There's a lack of mentors who genuinely care about their trainees as humans. Instead, they expect them to be data-producing machines regardless of outside factors. There's also an acceptance of abusive environments (especially verbal abuse) that are hard to fight as a trainee. It's exhausting and unsustainable to work in this culture long-term.

Existing NIH policies, programs, or resources

The best resource the NIH could provide is an increase in stipends.

Additionally, I do not believe the often toxic culture in academia will change unless there's money involved. I've watched as multiple toxic mentors have consistently been reported to my University and absolutely nothing has happened to any of them. It would be helpful to use mentorship/training environment as a key metric on grants such as R01s. It would also be helpful to provide trainees/alumni with a place to speak about the environment of a lab in a confidential way. Perhaps similar to the recommendation letters in an F series grant, an R01 could require confidential statements from past and present trainees speaking to the training environment and capabilities of the primary investigator.

Proven or promising external resources or approaches

No response

Response 599

Perspectives on the postdoc roles and responsibilities

The role of the postdoc is to lead research under the guidance of a faculty advisor, while getting further training in science, mentoring and lab management to eventually pursue an independent research program

Fundamental issues and challenges

- Salary is the main issue. These are highly trained individuals who are typically at the age of needing to save for retirement, start families, become home owners etc. NIH-level postdoc salaries are inadequate to achieve that. In my field, they can lag many fold behind industry salaries, so recruitment and retention is increasingly harder. This is also an issue of diversity. Trainees from underrepresented backgrounds are historically less likely to be able to afford many years of low pay due to e.g. much less transgenerational wealth
- On the other hand, the size of individual NIH awards to labs has been stagnant for almost 25 years, making it impossible for labs to support higher salaries.
- Salary problems our compounded by the increase in the length of postdoctoral training
- Postdocs have fear over the high levels of competition created by little faculty position availability
- Toxic academic culture has also pushed postdocs away in my experience

Existing NIH policies, programs, or resources

- Increase postdoc salary
- Increase modular R01 budget to match
- Allow optional supplementation on postdoctoral salary for trainees with F-type awards (Getting those often means a paycut)
- Force universities to keep F fellows as staff. Being moved to "fellow" often means they lose benefits
- Extend the eligibility window for K awards. It is increasingly hard to be competitive for e.g. a K99 after just 4 years

Proven or promising external resources or approaches

No response

Response 600

Perspectives on the postdoc roles and responsibilities

I am a PI of an NIH-funded academic lab. Postdocs in my lab are essential for my research and educational mission.

Fundamental issues and challenges

1. NIH scale of postdoctoral salary poses significant financial challenges to postdocs to make a living. My institution is in one of the most expensive cities in the country (SF). Rent for a standard studio is $2000—3000 and it goes up to $4000/month or more for a one-bedroom apartment. In addition, postdocs are often at the stage of their lives to have families. Childcare costs more than $2000/month. A salary of $54K cannot support basic living needs.
2. there is huge inequity in pay when compared to postdocs in the industry, which is vibrant in the SF Bay Area. Many graduate students go to industry for their postdoc or skip postdoc altogether. This is especially challenging for labs working on translational research that overlaps with interests in the industry. Graduate students interested in translational research have many options for their next stage of careers. In recent years, more and more choose a path in the industry right after they graduate. I have been able to recruit postdocs from overseas. However, many leave for the industry after a few years leaving their work unfinished.
3. The current NIH pay scale is grossly unfair to these highly educated people. It takes advantage of their passion for research. Technicians freshly out of college make more than postdocs in my institution. This does not make any sense.

Existing NIH policies, programs, or resources

Increase pay for postdocs to be on par with industry standards.

Consider having regional cost of living adjustments, not a flat scale across the country. Other jobs have regional adjustments in pay. It makes sense to have this for postdocs.

Consider family supplements so they do not have to choose between research and family

Increase R01 modular budget accordingly so that it will cover a postdoc's salary while still having funds for supplies and recharges

Allow international postdocs to receive NIH postdoctoral fellowships. They work in a US lab, often funded by NIH. Why shouldn't they be eligible for NIH fellowships? Many stay in the US after they finish their training. It'd be brain gain for the country.

Proven or promising external resources or approaches

Many pharma and biotech companies, Genentech, Regeneron, Merck, etc have postdoc programs that are very attractive to postdocs.

Response 601

Perspectives on the postdoc roles and responsibilities

Qualification phase before becoming an independent researcher. This includes data analysis, manuscript publication, exhibiting research at international conferences. Training and mentoring in writing grant proposals and networking with and collaborate in the future.

Fundamental issues and challenges

Too many responsabilities distributed across too many projects that are not directly related to career trajectory and keeps from focusing on own development. This results in a bad work-life balance hence 50-70 hour weeks are common. PIs are mainly interested that the postdoc keeps the projects going instead on helping him developing his own research profile and becoming an independent researcher. At the same time, quality of life is less than average. Here in [redacted for anonymity] postdocs annual income are below the median income across all occupations and costs of living are disproportionally high, especially rents. Also, holidays are only few with 15 days per year whereas in industry both income and holidays, as well as other benefits are much better. Hence, there is a strong incentive of leaving academia.

Existing NIH policies, programs, or resources

More funding opportunities and trainings for becoming an independent researcher are appreciated. Increase of the baseline salary should account for local costs of living instead of having a one size fits all approach.

Proven or promising external resources or approaches

No response

Response 602

Perspectives on the postdoc roles and responsibilities

I see the post-doc as a form of early career scientist wishing to gain additional training or networking after graduate school. While it is a training position a postdoc is typically faced with tasks outside that of a typical trainee such as supervising and training graduate students and technicians as well as providing valuable skills to push lab directives and inform future lab initiatives.

Fundamental issues and challenges

Money. Particularly payment that is not adjusted for city. Much of the strong opportunities for post-doc growth coexist at institutions in cities that are quite pricey. A flat NIH minimum is absurd as many institutions in expensive places will use the NIH minimum as a crutch to keep paying post-docs considerably little for where they are and this taxes quality of life. Additionally institutions will argue the delta can't be made up since any pay above NIH minimum must be supplemented. Lastly the pathway to principle investigator is often too long (more than 6 years) to be payed so little. It makes the academic career path way less tenable particularly for those who come from less supported backgrounds. Worse off the promise of career after post-doc is considerably risky given the limited tenure track openings. To recoup the opportunity cost from sacrificing prime earning years at what would be considered low pay to other doctoral degrees (about 10+ if you count graduate and post doc training time) with an non-tenure track salary is simply a risky career move which is pushing recent graduates out of academic science and

into industry positions. The lack of security during post doc of being able to secure a job without uprooting ones entire life is a problem. Postdocs can't spend 7 years in a city during their early to late 30s (note these are also prime years for child/family development) only to uproot it all because the only available job is on the other side of the US.

Existing NIH policies, programs, or resources

Minimums with cost of living adjustments .Increased opportunity to post-docs to gain funding security (no a few K grants is not enough).

Proven or promising external resources or approaches

Acknowledging post-docs are more than trainees and often highly skilled, specialized workers acquired by institutions to deliver research goals and really are more of an employee in that manner and should be compensated accordingly.

Response 603

Perspectives on the postdoc roles and responsibilities

A job in research for a qualified PhD scientists who need a stepping stone to a faculty position

Fundamental issues and challenges

I would not consider a postdoctoral fellowship which did not provide compensation commensurate with the job duties (i.e. a salary competitive with PhD-level jobs with similar job duties)

Existing NIH policies, programs, or resources

Salaries need to be increased. At present, they are woefully inadequate and exploit workers who are desperate for a faculty position and are forced to do a post-doc first.

Proven or promising external resources or approaches

No response

Response 604

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are meant to provide the transition to a career as an independent scientist. The postdoc's responsibility to themselves is to take advantage of opportunities for mentoring and to take on challenging research projects that will advance their scientific careers. The mentor's responsibility is to provide guidance (not to much, not too little) for research projects and their selection, design, interpretation and publication that will establish the postdoc's reputation for performing rigorous, innovative, and impactful research.

Fundamental issues and challenges

Expectations and demands are high, and compensation is low. The matter of expectations and demands disproportionately impacts women, especially if they have children. The matter of low compensation disproportionately impacts any one that doesn't have a source of wealth.

The differential cost of living in certain areas needs to be considered by the NIH. A postdoc that avoids certain regions because of the cost of living despite the possibility that the best training opportunity exists in an expensive region is unfairly handicapping their career development.

Existing NIH policies, programs, or resources

The NIH should establish policies that take regional differences in the cost of living into account. The NIH should also liberalize the policies that restrict many training/career development awards to US citizens and permanent residents.

Proven or promising external resources or approaches

Pay them more fairly.

Response 605

Perspectives on the postdoc roles and responsibilities

The postdoc position is a job that is touted as a training opportunity. This vague definition as well as other factors allows PIs who advise postdocs to treat postdocs as laborers when convenient for the PI or as trainees when convenient for the PI. Using the title of trainee allows PIs to feel justified in overworking postdocs. Using the title as worker/laborer also allows PIs to feel justified in hiring postdocs to work as technicians with specific tasks that are more removed from the independent work and thought that goes into academic work. Postdoctoral researchers are both workers and trainees and should be respected as such rather than abused when it best suits the needs of PIs. A Postdoc's role involves having ownership of multiple projects and the freedom to guide them in directions that they see fit. Postdocs have responsibilities to maintain those projects, train others to work on those projects, and report back data and results to the PI and others in their field. Postdocs are scientists and thus have a role in the scientific community and should be able to write papers, network, and present their work to their colleagues at conferences, seminars, and meetings; this is part of their job and a part of their training. Postdocs have a responsibility to read, write, apply for funding, attend seminars, attend workshops or informational sessions that are useful for their research, knowledge, and growth as a scientist. Postdocs should have the opportunity to learn new skills and have the opportunity to teach, all depending on their future career goals; this is part of their role as both a trainee and a worker. Postdocs should be able to do these things in a 40hr work week and not be pressured to work more.

Fundamental issues and challenges

Academic culture has allowed for postdoctoral abuse which pushes out talented scientists from academia. Postdocs are notoriously overworked, frequently micromanaged, and often not given freedom to develop intellectually as scientists. Most of this abusive behavior is directed immediately by PIs who believe that postdocs must work 80 hours a week. Departments, which consist of leadership who are these PIs, recruit other faculty with similar mindsets who continue the cycle of abuse. In my experience as a Postdoc, I was told that PIs have suggested to other new PIs to hire postdocs because they are financially more worth it than graduate students—PIs don't have to pay for tuition, and the salary paid to postdocs is slim compared to the number of hours that they are pressured to work. This culture becomes harder and harder to break when the postdocs who want a different academia are pushed out; in other words, academia selects for people who are able to work in an abusive environment who then go on to expect that of other postdocs. Overwork, being underpaid, and abusive work environments strongly inhibit recruitment and retention of postdocs.

Existing NIH policies, programs, or resources

This is honestly something that you should pay people to brainstorm. Having the knowledge of every nih policy, program, or resource is not something that people have time to go through to suggest changes. Rather, I suggest you create a paid working group to really dissect out how these policies should be changed. Absolutely make sure this working group includes postdocs of all races, genders, and nationalities. I would also recommend not having ANY PIs on this working group to avoid power dynamics.

Proven or promising external resources or approaches

See my suggestion previously of a working group.

Response 606

Perspectives on the postdoc roles and responsibilities

I see the postdoc position as a temporary position in which one can get to lead research projects more and more independently, contributing to a lab's research and to the PI's career while also contributing to theirs, through gaining skills (research/technical, article writing, grant writing, science communication, time, project and people management.) that can be transferred to any post-postdoc career step, whether in or outside of academia. Because the postdoc position is temporary, it is also the responsibility of both the postdoc and their advisor(s) to co-create and regularly review an Individual Development Plan for the postdoc, in which they set milestones for skill building, academic accomplishments and the transition to the post-postdoc career step (includes career exploration, networking, job applications.).

It is crucial that, during the interview process and in the invitation letter, the focus is not only put on science and that data is shared about the cost of living in the city in which the institution is located, as well as financial, health, housing, child care and professional development resources available at the institution they will join, ways to connect with other postdocs like the Postdoc Association. This is so key for postdocs to get to know their future work environment, make an informed decision about the job offer that is made to them, and have relevant information to acclimatize to their new community of practice.

It is key that the postdoc and their advisor set clear expectations at the beginning of the postdoc position, by discussing and defining each other's responsibilities and roles, project and skill building priorities, meeting frequency and ways to acclimatize to the lab, productivity, time management and work/life balance, the IDP and professional development opportunities, ways to get mentors and sponsors that can support the postdoc's professional development and career transition.

Fundamental issues and challenges

1. Low salary—the NIH minimum salary is not enforced everywhere, and the cost of living in big cities makes it hard for postdocs to live decently, especially if they have loans, health conditions, families to take care of/support financially. Also, knowing that your cost-of-living-adjusted income (fig.2 in https://elifesciences.org/articles/40189) is less than that of a clown (https://www.nature.com/articles/d41586-020-03191-7) or a public transportation driver, but that you still have to work long hours and dedicate your health, energy and life to your research is demoralizing and unsustainable in the long run. Finally, the crucial roles postdocs play in lab management, research, training/advising others, getting grants, communicating about science is hardly recognized—https://www.nature.com/articles/d41586-020-03191-7.
2. No accountability system to check on the mentoring postdocs receive (a shame given the impact it has on their career decisions and well-being: https://elifesciences.org/articles/40189), and train their advisors if needed.
3. The lack of diversity & inclusion in academia and the competitive, racist, sexist, non-meritocratic culture makes it harder for URM postdocs to feel welcome, alters their sense of belonging and self-competency, prevents them from doing the meaningful work they want, does not provide them with looking-like mentors, and reduces their chances and motivation to remain in academe = vicious cycle.
4. Decreasing availability of career opportunities in academia for the people who wish to become faculty members—https://www.science.org/content/article/amid-pandemic-us-faculty-job-openings-plummet. Also, given the fact that, for people who end up in industry, doing a postdoc does not improve their hireability nor their starting salary (https://cheekyscientist.com/postdoc-is-waste-of-time-for-phds-interested-in-industry/), why do a postdoc when one could get a competitive hiring packet in industry right after their PhD?
5. Lack of professional development support outside of the NIH (OITE is great!). With career prospects being increasingly uncertain (https://www.nature.com/articles/d41586-020-03381-3 and https://www.nature.com/articles/d41586-020-02029-6), postdocs need more and more support to explore potential career paths and prepare their transition (https://www.asbmb.org/asbmb-today/careers/010121/transferable-skills-for-industry).

Existing NIH policies, programs, or resources

Love the OITE resources!

An important proportion (~50%) of postdocs in the US are international fellows, and most of the NIH grant opportunities are for US citizens or residents, which seriously limits their prospects and the pool of fellows who could get competitive grants and become faculty members after their postdocs.

Proven or promising external resources or approaches

1. A better and competitive salary, that is adjusted to the local cost of living: https://postdocs.mit.edu/about/vice-president-research-statement-salary-and-benefits—this will inspire other institutions and equip their advocacy postdoc groups with data to improve the working conditions of postdocs.
2. To provide self-paced professional development opportunities and help postdocs meet peers from other institutions: https://www.postdocacademy.org/ and the National Postdoc Association: https://www.nationalpostdoc.org/default.aspx (they have great resources on mentoring, supporting postdoc affairs, mentoring up, diversity: https://www.nationalpostdoc.org/page/resources).
3. To improve mentoring practices and make them more inclusive and mentee-centered: CARES Mentoring program—Register as a guest following these instructions: https://ctsi-d8.dev.umn.edu/sites/ctsi.umn.edu/files/2021-04/Mentoring%20Modules%20Registration%20Guide%202021_External.pdf—The system need a few minutes to acknowledge your profile, before you can access their Canvas and take the course: https://training.umn.edu/courses/12160
4. For culturally-aware mentoring: https://nrmnet.net/videos/2021/05/03/ibiology-and-nrmn-live-qa-culturally-responsive-mentoring/ and https://courses.nrmnet.net/course/c/UnconsciousBiasCourse
5. To enforce the IDP: https://grad.msu.edu/sites/default/files/content/mentoring/1-s2.0-S109727651500307X-main.pdf
6. Invest in future faculty by supporting the postdoc-to-faculty transition and equip them to become impactful and empathetic leaders, in addition to being amazing scientists: https://faculty.northeastern.edu/advance/faculty-recruitment/future-faculty-workshop/

Response 607

Perspectives on the postdoc roles and responsibilities

A postdoc is an academic employee tasked with performing original research to develop an independent laboratory or to gain skills to lead teams of professional scientists.

Fundamental issues and challenges

Postdocs are underpaid across the board. Postdocs are revenue engines for universities and are not compensated fairly. This selects for privilege and creates academic monoculture.

Existing NIH policies, programs, or resources

Research grant budgets of all varieties must be increased. All problems stem from the small budgets that have not meaningfully increased in decades.

Proven or promising external resources or approaches

No response

Response 608

Perspectives on the postdoc roles and responsibilities

In the majority of labs, postdocs are treated as basically-free, easily-exploitable labor that must rely on staying in the good graces of their mercurial principal investigator to preserve the faintest shot at one of the vanishingly few faculty positions that open up each year. I considered doing a postdoc after successfully procuring an F31—until I finished my PhD and realized that every postdoc I knew was on the poverty line and miserable, unable to control where they lived or take enough time to have a much-desired child. I took an industry job instead that paid me six figures right out of school and it's been great. We do awesome, handsomely-funded science. I never have to pay my own upfront expenses for conferences or wonder if I'll ever be reimbursed. And there's even a HR department to protect me from supervisors who might want to abuse their power!

Fundamental issues and challenges

This is a very simple problem. Postdocs do not make enough money to live above the poverty line in major cities; they are not granted traditional job benefits like paid parental leave or a retirement savings plan; and there is no oversight (or management training) for the principal investigators that unilaterally control their fate. If your PI decides to make an international trainee's continued existence in this country contingent on them working 100-hour weeks, they can do so. If your PI decides to make lab social events awkwardly sexual and talk to you about completely inappropriate topics, you have to grin and pretend like it's okay or he will ruin your career, not in a dramatic blowout but simply by writing you mediocre recommendation letters. These scenarios are easy to recall because I've seen both of them happen more than once. Bottom line? Pay your people competitively. Mandate that universities give postdocs the benefits they need to lead stable lives. And give them access to a functional Human Resources department.

Existing NIH policies, programs, or resources

NIH postdoc salary recommendations are routinely treated as maximums, rather than the suggestions they were intended to be. Double them. Mandate that universities provide postdocs with a complete employee benefit package.

Proven or promising external resources or approaches

If you want qualified scientists to opt for an academic postdoc over an industry job, make a competitive salary offer. If you'd like to incentivize women to choose to do a postdoc, provide both genders with generous, fully-paid parental leave and a childcare stipend (since postdoc salaries are *nowhere near* able to cover childcare—my own daughter's daycare costs twice as much per month as my mortgage!). Mandate that postdocs be considered university employees, ensure they are allotted paid time off and holidays, and help them understand and prioritize retirement savings. Encourage (and pay for) industry internships during postdoctoral training. Provide PIs with mandatory management, leadership, and sexual harassment training and ensure that trainees can take real and meaningful action against a mentor for violations.

Response 609

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a training role. It is meant to give you additional experience in project management and people management (mentoring). However, in practice, there are few opportunities to gain future faculty skills. Professional societies have few ways for postdocs to do meaningful work (help score abstracts or identify speakers for conferences). And while graduate students can often take on additional TA opportunities, postdocs often cannot as they cannot be classified as "student workers". And many non TA teaching roles require faculty status so postdocs often fall through the cracks.

Fundamental issues and challenges

The 5 year time clock makes it challenging to recover if the project you're hired on fails or if your funding runs out 2-3 years in. Yes, a second postdoc is possible, but it's so much harder to make tenure-track PI applying as an RAP than as a postdoc. I have dreamed of a career in academia 15 years and had a very successful graduate career, but am about to leave academia because I don't see a realistic way to make it to PI.

I am also tired of feeling like I fall through every crack in the system. I have been denied teaching positions because I'm no longer a student but not yet faculty. I lost access to benefits because my status switched from associate to fellow. In graduate school, fellowships often get you a pay raise, but as a post doc they cost you access to employee benefits.

Existing NIH policies, programs, or resources

Please find a way to make it so post docs paid on fellowships are still considered employees of their home universities. People hired as associates have decent benefits, get what should be an excited fellowship and are rewarded with loss of benefits they used to be entitled to by law. In other words, they receive unequal pay for equal work compared to what they did before the fellowship and to their postdoc associate peers. The way that fellowships are taxed/ classified as grants vs. loans vs. stipend vs. salary impacts the ability of anyone to do anything to remedy the disparity (assuming they even want to try). If the NIH and other

granting agencies were able to change the wording of the award and/or change how the award is dispersed so that postdocs can maintain employee status, it would create greater equity.

Abolish the postdoc title and make people go from graduate student to staff scientist. Allow staff scientists to apply for K awards with no time limits from date of PhD. This should make it easier for people to transition to PI regardless of one unlucky project or a couple of hard personal years or similar circumstances that prevent people from having a competitive PI application within 5 years of defending their PhD.

Proven or promising external resources or approaches

No response

Response 610

Perspectives on the postdoc roles and responsibilities

The reality of a postdoc position is as follows: trading a substantial increase in the freedom to drive your own research focus over that in your PhD for increased working hours, increased pressure to support your own research with grants, and substantial pressure to limit your commitments outside of the laboratory. While a postdoc is a necessary step towards an academic career, it is also a sacrifice that one must choose to make in order to pursue academia. It is the workhorse attitude of a graduate student with the grant and publication expectations of a professor. I left academia for industry after 7 years as a graduate student and 1 year as a postdoc because of financial and family planning, and to escape the vast gender gap in my STEM field which increases exponentially with seniority in academia (40% female graduate students, less than 30% female postdocs, less than 10% female professors).

Fundamental issues and challenges

I believe that many rising young scientists would love the opportunity to stay in academia and pursue a career in higher education. However, the compensation for and length of a postdoc position combined with the average time-to-degree of a PhD in the US has made an academic career dependent on either

a) delaying family and life planning,

b) becoming financially dependent on a partner or spouse, or

c) having a substantial alternative income. The average time-to-degree in the US for a STEM PhD is 7 years, with up to 5 years as a postdoc.

This means that in order to pursue an academic career one has to be willing to be compensated well below industry wages until age 34 (or beyond if more than one postdoc is completed). Especially for scientists who do not come from wealthy families, the ability to meet traditional life goals during this time—purchase a house, start a family, start saving for retirement—must be all but forgotten to pursue academia. While a change of salary alone would help this problem, other substantial support (a matched 401k, child care, overtime pay, limitations on time-to-PhD) is necessary to make the academic path competitive with industry.

Existing NIH policies, programs, or resources

Increase the base pay for postdoctoral positions. Require institutions that receive these grants to offer 401ks to postdocs. Require overtime pay after 80hrs/week of work by a postdoc. Require research institutions to pay a larger percent of postdoc salaries so as to not increase grant funding to pay at a living wage. Reduce funding to institutions that have a time-to-PhD over 5 years. Limit funding to institutions that cannot meet guidance to close the gender gap between their graduate and postdoc programs. Require child care resources at funded institutions.

Proven or promising external resources or approaches

No response

Response 611

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as a means to prepare recent graduate students towards independence. While I do think additional preparation is needed to become a tenure-tracked, funded, PI, I view it as a drawn out process with no guarantees. As a successful graduate student, many PI's have encouraged me to do a post doc because they believe I'm "made for academia," but I view it as another 3-5 years of limbo with an abdominal work-life balance with no assurance that you will successfully secure a PI position.

Fundamental issues and challenges

The pay is my biggest issue with post doctoral positions. The NIH maximum salary cannot support an adult living in most cities. I refuse to even consider a post doctoral position because I cannot take the financial risk to do so. I am graduating with my PhD in Pittsburgh in less than 4 academic years and was offered an industry position with a starting salary of $90,000 in the same city. If academia wants high quality, healthy, supported researchers they need to raise the pay scale and allow them a decent quality of life. Additionally, the complete absence of a retirement plan is obscene. It's a huge sacrifice and blatantly irresponsible not to offer a retirement plan to individuals in their 20s/30s. To financially recover from these decisions, individuals would have to place at a top tier institution (less than 5% chance in STEM) following their post doc, be incredibly well-funded (less than 1-5% chance depending on the study section), experience 0 discrimination at said university and have a wealthy partner. The odds of success are extremely low and, in my opinion, not work the sacrifice. The system is broken and I hope the input accumulated in the poll is considered seriously. I recommend raising the maximum pay, treat post docs like staff instead of trainees, and formulate a pipeline for PI placement. Without doing so, talented individuals are smart enough to go where they are appreciated, with compensation and support that reflects that.

Existing NIH policies, programs, or resources

The minimum pay for a 1st year post doc should be at least $70,000. A 401k or Roth IRA should be offered, and all post docs should get staff benefits at their institution.

Proven or promising external resources or approaches

Look at the average salary of a scientist in moderately-sized cities: Pittsburgh, Cincinnati, Chicago, New Orleans, and base the pay scale off of that.

Response 612

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 613

Perspectives on the postdoc roles and responsibilities

Post docs are trainees in years 1-4, then if they stay on, they are typically scientists. This should be reflected in a pay jump and potentially a title change.

Fundamental issues and challenges

I am a physician scientist and have maintained 75% protected time through federal grants for 12 years now. Talented post docs are critical for our projects' success—work that the NIH has deemed of high importance and worth funding. Talented post docs are difficult to recruit because they have skill sets that are also highly valuable for industry, which pays 3-4 times the salary. From the post docs perspective, they do have more flexibility and freedom than they would have in an industry job, but this alone cannot bridge the current funding difference. Further it takes 4-8 years for most post docs to experience enough lab environments to develop a unique program for independent funding. But by PGY4/5, post docs have families and require higher salaries than we can provide based on nih caps. Further, with the paucity of tenure track positions available, this path is high risk with an uncertain outcome.

From the lab perspective, the science would be more efficient if we could build sustainable team without turnover every 3-4 years. This requires a post doc to abstain from pursuing industry or a tenure track position and choose a research scientist career path. But, it's hard to support talent that would even choose this. The $500k/max direct costs for R01s is met quickly when 1-2 research scientists work full time on a project if their salary is a livable $100-$150k.

Existing NIH policies, programs, or resources

We are losing talent because non U.S. citizens are not eligible to apply for T32s or career development (K) awards.

Post doc salaries are too low after they have significant experience (pgy4+)

$500k direct cost max makes it difficult to full time career scientist salaries alongside other research expenses.

Proven or promising external resources or approaches

Conferences for post docs (similar to the ninds k awardee meetings) would be useful to foster community, understand challenges, and provide mentorship and guidance.

Response 614

Perspectives on the postdoc roles and responsibilities

A post-doc should be training PhDs to become a professor. But these days, a post-doc is just synonymous with cheap labor.

Fundamental issues and challenges

Money, money, money. In 2018, I did a 4 month post doc stint that was paying me $48K annualized. I applied for industry jobs, including interviewing for an entry level clinical coordinator position (bachelor's degree only, 0 years experience required) that paid the same amount as my post-doc. The worst part is that the clinical coordinator position had more growth opportunity for my career than a post-doc as I did not want to become a professor. If academics paid post-docs more than the bare minimum, recruitment and retention wouldn't be an issue. At this point in academia you can't support a family with a post-doc salary.

Existing NIH policies, programs, or resources

I have no comment as I have little knowledge here.

Proven or promising external resources or approaches

I have no comment as I have little knowledge here.

Response 615

Perspectives on the postdoc roles and responsibilities

I love being a scientist and take great pride in my role and my work. Being a postdoc has been much more challenging than being a grad student for several reasons, but on the positive side it has meant more of a sense of agency, ownership of my work/my career, and independence.

Fundamental issues and challenges

To put it bluntly, it's simply a matter of proper compensation. Postdocs are not paid nearly enough for their level of expertise and the amount of work they put into their jobs. Especially with the growing possibility of careers in industry which actually pay a salary commensurate with our training and abilities, academia will quickly fall behind if postdoc salaries don't increase soon.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 616

Perspectives on the postdoc roles and responsibilities

The postdoc's purpose is an opportunity to learn new skills that you want to use in your own lab in the future (if you can become a PI). Academic postdocs have become a holding pattern for scientists who are hoping to become PIs. One hopes to make more discoveries in the postdoc that can make one more competitive in the ever-increasing competition for PI positions. Other than learning another new skill and working to become more competitive for PI positions, the postdoc is an unnecessary training step. Everything you learn in a postdoc, you can learn in the PhD. The postdoc should be short to take advantage of learning new skills without spending too much additional time as a trainee a second time.

Fundamental issues and challenges

Postdocs are so underpaid that they cannot afford to stay in academia. The postdoc has become a drastic financial sacrifice people make, sometimes for over a decade, in the hopes of becoming a PI. Yet, the availability of PI positions is too low to accommodate all these postdocs. The "training" in a postdoc is all possible in the PhD. Postdoc should not be a second PhD, yet it has become that. Instead of learning new skills for a couple years and moving on, postdocs must complete an entire multi year research study. This is a problem that keeps people in low paid training positions for entirely too long.

Additionally, the supervisor structure of a single PI who alone oversees the career progression of a postdoc places too much power on the advisor. This structure isolates postdocs to the whim of a single person and puts postdocs at risk of bullying and harassment. Postdocs are unsafe because there is no person above or lateral to their PI who is involved in the research and career of the postdoc. If a postdoc needs to escape a toxic supervisor and go to another lab, they must start over again from scratch. This is in contrast to non academic positions, where one's career would continue to progress as they leave a toxic job and start a new job at the next career level up.

Existing NIH policies, programs, or resources

The NIH recommended postdoc salary should be raised to a realistic living wage, if not more, in all locations. NIH should incentivize hiring more permanent and better paid staff scientist positions. The goal should be to have fewer postdoc positions, which are temporary, under paid, and often unnecessary, and replace these positions with staff scientists. A more permanent staff scientist will be more efficient at research than a rotation of new postdocs who need to be trained every few years, so the biomedical research machine will be able to function with fewer, better paid staff scientists.

Proven or promising external resources or approaches

Industry provides a model for employee satisfaction. An industry scientist does not lose time in their career progression by leaving a bad environment and starting a new job elsewhere. This causes companies to compete for talent. This competition incentivizes companies to create better working conditions for employees. Universities and labs need to do the same. NIH has the power to shift funding towards staff positions that would operate like this and hopefully have more job satisfaction. Perhaps that might create an environment where postdocs are shorter, truly about training rather than a holding ground of cheap labor, and more optional for becoming PIs.

Response 617

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

In order to have more post-docs, and post-docs of a high caliber, we need to have a better pipeline of pre-doc students who are well-supported and provided with a viable pathway to a research career. Currently, the NIH caps on pre-doc funding are shutting down the ability to recruit, fund, and graduate doctoral students. At our institution, the student union requires payment of a particular stipend level that far exceeds the NIH cap. As researchers, we are caught in the middle. If we put students on our research grants as Research Assistants, NIH cuts the funding allowed for students to a level so far below what our institution requires us to pay students that we cannot fund, and hence cannot train our students. Our students cannot successfully submit training grants because the gap between what NIH will fund for a stipend and what our institution requires is so large that the institution will not be able to fill the gap. If we don't support and graduate strong doctoral students, there is no pipeline for post-docs. NIH needs to put out a formal policy that allows researchers to flex student stipend levels to meet what researchers are required by their institutions to pay.

Existing NIH policies, programs, or resources

NIH needs to change the funding policy for pre-doctoral students to allow greater flexibility and sensitivity to local economic climates as well as institutional requirements such as binding rules put in place by university unions that require researchers to pay students a particular stipend level that far exceeds the NIH student stipend cap. NIH should be able to find a way to review funding for RAs on research grants, as well as student training grants that allows for students to be paid what is required by their institution—rules that researchers have no choice but to oblige by—while still ensuring fiscal responsibility on the part of researchers. I am not advocating for no oversight or cap, but the current capping level that is blind to individual institution restrictions is shutting down the pre-doctoral student pipeline. If you do not have good pre-doc students, you will not have any post-docs.

Proven or promising external resources or approaches

No response

Response 618

Perspectives on the postdoc roles and responsibilities

Postdocs are the backbones of research laboratories. They fill the void between graduate student and PI. They are trained enough to have the technical competence that many PIs lack, and experienced enough to have the intellectual competence and perspective of where their science stands in the field—skills that grad students are still developing. We do benchwork, write papers, write grants, train new lab members, and often perform managerial tasks that are overlooked by a lab manager. I wear nearly every hat in my lab—from autoclaving to caring for the mouse colony to running flow cytometry to writing successfully funded grants to writing successfully published papers.

The postdoctoral "trainee" needs to be abolished as a concept. We are far past the time when the average postdoctoral position in the biomedical sciences is only a few years followed by a faculty position. The landscape has drastically changed over the last 50 years. There are too many graduate students and too few faculty positions for that. Make it a real staff job with salary and benefits that are not insulting. Sure, I am learning and perfecting many skills, but

a) what position in academia doesn't involve training, and

b) why does training preclude a dignified salary/benefits package?

Any other job that I would take for this amount of time would readily offer me these things, regardless of my employment length.

Fundamental issues and challenges

Academia classically attracts the most trained, intellectually curious, and motivated scientists—and what does academia do? Treat them like [redacted]. The salary is incommensurate with our worth. The benefits are measly at best, and woefully inadequate at worst. The [redacted for anonymity] "negotiated" a postdoc healthcare plan with Aetna such that each dependent is $600/month, and a family is $1300/month. Penn does not even offer a retirement plan with matching to postdocs. How insulting—I got a retirement plan with matching as a low tier lab tech at this very institution. Dental plan? Basically nonexistent. And the person in charge of these benefits plans [redacted for anonymity] is not interested in postdoc feedback. We have a postdoc association that gathered data from hundreds of Penn postdocs that detail what benefits improvements we want. [redacted for anonymity] is not interested in seeing our data, made clear during meetings with postdoc reps that are apparently for show. On the NIH minimum pay scale (that everyone seems to consider a maximum) coupled with laughably horrible benefits, only childfree, debt-free, health issue-free people can have a decent quality of life. Ableism at its finest.

I personally know multiple postdocs and grad students who were forced out of academia due to financial and personal wellbeing concerns. They were talented scientists who could have contributed a great deal in scientific content and in improving wellbeing in academia. Academia selects for humans with poor work-life standards for themselves and others.

With these factors becoming more widely known, academia will attract those who are not competitive enough to land an industry job. The all-hallowed "NIH minimum" will push out the best scientists because they are smart enough to know they can have a much better quality of life outside of academia.

Existing NIH policies, programs, or resources

It is your job to figure this out, not mine. You need to have paid labor to explore this.

Proven or promising external resources or approaches

Pay postdocs an adequate salary. Provide postdocs adequate benefits. These measures allow postdocs to focus fully on their work without the insidious stress of financial concerns. Train PIs how to manage a lab. Train PIs how to mentor. Decrease the other loads (academic committees, etc) of early career PIs AND clinician-scientist PIs to give them time more time for their science. Job satisfaction and recruitment will follow.

It is preposterous that for all their careers, pre-PIs are promoted based on their science.and then suddenly, when they become a PI, they have to do a COMPLETELY different job for which they have minimal training. It's not fair to them and it's not fair to us. Successful PIs are either naturally good at this, or their science is so good that their lab will put up with them being a poor manager.

My PI is a veterinary clinician-scientist. She has to go on clinics for 2 weeks at a time several times throughout the year, participate in veterinary resident selection, participate in faculty selection, and countless other administrative duties. This leaves extremely little time for training or mentoring me. I don't blame her—the responsibilities placed on her are absolutely insane—but I also don't want to have to beg for mentorship. I turn to other people in my academic environment for mentorship and training because I am highly motivated, but the lab suffers because of how little time she has to dedicate to her science and the people who are doing her science.

As a veterinarian and postdoc, I would love to be an NIH-funded clinician-scientist. But I see my PI's quality of life and quality of work, and I very specifically do not want that. I want to do good work, but I also want to enjoy my life.

Response 619

Perspectives on the postdoc roles and responsibilities

A postdoctoral position means the opportunity to learn additional skills that complement those learned in graduate school while growing ones network and independence as a researcher. Because I am interested in scientific research, I see the postdoc as a period to intensely focus on conducting research without the constraints of trying to obtain funding or teaching. Generally, I see a postdoctoral position as the opportunity to dive deeply into ones individual career interests without being bogged down by administrative or university responsibilities that one has in graduate school.

Fundamental issues and challenges

Money. Money. Money. It is very hard for middle class researchers (postdocs and project scientists) to have a stable life in academia. Compared to most jobs that require a PhD, a postdoctoral position has terrible benefits and job security. The universities look to federal funding agencies to set salary guidelines which haven't changed for a while. Postdocs get basically no retirement benefits and medical insurance rarely covers mental health support which is much needed for this community. I understand that the NIH can't improve medical insurance benefits or retirement benefits, but more funding needs to be available to PIs and postdocs to increase job stability.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 620

Perspectives on the postdoc roles and responsibilities

Postdoctoral researchers basically conduct their own research projects and often mentor and train grad students. They're basically low paid unofficial PIs. They are often the source of hands on experimental expertise especially since PIs won't have the time or necessary expertise to mentor each and every student.

Fundamental issues and challenges

Salary, salary, salary. Lack of upward mobility in academia. I am a last year PhD student and have not considered doing an academic postdoc since my second year, because I do not think that academia is a financially viable career. Not when you have to do at least 5 years of low paid work, while working incredibly hard. Why would would I choose to be an academic postdoc and get paid 60-70k when I could go industry and get paid 80-100k with a better lifestyle? Or if I manage to land a job at McKinsey, I could be paid 190k. It's ironic when it seems that all of the employers outside of academia value PhDs far more than academia does, but it also makes sense because there are too many PhDs in academia (supply) but not enough jobs (demand).

Existing NIH policies, programs, or resources

Increase the floor of postdoc salaries. Maybe have a path out of postdocs into a well paid staff scientist role, akin to industry. Be paid 80-100k. If you want to retain talent, you'll have to compete with industry on compensation and benefits.

Proven or promising external resources or approaches

Increased salary would reduce financial worries.

Response 621

Perspectives on the postdoc roles and responsibilities

I am interested in doing a postdoc, and I entered grad school thinking I would do one, but now I am not sure. I love academic research and curiosity-driven science and I am excited about the idea of pursuing further postdoctoral research, potentially in a new or adjacent biology field (I am in cell biology and am interested in evolution/population genetics).

Fundamental issues and challenges

I am a woman and intend to have children in the next 2-5 years. I am concerned about the feasibility of this both financially and professionally. I have noticed many postdocs struggle to support their children, particularly in high cost of living areas. I am also concerned about inflation and the overall feasibility of relocating (possibly temporarily) for a position that would not guarantee a further career in academia. If there were more staff scientist / permanent-postdoc research fellowships or opportunities, better childcare/family support, and a higher salary payscale for postdoctoral positions, I would feel MUCH more interested in pursuing one, and would probably not consider alternative-academic careers the way I am

now. Additionally, there is a HUGE variability in quality of PI/mentor and I am concerned about joining a lab, only to find the mentor abuses or bullies their students and staff. THIS IS NOT UNCOMMON. In fact, in my department there are more faculty with reported bullying and harassment than not—the idea of changing labs / institution for a postdoc, only to have uncertainty and a non-zero chance of the mentor being terrible, is not appealing.

Existing NIH policies, programs, or resources

I would be very interested in more opportunities for postdoctoral funding beyond 5 years, for people who wish to continue working in their postdoc lab without becoming a faculty member themselves. I would also appreciate if the NIH raised their salary minimums and provided more incentive for institutions to provide family infrastructure/security.

Proven or promising external resources or approaches

Higher postdoc salary scale minimums. Incentivize mentorship training and increased resources for postdoc support at institutions.

Response 622

Perspectives on the postdoc roles and responsibilities

I view it as a job

Fundamental issues and challenges

Low salary. The temporary nature of the job adds to stress and causes insecurity.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 623

Perspectives on the postdoc roles and responsibilities

My academic postdoc allows me to obtain specialized training in a field and lab relevant to the research area I'm interested in pursuing as an independent scientist/principal investigator. It also allows me to transition into pathway to independence awards.

Fundamental issues and challenges

Pay scale is a major factor; most institutions utilize the NIH minimum as the standard pay for postdocs and that is not affordable, especially with any student loan debt. Additionally F32 and T32 stipends utilize minimum as standard pay instead of minimum.

Existing NIH policies, programs, or resources

Improve the pay scale, it should increase with inflation.

Proven or promising external resources or approaches

Standards for training and requirements at institutions would be a valuable start. Most institutions have no infrastructure in place and allow PIs to govern postdoc training, which doesn't create sustainable or equitable training for all postdocs.

Response 624

Perspectives on the postdoc roles and responsibilities

Postdocs are hired to take mentoring and more difficult training and experimental work off the shoulders of PIs and sometimes grad students who have become so burdened keeping the lab running they barely have time to work on their thesis, from what I've observed and heard from others. It's not really a

position where you're getting training anymore. You're expected to be an expert at something already and be ready to teach others so the PI doesn't have to. This is fine, but the pay needs to reflect the level of responsibility being placed on postdocs.

Fundamental issues and challenges

Mainly money. You can make twice or thrice more in industry or consulting. Why go to school for the better part of a decade to then be paid less with a PhD than a manger at McDonald's? It's madness.

Existing NIH policies, programs, or resources

Women of reproductive age need WAY more guaranteed support. Pregnancy and early childhood slows down a woman's career in the best of circumstances, but those rarely exist and people get fired or taken off their projects because of the constant pressure on the PIs to publish so they can renew their grants. Women pay the price. Also, coverage for egg freezing so a woman can put off having children and gain some peace of mind if wanting to focus on career first.

Proven or promising external resources or approaches

Again, money. Also getting rid of abusive PIs by having some kind of blacklist so these people don't continue to get funding or something to address this pervasive issue.

Response 625

Perspectives on the postdoc roles and responsibilities

This is simple. The pay for NIH funded postdocs is ridiculously low.

Fundamental issues and challenges

Extraordinary underpayment

Existing NIH policies, programs, or resources

Higher pay for postdocs so that the risk of doing a postdoc is lower and it is not impossible for them to make age appropriate life milestones (having/raising family, purchasing home, etc)

Proven or promising external resources or approaches

No response

Response 626

Perspectives on the postdoc roles and responsibilities

A postdoc is a highly trained expert doing research that, when funded by NIH or NSF, the government has determined is important to the nation's goals. It is in a midlevel position in the academic career path with a large degree of influence and decision making in projects, high level of expertise, and often management and training responsibilities. Despite being "trainees", graduate students and post docs provide an expansive breadth and depth of knowledge fundamental to the work that NIH wants to be done and often are the only ones with the technical knowledge to complete the data collection, analyses, etc of the proposed work. Post docs often spend more time training others than being trained in anything in particular, so the framing of "trainee" is not only incorrect but feels like a downplaying of post doc's contributions and expertise to justify the low pay. Post docs and grad students are fundamental to the research mission of academic institutions and of funders, but are under appreciated.

Fundamental issues and challenges

The current system provides no stability for a decade or more after college. This is fundamentally driven by the low pay that does not allow us to have a substantial emergency fund, but is exacerbated by short term contracts that come with additional costs and leave us without a robust community to lean on.

There are also no benefits to ease the low pay, our stability is entirely dependent on what we're able to save. If funding for our project runs out and we are essentially laid off, we don't get severance to ease the transition. We don't have matching for retirement to ease the burden of saving (and many of us will not be eligible for social security benefits before the fund runs out in 2035). Our healthcare options are often

dismal or we can't afford better plans. There is no overtime or bonuses even when working much more than full time. Our pay barely changes with inflation–I have an NRSA and am actually making less than I did in real pay before the pandemic and subsequent inflation, even with substantial supplementation by my institution.

It is a testament to the immense dedication that researchers have to their work that anyone is working as a post doc right now at all. I'm not sure what I'll do because I genuinely love research and think the work is important for society, but it is impossible to justify doing a post doc on paper. I have about a year of my PhD left and know almost nobody from my institution or other institutions who are seriously considering a post doc, even if they want to do research.

Existing NIH policies, programs, or resources

The pay needs to be higher. It's not the only problem, but recruitment is not going to improve when the current system is asking people to chose precarity when they have skills that are valued substantially more elsewhere.

Proven or promising external resources or approaches

I like the GS pay scale and system that the rest of the federal government uses, with locality adjustments. If I want to do work for another branch of the federal government as a fresh PhD with my skill set, I would make at least 80k in my city and have benefits, standard hours, and decent job security. If I want to be a post doc doing work for NIH, I will make 56k with few benefits, no job security, and much longer hours. It's not clear why the time and expertise of biomedical researchers is so undervalued compared to other skilled workers paid by the government and recruitment.

Response 627

Perspectives on the postdoc roles and responsibilities

It's a position that allows you to expand your individual research focus that will drive the direction of your future lab.

Fundamental issues and challenges

The compensation is inequitable for someone with a terminal, advanced degree. There are no retirement benefits, undefined limits to how long the job will last, and little to no promise that at the end of a postdoc you will get hired as tenure-track faculty. There are no relocation fees paid and you are considered a trainee despite having completed the highest degree attainable in our field. The current state of postdocs is one of persistent infantilization—it forces those who participate to suffer poor wages and job insecurity while watching their non academic peers move forward with adult milestones (purchasing a home, starting a family, saving for retirement). For students who started pursuing research later in life, it is almost unthinkable to earn a postdoc wage with no retirement well into their late 30's and early 40's.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 628

Perspectives on the postdoc roles and responsibilities

For me, postdoctoral position is a way to acquire experience, publication and skills for grant writing. Theses assets will help me getting a PI position and, I hope, being a good PI.

Fundamental issues and challenges

In my opinion:

1. in academia salary is too low, only half of what you can get in industry.
2. Number of position in academia is ridicously low when compared to the amount of applicants.
3. Healthy balance between life and work is hard to achieve, when everything and everyone remind you: Publish or perish.
4. Work laws in the US states usually give a very low amount of days off, and universities are not really offering more. It seems impossible to convince people to work the whole year, without real break to relieved stress.

Existing NIH policies, programs, or resources

I think that the NIH sould remove all limitations based on US citizenship and permanent residency, since it excludes every researcher that didn't made his PhD in the US. Also, allowing postdoct to apply for NIH fellowship, for a longer time after their PhD defense could enhance their chance to get a position ans to feel more independant for their research. Otherwise, rely on a PI for the salary is not going the help the postdoc to feel independant anc confident to start his own researches.

Proven or promising external resources or approaches

No response

Response 629

Perspectives on the postdoc roles and responsibilities

Exciting and challenging.

Fundamental issues and challenges

Funding uncertainty, and the need to balance research demands with other professional and personal goals.

Part time work policy should be given for postdocs.

Existing NIH policies, programs, or resources

1. Inclusion of J1 scholars in various translational research training
2. Salary policy. A salary of minimum amount 100, 000 dollars should be given for the first year postdocs.

Proven or promising external resources or approaches

Every postdoc must be given a chance to work on grant proposal writing. It should be mandatory.

Minimum a 5 year visa should be issued for international postdocs (Extension for the next year can be based on the performance. Or a minimum of 6 months visa extension time should be given.

Every University should provide housing support.

Now, the tax exemption treaty for J1 scholars is 2 years. It can be extended for 5 years.

Response 630

Perspectives on the postdoc roles and responsibilities

To build our skills as independent scientists. To mentor, to train, to learn how to write and communicate effectively, and ultimately to be prepared for our next career step within a reasonable amount of time.

Fundamental issues and challenges

The label of "trainee" and the corresponding salary is insulting. Postdocs are treated worse than graduate students. I'm aware that I chose to do a postdoc in a major urban city, but it is disheartening when nearly 55% of my salary goes to "subsidized" housing—and I'm single. Academia does not deserve postdocs—this enterprise is exploiting our passion for science while we train and mentor their students, contribute to

funding, and build up the prestige and reputation of the institution. We're not naive to think "the grass is always greener", but if we are going to deal with isolation, harassment, and exploitation, we might as well get a decent paycheck.

Existing NIH policies, programs, or resources

Mandate competitive salaries for postdocs and graduate students in all grants.

Proven or promising external resources or approaches

Pay us, and hold exploitative PIs accountable.

Response 631

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is extremely important because health is the meaning of a happy life not for me or you but for everyone one:)

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 632

Perspectives on the postdoc roles and responsibilities

It's supposed to be a mini test run of being a PI. More independence in the lab, more exposure to the writing side as well as budget/admin side of running a lab. It's an opportunity to learn new skills and potentially switch fields or organisms without making the big commitment of starting a lab. It's a chance to try out an academic career without committing to it. Or at least ideally that's what it should be.

Fundamental issues and challenges

Pay isn't enough, especially when you consider that most people relocate for post docs and then potentially will have to move again after the post doc. Benefits aren't enough. Post docs should be well compensated and be entitled to healthcare and a 401k and other normal benefits. Many people end up doing two post docs and that's not appealing as a current grad student. The chances of getting a TT position afterwards is also slim so at times it feels like what's the point of a post doc since you could get better pay in industry or elsewhere. The salary is hard to live on especially if you have a family. Also, academia has a lot of politics and a lot of sexism/racism/etc. Putting myself in a position where I could be taken advantage of isn't appealing. A post doc needs the position to work out well and like a grad student might feel they have to put up with workplace mispractices and abuse in order for their career to survive. In industry, there is a better balance of power that isn't found in academia.

Existing NIH policies, programs, or resources

Raise the minimum stipend for grad students and post docs.

Proven or promising external resources or approaches

Better pay and benefits. Have stricter policies regarding workplace safety/harassment/etc.

Response 633

Perspectives on the postdoc roles and responsibilities

Note: I earned a PhD from an R01.

Much of the expertise and few of the rewards. Unless they already have a faculty position lined up, in which case, they are practically paid to do whatever they want until it starts.

So easy for well-intentioned postdocs, especially international postdocs, to be screwed over by the system. Substantial reduction in lifetime earning potential (as a conglomerate) if a person chooses to do a postdoc vs if they choose almost any job outside.

Fundamental issues and challenges

Note: I earned a PhD from an R01.

Postdocs are given empty promises that their position will improve their career candidacy. This is not the case unless they have a mentor supportive of a postdoc being proactive. Flawed system where PIs can exploit postdocs' ingenuity, time, and energy without much of a limit.

Discouraged from entrepreneurship or taking outside jobs that would give them greater perspective.

Mindset of postdocs is generally negative and I would not want to be around that kind of mentality for long.

No ceiling to how many hours per week the postdoc can be pressured to work.

No economics and no control = bad investment of time.

A good but not stellar grant record where a person just misses the mark a few times as a grad student combined with the decision to go into a brand new lab often means that the grad student does not end up with the strong publication record it takes to be competitive for postdoctoral fellowships.

I could write a 60-page grant proposal to the NIH to earn $60K per year OR I could write a 2-page resume to a biotech company earn $120K per year as a starting salary. With an employer matched 401(k) and performance bonus. Even if I was not motivated by money at all, the clock is ticking and I want to have a life.

Existing NIH policies, programs, or resources

Note: I earned a PhD from an R01.

My grad program talked about NIH policies that DID NOT EXIST to pressure me into not doing an extracurricular tech project that would improve my career prospects while doing some good for the broader community. I did not believe them, so I contacted my grant administrator at the NIH directly, and found that indeed, the NIH policies that my program cited DID NOT EXIST.

I told my program director, who practically gave me a "back in my day, training was this way" spiel. And that was it. That was not helpful.

Please do not allow our program directors to give us narratives that would stall our careers if we listened to them. It is not ethical for leaders to clip our wings by being dinosaurs themselves.

Proven or promising external resources or approaches

Having 80:20 time like Google has.

40 hour workweek so time is respected like regular adults. Overtime pay if more time is needed.

Widespread usage of project management software like Jira. Collaborative tools that make for production without inefficient data systems. If these things were not efficient, industry would not use them.

Response 634

Perspectives on the postdoc roles and responsibilities

Post-docs are PI's with training wheels. They are people who want to learn how to run a lab without the pressure of funding themselves. This is a management training role and a scientific thinking role. Post-docs should be leaders in the lab, perhaps running entire divisions of research but ultimate responsibility for the lab/research falls on the PI.

Fundamental issues and challenges

Primarily money. Post-docs have already put their earning potential life on hold to become highly educated and they are not paid well enough to defer that even longer. It's a low paying, high stress job where responsibility too often falls to the post doc. More and more, it seems like doing an academic post doc just isn't worth it when you can get more money and less red tape at an industry job. The payoff is also often not good because there are so few tenure-track positions open to post docs.

Existing NIH policies, programs, or resources

The minimum pay for post docs should be increased with appropriate cost of living adjustments. Perhaps also the support for young PIs could improve to increase job opportunities for post docs.

Proven or promising external resources or approaches

No response

Response 635

Perspectives on the postdoc roles and responsibilities

Independent research scientist funded and managed by academic PI. I do not view academic postdoc positions as training positions. Postdocs may receive training in structuring large research projects, grant writing, building leadership skills, teaching, etc., but these activities would be considered career/personal development in any other job sector and not grounds to broadly classify a position as "trainee" .

Fundamental issues and challenges

I accepted an industry scientist position immediately after graduate school rather than pursuing an academic postdoc position because of significantly lower pay in academic postdoc and burn out from academic environment. I knew that I could find a scientifically fulfilling career with a high salary and good benefits outside of academia, without a post doc. I did an industry internship during my PhD at a large biopharma company, where people were much happier than in my academic department, had better work-life balances, and more resources in just about every category of daily work life. I was also afraid of landing in a postdoc with a subpar work environment/PI, even with due diligence, and getting stuck in that situation. There are more strings attached in postdoc positions rather than simply applying to another job, giving 2-4 weeks notice, and moving on.

Existing NIH policies, programs, or resources

Increase pay for NIH funded postdocs to be competitive with industry postdocs would be a good start.

Proven or promising external resources or approaches

After pay increases, improving recruitment and policies for international postdocs is another suggested route of enhancing the postdoc ecosystem.

Response 636

Perspectives on the postdoc roles and responsibilities

My viewpoint of a postdoc is a position where I would have more responsibility in planning and executing a research project toward publication, preferably 1 pub per 1-2 years or 2 mega impact papers for 4 years worth of work (neuroscience). I see the postdoc role as having more responsibility in training new graduate students in techniques. But I also see the training part of the postdoc as gaining insight into review processes (reviewing others' papers and how to respond to reviews), grant writing, and disseminating/sharing research in the form of short talks at conferences.

Fundamental issues and challenges

#1 is the money. How is it that someone who has this much training is barely able to afford rent and food in some of the most expensive cities in the US? If you all are paying attention to the publications on where postdocs are hired from at research instituions, they are coming from Harvard, MIT, Stanford, UPenn, UCSD, Caltech, UC Berkeley, all of which are fairly expensive locations. In an area that costs $3000/mo to rent an apartment, how can it be expected that the person live on a $54k/year? The postdoc has so little benefits like daily commute funds (e.g. for the Caltrain), healthcare (it's a very basic plan), etc. In

addition, for women, how is there no funds for things surrounding childcare? Why is there such little sick day allowance? Why aren't moving expenses covered? The few benefits in addition to the low stipend is really telling of what the experience is going to be like --> not very good for how hard it was to make it here. People who do a postdoc often still have debt from undergrad education. The PhD didn't pay much because it was a training experience. And now the postdoc is again treated poorly compared to an industry career which we are also qualified for. It's an overwhelming experience to carry such a financial burden into the adult 30s and have to continue living on wage restriction.

Also, I'm a woman. Husband did his PhD first. I waited because it was overwhelming for us both to do a PhD at the same time. I started my PhD after his postdoc was over and he was in a stable career. So my career is pushed back—I'm mid-30s trying to finish a PhD. I will be too old for age-restricted awards.

Existing NIH policies, programs, or resources

1) Stop preventing faculty from using unrestricted funds to increase postdoc salary
2) A lot of faculty are going the route of advertising staff scientist salaries to those who don't want the tenure track route in order to recruit talent to get their research done and to get around the postdoc salary limits, but this makes people who DO want to train for faculty positions make a hard choice of staying the route or earning more money so why force future faculty to earn less over their lifetimes? why make the pathway to faculty so restricted and only "postdocs" can apply for NIH funding?
3) Why is there not really a place for permanent staff scientists in the life sciences? Is it really postdoc->faculty or the talent is thrown in the garbage? Why is there not a national lab space for life scientists? This exists for mathematicians and engineers (e.g. Sandia, LBNL). Why not life scientists? And
4) Why is the experience for writing a NIH grant such a guessing game? Why do you all not run workshops to help graduates get postdoc funding and help postdocs get independent funding? Why is it so mystified with curt criticisms from reviewers? It's as if it IS and inside club and you have to learn the politics and it's not supposed to be known and the money only goes to the Mens club. It's almost as if the goal isn't actually to solve health problems by funding the most innovative ideas but to give money to the insiders.

Proven or promising external resources or approaches

1) recruitment bonus (can even be from companies) and moving expenses paid (fully paid, not the dollar amount minus 25% tax)
2) emphasis on a mentorship network with less empasis on the singular letter from direct supervisor to limit the conflict of interest of the supervisor retaining intellectual property created by the postdoc or creating an unachievable work atmosphere
3) You know what would be cool—a thing like youtube for life scientists. What if I'm used to using whole tissue protein analysis techniques like IHC and DREADD or optogenetic manipulation, but I want to learn ephys or various transcriptomics methods? What if there was a website where postdocs could share techniques, both videos and forums for Q&A. There's ResearchGate but I'm dreaming about more of a YouTube for life science. What if there was a "please don't be a jerk, we're all trying to learn" policy on the site and an attitude of let's learn successful techniques (and in a knowledge-seeking attitude, discuss the nuances for doing things differently) but do so together instead of each independently guessing and wasting time and money? And what if that also included a grantsmanship section? And if you're a jerk, the behavior could be flagged and externally reviewed and have posting privilege restricted. I get doing things differently can lead to new knowledge, and that different companies for life science around the world produce different products that faculty buy which makes the technique need to be different. But why does it feel like the wheel has to be reinvented each time I move to a new lab, and then I'm judged on how quickly I can get results and publish?

Response 637

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Higher salary. That's all. Any other factor is just a noise.

Proven or promising external resources or approaches

No response

Response 638

Perspectives on the postdoc roles and responsibilities

Postdoc training ideally would be me getting scientific and technical support for 3-6 years so that I can look for fully independent positions and academic rank in a research institute. Postdocs should be allowed to pursue riskier research while also getting hands on training on how to run a lab, mentor undergrad and grad students, grow their professional network and set up collaborations. They should be given time and resources to be able to maintain a healthy life balance so that they do not burn out at work.

Fundamental issues and challenges

I am a graduate student working in academic labs with 5+ postdocs. All I see right now are bright and curious postdoc trainees being burdened to do only what their PI thinks is correct and spending 7-10 years in various post doc positions to then go on to compete for scarce independent positions. All this, along with a very low salary, leads to post docs leaving academia for industry or leaving science completely.

Existing NIH policies, programs, or resources

NIH postdoc trainee salaries should be increased to be on par with industry (PhD-level jobs) right from year 1 of a postdoc.

Proven or promising external resources or approaches

No response

Response 639

Perspectives on the postdoc roles and responsibilities

Early stage investigator, went from grad school to industry without postdoc because I have no interest in perpetual adolescence and low wages in order to prop up an academic system that benefits very few faculty and an excess of administrators who contribute no value to anyone in particular.

Fundamental issues and challenges

What is the point of a post doc? There are virtually no faculty positions, all you're doing is sacrificing future earning potential. There is nothing to learn in a postdoc that couldn't be learned in a job. The majority of these positions only exist so that universities don't have to pay the salaries of scientists.

Existing NIH policies, programs, or resources

Stop providing such ridiculous levels of funding to administers rather than researchers

Proven or promising external resources or approaches

Don't recruit postdocs unless academic jobs exist for them. The vast majority of postdoc positions are exploitative wastes of time and money, unless you are the professor or dean benefitting from this extractive system. People who don't just condone but try to expand this system should be ashamed of themselves.

Response 640

Perspectives on the postdoc roles and responsibilities

Good training opportunity for transition into tenture track position .

Fundamental issues and challenges

Low salary, barely a living wage in my high cost of living area.

Existing NIH policies, programs, or resources

Improving payback system to be realistic for those pursuing non-academic jobs

Proven or promising external resources or approaches

No response

Response 641

Perspectives on the postdoc roles and responsibilities

I have applied to various postdocs. I have received three offers and have turned down all three. One was international. Receiving meager pay to move to another country with little to no help with moving costs is really an insane compromise. No other occupation in the world asks you to make these sort of compromises or sacrifices.

Fundamental issues and challenges

- Cost
- Temporary
- Benefits
- Prolonging trainee processes (2 year postbacc, 5-6 year PhD, 2-4 postdoc.)
- Isolation/lonely

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 642

Perspectives on the postdoc roles and responsibilities

As a Postdoctoral Fellow, I support the PI in scientific projects and all aspects of research, teaching and service. Specifically:

1. I lead and execute my research projects independently with minimal intervention from the PI
2. I mentor undergraduates and PhD students in their research projects
3. I undertake teaching duties in undergraduate and advanced courses
4. I provided substantial input in grant proposals (crystalizing ideas, knowledge transfer, preliminary analyses, writing)

Fundamental issues and challenges

From my personal experience and from the experience of fellow postdocs:

1. Lack of job security
2. Inadequate compensation
3. No work-life balance
4. Mobility requirements—relocation is expensive for a temporary, relatively short work duration (6-18 months)
5. Power imbalance between PIs and postdoctoral fellows (increases chances of bullying and misconduct by PI)
6. Dwindling opportunities for tenure
7. This is the biggest issue: we may be considered as trainees for a Professor position sometime in the future. However, in reality we are considered highly-trained, highly skilled researchers who advance another Professor’s career without being allowed to develop an independent line of research, and with relatively poor compensation for our valuable contributions.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 643

Perspectives on the postdoc roles and responsibilities

Despite the outdated view by the NIH that postdocs are trainees, my experience as a postdoc has been that the majority of postdoctoral scientists are independent researchers who rely on the equipment, facilities, and funding of PIs to perform their experiments. The responsibilities of postdocs often include: performing experiments, analyzing results, writing papers and presenting findings, training new researchers, and mentoring. Postdocs are almost always the most senior members of labs with the most practical experience and are in charge of both ensuring experiments and equipment run smoothly and training new members to do the same. Although some scientists acquire new skills as a postdoc my estimate is that most postdocs acquire new skills for only a brief period of their postdoctoral "training", usually limited to the first few months up to a year.

This is dramatically different from the way that postdocs are portrayed by the NIH. The K award series presumes that postdocs require additional training prior to running their own research groups, rather than that they need additional time to perform their research and funding to support their ability to apply for extremely competitive grants against senior PIs.

Fundamental issues and challenges

The largest challenge for postdoctoral scientists is that they are significantly underpaid relative to their experience and skills. At most R1 research universities the standard NIH postdoc pay scale ($56,000) means that a postdoctoral scientist can easily spend more than 50% of their salary on rent and food alone, adding anxiety about food and housing insecurity. Industry jobs commensurate with this experience often pay three times as much, causing the best scientists to choose to leave academia.

The second largest challenge for postdoctoral scientists is lack of funding and significant barriers to acquiring funding. Most postdoctoral scientists will spend one to two months preparing and submitting an NRSA and then another two months preparing and submitting a K award. At current NRSA levels, each submission therefore costs the NIH a minimum of $10,000. NIH grant submissions are onerous, requiring elements that are excessive and create a burden for new scientists. Reducing the requirements of the submission process to just a personal statement and research plan, similar to how the majority of private fellowships are implemented, would substantially reduce costs. This would also increase time for experiments, helping scientists focus on career development.

The third largest challenge for postdoctoral scientists is the stifling publication environment caused by overpriced closed-access journals. The NIH needs to require that all NIH-funded research be published as preprints first and then in open-access journals, with a reasonable limit ($3000) on the maximum allowable publication fee. NIH-funded research should not be allowed to be published in closed-access journals or journals with a fee over this limit.

Existing NIH policies, programs, or resources

The NIH postdoc payscale needs to be raised by about 50% to account for dramatic inflation and rising cost of living in the major cities where postdoctoral scientists often work. An *additional* cost-of-living adjustment should be added according to the cost of living within specific geographic regions.

NIH grant submission requirements for F and K awards need to be simplified to reduce the burden of the application process.

The NIH should require all NIH-funded postdocs to be on minimum two-year contracts to improve the stability of research positions in academia and protect precarious international workers who depend on yearly visa applications.

K awards should not require postdocs to be in labs with senior PIs. This requirement creates intense bias in the field and prevents PIs who join younger labs from succeeding in academia.

Proven or promising external resources or approaches

The majority of private fellowships for postdocs have far better applications, requiring only personal and research statements. These should be used as models for reforming the onerous requirements of F and K grants.

Response 644

Perspectives on the postdoc roles and responsibilities

My work means life to me. I did a 6 mo break after PhD and couldn't wait to start work in a new place. I know that I did choose science and an academic career because I wanted to, not because I did not explore other options.

Postdoc is a time of development on many fronts—above all scientific, but also social (new country and cultural codes), and mental (you need so much self-awareness and mindfulness to survive). Balancing all these areas is hard, Â and some others like personal life development are neglected. Science-wise, one is definitely developing new skills and perfecting the ability to discuss and communicate science. Each postdoc should be able to easily say: 'I contributed to important science and I do know that my work matters and is useful for the scientific community, industry, and humankind'. In my opinion, the postdoc time should be science-wise challenging and stimulating. Postdocs serve so many different roles, which allows one to identify which particular aspect of doing science you are most happy with (performing experiments/analyzing data/software development/designing research/ supervising younger colleagues/ giving talks.). Â You are a bit forced to do it all to enter the next stage of an academic career, but those skills are also super needed in the industry. As a part of the organization Â—postdocs are the main people doing research—the effective, well-trained workers who do the needed job. We transfer the knowledge mainly to colleagues who are trained (other postdocs or students) on one on one basis. Postdoc experience varies a lot depending on your personality and other people around you.

Fundamental issues and challenges

1. compensation—for the number of skills we have to have to ensure good results and most importantly—the level of commitment and engagement it requires to do science, we are very poorly compensated. Especially, in the areas which are more expensive (ex. Bay Area)—we could work more effectively if basic human needs are able to be paid for and some quality of life achieved financially. That applies to PIs too.
2. To get to the next position Â—the PI Â—the demand is enormous—I could be a PI already—have the skills, but I still need my CV to get pumped up with the right papers to get a foot in the door in the interview process.
3. As a non-USA citizen I did not get many chances to get a fellowship (I know they exist but is very unfair that not all fellowships are open to all).
4. A lot of diversity and inclusion policies and rules are unfortunately still empty statements and liability cover instead of a real change.
5. mental health—as a postdoc representative in my department I talk with many people and in private conversations, a huge portion (~above 60%) admitted to being on antidepressants, having anxiety and panic attacks, having sleeping issues, and trying to get help in any possible way (from medicaments and therapy to soft drugs and various self-help tools). Just in my lab (9/12 ppl I have knowledge of have/had a period that falls into the serious mental problems category). And this is not a lab with abusive supervisors—these are good mentors' labs!

Existing NIH policies, programs, or resources

1. Open all grants to all
2. Increase postdoc payment and adjust the pay scale to the cost of living in the area.
3. Create a 'permanent postdoc' position for those who enjoy just doing science and pay them well, create grants so the lab can have those positions for several years
4. Require each PI to have a code of conduct/ welcome letter document. It should be first required for a PI to be a good manager and leader, instead of a scientific visioner. Â Too much misconduct in science is excused by incompetence to be a decent manager/leader.
5. Increase postdoc independence from PIs—give us money for conferences and grants so we are not only depending on our PI budget and philosophy of 1 conference a year. Many of us need more conferences to build a network. I believe we are scientifically mature to steer our careers but we are limited by our PI often (as it cost money and our absence)
6. Universities obtaining NIH grants should be required to have a postdoctoral affairs office in each department. It should be run by dedicated workers who will build a community and they shouldn't be burdened with any administrative work. The goal should be to integrate the local community and facilitate good relationships and happiness across postdocs.
7. Impose a policy of mental health check-ups for each postdoc, grad student, and PIs yearly (1 obligatory session, up to 10 sessions covered on-demand—big tech companies have a great tool for that for their workers crafted precisely for situations they deal with within each day)
8. Improve transparency—require labs/departments to log when they hire ppl and when they fire them or when ppl leave on each department level and what was the reason. Ensure open access of these data

Proven or promising external resources or approaches

The Internet is full of resources. Even at [redacted for anonymity], we have a lot of them—just seems like ppl are not interested to get extra work done. TFaculty often does not recognize, that making their management skills grow is part of their job.

I really encourage you to talk to executives in big tech (Google, Facebook, Apple, Â Linkedin) about how they ensure well being of their workers. Just half of what they have could be so much progress for science. Especially the mental health benefits and offer of resources are very well crafted to the needs.

Response 645

Perspectives on the postdoc roles and responsibilities

I view it as preparation for a career as a professor—as such I believe the ideal postdoc position should come with the freedom to pursue high-risk high-reward projects, and plenty of mentoring and professional development opportunities.

Fundamental issues and challenges

The salary is atrocious, especially when compared to the cost of living in most major US cities. It is not enough to live alone in most cases (most postdocs I know have roommates, which is not the ideal living situation for most postdocs), let alone support a family. Most postdocs which I know are losing money every month of their postdoc, which is not sustainable. I also know a postdoc who got an abortion against her will because she could simply not afford having a child, despite the fact that she was ready to start a family. It is not unusual to hear such family planning scenarios. This is the opposite to the postdoc situation in many other countries (i.e., Europe, particularly Scandinavian), where the postdoc is the time when many researchers are beginning their families. This is simply not acceptable considering the amount of expertise and training which postdocs have coming into a position, and most people realize that and choose an alternative path that values their contributions. Even if one manages to recruit a postdoc to a position, the typical postdoc is trying to get out of there as quickly as possible because of the lack of job security coupled with embarrasingly low salaries, which make it impossible to plan for the future (save for a house, plan a family, etc).

Existing NIH policies, programs, or resources

1. Increase salaries! They should be at least doubled from the NIH minimum in major cities like Boston and San Francisco.
2. Improved paid parental leave policies, for both parents, paid by the postdoc fellowship. This is also fundamental to equality principles. At least 6 months of paid parental leave per parent.
3. Improved programs for affordable child care, for when parents have to return to work.

Proven or promising external resources or approaches

Look at what companies are doing and providing for industrial postdoc positions, which is already a huge step up from academic postdoc positions. For instance, AstraZeneca has a great industrial postdoc program.

Response 646

Perspectives on the postdoc roles and responsibilities

Research focused, further skill development, network and collaboration building, research outcomes

Fundamental issues and challenges

1. Not paying them enough money, postdocs can go into industry and double or triple their postdoc income.
2. Toxic academic environment (bullying, pressure, unsafe work hours, undervaluing postdocs).
3. Publish or perish culture—when excellence is measured through one metric (publication count) the metric will be gamed, and articles are written just for the sake on line items on CV.
4. Academic executives see funding as research, not research as research.
5. System must go back to what is important and meaningful about research, and that is impact. Publication is not impact, funding is not research and it is not impact.
6. Young researchers deserve better and they know this. If the above issues aren't changed, postdocs walk into industry that values them and their well-being.

Existing NIH policies, programs, or resources

As above.

Proven or promising external resources or approaches

Listen to postdocs and their lived experince. That should be enough evidence. The culture is toxic, postdocs are underpaid and undervalued. The system needs to change.

Response 647

Perspectives on the postdoc roles and responsibilities

A training opportunity beyond the PhD. Interestingly, I don't think there is much difference between a PhD student and a postdoc in a lab. Unless the postdoc has been working in the same laboratory for longer amount of years. I can conclude that a post doc looks like an elongated PhD with LOWER salary, and NO housing. Basically and underpaid extension of your PhD.

Fundamental issues and challenges

SALARY and HOUSING. PhD students are encourage to leave academia , or postdoc training in general because is UNDERPAID. No housing is provided and postdocs really struggle about housing and food. Starving and homeless are what most postdocs are afraid and that is why they tend to leave asap and go to an industry position, or PhD students have already crossed out the postdoc position by observing the hunger and housing issue that postdocs regularly have.

Existing NIH policies, programs, or resources

You need to increase the salary, make universities provide free housing for postdocs, and somehow give food stamps or food for postdocs.

Proven or promising external resources or approaches

Have a fund for socializing with postdocs so that they can network further with other faculty and apply for jobs.

Response 648

Perspectives on the postdoc roles and responsibilities

Untenable hours, suppressed wages, no career prospects

Fundamental issues and challenges

Salary, no work life balance, exploitation by PIs

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 649

Perspectives on the postdoc roles and responsibilities

It is pretty simple, if postdocs were just uniformly treated and valued like employees with a doctoral degree instead of as trainees that can be walked all over they would not be leaving academics to go to other jobs where they are given basic decency.

Fundamental issues and challenges

The fact that PIs can't use NIH grant funds to supplement the salary of a postdoc or pay for their employer sponsored portion of health insurance when they are on a training grant or F32 is problematic

Existing NIH policies, programs, or resources

Require institutions to continue to treat postdocs as full time employees when they get NIH funding, it is crazy that when I get an F32 I can lose my retirement and have to pay more for health insurance because the institution no longer treats me the same due to where my money comes from

Proven or promising external resources or approaches

No response

Response 650

Perspectives on the postdoc roles and responsibilities

Postdocs need to be paid more. They should be paid what they are worth, and that means matching industry salaries. I have several friends that went into industry after grad school and I know postdocs work longer hours and have more responsibilities than those starting out in industry. A postdoc needs to be a viable investment option. That will likely mean raising the salaries of assistant professors as well. At this point, slogging through a postdoc to obtain an assistant professor's salary is pointless.

We need to stop mandating that trainees change institutions at every step of their career. While my graduate school was a fantastic place to train, I would have been better off remaining in my home state where I had friends and family. This issue is magnified when starting a family. The bigger support system a trainee has, the more likely they will be able to continue their training. Changing labs and/or departments should be plenty adequate for proving that a trainee has the ability to perform in different environments.

Postdocs should not be treated as technicians. If the goal of postdoc training is to prepare them for running their own lab, the environment should reflect that. Every postdoc should be given at minimum 1 dedicated technician to supervise to learn how to delegate, mentor, and deal with conflicts. I spent hours

upon hours doing tissue culture as a postdoc when I should have been learning new skills and writing. The bulk of my time as a postdoc did not benefit me.

Fundamental issues and challenges

This does not only apply to postdocs, but all new parents should get a minimum of 6 months of parental leave. While reaching this seems impossible at this point, new parents at minimum should have increased flexibility when it comes to their work load. This may not only apply to new parents, this should also apply to anyone undergoing major life events.This does not only apply to postdocs, but all new parents should get a minimum of 6 months of parental leave. While reaching this seems impossible at this point, new parents at minimum should have increased flexibility when it comes to their work load. This may not only apply to new parents, this should also apply to anyone undergoing major life events.

There needs to be a greater push for free on-site day-care. It made the most sense for us for my husband to stay home with our baby, but many people don't have this luxury. If new mom's could directly breast feed their babies during the day that would go a long to way improve productivity and quality of life. Not to mention, the cost of day care is astronomical and unaffordable on current postdoc salaries.

Postdocs should have free rein to decide their hours and when they will work from home. At this point in their career, postdocs know what they need to get done and how they will achieve it. Again, this is to prepare them for an independent career.

Existing NIH policies, programs, or resources

Postdocs should not be assigned tasks that detract from their independent research without their approval. I certainly received some wonderful opportunities outside of my research that benefited me during my postdoc such as interacting with patient advocates and working with students, but I was also saddled with many technical tasks under the guise of "learning new skills" . Alternatively, postdocs should be compensated monetarily for these additional tasks if they are necessary. Bonuses are commonplace in industry and there is no reason they should not be part of the culture in academia.

Many postdocs have accumulated mountains of student loans during undergrads, with little chance to pay them off during grad school. One great incentive for postdocs could be to offer to pay off their student loans.

In general, the pace of research in this country should be slowed down. Continuously cranking out mediocre papers that may or may not be relevant to human health is running our scientists ragged without truly benefiting society. We need to get rid of the administrative bloat and allow scientists to spend time thinking and maintain work-life balance. If overhauling the training system and paying people adequately means funding fewer labs, I think that's a risk that is worth taking.

Proven or promising external resources or approaches

The fact that there is a 300 word limit on these boxes makes it quite clear that the NIH is not truly interested in understanding the full story. I recently left my postdoc and have a lot to say about my experience but there is not space for it. I included my suggestions for improvements in the boxes above.

Response 651

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary. The NIH minimum postdoc salary is incompatible with a reasonable quality of life, and is completely out of sync with the qualifications and expertise required for these positions. I sought a postdoc outside of the US–despite having NIH-funded offers in the US–for this single reason.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 652

Perspectives on the postdoc roles and responsibilities

For me, the ideal postdoctoral position would focus primarily on training professional development activities, learning to write grants, managing a team of scientists, developing novel projects and ideas, managing grants. I.e. preparation for a career as a PI, not simply yet another fancy lab tech

Fundamental issues and challenges

As postdocs we perform a lot of skilled labor with no benefits.We are exploited for our technical skills, ideas are often stolen and claimed by the advisors/PI, we do not get paid nearly enough under the guise of training, but no actual training seems to take place. Just exploitation.

Existing NIH policies, programs, or resources

There need to be more early career (small) grant options that postdocs can apply for independently, not fellowships. K grants should not require mentors, rather collaborators. Many gifted postdocs lose out on these opportunities due to not having supportive PIs

Proven or promising external resources or approaches

An increase in pay is a proven way to increase retention. Tracking of hours worked during the week should be made mandatory for those funded under NIH. Prevents exploitation where trainees are made to work 70+ hours a week with little pay and few benefits. Let’s not pretend this does not happen.

Response 653

Perspectives on the postdoc roles and responsibilities

Ideally, postdoc should be a relatively short (~2 years) training after a Ph.D. to gain extra training needed for running a lab. In practice, it has become a duplicate of the Ph.D. experience, both in training duration (~6 years) and training content (bench science, without any training in managing a lab).

Fundamental issues and challenges

It is a common lore in academia that you have to sacrifice all financial ambition in order to dedicate yourself to an academic career. However, the current situation is such that one not only has to forget about financial ambition, but they also have to be willing to sacrifice financial stability in order to pursue a postdoctoral career. Elite R1 universities happen to be largely concentrated in places where the cost of living is quite burdensome for postdocs earning NIH scale salary. Single postdocs cannot afford rent on their own. Postdocs with partners cannot afford to have children, because they are already rent burdened (unless their partner has a lucrative job). Meanwhile, peers of similar age groups who have chosen other professions after college are purchasing their first house. A reasonable person with this knowledge in hand would not and should not choose to become a postdoc, unless they are privileged enough to not worry about making a living.

Existing NIH policies, programs, or resources

NIH has staff scientists who are PhD scientists that do not run their own labs but do benchwork. Allen Brain Institute has similar career paths. These career paths are vastly different from postdocs, because there is no expectation for them to leave. In fact, they are encouraged to stay. In addition to job security, their pay resembles a living wage. In my opinion, every university should have these research faculty positions that are semi-independent, may work in one lab or across several labs, and provides good stability and income. Importantly, these positions should *replace* current postdoc positions–i.e., there should be no postdoc training expected before applying to these positions.

Proven or promising external resources or approaches

As mentioned above, I believe NIH staff scientist positions and Allen Brain scientist positions are good career paths that should be widely expanded and adapted in every R1 university. Many Ph.D. scientists who love academic research but has been pushed out of academia by the irrationality of subjugating oneself to a career path with low-pay, low-stability, and unclear future prospects, i.e., a postdoc career, would welcome this alternative career path. Postdoc positions should be shortened by 3-fold, and should concentrate on training Ph.D. scientists on lab management, grantmanship and mentorship.

Response 654

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salary is laughable. How am I supposed to have a family on a post-doc salary in most parts of the US? How could I afford child care in most cities on the post-doc salary? The NIH sets the tone for how much post-docs can make, and honestly child-care is a major barrier for me deciding whether or not to do a post-doc after my PhD

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Improve child care. Every major research institue over a certain size should supply child card.

Response 655

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a full-time position that allows for one to receive pertinent research training that will allow them move onto their independent careers. The postdoc should be viewed as more training, but should also be viewed as full-time employment with a full suite of employment benefits with commiserate pay.

Fundamental issues and challenges

Postdoc salaries are incredibly low given the wealth of experience (technical and "soft-skills") that one brings to any lab as well as how much work a postdoc is expected to complete within a short time period and actually contribute to a new environment that might be away from home. Additionally, current stipends are prohibitive to many graduate students wanting to become postdocs and favors those not from marginalized backgrounds and who can afford to continue on the academic path. There appear to be many sacrifices that one has to make to become a postdoc, such as family and financial security, on the path to an independent academic career. Postdocs are also not afforded protections like many graduate students and put them in a more precarious and risky position

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 656

Perspectives on the postdoc roles and responsibilities

I still view the postdoctoral role as the classical role of preparing to become an independent academic investigator since that is what I aim for. However, I understand that many don't share this view and suspect that there will be diverse perspectives/descriptions of what a postdoc means to others.

Fundamental issues and challenges

The pay is far too low! Especially in the high-cost-of-living cities where most want to perform postdocs (Boston, San Fran, etc). I know personally multiple postdocs who have left for industry because the NIH salary levels no longer provide adequate support for basic needs such as rent, bills, and groceries.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 657

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should provide a wholistic training that can be catered to the career track that the mentee is seeking. Overall the experience should be more like an apprenticeship (ideally under multiple individuals who hold the goal position that the mentee is seeking).

Fundamental issues and challenges

Postdoctoral training can be a black hole for some. They can spend years trying to generate enough data from dead end projects to publish enough manuscripts to make them attractive candidates for professor positions however, these are highly educated people putting a critical time of their life on hold while they could move into industry positions doing (likely) more impactful work and make three times more money/ better work life balance/and more opportunities for advancement. There is really no logical reason to stay in academia other than ones passion for new knowledge.

Existing NIH policies, programs, or resources

The time limit for post docs to obtain a k99 from was a hate limitation for me. I had 2 children during my postdoctoral work the second of which took me much longer to recover from. Although the NIH recognizes and allowed extra time for maternity leave, that allotted time was did not support me enough to balance being a new/young mom and get the publications needed to me a good candidate for the K99. An effort should be made to further limit constraints that hinder women in science.

Proven or promising external resources or approaches

Holding PIs more accountable for the success of their mentees would improve things drastically. There needs to be a more official yearly review process of both mentors and mentees and institutions should be responsible to step in when necessary to ensure success of the individuals training there.

Response 658

Perspectives on the postdoc roles and responsibilities

A stepping stone toward a career goal, whether it is a faculty position, an industry position, or elsewhere.

Fundamental issues and challenges

Extremely low salary that is not adjusted based on the location. Living paycheck to paycheck in my 30s, unable to consider having a family, is degrading. This is especially challenging for postdocs who did their PhD in an expensive city and didn’t get to save money while in graduate school.

Existing NIH policies, programs, or resources

Mandating extramural postdoc salary consistent with intramural postdoc salary, or even more salary. NRSA sets the standard for extramural postdoc salary. NIH needs take the responsibility and step up to improve postdoc experience.

I’d argue that this system is extremely discouraging for people from financially challenging background and is selecting for scientists from a wealthy family background. I very much hope that the NIH can offer a system with equity where any scientists can at least dream about becoming a postdoc and staying in academia. Academy needs an immediate action with equity.

Proven or promising external resources or approaches

No response

Response 659

Perspectives on the postdoc roles and responsibilities

A highly educated and skilled worker that is expected to work independently with pay that is commensurate with level of education and expected work load.

Fundamental issues and challenges

Overworked and poor salaries not keeping up with inflation, especially in high cost of living areas.

Existing NIH policies, programs, or resources

Increased salaries (>50%) to attract or retain post docs. Low salaries in high cost of living areas is detrimental to first generation postdoc or postdoc without familia wealth to offset poor salaries.

Proven or promising external resources or approaches

No response

Response 660

Perspectives on the postdoc roles and responsibilities

I think there is still tremendous value to have a post-doc, with learning a new topic and skills outside of the PhD and creating additional training for a career in academia and industry

Fundamental issues and challenges

Salary and benefits. Post-docs need to be treated as skilled labor positions. Right now, even the NIH salary scale starts just over 50k. This isn't enough to live in most locations in the US, especially if post-docs are trying to support a family and have childcare expenses. A mandate needs to come from NIH to raise the minimum salary to 65-70k and universities need to follow suit. With the current salary it just enough to get by, especially with ever-increasing competition for academic positions. Many just leave.

Existing NIH policies, programs, or resources

Mandated minimum salary. The creation of permanent scientific positons. Funding increases in grant size to accommodate increased salary. Better grant pay lines to enable growth.

Proven or promising external resources or approaches

No response

Response 661

Perspectives on the postdoc roles and responsibilities

For me, the postdoctoral position has meant the opportunity to further strengthen my research background and experiences as well as my track record of publications. My responsibilities are largely focused around project management and the generation of publications from datasets, though more will be coming soon related to data management and analysis. I feel my key need and responsibility in this position is to grow in the science and especially in transferrable skills so that I can contribute to the research body through my own work and through interdisciplinary collaboration in the future. I am learning to manage grants and funding in some ways, but in many ways I am relearning how to be a scientist and how to look at data. I am gaining more statistical training than I previously had and am being stretched in my writing skills.

Fundamental issues and challenges

I believe one of the key challenges inhibiting recruitment, retention and quality of life for postdocs in academic research is funding-related. I turned down a job where I would have made $10k more per year so that I could take this position, and I wouldn't have been expected to put in more than 40 hours per week for that job.

I believe a second and key challenge is related to finding jobs after the completion of the postdoc. While I can't speak for all areas of the United States and higher education, both a PhD and postdoctoral training

mean almost nothing when seeking a job in the current environment. There seems to be very little respect for science in the general population and a general mistrust of our work. There also seems to be a belief that we have 'book smarts' but no common sense or practical skills and abilities. While I and many others in academia know this to be false, we need to get the practical nature of our work out to the general population. There also needs to be a high priority placed on the acquisition of certificates, registrations, or other licensure during the postdoc phase in order to make certain that researchers completing this training and work have avenues to employment in both private and public sectors after their postdoc training. In my current field, I will have few opportunities for work after my postdoc until I complete an additional training that will cost me $10k or more to complete and an additional 6 months of full-time work where I will be unable to hold another job. I am fortunate to have a partner who can support me in this transition, but many others are not.

Existing NIH policies, programs, or resources

Additional funding for training and certification in health-related areas, especially those tied to supportive care such as dietetics and kinesiology would help to improve academic research career pathways. Also allowing dual-enrollment as both a postdoctoral research fellow and as a student in one of those certification/training paths to allow the utilization of resources more efficiently would be helpful.

Proven or promising external resources or approaches

No response

Response 662

Perspectives on the postdoc roles and responsibilities

Gain experience through conducting research in a supervised setting in preparation for an independent research career.

Fundamental issues and challenges

Immigration system makes it challenging to recruit students internationally, particularly when students are often now able to find equally good training opportunities in their home countries.

Existing NIH policies, programs, or resources

Pathway to citizenship for post-doctoral students, particularly those who end up staying in the US as faculty.

Proven or promising external resources or approaches

No response

Response 663

Perspectives on the postdoc roles and responsibilities

For me my postdoc training is about getting additional research experiences that I have not yet had to be able to set me up for an assistant professor job. Specifically, conducting research in a hospital setting/enrolling patients into research who are embedded within healthcare settings, as well as grant development and submission, which I have not had the experience of doing yet.

Fundamental issues and challenges

The primary reason is financial. All other issues (e.g., lack of diverse candidates, retention problems) likely stem from this problem. Postdoctoral training isn't inherently necessary for a successful career, so I believe many individuals bypass it completely for higher paying jobs (teaching, clinical, asst. professorship) or leave as soon as possible for other opportunities that can pay more. The NIH postdoctoral salary is not equal to its equivalent in the medical field (medical fellowships), which pay in the $70,000-$80,000 range. In many areas of the country, ~$55,000 is not sufficient relative to the living wage. Having a PhD/MD (or other doctoral level degree) and in some cases being a licensed provider, one might expect to be making more than what the current postdoc salary is set at.

Existing NIH policies, programs, or resources

Allowing moonlighting and seeking other sources of income if the postdoc salary is not going to be raised.

Proven or promising external resources or approaches

No response

Response 664

Perspectives on the postdoc roles and responsibilities

The postdoctoral position to me is a required stepping stone to achieve a higher position, be it a faculty position or position in industry. My view in grad school was that entering a postdoc means accepting a few years of low pay for an opportunity to gain a faculty position, and I could justify this decision by knowing that I would gain experience that would be applicable my future career. Now that I am nearing the end of my postdoc, I feel I've still gained applicable experience, but now that I am no longer seeking a faculty position, I feel that I've lost a few years of better salary and am in a worse position when it comes to job advancement on the industry side. Talking with my peers from graduate school, few even considered pursuing a postdoc because they could jump start their careers immediately in biotech or consulting, and often times graduate students are burnt out by the time they reach the decision that a postdoc is not an attractive option.

Fundamental issues and challenges

The pay scale for the expected workload is too low, and the perceived outlook on gaining a faculty position feels like entering a lottery. As a postdoc in my third year, despite the amount of outside teaching and mentoring I did and my publication record, because I was relatively unsuccessful in obtaining competitive fellowships (HHW, LSRF, K99), the prospects of a faculty position seemed untenable. I feel fortunate to have a supportive mentor and a thriving institution, but many of those in my position don't get the same type of support. I've seen several labs at my institution struggling to recruit postdocs, and I think the prevailing attitude from many who are running research groups and are no longer at the bench is that young researchers should be grateful for the opportunity to work in their labs. Without institutional change and with better, higher paying job opportunities, newly minted PhDs aren't going to flock to the postdoc position.

Existing NIH policies, programs, or resources

Current career advancement funding opportunities (e.g. K99) often reward trainees that have managed to publish within the first ~1-2 years of their postdoc and/or have been previously funded under another NIH opportunity. This has two detrimental effects on many candidates applying.

1. It reinforces those that have already had success, making it more difficult for those who haven't had early success.
2. The length of time required to apply and go through the review process makes it difficult to actually receive training under the program. In my particular case, I received great comments about the scientific merit of my proposal, but didn't yet have a publication in my postdoc, which was the primary detriment according to reviewers. The option for resubmission of the grant requires months for the next deadline and the review process, which pushed back the "training" period to the point where it was no longer worth it to resubmit. I've heard from several other trainees that the "training" period of these grants ends up in such a late stage of the postdoc that they're already in the process of finding jobs by the time the training period would even begin.

Proven or promising external resources or approaches

No response

Response 665

Perspectives on the postdoc roles and responsibilities

My roles include publishing, mentoring and training research assistances, facilitating/organizing study visits, supervising clinical services provided during study visits, and building my program of research.

Fundamental issues and challenges

Salary ranges are untenable. I have spent 10 years being underpaid for my educational level as a student. I now make $60,000 a year, am expected to work 50 hours per week, and my rent costs $48,000 per year. It is untenable to stay in academia when the cost of living far exceeds what the stipend will cover and working in private practice or industry pays much more fairly. Additionally, my university pays T32 postdoctoral fellows as contractors, meaning taxes aren't taken out of our paychecks. We are guaranteed benefits, as required by the university and the NIH; however, the taxes on our benefits aren't paid by the university. Meaning that my actual take home pay is close to $40,000 a year for 50 hours a week of work—a full $8,000 less than my rent alone. I cannot afford to get married, have a child, or progress in my personal life. I have limited savings, which consists of entirely leftover student loans from graduate school, which are dedicated to an emergency fund. Quality of life cannot be discussed until postdocs are compensated fairly enough to not qualify for food stamps. I am dedicated to my research career and lucky for the privileges that I have to have been able to make it this far in my research career being underpaid and taken advantage of. Remaining in research will completely depend on having my student loans covered through an LRP or similar and a fair increase in pay, benefits, and work-life balance that reflects the 25 years of education I have received. In speaking with my friends who have forgone research careers or post doctoral positions, the answer is simple—industry fairly compensates the decades of work and sacrifice required to complete a doctoral education; NIH does not.

Existing NIH policies, programs, or resources

LRP programs need to be expanded, more widely advertised, and more accessible. Postdoctoral salaries make it nearly impossible to pay off loans while also relocating to a new position and actually beginning a personal life that has been largely on hold for 6 + years of graduate school. Benefits during post doc are non-negotiable and the taxes on those benefits need to be covered, either by an increase in pay or by the universities seeking to retain scientists.

Proven or promising external resources or approaches

Industry provides a pay structure and benefits that make covering student loans and personal expenses (day care, food, rent) reasonable.

Response 666

Perspectives on the postdoc roles and responsibilities

I view a post-doc as a necessary training step toward an independent faculty position. Acquiring training and (more importantly) convincing others that you are qualified are the two main goals.

Fundamental issues and challenges

Independent faculty positions are virtually impossible to attain, making the need for a postdoc virtually pointless. The training may not match what is necessary for other jobs, so those employers might as well hirer younger workers and train them in lieu of training they would have received during their postdoc.

Existing NIH policies, programs, or resources

Forced retirement or lab size restriction (at retirement) are two angles to ease the problem of older PI's who wander the halls like senile ghosts. The NIH has fantastic resources already, so aside from salary increases, these are not entirely relevant. The problem is largely structural and financial.

Proven or promising external resources or approaches

The actual resources given to postdocs are excellent. This is not the problem (unless you are an organization trying to hire them for another job).

Response 667

Perspectives on the postdoc roles and responsibilities

Training to become an independent research

Fundamental issues and challenges

Pay is way too low. Not able to support family or pay off debts acquired during education

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 668

Perspectives on the postdoc roles and responsibilities

There’s not enough perspectives in academia following postdoc positions.

Fundamental issues and challenges

Salary is too low

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase our salaries.

Response 669

Perspectives on the postdoc roles and responsibilities

Postdoc to me was initially a way to develop my scientific vision and leadership to get me ready to run my own scientific team.

Fundamental issues and challenges

Salary are ridiculous.

Existing NIH policies, programs, or resources

Today postdoc mean nothing beside cheap labor for institutions. Most funding exclude non US citizen or Permanent resident which mean exclude the “MAJORITY” of Postdoc in US. Deconstruct the system and rebuild it.

Proven or promising external resources or approaches

More money will definitely help but not only. NIH funded labs should show that they pay all their Postdocs (independently of the nationality) a decent salary.

Response 670

Perspectives on the postdoc roles and responsibilities

Postdocs drive publications, which are critical for a functioning lab. We also train graduate students.

Fundamental issues and challenges

Federal government post-docs do not receive W-2s (we are paid in taxable grants and receive a 1095 instead) and this makes it difficult to do things required to maintain a family, like securing a loan to take out a mortgage or a car loan. It would be better for post-docs to be hired as Research Fellows or paid in another way so that we can do these things.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 671

Perspectives on the postdoc roles and responsibilities

I had a T32 post doctoral fellowship through NIMH. It was incredibly valuable as an experience, and set me up well for the skills that I would need as a tenure-track faculty member.

Fundamental issues and challenges

There were several extremely difficult, and it turns out long lasting problems about my postdoctoral fellowship. The salary was very low and was set by statute. It was too low to survive in the city where I needed to live for the postdoc, so I had to have a second job. Unfortunately, I learned later on that none of the time as a postdoc counted towards my loan repayment public service even though I continued to make student loan payments and was employed. So not only did I live in poverty and have to work two jobs in order to survive, but none of that time counted towards my loan repayment. I have advised others to carefully consider this balance when they decide whether or not to take such a position. The interest on my student loans continued to compound, I continued to make payments, but that time ended up putting me further behind.

Existing NIH policies, programs, or resources

The loan repayment programs are an excellent incentive and approach, but the payment schedule and structure needs to be modified to avoid unintentionally causing harm. Currently, payments are made quarterly, which allows interest to accrue that essentially equals the payments, so the LRP payments end up basically paying interest. While I was a postdoc, and then later, when I had one of the LRPs, the interest accrued on my large amount of student loans faster than I could make any payments to get it down.

My suggestion would be to freeze student loan interest while someone is in a post doctoral position, and for the LRP programs to make monthly payments rather than quarterly, which would allow the amount to actually have an impact. Or pay the total amount all at once, at the end of the year. In my case, the LRP program paid me significant amounts of money that had virtually no impact on changing my total amount of loans because of the way it was dispersed. If it had been dispersed all at once at the end, it would have wiped out a good portion of my loans.

Proven or promising external resources or approaches

No response

Response 672

Perspectives on the postdoc roles and responsibilities

I view it as a way to diversify my knowledge and act as a stepping stone to a higher, long term research position.

Fundamental issues and challenges

I am extremely concerned about balancing having a family and being a postdoc. I know people at NIH who have had to leave because the fact that they could only be in person for part of the week was unacceptable to the PI. I find this is a huge problem in research. We want more women in research, but realistically women are occupied with children for at least the first six months of their life. If after that the woman is unwilling to put their child into daycare, then she is not assisted in finding flexibility. This is a huge problem. We talk about inclusivity, but there is only one apparent option for female researchers, put your child in daycare or it’s unreasonable for you to expect us to help you continue your career. While I acknowledge that not every lab is like this at NIH, there needs to be more institutional guidance to PIs and postdocs about what their rights are when it comes to raising a family. It also needs to be made clear that women with young children need to have more flexible working conditions rather than forcing the woman themselves to just figure it out, which is how everyone I know has done it. NIH has an amazing opportunity to be at the forefront of creating inclusion in the workplace by advocating for diverse working hours and conditions for its female researchers. Finally, while I acknowledge men also need to spend time with their children, young children are generally not as reliant on men as women, especially when women are breastfeeding etc., so typically men are able to continue their work without as much need to completely change their life.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Expand and encourage grants for researchers reentering research after a break due to looking after family or other reasons: https://www.aai.org/Careers/Fellowships/Reentry

PIs should also be encouraged to hire people even if they have had a resume break, especially if they show they have kept up on the literature and developments in other ways

Response 673

Perspectives on the postdoc roles and responsibilities

Postdocs are apprentices to the principal investigator. However, the amount and quality of the training varies and is heavily dependent on the lab / principal investigator.

Fundamental issues and challenges

I am a PhD candidate who will be receiving the degree in 3 months. After consideration and a lot of conversation with industry scientists, I elect to not pursue a postdoc. A big drawing point of doing a postdoc or "staying in academia" is the so-call "intellectual freedom." However, a postdoc researcher is constrained by the direction of the principal investigator which I found to be more akin to a dictatorship. Positions after postdoc in academia are few, competitive and heavily depend on publication quantity and quality.

Existing NIH policies, programs, or resources

I suggest every Principal Investigator who has over 20 years of funding support should no longer be qualified to obtain a grant as the sole investigator. More support should go to enable the career of young investigators.

Proven or promising external resources or approaches

Postdoc should have a fixed time line (< 5 years), mentors beyond PI, union support, and a minimum wage that is enforced.

Response 674

Perspectives on the postdoc roles and responsibilities

The academic postdoc is mainly a way to become a tenure track faculty member. While there are some non-tenure track academic jobs, these jobs ultimately do not use many of the skills gained during a postdoc (such as grant writing and experimental design).

Fundamental issues and challenges

1. As a postdoc, you lose student status and enter the repayment period for student loans. At a postdoc stipend, this would result in needing to pick up a second job just to make ends meet. Because postdoc stipends are lower than comparable industry jobs, and postdocs are often in high cost of living areas, adding the burden of a student loan payment would be financially unwise.
2. After a postdoc, you have gained little career capital if a bid for a tenure-track faculty position does not pan out. Many industry scientists I've spoken to state that most postdocs have no relevance to the modern industrial biopharmaceutical landscape. This makes a postdoc not only low paying, but also high risk.

Existing NIH policies, programs, or resources

Instead of increasing stipends, add a certain amount of student loan repayment assistance to grants. Many industry companies are now adding student loan assistance as a recruitment perk, making an academic postdoc less appealing by comparison.

Proven or promising external resources or approaches

No response

Response 675

Perspectives on the postdoc roles and responsibilities

An opportunity to expand research and leadership skills by conducting self-determined research projects that dovetail from dissertation and establish a foundation of publications and grants that will carry the scientist into a research career.

Fundamental issues and challenges

1. Variation in experiences (i.e. T32 mechanism versus a postdoctoral position within an individual's established program of research, where self determination may be hindered)
2. Low pay

Existing NIH policies, programs, or resources

Increase the wage to keep up with inflation and understand that some potential post-docs have the opportunity to make significantly more money elsewhere.

Proven or promising external resources or approaches

Mentoring is key!

Institutions should consider post-doc professional development curricula (like a T32 generally has) so that post-docs not included in a research Fellowship may benefit from didactics, peer reviews, etc.

Response 676

Perspectives on the postdoc roles and responsibilities

It's a transitional role meant to prepare for the next thing. For me, that includes substantial exploration, skill-building, and networking, alongside building a reputation for research excellence and independence.

Fundamental issues and challenges

Being a postdoc is a pretty bad deal because the pay is low and the prospects of becoming faculty are lower. We are all severely underpaid relative to our skills, education, and value on the industry job market. Many of us are willing to take the pay cut now in order to become faculty later, but that deal is less and less attractive as the competitiveness of attractive faculty positions increases. I think that in terms of hours, pay, and working conditions, the postdoc needs to be a sustainable job in itself, not a sacrifice for the next thing which may not exist.

Existing NIH policies, programs, or resources

Higher postdoc salaries, with more grant funding (and modified budget guidelines) to reflect this. Better training and career development for non-academic jobs.

Proven or promising external resources or approaches

Higher pay, apart from making people feel valued, also helps smooth out life's other difficulties so that one can focus on research. Subsidized housing and childcare can help in expensive cities. The intensity of the PI-postdoc relationship creates opportunities for abuse, so it would be good if postdocs were less reliant on the capricious whims of one individual. This means supporting the creation of a network of mentors, supporting joint or institutional hires (instead of within one lab), oversight on postdoc management. There are very few other jobs where every aspect of your day and your future is dependent on a single person with no oversight.

Response 677

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are mutual agreements between a candidate and a number of PIs. The candidate will receive training and will perform research tasks. During this transitionary period, the trainee will get prepared for higher-level job opportunities.

Fundamental issues and challenges

The number 1 fundamental issue is postdoc pay and benefits. The current postdoc situation in academic institutions is demeaning. Trainees are better off in industrial positions where they can receive a living wage, maternity/paternity leave, retirement contributions, and organized paid time off.

Existing NIH policies, programs, or resources

Realistic adjustment to salary and benefits, reflecting inflation and living costs. Definition of scientists as project staff instead of postdocs.

Proven or promising external resources or approaches

No response

Response 678

Perspectives on the postdoc roles and responsibilities

Ideally, a post-doc should be a short term, single period launching pad to a productive, independent research career. That is not the case now. It is a lottery ticket of a multi-iteration game designed to keep wages suppressed with low probability of long term pay-off for non-stars.

Fundamental issues and challenges

Any PhD or ABD in this pipeline has outside options that pay two, three, four times as much with more stability and healthier boundaries than a modal post-doc job.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 679

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is a transitioning position that supposed to prepare us to be ready to the job market. Postdoc also is the last chance for me to decide whether I should stay in academia or industry.

Fundamental issues and challenges

When a postdoc has family/kids, the life cost is too high relative to the salary.

Work-life balance is really bad, no weekends, no boundary, but the pay is really low

Existing NIH policies, programs, or resources

Career awards like K-99 are restricted to postdocs graduated within 4 years. But most PIs would request postdocs to focus on research/papers rather than grant application at the first at least two years before you can have some publications. Postdocs without U.S. citizenship is put in a very bad position in pursuing independent careers. Wish there are more career awards targeted to non-citizen postdocs.

Proven or promising external resources or approaches

Raise salary base.

Emphasizing mentoring efforts when a PI apply grants, so they would not only focus on publications

Response 680

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 681

Perspectives on the postdoc roles and responsibilities

An academic postdoc is essentially an apprenticeship of 2-5 years to become an independent investigator.

Fundamental issues and challenges

Poor compensation in the countries most expensive markets.

Existing NIH policies, programs, or resources

The NIH can raise the recommended postdoc salary.

Proven or promising external resources or approaches

No response

Response 682

Perspectives on the postdoc roles and responsibilities

I am in a research postdoctoral fellowship. So, my primary responsibility is to conduct research.

Fundamental issues and challenges

Salary. The salary is very low, and prohibits people from minoritized or international backgrounds to accept a position.

Existing NIH policies, programs, or resources

A postdoc’s salary should be higher than what it is now. Also, the salary should be adjusted based on the region someone lives in.

Proven or promising external resources or approaches

It is a well known fact that getting paid more increases job satisfaction, and productivity.

Response 683

Perspectives on the postdoc roles and responsibilities

I was a graduate student who decided to move into industry after graduating despite initially having plans of being a post-doc. My initial impression of a post-doc was as a role that had increasing independence and responsibility to steer research projects as a stepping stone to running an independent research lab. This meant interactions with a supervising PI that were professional instead of infantilizing, some latitude to manage one’s own time and some autonomy in the scientific decision-making process. Unfortunately, what I observed in the lab as a graduate student were 5 overworked post-docs all of whom were regularly belittled by my PI at lab meetings, and whose projects were strong-armed into fulfilling my PI’s vision instead of their own.

Fundamental issues and challenges

The fundamental issue is that the role is a path to nowhere embedded in a zero-sum game. Only a single-digit percentage of post-docs end up as faculty, and faculty—realizing this to be the case—treat them as disposal, since they will soon be exiting the system anyway. The low survival rate is of course not due to lack of ability but lack of funding. Moreover, the pay is atrocious considering the intensity and difficulty of the work, so that only well-off individuals from privileged backgrounds can afford to embark on the tenuous endeavor in the first place. This dynamic largely precludes minorities. Instead of recognizing that poor economics is the source of academic woes, there is also now a misguided diversity and inclusion push, which unfairly funnels promising minority students into a toxic culture in which they cannot possibly thrive in due to financial constraints.

Existing NIH policies, programs, or resources

I left the academic system before I became too familiar with the NIH transitionary process. However, I do know that some senior post-docs in the lab felt largely dejected by the K99 application, as it seemed to really favor academic in-breeding. Relatively unproductive students who came from more famous labs and had references that were highly regarded in their field, did much better than more promising researchers who didn't have some advantages.

Proven or promising external resources or approaches

It would be helpful to have a database like Glassdoor that would serve as a rating system for PIs for prospective graduate students/post-docs to rely on. Despite casting itself as meritocratic, I can't think of any environment where there is such a poor correlation between aptitude/effort/output and career progression. One's career progression is largely dictated by the fickle whims of a single PI.

Response 684

Perspectives on the postdoc roles and responsibilities

A postdoc is a training role that should bridge the transition form graduate school to being a PI or leading industry scientist. It should be filled with mentorship from senior community members.

Fundamental issues and challenges

One fundamental issue is that postdocs are paid relatively low level wages even though they have a terminal degree in their field and could take an industry position for double the money and many fewer hours worked. Another issue is that postdocs often are treated with a double standard in their institutions, they're faculty/staff when it's convenient to the university but trainees when it comes to things like matching retirement benefits. After completing a PhD, most postdocs are already behind in saving for their retirement and then are further penalized when choosing to do a postdoc. Furthermore, the disintegration of the academic workforce, from the day we start graduate school we're told that it's nearly impossible to get a tenure track job and the only way to do it is to spend 5 years as a low paid and overworked postdoc that has no guarantee of an academic job at the end. Finally, it gets tiresome to move around every ~5 years uprooting family and support systems but the expectation is that to get a good job you make at least a few of these big moves.

Existing NIH policies, programs, or resources

The size of R01 grants greatly inhibits increasing postdoc salaries, even when our PIs would like to pay us more, there is barely enough money on one R01 grant to pay a postdoc/research associate and this greatly limits the number of people who can become postdocs or stay as postdocs.

Proven or promising external resources or approaches

No response

Response 685

Perspectives on the postdoc roles and responsibilities

When I moved to the US to undertake a post doctoral position. I was expecting to gain insights on improving my understanding of how to do science, grow my ideas, become more independent, and contribute to a scientific field.

Fundamental issues and challenges

I moved to industry because I no longer felt I was growing as a scientist. I was stifled, under paid, and left with no guidance, and this is in a lab at [redacted for anonymity]! While on a visa it felt like I had to work or else I would lose my status. My advisor did not know how to manage a lab and since I have left he has lost all his post docs and technicians. Industry pays better, I can afford to live in a major scientific hub on the east coast. The work life balance is so much better, I have time to see my family, relax. My science is so much better because I can think clearly. I have obtained more meaningful results in the 9 months of industry then 4 years of a post doc. Within the same field. Yes industry has more money, but the team is better, works better, they don't want to step on you because they want first author. The managers manage teams better, and my voice is heard. Those are things that can be done in an academic lab.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 686

Perspectives on the postdoc roles and responsibilities

I view it as a training ground to become a successful PI. My roles include coming up with a project, develop and test hypothesis, generate data, and publish results. Additionally, I am expected to take up leadership roles, train individuals, mentor students, and write grants and papers. My work also include communicating science to the community or to a wider audience.

Fundamental issues and challenges

One of the major issue is compensation. While, we are expected to work equally or more than folks in industry, our compensation is 2-3 times lower than that industry professionals are paid in the name of profit versus non-profit institutions. While, I understand PIs point on not having enough money to allocate higher wages to postdocs, it is important to allocate more grant money upfront to avoid any negative ripple effects. Being a postdoc definitely feels like a dip in quality of life, when you're no longer a student and you still are paid a meagre salary at the stage of life when you have or are thinking of starting a family. It becomes much more challenging for folks from low income background because it makes no sense for them to continue doing academic research when the alternative is a high paying industry job. Eventually, its not surprising that we end up reaching at a stage with very low representation of marginalized community at the higher levels because at this stage in life your responsibility precedes over passion and drive for science.

Existing NIH policies, programs, or resources

International student and postdocs are not eligible to apply for most of the grants up until K99. This leads to a lack in grant writing training that their peers have and are miles ahead at this time. NIH should remove these restrictions, especially when the driver of research in US are undisputedly the international students.

Proven or promising external resources or approaches

NIH can offer free grant writing courses and mentorship programmes for postdoctoral researchers. NIH must find means to have the PI accountable for their trainees.

Response 687

Perspectives on the postdoc roles and responsibilities

For me the postdoctoral position is the bridge between PhD and junior group leader. It is still a time of training, but more in the way of conducting independent research and taking on responsibilities that a PhD student may not necessarily do (i.e. instead of aiming towards a thesis—you're applying for independent grants/working towards first-author publications/ mentoring students at all levels). The postdoctoral position is crucial in the academic system, as well as important in shaping one's career trajectory.

Fundamental issues and challenges

The likelihood of obtaining a permanent position affects the quality of life of a postdoctoral trainee—there are so many postdocs and so few permanent position that it sometimes feels unrealistic to have both a decent quality of life and a decent chance of getting these jobs. In addition, postdocs are at a stage in life (late-20s/early to mid-30s) where milestones can occur for some people (buying property, marriage, children etc). These milestones are difficult to obtain when the salary of a postdoc is so low (especially after so many years of higher education). In addition, the expectation for postdocs to move every few years for a position is unrealistic if you have other people in your life that you have to consider, and so I can completely understand why many postdocs are not staying in academic research. They can move field and then get paid a fair wage for their research experience, as well as have the job security that one deserves at this stage of life. However, it's a hard decision to make when you've worked so hard to get to where you are now.

Existing NIH policies, programs, or resources

I'm new to the US so I'm not familiar with the NIH policies etc—however I think two things are important for enhancing academic career pathways. There needs to be more permanent scientist positions for people who want to stay in academia. but do not want to go down the PI route. I also think at the highly ranked universities in the US, there needs to be more recruitment of faculty based on teaching ability as opposed to research success. I understand why research success is important for group leaders, but I think having lecturer positions and PI positions sometimes separate allows for more postdoctoral job routes as well as an increase in student satisfaction and engagement.

Proven or promising external resources or approaches

Having a mentor system for postdocs is a great idea, but I'm unsure how that will help with finding a permanent position and improving working conditions.

Response 688

Perspectives on the postdoc roles and responsibilities

A transitional position towards PIs. Responsible for more independent research.

Fundamental issues and challenges

Low income and difficulty to find a faculty position.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 689

Perspectives on the postdoc roles and responsibilities

A postdoctoral research position is a training position in preparation for an academic job, in contrast to a research associate position which is a more long-term stable position. Postdocs are intended to be short and used to pivot into a new area or build new skills.

Fundamental issues and challenges

1. NIH postdoc (and predoc) salaries are WAY to low. Predoc salary should be $35K. Postdoc salary should be $75-100K. And both need to have benefits added on top of those numbers. It's frustrating NIH increased the salary cap this year but left trainees out to dry!
2. Postdocs are directly competing with industry jobs. Most jobs start at 100K+, with numerous benefits. Postdoc positions need to be able to compete with the benefit packages. Present NIH guidelines do not provide funding for parental leave. Most postdocs are at the age of having children. NIH needs to support parental leave directly, e.g., via a supplement or fringe costs.
3. F and K awards are too rigorous and too late to entice students to go into postdocs. Follow NCI and create more F99/K00 awards that transition students from predoc to postdoc. Lower the application barrier for fellowships. Lessen reviewer emphasis on coursework and grades by removing the transcripts from the application.
4. Simplify the visa process for postdocs. Why would any international students take a postdoc with the limited support they receive towards immigration? They can't even return home without fear of never getting back to the US. This needs to change to make postdocs more competitive

Existing NIH policies, programs, or resources

NINDS, NICHD, NIBIB, etc. Need to create F99/K00 awards to transition from predoc to postdoc.

NIH needs to increase payrates SUBSTANTIALLY

NIH needs to add parental leave

NIH needs to simplify VISA process for international students

Proven or promising external resources or approaches

https://www.cancer.gov/grants-training/training/funding/f99

More F99/K00 to provide students a secure transition into postdocs. Allow F32 applications to come earlier as well.

Response 690

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is meant to help PhD grads build out skills & record of deliverables (e.g., grants, pubs, products) for next career steps, whether in academia or industry

Fundamental issues and challenges

Salary—it is extremely low compared to private postdoctoral funding and industry positions. The T32 postdocs are also awful, in that most institutions count postdocs as trainees and NOT employees, disallowing them to enroll in employee benefits (even though the research they do benefits the university). In retrospect, I would have skipped a T32 postdoc and looked for other funding.

Existing NIH policies, programs, or resources

NIH could set better guidance for universities on 2 points:

1. The salary guidelines are a MINIMUM, and salaries should be adjusted for cost of living (even the military adjusts housing allowances for cost of living);
2. T32 postdoctoral trainees should be eligible for employee benefits;
3. The tax burden of T32 should be compensated for (since T32 postdocs are taxed on health insurance, etc., but that is not income going into my pocket)

Proven or promising external resources or approaches

Duke's policy on dealing with the postdoctoral stipend tax burden: https://postdoc.duke.edu/policies-and-forms/faq-duke-postdoctoral-policy

Response 691

Perspectives on the postdoc roles and responsibilities

The role of an academic postdoc is to develop the skills necessary to transition to becoming an independent scientist. Just as important, the postdoc should be acquiring the particular and specialized skills necessary for their future career goals, whether that be in academia or elsewhere.

Fundamental issues and challenges

The main challenge for me as a postdoctoral trainee is the monetary compensation. Although I understand this is a trainee position, postdoctoral trainees have highly specialized skills that come from immense training/education. I believe that postdocs are fundamentally not compensated enough for those skills. Also, I believe that the amount of time someone is expected to stay in a postdoctoral position is too long, especially when it comes to apply for academic positions. This furthers the compensation issue and ultimately creates a class disparity where only those who can afford to be a postdoc for an extended period of time are the ones applying for those positions.

Existing NIH policies, programs, or resources

I am happy that the NIH sets standards for postdoctoral compensation. However, I believe there should be an adjustment based on cost of living in that region.

Proven or promising external resources or approaches

No response

Response 692

Perspectives on the postdoc roles and responsibilities

A transition role into PI position where experiences in grant writing and mentorship are the key skills to acquire

Fundamental issues and challenges

Pay, living standard, lack of mentorship from PI, unrealistic and overemphasized publication record

Existing NIH policies, programs, or resources

NIH needs to support people and to offer more workshops on alternative career paths other than postdoc and academia, which would reduce unnecessary competition, and encourage more diverse choices of personal development.

Proven or promising external resources or approaches

Increase pay, increase funding and rights for Postdoc association

Industry partnerships: Partnerships with industry can provide postdoctoral researchers with opportunities to gain experience outside of academia and develop skills in high demand in the private sector. NIH could explore ways to facilitate these partnerships and promote collaboration between industry and academic researchers.

Response 693

Perspectives on the postdoc roles and responsibilities

If supervised under right manager and advisor, good way to gain more practical perspectives on applying to grants, utilize resources and in-depth training for specialized topics. But in most cases, it is a way to gain cost-effective and exploiting social hierarchy for advancing advisor’s research not much benefiting the trainee itself.

Fundamental issues and challenges

People do not want to do postdocs because it is portrayed as imbalance of work-life, low-pay and high stress which is mostly true.

Existing NIH policies, programs, or resources

Proper compensation, respect to post-doc's personal life and equal opportunity

Proven or promising external resources or approaches

No response

Response 694

Perspectives on the postdoc roles and responsibilities

It seems to be a rigorous training to prepare scientists for faculty positions, although many do not end up as PIs.

Fundamental issues and challenges

I think that the low salary (compared to industry jobs) is a big factor preventing recruitment. And low turnover to faculty position.

Existing NIH policies, programs, or resources

More grant and mentoring opportunities, higher salary.

Proven or promising external resources or approaches

No response

Response 695

Perspectives on the postdoc roles and responsibilities

Training position in which to carry out an independent research project aiming to start a line of research to follow up as an independent researcher after the postdoc. Specific responsibilities other than research include mentoring younger generations of scientists, teaching, and participating in peer review and publishing/presenting research in scientific journals, conferences and public engagement.

Fundamental issues and challenges

Non competitive salaries, unpaid extra hours, lack of benefits (ie retirement), lack of stability, limited opportunities in academia after the postdoc, extreme competitiveness leading to mental health problems. Occasionally difficulty to report/confront supervisors with abusive behaviours or unhealthy work environments.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 696

Perspectives on the postdoc roles and responsibilities

As a 5th year doctoral candidate currently seeking a post-doc position, a post-doc position is a transitional position meant to prepare me for independence in academia by becoming an expert in my research area. I also hope to gain skills in thinking independently and critically.

Fundamental issues and challenges

I am very concerned with the salary of a post-doc position. Because it is capped and does not flex with cost of living/location, I feel forced to consider positions only in areas with reasonable costs of living. For example, I have the opportunity to interview for a postdoc position at [redacted for anonymity], but I don't believe my 2-income family (husband and I) could live comfortably, nor would we be able to afford to start a family. Starting a family is also a concern. There are not reliable policies protecting people who become pregnant from discrimination, there is not guaranteed maternity leave, or affordable child care options, and I'm worried that any health care I can afford may not be a good enough health care plan to even cover the healthcare costs associated with pregnancy and birth.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 697

Perspectives on the postdoc roles and responsibilities

I think clear hours & time commitments should be set upon hiring. Obviously science experiments don't adhere to a 9-5, but is this a 40h/wk job or a 60h/wk job? Either is fine if we are told clear expectations upon hiring. If I come in late at night or on the weekend to prep mice or take time points, I should be able to leave early another day in the week with out guilt.

Fundamental issues and challenges

Clearly the biggest hinderance is salary. We have PhDs and are paid like those with B.S. If a PhD goes to industry their starting salary is $85,000.

Existing NIH policies, programs, or resources

Better advertisement of training programs. I was already in my second year when I found out about and applied to a K12 at my institution.

Proven or promising external resources or approaches

Subsidised child care programs would be extremely helpful.

Response 698

Perspectives on the postdoc roles and responsibilities

To me, a postdoctoral position is a training period in which the trainee prepares for an independent career in academic research. As the trainee should already be a proficient scientist, this period of training should include a focus on

1) Managing a research laboratory,
2) Navigating the teaching and service responsibilities at an academic institution,
3) Acquiring extramural funding, and
4) Building the preliminary data necessary for a research program.

Fundamental issues and challenges

As a postdoctoral trainee, I am in a difficult position of wanting to pursue my own research areas and establish my focus, while having to worry about where the money comes from to pay for the experiments. My focus is outside of the purview of my mentor, so it is not appropriate for me to have her pay for my experiments when they are not working towards the aims of her grants. Another difficulty is that the postdoctoral compensation is low, considering how the time commitment is often longer than 40 hours every week.

Existing NIH policies, programs, or resources

Placing a term-limit for postdoctoral fellows would enable them to progress quicker.

Proven or promising external resources or approaches

No response

Response 699

Perspectives on the postdoc roles and responsibilities

Postdocs are professionals who need additional training to show their ability to drive biomedical research forward with less input than they received during their graduate school careers.

Fundamental issues and challenges

- The availability of funding is an issue. With low funding rates, only large academic/research institutions are able to recruit postdocs effectively.
- The time spent as postdocs is too long with the average postdoc spending 7 years in training.
- The pay is low making it challenging to have a family and train at the same time.

These factors contribute to scientists choosing alternate career paths to stay away from the academic path.

Existing NIH policies, programs, or resources

Postdoctoral training should be planned in a manner similar to physician training. All postdocs could spend a mandatory 3 year training period to show they can do the science and publish papers. Additional years can be made optional for those wanting to write grants (R00, K awards, among others).

Proven or promising external resources or approaches

No response

Response 700

Perspectives on the postdoc roles and responsibilities

I see postdoctoral position as the bridge to faculty postion. Fresh PhD have enough exposure to research but at postdoctoral stage we learn how to be more independent in terms of writing the grants or manuscripts persay. This training is very crucial for the future for any researcher who wants to pursue research in their future be it academic or industrial research. Networking is another crucial part of any postdoctoral postion where a researcher should initiate the collaborations and build their own niche for the future research.

Fundamental issues and challenges

the first and basic challenge every postdoc faces is the salary differences. Not all the universities pay the NIH scale, whihc is really sad, as NIH is the authority who should keep close eye on this mater. Specially when a grant comes to review they should check the proposed salaries of the researchers going to join in the projects. Second major challenge in any postdoc researchers life is the transition to faculty postion. The fact is known to everyone the ratio of successfull transitions in academia. Due to these two major constrains the academia looses brilliant researchers even after putting so much efforts in their training. The time and resources invested in the postdoctoral training is immense, there should be policies to retain quality researchers engaged in the field.

Existing NIH policies, programs, or resources

There should be more scope for funding opportunities for researchers on Visas, this will nbot only help to retain them intersted in the acadmic research but also will be fruitfull for the NIH and universities to pursue hihg quality research.Their should me more opportunites to give administration training to postdocs which will help in their future PI roles. another crucial point is the human resource management training, this is the well known fact that not every PI is good in human resource management because they never got formal training for the same. There should be more focus given to these activities to groom the postdocs in prospective PIs.

Proven or promising external resources or approaches

If we consider the worklife balance, visa issues, better training for administration and grant writing. I think the training ecosystem will florish and evreyone will be benefited.

Response 701

Perspectives on the postdoc roles and responsibilities

Postdocs are the lynchpin of successful research labs and successful careers. The postdoctoral role offers a key time of training and development towards independence that sets researchers up for success in

running their own labs. They are often the drivers of innovation in the lab, supervising junior staff, and innovating methodologies.

Fundamental issues and challenges

Postdoc salaries have lagged far behind industry salaries. Especially since postdocs are often at an age where they are starting families, living at near-poverty wages is not an option. NSF postdoc salaries have better kept pace with these trends (NSF SPRF salary = $65,000 ; NIH NRSA salary= $56,484). Outdated family leave policies also make it difficult to retain postdocs, especially women and people from under-represented backgrounds.

Existing NIH policies, programs, or resources

1. Increase postdoc stipend base levels to at least the NSF standard: $65,000, with potential automatic supplements for those in high cost-of-living areas.
2. Increase family leave to 16 weeks rather than 8 weeks. Since leave time comes out of the budget of training and research grants, family leave also means a shorter time in training/research, which penalizes the postdoc taking leave. Grant "family leave supplements" to make up the difference in training & research time. (e.g. A postdoc has a baby and goes on maternity leave for x weeks--allow the PI of the grant that funds her to automatically supplement the budget with x weeks of salary)

Proven or promising external resources or approaches

No response

Response 702

Perspectives on the postdoc roles and responsibilities

When I stated I loved being a postdoc, loved my projects and everything. But over the years this changed, see issues below. On a personal level it was very hard as well, not being a resident or citizen I was mostly dependent on my PI's finding funding, if not I would have to leave the country, this was very stressful. I decided not to become a PI after seeing all the issues my PI's had with getting NIH funding, I just didn't want to put this pressure on my potential postdocs and myself. Since it's not just a job in this case you are involved in someone's living situation and potentially their whole family if they brought them over from a different country.

Fundamental issues and challenges

I believe the fundamental challenges inhibiting recruitment and retention are the huge disparities of benefits and wages in comparison to for example industry jobs. My University for example does not contribute to my 401K which puts me at a huge disadvantage compared to for example graduate students that move into an industry job right after completion of their PhD. Also wages are still too different to make postdoc positions a great choice. I love working in Academia but these issue make me want to leave. Also the possibilities for Postdocs to get promotions are so limited. Not every postdoc can be a PI and Instructor and Staff scientist positions are again not paid really well.

Also the NIH puts out yearly suggestions for wages, which raise on the minimum level as well as on the experience level. At my institution, I had to beg my PI to be moved up on the salary scale based on my experience though, and even then sometimes this is being questioned by admin staff. It's just not a great work environment.

Existing NIH policies, programs, or resources

- Make pay scale mandatory for all postdocs otherwise no NIH funding anymore for the lab
- Make universities contribute to 401K's
- New job opportunities for postdocs that want to stay in academia but didn't make it or don't want to be a PI
- More funding available for non-residents/non citizens (especially since more than 50% of postdocs do not fall into this category)

Proven or promising external resources or approaches

No response

Response 703

Perspectives on the postdoc roles and responsibilities

A postdoc is primarily responsible for conducting research that will allow them to pursue a career as an independent scientist, either at an academic or non-academic institution. To that end, they should have more independent autonomy over their research project than a graduate student, while still contributing to the overall themes of the lab of which they are a part. Additionally, postdocs should be allowed and encouraged to take the research project they develop with them, to pursue as they see fit as independent scientists later on. Supplemental to their research, postdocs should be expected to mentor younger students in the lab. Senior postdocs especially should be viewed as experts (not trainees), partly responsible for guiding the instruction of more junior members of the lab.

Fundamental issues and challenges

Postdocs should be paid a fair salary equivalent to someone that has successfully completed graduate-level education. Currently, postdocs are dramatically underpaid, considering that many of them are acting as field experts in their labs, contributing new skills and expertise to their labs which would not otherwise be possible. Additionally, postdocs are often neglected by their PIs in terms of mentorship. While postdocs are no longer trainees, they still deserve and require instruction on how to develop independent research programs or how to pursue careers outside of their current lab. PIs are an integral part to postdoc career development and can often make or break the success of postdocs following their tenure in the lab. It is integral that PIs be judged on not only their science, but also their mentorship capabilities when it comes to promotions/grant funding, as often that aspect of their role is neglected, resulting in poor working conditions for the members of the lab.

Existing NIH policies, programs, or resources

Payment, mentorship resources, career development resources, training/instruction for new fields of work/technology, financial literacy classes, grant writing seminars, basically a "how to" course for running an independent research lab, faculty interview advice/workshops, training in how to give a talk/how to teach, mentorship courses, teaching pedagogy training, DEI workshops (i.e. how to practice inclusive science, integrate diversity into the lab environment, and prioritize inclusive hiring)

Proven or promising external resources or approaches

No response

Response 704

Perspectives on the postdoc roles and responsibilities

I see the biomedical postdoc as a chance to learn how to become an academic PI without the responsibilities of managing people or finding funding. I am able to devise and execute projects with some guidance from my mentors

Fundamental issues and challenges

1. No health insurance coverage provided by the university for postdocs on fellowships
2. No opportunities to offer even slightly critical feedback to mentors
3. No integration into the larger university or department (no participation on thesis committees, limited access to graduate or student affinity groups, little interaction with faculty or other postdocs in the department)

Existing NIH policies, programs, or resources

Require universities that accept NIH funding to provide university-subsidized healthcare and childcare to their postdocs (even those postdocs on NIH fellowships) Prohibit universities from taking money out of a postdoctoral fellowship's research budget to use on their healthcare. Ensure that universities employ more academics than administrators

Proven or promising external resources or approaches

No response

Response 705

Perspectives on the postdoc roles and responsibilities

I consider postdoctoral training to be an opportunity to develop the scientific basis for my independent research program, acquire soft skills in management, budgeting, negotiation, and mentorship, and gain exposure to additional research topics and techniques of interest. When I was a graduate student, my PI encouraged me to apply for the DP5 award, but I declined largely because I felt that a postdoctoral training period would be to my professional and personal benefit. I do think that responsibilities are largely determined by the PI, and I definitely sought a position that would give me more experience in management and mentoring than in hands on benchwork simply because my eventual goal is to be a PI and I think practicing those skills now is key.

Fundamental issues and challenges

There are several major challenges to the traditional postdoc. First, there are very few prospects for eventual success as a tenure-track faculty member, which is problem difficult to address. Second, the payscale for postdocs is very poor considering the qualifications and skills which they bring to the table. In fact, my take home pay is only marginally more than it was in graduate school as a Ph.D. student because of increased taxes (no longer a stipend!) and cost of health insurance. This leads into my third major challenge in postdoc recruitment and retention which is categorization of postdoctoral trainees as neither fully trainee nor fully employee at many institutions. At this point in their career, a Ph.D. has the highest degree available and expertise in a particular subject with valuable experience and skills that are highly sought in various industries and markets, yet in academia they are excluded from many of the resources and financial "breaks" offered to student trainees (training, events, tax breaks, free health insurance) AND the benefits of full employment offered to any other full-time working member of the university (such as retirement benefits, reasonable health insurance rates, commuter benefits, etc). For example, I turned down a postdoctoral position with an top tier university because I could not afford the health insurance ($1200 monthly for myself and my child). I was able to get employee status elsewhere where I pay about $300 monthly for equivalent health insurance and I also receive retirement and commuter benefits—all of which are unusual for postdocs. What are postdocs—trainees or employees? Leaving categorization up to universities has lead to fuzzy definitions. These issues encourage brilliant scientists to look elsewhere for jobs that offer better salaries, benefits, and job stability.

Existing NIH policies, programs, or resources

Standardizing the definition of a postdoc to require universities to label them as employees would make a huge difference since this would qualify a full time postdoctoral scientist to receive employee benefits that improve quality of life. Limiting the number of years a postdoc can spend in such a position would be great (some universities already do this) with the one exception being that those who cannot acquire a tenure track faculty position within that timeframe should still be given opportunities to achieve this later on without being viewed negatively. Increasing the NIH payscale, which was recently done, helps as well, although I will also concede that most people choosing to continue in academia are not doing so because they prioritize good pay. While the pay will likely never be comparable to other career paths I do think it is possible and beneficial to increase this when possible.

Proven or promising external resources or approaches

I think that the fact some universities and hospitals label their postdocs as full employees makes a huge difference in recruitment and job satisfaction. I recently had a baby and was able to take full time employee maternity leave, which ended up being 13 weeks of leave (11 paid). I have retirement benefits. I save money every month by using commuter benefits. I pay a reasonable sum for health insurance for my family. Although I am not paid as much as I could be in many other positions and would certainly appreciate any increase in pay I could get, I am passionate about being in academia and very satisfied in my job knowing that I am doing what I love and still finding a reasonable balance between my career goals and providing for my family. I would be in a bad place if I had to choose between my career goals of staying in academia and making enough money to support my children, so I'm incredibly grateful I have

found the position where I am. All of that is made possible largely because I'm an employee and not a trainee (but not really a trainee) category.

Response 706

Perspectives on the postdoc roles and responsibilities

Postdoc provided me with the opportunity to get additional specialized training to prepare me for independent research that I was not able to obtain earlier/in grad school--I got training and mentored experience in developing grant proposals and conducting large NIH-funded grants.

Fundamental issues and challenges

Pay. The pay is fixed/typically non-negotiable and generally less than 50% of what private practice or industry jobs.

Existing NIH policies, programs, or resources

Increasing the stipend for T32s and other NIH set paylines to make the pay more appealing

Proven or promising external resources or approaches

No response

Response 707

Perspectives on the postdoc roles and responsibilities

An opportunity to develop my own expertise and independence as a researcher and expert. I stepped away from a higher-paying job that felt like it would not give me the same long-term opportunities as being a post-doc and gaining greater skills and recognition.

Fundamental issues and challenges

Pay.

Even on a non NIH-funded post-doc, my institution ties salary to the NIH scale. I took a pay cut to do the post doc, and did not get benefits like retirement contributions. Thank goodness it was only for 2 years. I would not have done it if it were for a longer time. After doing a PhD (no income), I am entering the workforce later than my peers and can't afford to sacrifice more years of earnings and retirement contributions.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 708

Perspectives on the postdoc roles and responsibilities

Postdocs are the scientific and creative engines of a lab. They plan, execute, and interpret the results of experiments. In most cases postdocs are the primary authors of grants which are often submitted without their attribution and are funded in their PI's names. In almost all cases postdocs also serve as the direct scientific mentors of junior scientists such as graduate students, undergraduates, and some technical staff. In many cases, postdocs take on classroom teaching roles, either to develop their own careers, or out of necessity to earn enough money to live off of. The idea of postdocs as extensions of one's scientific training has not been anywhere near true in the United States for decades. The US has some of the longest graduate programs in the world to receive a PhD, and at the ends of these programs, we essentially have scientists who are entirely capable of independently designing and running their own research enterprises with only a minimum of administrative support. However, due to the structures of academic research, most postdocs are forced to accept positions which essentially have all of the scientific responsibility of junior faculty without any of the rewards.

Fundamental issues and challenges

When I graduated from the top program in the world (at least in my field) I essentially had two options: accept a postdoc at a prestigious institution in a high-cost-of-living area paying the NIH minimum (54k a year), or accept a senior scientist role at a large biotech company (150k a year plus benefits and stock compensation equating to an additional >$75k a year). The choice was trivial to make. Until compensation of postdoc scientists (the term "trainee" is frankly an insult to the expertise of US-trained PhD scientists) reflects their value, academia will continue to lose talent to the private sector.

Existing NIH policies, programs, or resources

If the NIH is serious about postdocs remaining in academia, K grants need to be funded to greater degrees, provide for higher compensation for postdocs, allow for hiring or technical staff/compensation for graduate/undergraduate workers, and pay for administrative/other indirect costs associated with the funded research.

Proven or promising external resources or approaches

1. Fund the postdoc not the PI. Existing funding programs need to follow postdocs wherever they decide to pursue their research and should not be paid directly to the PI of a lab. Doing so restricts mobility, decreasing bargaining leverage, and continues to expose highly trained scientists to exploitation from PIs who have essentially become middle-management.
2. Increase NIH minimums by a minimum of 2x, with an additional adjustment for Cost Of Living. Biotech hubs are concentrated in High Cost-Of-Living areas in the country, leaving many postdocs with far less than a living wage.
3. Support efforts of postdocs to unionize. Collective bargaining is an avenue by which postdocs have a fighting chance of obtaining safe working conditions, fair compensation, and increased decision making power.

Response 709

Perspectives on the postdoc roles and responsibilities

Postdoc is the role in which I can focus on 100% of the research that I'm interested in. In the meantime, I can get more interaction with collaborators and funding agencies. I will learn from my PI how to run the lab and balance work/life.

Fundamental issues and challenges

1. Low salary, especially in [redacted for anonymity]. The rent, daycare, and living expenses in [redacted for anonymity] makes postdoc salary unsustainable.
2. Need affordable daycare and school for kids.
3. Need more opportunities with non-academia jobs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 710

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should be an opportunity to work in a well-known lab and gain experience in the chosen field of study. It should ideally be limited to a total of 3 years, sufficient time for the researcher to decide and pursue the future direction—research in industry, a faculty position in academia, something completely removed from research (such as scientific writing, patent, regulatory, clinical), or even a further degree (such as an MBA). During a Postdoc the researcher should be able to publish at least one scientific paper and take on a role in collaborations within and outside the lab. The researcher should also given the opportunity to practice public speaking and networking by attending scientific conferences.

Fundamental issues and challenges

The main problem is money (obviously). Even a Postdoc needs to have sufficient funding to scrape by. By the time somebody starts a Postdoc this person is in their early 30s which is a time where you want to start a family and are not willing to live like a student any longer. A Postdoc salary should be sufficient to cover basic expenses which varies greatly depending on the location. For instance you can survive on 60K annually in the Midwest, but not in Silicon Valley. With ample of Biotech jobs around it is not surprising that folks are quitting their role after only 1 or 2 years into their Postdoc as they get an attractive offer from industry. The second problem is increasing wokeness of the institutions in academia, even in STEM fields and the negative impact it has on Postdocs and other researchers in the lab. There are so many trainings required now by the DEI departments that it pushes people out. In industry you take a job and can easily work your way up very quickly (speaking from my own experience here) while academia is very slow to progress you in your career. The third main problem is today's publishing culture. Of course the PI wants you to publish in a top journal where the requirements are so intense that it is almost not doable. The young researcher spends long hours trying to fulfill all the requirements demanded by a top journal, thus sacrificing their health and personal life. On top of that the PI is required to pay top $ to get the paper published. Another problem is the long work hours required to gather enough data for publication. Folks simply burn out quickly that way.

Existing NIH policies, programs, or resources

More salary for Postdocs, needs to be adjusted to cost of living in the area. More realistic expectations when it comes to publishing.

Proven or promising external resources or approaches

more oversight over mentoring quality of the PIs. Not every excellent scientist is a good mentor.

Response 711

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

WIth regard to retirement benefits, many PhD students are not aware of the sacrifice that they are making when starting their programs. Giving up on five to six years of wealth building is already a tremendous detriment on scientists ability to one day retire. It is therefore shocking to me that postdocs, after making such sacrifices during their PhD work, are not offered retirement benefits at most institutions. In fact, at my institution, postdocs are specifically excluded from the generous retirement benefits that all other university employees enjoy. With postdocs taking longer and longer to complete, I am deeply concerned about the future financial well being of postdocs in the US.

We also cannot discount the effects of low wages for postdocs on recruitment and retention. At most institutions the NIH minimum salaries are viewed not as a baseline, but as a hard set payscale that cannot be deviated from. This payscale is weaponized against postdocs seeking a raise, and we are told that it is unfair for us to be paid more than other postdocs who are on this scale. Entrenched and senior scientists who have owned homes for decades and are shielded from the worst effects of inflation simply do not understand that a salary in the 50-60k range is not a middle class salary in modern times. This is enough to get by, but not enough to move into the stage of life where we can think about starting a family or owning a home, or otherwise build wealth. Given the skill sets that we have developed in our PhD work, it is unsurprising to me that so many postdocs are leaving academia for other positions that offer real salary and benefits.

Existing NIH policies, programs, or resources

Here are my suggestions for NIH to improve the situation of postdocs:

- Allow institutional allowances for F grants to be spent on retirement benefits for the fellow.
- FORBID institutions receiving NIH funds from excluding postdocs from university benefits that other staff receive.
- Improve pay scales and encourage well funded labs to pay postdocs more, perhaps some kind of matching system?
- Provide more incentives for postdocs to get fellowships, which are usually neutral or even financially detrimental for fellows (but not the PIs!)

Proven or promising external resources or approaches

No response

Response 712

Perspectives on the postdoc roles and responsibilities

training to perform independent research with high impact publication for career development.

Fundamental issues and challenges

1) Income is too low to recruit the best phd students.
2) To get an academic job (tenure track), a postdoc need to publish high impact journals (CNS level) despite the open access or Elife movement , so most likely need to join a HHMI or well-established reputable laboratory. These labs are most likely with a few dozens of trainees, the PI most likely provide limited mentorship but a lot of research resources. So many future PIs will run their labs in a similar format like their mentors, so proper postdoc training is hard to propagate.

Existing NIH policies, programs, or resources

We need to have a particular minimum salary limit to provide livable condition, especially since some of the locations are very expensive. And need to require the large grantee (mentors) to take training on how to mentor postdocs.

Proven or promising external resources or approaches

Should allow trainee to apply private funding on top of the NIH fellowship to supplement their research and salary.

Response 713

Perspectives on the postdoc roles and responsibilities

I have viewed my postdoctoral experience as a time to gain needed skills, establish myself as an expert in my field (e.g., through publications, presentations), and network in order to secure a PI position. I view myself as supporting my mentor’s work while separately pursuing and establishing my own line of research independent of my mentor. Early in my postdoc, I viewed my role primarily as a learner of materials and methods that I will use during my career. Now that I am more advanced in my postdoc, I serve in a supervisory role and provide guidance to the more junior members of the lab. I also have more administrative responsibilities on our projects (e.g., coordinating with study staff, budgeting, etc). This has helped me to develop administrative, mentorship, and “people” skills. I feel this has been a good pathway for development, particularly as I am interested in a PI position as the next step. My responsibilities vary widely depending on the week, but at this point, I see little difference between my responsibilities and those of my PI.

Fundamental issues and challenges

The biggest fundamental issue that I have faced, other than substantial COVID-related career setbacks, has been in channeling my postdoctoral position into a PI position. The job market is tough and securing a position is almost entirely luck and timing once you reach the PhD level. Postdocs are people too, and

many of them have families. The thought of moving everyone in my family for the third time in ten years for a job across the country exhausts rather than excites me at this point. With that in mind, the biggest issue I would say is the toxic competitive mindset that forces mentors and institutions into encouraging postdocs to seek employment elsewhere. Retaining talented postdocs as PIs and helping them to develop independence at the institution they received their training should be a goal. Think of it as someone getting an internal promotion instead of constantly being forced to look elsewhere to even be considered. This issue is especially frustrating as academic postdocs are not getting paid nearly enough. Seeing no opportunities for advancement while not getting paid enough is a poor combination, and many postdocs I know are leaving academia entirely because of it. I am strongly considering a non-academic next step myself, with my lack of interest in moving as the biggest motivating factor.

Existing NIH policies, programs, or resources

Grants or programs other than the K99/R00 to aid in successful transitions to a PI position should be available to postdocs from all backgrounds and institutions. So much of a successful transition lies in knowing the "right people" at the right time, which is getting harder to do with things moving to a virtual platform. Further, those from less privileged backgrounds or whose mentors have limited experience (e.g., early career mentors, those who have only worked in government) are less able to navigate the transition successfully. The K99/R00 is not an entirely opaque process either, with some well-scoring candidates not being awarded due to criteria that are not laid out in the RFA.

Proven or promising external resources or approaches

No response

Response 714

Perspectives on the postdoc roles and responsibilities

Postdocs are essentially journeymen, treated as high skilled, poorly compensated laborers with limited prospects for career advancement.

Fundamental issues and challenges

Pay is poor, most institutions deny full access to benefits, career prospects limited, no advantages gained in the role for careers outside of academic track.

Existing NIH policies, programs, or resources

Shrink gap between high level PI pay and postdoctoral pay. Force institutional compliance with a minimum benefits standard.

Proven or promising external resources or approaches

Maybe just let people leave.

Response 715

Perspectives on the postdoc roles and responsibilities

The postdoc is an opportunity to receive additional training not received during graduate school. This includes new research techniques, grant writing experience, teaching experience, mentoring experience, project design, etc. Postdocs are fundamental to lab success, generating publications, generating important data for grant applications, mentoring students, and other less appreciated tasks (e.g. managing IACUC or IRB protocols, lab websites and social media pages). People who provide such valuable work to the scientific community should be treated and compensated as such.

Fundamental issues and challenges

The postdoc salary and benefits are inconsistent with the postdoc's level of education and expertise. For someone with a PhD that is an expert in some field of science, they should be compensated well enough to afford to buy at least a 1-bedroom house, at least 1 car, and be able to support at least 1 other person or pet in the city or metro area where they work. The NIH minimum salary for postdocs does not reflect this level of compensation. In the U.S., cost of living since the pandemic began has rapidly increased, and the NIH has not acted swiftly enough to keep up.

Existing NIH policies, programs, or resources

All NIH grant applications should be simplified and streamlined, but the NIH consistently tries to make applying for an award more difficult and burdensome for the applicant. This is particularly challenging for those with the least grant writing experience, negatively affecting postdocs. This also disproportionately negatively affects those from disadvantaged backgrounds like under-represented minorities.

Additionally, to support postdocs, the NIH should create a postdoc supplement for ALL R level grants (including R00), allowing additional funding for 1-2 postdocs per award to cover cost of living expenses. This will allow labs to have enough funding to more competitively recruit and retain postdocs without compromising the quality of work of the original R award. Maybe you can call it a housing supplement to support paying a mortgage or rent, in urban areas.

Proven or promising external resources or approaches

Other agencies such as DoD and NASA provide higher minimum postdoc salaries than NIH does.

Response 716

Perspectives on the postdoc roles and responsibilities

As a postdoc my role is designing and conducting experiments that help answer complex questions in the scientific field. As a more senior member of the lab, I also see my role as a mentor to graduate students and undergrads.

Fundamental issues and challenges

The main fundamental hurdle for continuing as a postdoc is the cost of living. The salary of a postdoc has not changed in proportion to inflation and it is becoming increasingly harder to convince myself to stay in academia when there is a higher paying job in industry.

Existing NIH policies, programs, or resources

More training, and more resources.

Proven or promising external resources or approaches

No response

Response 717

Perspectives on the postdoc roles and responsibilities

Responsibilities include bench research, grant writing, lab management, science communication, establishing collaborations, mentoring junior scientists.

Fundamental issues and challenges

Low salary, bad work-life balance, no or limited sense of belonging in the institution, not enough tenure-track positions available

Existing NIH policies, programs, or resources

Increase payscale, increase funding for career development grants, favor industry-academia exchange. More funding for early stage R type grants.

Proven or promising external resources or approaches

No response

Response 718

Perspectives on the postdoc roles and responsibilities

A postdoctoral position uses our vision and passion to take them to the next level in academics. If someone is shining good in this then he/she would have a better life in future.

Fundamental issues and challenges

The fundamental issue with postdoctoral training in academia is the mentor-mentee relationship. Most of the mentor is not guiding the student in the proper way. Hence, this could restrict them from future opportunities.

Existing NIH policies, programs, or resources

NIH policies are good, but the institute and mentors implementing those policies are not so good. For example, the salary. The NIH has some postdoc salary regulations, but the institute and mentor do not follow them. They always wants the cheap labor to carryout their work.

Proven or promising external resources or approaches

The NIH must intervene in this salary dispute.

Response 719

Perspectives on the postdoc roles and responsibilities

A postdoc is supposed to be a time where you are mentored and are able to explore your research interests without being used and disposed of like a piece of lint. It should be a time where you are allowed to grow and not have to feel like your PI of the lab is competing with you.

Fundamental issues and challenges

Everything. Let's start from the actual science. You are not given the bandwidth to do actual research, rather you are used as free labor. Second, many mentors do not support the trainee at all, in fact, they compete with the trainee and make them write grants, etc. and not get any form of recognition. If I knew what I know now, I would have never been a PhD scientist and gotten into medicine and did a research fellowship. Lastly, you are constantly told false information about the glamor associated with being a postdoc, however, the vast majority of research is not repeatable and is nonsensical. Does not have any impact on the ordinary lives of John and Jane Doe.

Existing NIH policies, programs, or resources

Postdocs should be given the opportunity to apply for funding under their own name, and not under the PIs name. The latter has put me in situations whereby I have written multiple grants for the PI and we secured close to $5 million in less than 4 years, yet I am being paid at 0.5 FTE. When you let your grievances known to authorities like HR, ethics, compliance, etc. then you are put in a position where they cannot do anything because NIH deemed the PI as the only entity who is key personnel. Then what happened to the other key personnel in the grant application?

Proven or promising external resources or approaches

I think there should be a limit on how many postdoc positions in the country. NIH is not here to help facilitate better opportunities for these individuals. It is best to either go into industry or build a consulting company. The biggest thing NIH can do is to reset what a postdoc is supposed to be. Redefine that and then move forward with whatever plan you have. But as long as you have the good old boys club intact, then forget about any resources you want to put towards a problem that is not fixable. Money does not resolve anything, change the mindset.

Response 720

Perspectives on the postdoc roles and responsibilities

My personal view is that the academic postdoc is obsolete. Originally it was a short-term training position that prepared scientists for a lifelong career in academic research. Nowadays it is just a source of cheap labor for labs. The position is focused on executing the research plan of the PI/lab head and providing training and direction to graduate students, technicians, and other students. Unless the post-doc has independent funding, they typically will not be allowed to pursue their own research which defeats the purpose of the postdoctoral position.

Fundamental issues and challenges

My academic cohort of graduate students viewed postdoctoral positions as the backup plan if industry/government/other career plans fell through. Even then, the postdoctoral position was viewed as a temporary step while you retooled your CV or underwent additional training (i.e.science communication or data science) to pivot to the target career. The amount of work expected for the pay scale is horrendous. Benefits given to full-time staff are often not given to post-docs (i.e. 401k, discrepancies in vacation/sick time) which is demoralizing. There is a mental health crisis amongst postdoctoral trainees which forces those who can get out to do so. Those that remain are often international scholars who are constrained by visa issues or those who have niche skillsets that don't translate directly into industry. Even if the pay and benefits were adjusted to market rates, the academic environment itself is a problem. The publish or perish mentality makes having a work/life balance very difficult and it is an open secret that there are not enough permanent staff positions for all postdoctoral trainees to aspire to after their contract ends.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Forcing PIs/lab heads to mentor their postdoctoral trainees instead of assigning them experiments, and factoring in the trainees' career outcomes to the PIs performance review could shift the focus from getting the maximum output from trainees to restoring the training component. Right now, with the salary and benefits where they are, and the work/life balance as bad as it is, the only feasible way to retain postdoctoral trainees is to allow them to have a component of independent research. Many people would put up with the conditions if they were offered more freedom and creativity to pursue science that interests them.

Response 721

Perspectives on the postdoc roles and responsibilities

An hybrid trainee/worker position with definite roles: designing and executing experiments, interpreting data, writing research proposals and papers, collaborating with other scientists and institution while expanding the professional network, learning/understanding how to advance in their career.

Fundamental issues and challenges

Life quality in [redacted for anonymity] is bad. The life costs are incredibly high but the salaries do not match the costs of living. I am a recipient of two doctoral degrees with research experience at [redacted for anonymity] and must share an apartment with a roommate because I can not afford to live by myself. There is a little attention and support from the Institution on the professional growth of PostDoc, which struggle understanding what their next step will be. There is also a work overload, Postdoc often cover multiple position (management, technician etc.) and rarely take care only of their own project, wasting time and energies on less important tasks, for which they are, moreover, not paid. Extra time is not retributed, PostDocs rarely work only 8 hours a day and very often need to work on weekends too, without additional pay. Basically a PostDoc has a trainee stipend, but a 150% full time job with responsibilities and no pay.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 722

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The pay is frankly abysmal. Postdoctoral trainees have DOCTORATES. They can often find 6-figure salaries in industry or other jobs. Additionally, many high-quality educational institutions are in regions with very high cost of living (California, Boston, New York, etc).

For many, especially women, there is the consideration of major life milestones (marriage, starting a family). There is never a "good" time to do this in academia, but it's harder to do this when still expected to work long hours in lab for little pay.

While academia is generally considered a "labor of love," there is the issue that there are very little protections for workers. They are often still expected to work late hours/weekends or generally hold an unpredictable schedule. This is generally incompatible with the postdoctoral pay scale.

Also, the academic job market is historically very competitive. Many people who do go through the process of postdoctoral training are unable to find a faculty position. Even if they do, jobs are not guaranteed/stable unless tenure is achieved.

Many feel that they can receive better working conditions, a less stressful work environment, more stability, and better pay in a non-academic track.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

better financial compensation, especially in high cost of living areas. A single 32-year old with a PhD should be able to afford a one bedroom apartment near their institution.

Consider the sustainability of the current academic structure. If we continue increasing postdoctoral recruitment, are there academic jobs for them? If not, it's essentially promoting a pyramid scheme.

Response 723

Perspectives on the postdoc roles and responsibilities

Postdoc positions are generally required to obtain tenure track faculty jobs, and occasionally higher ranked jobs in industry and other sectors. Beyond this reality, I think postdoc positions can in certain circumstances be very beneficial to the trainee. During my postdoc I have learned a variety of new techniques and skills, and am working to build my future research program. I have also benefited from a relatively stable postdoc environment (good advisor, intramural NIH system, better than average salary) which is not true of all, or even most, postdocs right now. Without this, I do not think I could have the luxury of completing a postdoc. This is compounded by the fact that despite the tremendous service postdocs provide in furthering their advisor's research and science broadly, we are often viewed exclusively as "trainees" and are told we are "lucky" to have these positions. We are treated in many ways like students despite being highly trained and productive adults who can often make more and earn more respect in other non-academic industries.

Fundamental issues and challenges

There are several issues with the current academic postdoc system that are prohibitive to doing a postdoc, particularly for poor or marginalized people. These include, but are not limited to:

- Low pay relative to education/experience. Postdocs are highly skilled labor, and until recently were not making more than $50k a year
- "Trainee" vs "Employee" status. Many postdocs ([redacted for anonymity]) are not considered employees. Because of this, we are not eligible for retirement or contribute to Social Security/Medicare (which, when combined with graduate school can mean upwards of 10+ years with no retirement contribution during peak working years), are not eligible for other employee benefits, and often our income (especially if on a prestigious NIH/NSF fellowship) does not qualify for the Child Tax Credit or others that would offset costs
- High cost of living in most cities where postdoc positions are located. This compounds the low salary issue mentioned above, and makes it very hard for people with families, especially those without partners or with partners incapable of working, or those with caring or other responsibilities to make the necessary sacrifices to complete a postdoc. People who choose to do postdocs generally understand that we will make less than in industry, but this discrepancy can only go so far when basic needs can't be met
- Job availability in academia is terrible. Most people who do postdocs do not end up with an academic position, leading to years wasted at low salary/benefits when they could be pursuing new opportunities in other sectors
- NIH modular grant budgets are too low. Many PIs I know would love to pay their postdocs more to reduce the discrepancy but feel they cannot because the NIH modular budget barely covered salaries + costs before any proposed salary increases

Existing NIH policies, programs, or resources

In many ways, ultimately everything comes down to money. Most postdocs do not desire to be rich, but rather to do their work and to support their families and themselves. People say that this will mean fewer postdocs and smaller labs, which is likely true, but right now many people are leaving anyway for the various issues I described above. Thus, I think it is important to make life better for the remaining people who genuinely want to be postdocs and pursue academic careers, even if this means smaller labs. Nonetheless, I think that NIH needs to change policies to account for this. As mentioned above, grant budges need to be higher. It is increasingly challenging for PIs to make ends meet on one or even two R01s, even before proposed salary and benefit increases, especially because universities pass on the costs of mandated increases to the PIs rather than pay themselves. I think that if the NIH were to increase budgets and establish policy incentivizing or requiring institutions to match a certain percentage of the increase that we could start to get closer to postdoc sustainability. I think there should also be more support for PIs to make permanent or long term staff scientist positions for those who want to stay in academic science but don't want to be a PI. Finally, I think the NIH needs to address the trainee vs employee mentality —it is unconscionable that highly skilled individuals cannot contribute to retirement, lose tax breaks, and lack most benefits for the long periods required for postdocs to obtain the credentials necessary for a faculty position. Furthermore, postdocs who earn prestigious fellowships often find that they lose what benefits (like health insurance) that they might have otherwise had, making their financial situation worse.

Proven or promising external resources or approaches

No response

Response 724

Perspectives on the postdoc roles and responsibilities

Being a postdoc during the pandemic certainly opened my eyes to how many academics pivoted their work to make it suddenly fit into a COVID narrative, as that's where the funding was. Even I was asked if my research should take a COVID perspective, despite it being outside of my field of expertise.

Fundamental issues and challenges

I am currently earning another graduate degree while in my postdoc, and a popular discussion topic amongst my classmates is learning about non-academic careers. There's definitely concern about the competition for funding and the pressures that come with academic settings where you have to 'move up or move out'. Especially since I now have a child and am the breadwinner of my family, I am also looking for satisfying and meaningful careers with a bit less risk. We all work very hard and are not afraid of taking chances (especially for things we are passionate about), but the pandemic really opened my eyes to my true long-term priorities, and I want to strike a balance between career and other important things in my life.

The pandemic also affected how 'connected' I am with my department and institution. I will have completed this training almost completely in a remote setting, and it has affected my understanding of what it really means to be an academic. I don't feel prepared at all to apply for a job in academia (lack of realistic expectations of day-to-day work, lack of confidence to successfully get funding one day, a heavy dose of imposter syndrome probably), despite how successful I may look on paper.

Existing NIH policies, programs, or resources

Having gone through a traumatic birthing experience and an intensive recovery period postpartum, anything to expand the support given to pregnant people and new parents would be great (increasing parental leave, increasing support for child care). If it wasn't for the virtual setting due to the pandemic and an advisor who was very understanding, I probably would not have been able to navigate my peripartum experience in the way I did, and would have had to make different choices for how I cared for my own health and my baby.

I also would like to see the quality of advisors improved across the board. I feel like I got very lucky with the PI I work with, but I've heard many stories (especially with trainees who have been historically excluded) who struggle creating the necessary bond with their PI (or the institution at large) and the tension is reflected in their work. We are trained to write good science and how to navigate funding applications, but much less so in the human aspect of mentorship, collaboration, and community. Combine this with many of the empty promises we've seen regarding 'diversity, equity, and inclusion' and you've got a hot mess.

Proven or promising external resources or approaches

No response

Response 725

Perspectives on the postdoc roles and responsibilities

Ask research questions, design research plans, design experiments, run experiments and perform analysis.

Writing grants, papers, presentations and dissemination of the research

Fundamental issues and challenges

Salary is too low for the job ! (54-66) after 7 year is a joke, after all these years of studies and hard work to to get a PhD, starting that low is insulting, no wonder postdoc are going directly to industry!

No pension, no child care , no benefits (for 2 years) , considered as a trainee for 3 to 5 years (worse that a technician sometimes).

Technician with lower levels of study are better than us , in terms of salaries, benefits and life style (8-5 job) VS all the time +weekends most of the time .

No real career development, publish, grants then become a PI , nothing else (not everyone wants or have the skills to be a PI) .

Too many efforts for pennies and not being considered.

For info , me as well after 4 years I will leave academia , dont want to be a PI hence need to leave no other options (and want a real job too that I don't have to renew every year for working crazy and payed pennies)

Existing NIH policies, programs, or resources

PAY us more ! (compare with biotech, or pharma salaries and match) that will make a huge difference.

Give us benefits.

Job recognition.

Career development plan.

Proven or promising external resources or approaches

SALARIES, BENEFITS and recognition!

Match the same as in private companies then postdocs will reconsider!

Response 726

Perspectives on the postdoc roles and responsibilities

It's useless if your not trying to get a tenure track academic position and it means more years of being massively underpaid.

Fundamental issues and challenges

Pay.

Benefits (health care, retirement, child care, vacation, etc.)

Work life balance, past docs are often expected to work long hours and weekends when they could get a 9-5 industry job.

No postdocs lead to career advancement outside of academia.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Pay them what they're worth.

Response 727

Perspectives on the postdoc roles and responsibilities

Totally taken advantage of. Workhorses. Little (embarrassing low) pay.

Fundamental issues and challenges

Systematic view at the PI uses postdoc as workhorses and free (or low cost) labor.

Existing NIH policies, programs, or resources

Pay, career options, mentorship OUTSIDE the lab, consequences for toxic PIs.

Proven or promising external resources or approaches

No response

Response 728

Perspectives on the postdoc roles and responsibilities

It's a step between graduate and faculty in which one has more independence in driving a research direction and sometimes managing other scientists

Fundamental issues and challenges

Postdocs and time in postdocs is very long (used to be more like 2 years, now closer to 8 from what I can tell but I don't have data at hand) with no guaranteed position at the other end. The timing of postdoc is

often at a critical time, at least for women for getting married/having kids, and the postdoc is not a locationally stable position which limits either one's career to one location or choice of partner to someone not locationallu constrained. On top of this, postdocs are paid significantly less than industry positions available which don't have this locational instability or doubt of whether there will be a position at the end of it.

Existing NIH policies, programs, or resources

Resources for higher paid postdocs and postdoc to faculty transition within the same institution / city, more support for e.g. childcare and dependents since raising kids a postdoc salary is difficult

Proven or promising external resources or approaches

Childcare, pay, support networks outside of just their PI.

Response 729

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a process of attrition by which the academic structure winnows down the large numbers of trainees it produces who are interested in academic positions to the number of available long-term positions. I feel frustrated that it's required, even for those who aren't trying to switch fields. While I understand that part of the notion is "additional training", it's not as though new PIs begin their labs fully trained, and fully capable of managing all of the new and different responsibilities. It additionally creates bloat in academic labs, with giant famous lab heads garnering massive amounts of prestige and recognition for the discoveries and efforts of their many, mostly unacknowledged, trained workers (who have already gone through an entire PhD!).

Fundamental issues and challenges

The obvious:

1) Pay
2) Lack of recognition
3) No autonomy
4) Poor support for childcare at most institutitions
5) Uncertain job prospects
6) Fragility with respect to conflict with a lab's PI, especially on visa issues for international postdocs
7) The PhD is getting longer, so people are older still even when they start their postdocs
8) Cultural homogenization (the sense of who becomes an academic long-term remains very narrow, which does not encourage anyone who doesn't seem themselves conforming to that mold)

Existing NIH policies, programs, or resources

The first few to come to mind:

1) Increased minimum salaries across the board
2) Increased individual grant awards to help PIs retain postdoc trainees.
3) More equitable distribution of grants (helps new labs get off the ground, which makes starting a faculty position seem that much more enticing; discourages giant paper factories churning out irreproducible science behind the veneer of a famous PI, which pushes out potential scientists that are made uncomfortable by that style of work)
4) Require institutions to supply improved facilities and benefits to academic workers. These include, but by no means should be limited to, enhanced support for child care, prolonged parental leave, strong anti-bullying and anti-discrimination policies with demonstrable efficacy (none of these in-house solutions that just protect the university)
5) Broader selection of postdoc training awards, and an emphasis on diversity in the standard grant process (rather than specialized diversity grants).

Proven or promising external resources or approaches

Please please please don't let the people who put something about the success of the tech industry or pharma sway you. The magic and power of academia come from the ways it _differs_ from those industries; our goal should be to reduce the failings of our own institution and not conform to the toxic and transactional culture of corporate research. It's not bad that some people want to go to industry, but it should only have to be a decision on style, and not based on livability.

Response 730

Perspectives on the postdoc roles and responsibilities

For people wanting to be a PI in the future, postdoc is a training stage they must go through. For other people who like and want to continue doing scientific research, postdoc is the start of a career as associate research scientist. Postdoc is also a second chance at choosing a research focus, a lab group, a city, etc., for people who are unsatisfied with their first choice (grad school). Then naturally it follows that people who have given up hope in finding a space in academia would not consider doing a postdoc.

Fundamental issues and challenges

Career prospect. As I said to the first question, postdoc can transition into PI or associate research scientist in academia, or other jobs in industry. But the number of PI jobs is very small. The number of associate research scientist is also small and the salary source can be unstable depending on the situation. In the direction of transitioning to industry, there is limited support for postdocs, and the postdoc experience does not add additional value to PhD. Marketing postdoc as a training for growth when it is actually a career stagnation makes people feel cheated and betrayed.

Existing NIH policies, programs, or resources

Ask yourself how meaningful is this survey question. Do you expect people to actually read those poorly titled, poorly organized, lengthy documents?

Proven or promising external resources or approaches

Columbia University Zuckerman Institute Center for Theoretical Neuroscience, co-directed by [redacted for anonymity]. They offer a flexible reporting structure to promote collaboration and rapid project development.

Response 731

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are still PhDs and should be seen as equals. The collaborative nature of science should be emphasized in order to have postdocs seen as collaborators, not competition, not indentured servants, not graduate students.

Fundamental issues and challenges

Postdocs should be respected as fellow scientists, and paid according to their contributions to the team. Postdocs who are hired by a PI are often beholden to that individual, and must work unreasonable hours with little pay and often the expectation of predetermined results, with the fear of termination and/or deportation should they displease their PI. Many existing senior scientists do not respect postdocs as doctoral-level researchers, and the culture surrounding the postdoc experience must change.

Existing NIH policies, programs, or resources

The policy of a national salary cap on postdoc salaries is unreasonable and harmful. This policy should be modified to represent a minimum wage, with the encouragement for institutions and PIs to provide higher salaries at their discretion.

Proven or promising external resources or approaches

Continuing to educate existing PIs on the collaborative nature of the postdoc experience. While postdocs are still seen as trainees, they are still PhDs and should be seen as equals. The collaborative nature of science should be emphasized in order to have postdocs seen as collaborators, not competition, not indentured servants, not graduate students.

Response 732

Perspectives on the postdoc roles and responsibilities

Training to advance to independent academic research or industry research related job

Fundamental issues and challenges

extremely low starting salary, insufficient annual salary increase, strong limitations in training funding opportunities due to non-US citizen/resident status (despite doing PhD in the US and being 4 years in post-doc position), university restrictions on multi-annual contract (ie. need a new contract each year, meaning new expenses for visa processing every year).

Existing NIH policies, programs, or resources

Increase of the base salary and annual increases.

Elimination of US citizen/resident-based restrictions to training grants.

Proven or promising external resources or approaches

Adjust salaries and increases to current economic conditions

Adjust citizen-based restrictions in funding opportunities to current demographics of postdocs (e.g. 3/3 postdocs in my lab are non-US citizens/residents)

Response 733

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

A Postdoc position is a trap. The postdoc must do the work of several different people at the same time. The postdoc must do all the experiments alone, analyze the data, follow the literature, write the manuscript, write grants, direct summer students, etc. There are no other assistants to help with the experiments. The expectation to do at least 2 articles during the postdoc years is unreal. A highly qualified article's experimental and writing process is at least 2-3 years per article.

Several postdocs work in the same field in different labs but they have no time and energy to help each other and cooperate because all of them are overwhelmed, and burned out. The postdoc has to be a superhero and does several articles by themselves without any collaborations.

The postdoc has to apply for grants during this time, but you cannot apply for a grant without articles. This is a contradiction. There are much fewer grants than postdocs. After the postdoc years, there are much fewer carrier options. If the postdoc doesn`t get a grant, which is usual, there are much fewer research scientist positions at the NIH. There are fewer carrier options if the postdoc doesn`t want to be a PI, doesn`t have a world-changing idea, or just wants to work in the same field.

Existing NIH policies, programs, or resources

Most of the programs for US citizens or residents, so they are not available for a foreign researcher. This is discrimination.

Proven or promising external resources or approaches

No response

Response 734

Perspectives on the postdoc roles and responsibilities

A person with high-level training to do scientific research, training new students and produce high-quality scientific data to help the advancements of society.

Fundamental issues and challenges

Very low salary to a Ph.D level, specially when compared to industry.

High pressure for results which increase the bias.

Disbalanced work-life balance (actually much more work than life).

Existing NIH policies, programs, or resources

The salary cap should be significantly increased to match the level of expertise of these professionals otherwise companies will be always more attractive.

Proven or promising external resources or approaches

New programs with benefits for their families should be created, as well as work-life balance should be significantly improved.

Response 735

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as a further training period and a stepping stone to a final, independent career position (PI, industry scientist, etc.). The postdoc should often design/build his or her own project from the ground up and have ownership over it. In turn, if moving on to a PI position, that project should go with the postdoc. The postdoc can be a mentor as well and should take on some leadership roles.

Fundamental issues and challenges

Frankly, no one values us or realizes how integral we are for quality science and data generation. Over the past year, my organization--The Mayo Clinic--has taken away my desk and my parking. They think I can perform biomedical research at home somehow. Mayo Clinic and other institutions chronically underpay postdocs, and culturally signal that they do not view us as members of their team. I have a K award and work 6-7 days a week. I have to analyze hundreds of GB of data. I have to do multiple daily welfare checks on my mice. How I'm expected to do that as they keep taking away my privileges (parking, desk/computer, etc.) is beyond me. If I do not get an independent job and get out of here by the end of the year, I will not work here for another year under my K. I will leave academic science. I have had T grant awards, 2 F grant awards, an OSNAP recognition, and a K grant in 10 years. I do not care if that personally identifies me. You need to know that the Mayo Clinic views postdocs as lower than dirt. They keep us on one year contracts so they can drop us as soon as we try to fight for better work conditions, better pay, and privileges afforded to postdocs at many other institutions. I do not understand it, because they treat graduate students like royalty. We are "research temporary professionals" and they have us sign documents attesting to the fact that we are expendable in their eyes.

Existing NIH policies, programs, or resources

For their indirects, institutions need to justify what they provide to graduate students and postdocs. The NIH should yank T32s from institutions that do not even let graduate students have a desk. Due to Mayo Clinic policy, we have had to convert half of our wet lab space into dry lab space for every lab member to have a space for their dedicated analysis computer–they are charging you for lab space under indirects being used as office space under their hoteling policy. This feels like fraud. We analyze terabytes of imaging data, which we cannot do on the Mayo standard laptop (8GB of RAM). They expect us to hotel to a desk somewhere in the building to do data analysis on this laptop. For this reason, we have had to convert half the labspace to dedicated desk space so we can run tower PC computers to actually accomplish our work. These concerns were completely ignored by admin over multiple months. This is a horrible culture that values MONEY MONEY MONEY and does not care about researchers. They only care about their public image and the NIH needs to investigate the Mayo Clinic's culture of profiteering as a non-profit at the expense of research trainees.

Proven or promising external resources or approaches

The institution needs to be given a standard form to fill out from the NIH stating what pay and privileges it provides postdocs. They need to justify why certain things can not be given, like a desk! They pay residents 50% more than us in the same role. An MD resident performing research can make $70k/year as a senior postdoc. I can make $55k/year as a senior postdoc with 3 years of experience (and I actually have training in research). The NIH needs to investigate why an MD with no research experience as a

postdoc makes more than a PhD with ample experience. They need to investigate why an institution in a town of 100,000 people, which owns most of the land, cannot provide its employees with parking or a desk. I could understand this at [redacted for anonymity]. I just don't get it here. They're being cheap and petty. Anyone with self-respect, and in this climate of postdocs leaving in droves, is simply going to continue to leave or enhance this trend if their solution is to treat us even worse year after year.

Response 736

Perspectives on the postdoc roles and responsibilities

Postdoctoral position as it stands now is to train the graduate student to become a Principal investigator. However, because of lack of regulations and guidelines, this fair position that gets heavily exploited by lab and individuals. Post-doc positions should be strictly caped at 5yrs. After 5 yrs any individual cannot be a post-doc position anymore (either on grants or on the ground in the lab). This initial 5 yrs of post-doc should involve mandatory grant writing training (both from NIH and from mentor) to prepare them for an independent position. Post-docs should have mandatory time/hours of work for own independent ideation/thoughts/project development of their own. Post-docs should receive mandatory training to supervise undergraduates, graduates, and technicians. Also, there should be a separate post-doc training position and program for non-academic training for those who wish to not go into academia.

Fundamental issues and challenges

Post-docs positions are underpaid, overworked, with no benefits and really prohibitive for having a family or maintaining a work-life balance. This is fine if it were a short training time of 3-5 yrs. Any more than that is mere exploitation. Generally post-docs are in the prime of their life in their late 20s and early 30s and are losing major income source. and family and work-life balance under current conditions where they are forced to stay as post-docs for extended period of time (much more than 5yrs).

Existing NIH policies, programs, or resources

Having permanent positions (higher salary based on experience, retirement benefits and other work-life balance resources) such as research associates or research scientists and having those funded through NIH grants for post-docs to transition into in academia if they life to do so.

Proven or promising external resources or approaches

No response

Response 737

Perspectives on the postdoc roles and responsibilities

The main responsibility of a postdoc is conducting research in order to establish oneself as an effective scientist capable of independent innovation and success. The precise research conducted exists in a grey area between

1) Research questions the postdoc develops independently and designs experiments to answer, and
2) Research the postdoc's PI/employer is willing to fund or currently has grants based around.

Fundamental issues and challenges

As with any career, the biggest hurdle to recruiting and retaining postdoctoral trainees is the imbalance between the cost of the work and the reward of the results. The majority of postdoctoral researchers have vast student loans that are most pragmatically addressed by pursuing whichever career pays the most. The current minimum pay for postdocs recommended by the NIH is far lower than is equitable for the level of education and amount of work conducted. To exacerbate matters, the current system of earning a living as a postdoc relies on a PI who has funding. This creates an unnecessary tension in the relationship between the postdoc and the PI by shifting the onus of responsibility for the postdoc's salary onto the PI. However, the true responsibility for increasing the salary and benefits, and thus "recruitment, retention, and overall quality of life" for postdoctoral trainees in academic research should lie with the institution which wants to improve these factors. Therefore, the biggest issues facing postdoctoral researchers is a lack of direct compensation from the NIH and other research-funding institutions.

Existing NIH policies, programs, or resources

To enhance the postdoctoral training ecosystem and academic research career pathways it is necessary to make said ecosystem and career pathways more appealing and accessible. This can be accomplished by vastly expanding the current funding provided to research and training, thus reducing the cutthroat environment of grant applications and reviews. Additionally,

Proven or promising external resources or approaches

The most effective approach to enhance the postdoctoral training ecosystem would be providing a generous, noncompetitive stipend to postdoctoral researchers and early career PIs. This would

1. Reduce the appeal of careers in higher paying, nonresearch-based industries,
2. Foster more collaboration between scientists by reducing tendencies to protect your ideas against your competition,
3. Increase innovative science by reducing the bias against null results, and
4. Ensure grants designed to fund research are actually funding the submitted proposals, rather than the common wisdom of "Propose the project you just finished so you can get the funding for the next project you're not sure will work". Risky science leads to greater leaps in our collective knowledge. By expanding funding and reducing the need for competitive research, the NIH would encourage more researchers to pursue and stick with postdoctoral, and eventually independent. research.

Response 738

Perspectives on the postdoc roles and responsibilities

I view it as a job. People describe it as postdoctoral training, but I spend a lot more time training others than receiving training myself. I work on a project that my PI and I agree on, and I know full well that if I went too far away from what he wanted, he would be dissatisfied and that would be reflected in my job stability. I am the primary mentor for a master's student, and although my hours are flexible the expectations are quite challenging since I manage his project as well as my own. I would say that my compensation is unreasonably small and in no way reflects the demands of my role or the training I undertook to get here.

Fundamental issues and challenges

It is not even close to being salary competitive. I am paid $60,000 per year in [redacted for anonymity] and I have my first child on the way. I have considered leaving early because the compensation simply does not allow the quality of life that a PhD scientist might expect. Obviously the other huge challenge is that there are far more postdocs than open faculty positions, which means people can stay as a postdoc for upwards of 5 years in biology. That is a very long time to stay in a role where you get paid poorly without any prospect of promotion, "training" for a job that you stand a high chance of not getting. A higher salary would go a long way to addressing this. This may sound greedy, but the fact is that unless you come from a wealthy family, you will worry about money constantly as a postdoc, which both detracts from your work and will fundamentally limit the accessibility of academia to those from poor or even middle income households.

Existing NIH policies, programs, or resources

Paternity leave, maternity leave, higher salaries. Also, the number of postdoctoral fellowships that non-citizens are eligible for is very limited, which is troubling considering the contributions that international scientists make as postdocs in the US.

Proven or promising external resources or approaches

No response

Response 739

Perspectives on the postdoc roles and responsibilities

A novice researcher who leads is own research with the help and advices of a senior researcher.

Fundamental issues and challenges

Big competition for getting fellowships. Even more in some countries.

Out of pure medical research related to human well-being, the money is hard to find.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 740

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Underpaid

Overworked

Underappreciated

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 741

Perspectives on the postdoc roles and responsibilities

The final training step on the path to becoming an independent academic principal investigator/professor or research scientist, but also useful for transitioning to industry or other roles. Postdocs are expected to be highly productive and independent, and take on mentorship responsibilities within the lab (e.g. training undergraduates and graduate students). They are (often but not always) a level above graduate students in terms of experience, professional development, and independence.

Fundamental issues and challenges

The fundamental issue is that postdocs are underpaid and often over-worked. There is a huge opportunity cost to accepting and continuing an academic postdoctoral position, because industry salaries for PhDs are often six figures. It is extremely difficult for postdocs, especially those who identify as women and are expected to play primary household roles, to start and raise a family.

Existing NIH policies, programs, or resources

Raise the minimum postdoc salary for NIH grants, provide additional child care resources/protections.

Proven or promising external resources or approaches

No response

Response 742

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a transitional yet key role in gaining both additional scientific expertise and research skills needed to advance to a role as a principal investigator. It is a time to deeply dive into an area of scientific interest and also to engage more deeply with the scientific community at large.

Fundamental issues and challenges

I see the most problematic issue with life as a postdoctoral trainee right now is what is somehow referred to as the "leaky" pipeline. Postdoctoral trainees are largely guided towards roles as principal investigators at academic institutions, yet these opportunities are scarce. Thus, what (I think) was initially envisioned as a transitional role has extended in length for many. I think this creates a challenge because there is not a lot of space for upward mobility (i.e., raises or promotions) for postdocs within this extended transitional period.

Existing NIH policies, programs, or resources

I think the main thing that could help is creating incentives for postdoctoral mentors to encourage and support their postdoctoral scholars in exploring careers outside of the traditional academic path (e.g., biopharma roles, teaching at PUIs and K-12 institutions, working at non-profits). There does not simply seem to be enough jobs at R1 institutions (or equivalent) to support the number of postdocs. In addition, I think it would help to raise base pay for postdocs and create mechanisms to give postdocs raises over the course of their postdoctoral training. It would also be helpful if there was some mechanism created that would help postdoctoral scholars save for retirement (e.g., contribution matching to retirement accounts).

Proven or promising external resources or approaches

No response

Response 743

Perspectives on the postdoc roles and responsibilities

2-8 year research position in which the postdoc learns new technical skills and receives mentorship from the PI in how to write, submit and reply to reviewers of primary research papers and grant applications.

Fundamental issues and challenges

Limited opportunity for futher advancement in an academic research environment since research professorships are highly competitive and research scientist positions do not offer further advancement opportunities. The cost of living is high relative to the salary in many cities with postdoctoral opportunities (eg Boston, San Diego, New York City).

Existing NIH policies, programs, or resources

A grant offered after the F32 for longer post-doc stints or research scientist positions, create an "F33"!

Proven or promising external resources or approaches

Workshops for career advancement, grantsmanship, one-on-one mentorship from more senior scientists and networking.

Response 744

Perspectives on the postdoc roles and responsibilities

Postdoc is a job to carry out research independently in a lab. Like jobs in industry, academic postdocs receive training and gain experience for future management jobs (PI, senior scientist, directors etc).

Fundamental issues and challenges

Currently, postdocs are regarded as trainees but not staff. That means they receive very low salary compared to other "formal jobs". And as they are expected to research independently, often they don't receive adequate training. These days it's becoming increasingly competitive to publish high-profile papers (more work and more co-first authors required) so postdoc training can easily last for many years. It's hard to make a living with low salary for these many years.

Existing NIH policies, programs, or resources

Increase the base salary.

Proven or promising external resources or approaches

No response

Response 745

Perspectives on the postdoc roles and responsibilities

Postdocs play an integral role in designing, planning and executing biomedical research. They do smaller-scale versions of all of the responsibilities of a PI (planning projects and writing grants, manuscript writing and editing, mentoring and training of students and other lab employees), while also performing experiments, doing analysis, and generally being skilled research practitioners with *No response*

extensive technical expertise. They are therefore central to the productivity of many academic labs. At the same time, especially in light of the low pay and temporary nature of a postdoc position, postdocs also should have a responsibility to learn, grow, and seek out new skills to make the most of the position and prepare for their next career steps.

Fundamental issues and challenges

Cost of living is a huge issue for postdocs. Many people choose to do a postdoc in a high cost-of-living area for family reasons or other constraints, and many productive universities with lots of research funding are in high cost-of-living areas. However, NIH postdoc salary/stipend scales and typical university postdoc pay are insufficient for postdoc stability in these areas. The stipends would be OK if postdocs could feel confident that it was just a couple years and have high confidence of obtaining a more stable and higher-paying position afterward. However, the prospects for postdocs afterward are deeply uncertain and unstable right now, tenure track positions don't promise the stability and quality of life that they used to, and postdocs are spending longer and longer in 'temporary' positions. Moreover, these are also the years which would often be ideal time to start a family, which is often not affordable on a postdoc salary in a high cost of living area and is further complicated by the uncertain future employment prospects.

Existing NIH policies, programs, or resources

The F32 and T32 training mechanisms are great, but they should be expanded. Many universities set postdoc salaries based on NRSA scales, so dramatically increasing these would have cascading benefits. Similarly, many universities set childcare subsidy policies following the NRSA fellowship policy, which is only a small amount of money relative to the actual costs of childcare.

Proven or promising external resources or approaches

No response

Response 746

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a time to learn many new skills and establish oneself as an independent thinker.

Fundamental issues and challenges

I believe the biggest deterrent to doing a postdoc is the pay. In most of the country, the postdoc salary is barely a livable wage, especially if one has a family. The expectations of a postdoc are much higher than a graduate student, however, that is not reflected in the compensation postdocs receive. Further, at least from my view, most institutions lack support for postdocs. From what I have seen, PIs have higher expectations for postdocs in the lab to stay between 4-6 years if they can, which is not advantageous to the postdoc. Also, from the student trainee perspective, we see individuals that want to stay in academia completing more than one postdoc position—overall limiting one's ability to move beyond this position with poor pay and benefits.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 747

Perspectives on the postdoc roles and responsibilities

A postdoc is responsible for carrying out research in a lab operated by a PI.

Fundamental issues and challenges

Labs are often understaffed, leading to an increased burden of responsibilities falling on a postdoc, above and beyond their job descriptions, which are often loosely defined and prone to abuse. Postdoc salaries don't even meet the guidelines set by the NIH, forcing qualified candidates to choose other careers in order to support themselves and their families.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Postdoc support could follow a model similar to undergraduate training grants where postdoc applicants could apply to be supported by an agency such as the NIH or NSF, with funding grants to individual PIs reduced to cover the cost. This would allow more control over postdoc salaries and allow postdocs to choose lab environments that suit their needs rather than choosing labs with available funding.

Response 748

Perspectives on the postdoc roles and responsibilities

The role of the postdoc obviously differs between labs, and perhaps has changed since my first postdoc position in 2015 to my current assistant professor role.

To my mind, the postdoc is meant to be the engine room of scientific publication. Postdoc to me means the person in the lab doing the experiments and publishing the results without the need for a lot of technical training that students require. The whole point of the postdoc experience is to cash in on one's expertise, expand the technical repertoire and produce enough publications of sufficient quality to garner independent funding.

Personally, I view my productivity as a post doc (i.e., the peer reviewed publication—the only thing that actually matters) as the lead pipe that I will batter people with when it comes to evaluating individual performance and promise. Sadly it seems in the US that evaluations on postdoctoral funding is more dependent on the sizzle of a particular proposal, as opposed to wheter the individual is capable of actualising it.

Fundamental issues and challenges

I am of the belief that one reaps what one sows in this life. Students have become so mollycoddled that the postdocs they turn into exhibit a type of learned helplessness, Recruitment is the most difficult thing in any organisation or endeavour, and is being hampered by the reduced resilience of the PhD pool to some extent, but to an equal or greater extent by the socioeconomic factors that NIH has no control over. these include individual lab/university environments and the locations that these enterprises inhabit.

Ditto for quality of life concerns. As a cynic, I am putting the recruitment and quality of life issues for postdocs firmly in the court of the tertiary education institutes who employ them. Indeed, the whole point of these places is to educate the professional populace and to advance knowledge (which basically serves to launder the reputation of the institution charging the fees). Sadly, the majority of the money spent within these places is on a bloated administration and bureaucracy, which neither teaches, nor researches. University accreditation bodies are perhaps best suited to tackle this issue.

So, for recruitment, I think the NIH should ignore this issue, the weak will be winnowed away through attrition. I think the main goal of the NIH should be retention and possibility of advancement of postdocs who demonstrate the requisite temperament to succeed after the first few hurdles.

As a warning—in Australia, where I got my professional degree as a veterinarian and my PhD, the department has over 150 associate or full professors, ~150 PhD students and less than a dozen postdocs. I'm fortunate to be compelled by a burning ambition to do science, but in many places outside the US, science is a glorified finishing school for people going on to be dentists or doctors or physiotherapists.

Existing NIH policies, programs, or resources

The major advantage of the Australian environment was that students have a very broad base of expertise and capability. Even postdocs in the US have a reduced range of technical competencies (note I used competence rather than mastery) compared to previous eras or overseas postdocs.

I believe this lack of breadth in training and interest has led to the slowing of scientific progress (as less people are capable of integrating their findings into a whole organismal-level funding).

Personally, my darkest moments came when I have been coerced into "ghost-writing" multiple well-received grants (top 1%, 4% and 9th%) for a multiple PI-team. Indeed, I am competing in the same study section with these parasites yet cannot put my name on the grant in any meaningful way without forfeiting "New-Investigator" status. I am a firm believer that an intermediate category between PI and Co-I/personnel (which gives co-Ino credit, yet the overall proposal is benefited by their expertise—perverse!) would be ideal to identify postdocs instrumental in the intellectual development of a grant, without losing "new investigator" status.

In order to improve science overall and the postdoctoral ecosystem in the US, I would penalize all applicants (at all levels, even professors) remaining within their PhD institution. All this serves is to enhance groupthink, promote complacency, reduce competitiveness and blunt intellectual development. I understand that remaining within an institute is becoming de riguer more recently as the prospect of starting again in an unfamiliar lab is looked as a step backward by most postdocs, but experience in diverse environments will be of far more benefit than whatever one could achieve in the time it takes to acclimate to a new locale.

Proven or promising external resources or approaches

I am aware of the cultural cachet that European style programmes, initiatives and personnel have in the US. Sadly, science is not an endeavour of cachet, but of accomplishment and I daresay ignoring developments on the Continent regarding enhancing academia is wise.

I am afraid I know what has proven to be ineffectual, but fixing things is a whole different ballgame.

That said, and despite the negativity surrounding the struggles to independence, I can't see myself doing anything else other than biomedical research until the day I die.

Response 749

Perspectives on the postdoc roles and responsibilities

It is an underpaid job, not a learning opportunity. You use your time and skills to do what your supervisor wants you to do so he/she can get credits. The opportunities to learn and grow in the institution are scarce or null.

Fundamental issues and challenges

Lack of real appreciation. You feel used.

Existing NIH policies, programs, or resources

I don't have enough information to provide a relevant answer

Proven or promising external resources or approaches

I don't have enough information to provide a relevant answer

Response 750

Perspectives on the postdoc roles and responsibilities

To be trained as an independent professional researcher in the future, including scientific thinking, technology promoting, networking, grant writing and lab management.

Fundamental issues and challenges

1. Identification status: Several-year away from the hometown makes people feel sad. J visa updated yearly, which interrupts normal work.
2. Low salary here compared to that in the original country. Be valued by original country gradually, could find better positions there without overseas training.
3. Unfair treatment: Lower social position, postdocs do not eligible for lots of employee benefits.

Existing NIH policies, programs, or resources

No systematic program for the training: Did not treat postdocs as trainees like students have. Only need postdocs to do experiments and publish papers.

Insufficient guidance for further career development.

Lack of grants that eligible for non-citizen postdocs.

Proven or promising external resources or approaches

1. Visa for foreign postdocs. Now both of visiting scholars and postdocs. were signed with J Visa, so it's better to separate them. Visiting scholars have to go back to the original organizations, but postdocs are not linked with original organizations, most of them expected to stay here. It would be appropriate to sponsor them with H Visa but not J visa.
2. Provide grants specific for postdocs in the United States without identification limitation.
3. Value postdocs' contributions, but not let them feel neither fish nor fowl.

Response 751

Perspectives on the postdoc roles and responsibilities

As a postdoctoral research scientist in preclinical research, I am tasked with understanding the mechanisms of psychiatric disease using animal models and translationally-relevent paradigms. I believe the postdoctoral position is a time to develop my independence from my graduate school mentor, to learn how to properly engage pedagogically in the sciences, and to learn how to lead a team. I am leaning into the academic path and believe that it is my obligation to ensure I have enough training to be able to spearhead my own unique research direction while training the next generation of scientists as a Principal Investigator.

Fundamental issues and challenges

I do not get paid enough. It is a struggle. Especially in the city of Boston, living as a single person, I truly feel like I need to have side jobs and to pinch pennies. I truly think that the most comfortable individuals are in group-housing situations (either with several roommates or with a partner). Even so, the opportunities to save are abysmal. I look with envy at my friends in industry, knowing they work less than me, knowing they don't stay up at night wondering about the future. I love my job. But, I hate that I am not valued for my time, effort, and passion to the research that I do. When I tell people how much I make with a Ph.D. doing work at a premier institution on work that can have real impact one day, they do not believe me. I believe academia is the best place to get high-impact work done. But, every day I wonder whether I will be the one weaned out (as a woman and a self-identifying queer individual, this is especially raw for me).

Existing NIH policies, programs, or resources

More formalized training for postdoctoral fellows. It feels like it is just us figuring it out.

Proven or promising external resources or approaches

Increase our salaries and make an effort to make us feel like true contributors to society by acknowledging our efforts. Have efforts to formalize training in scientific communication and leadership. Be realistic to folks about job opportunities, the variety of them, the fulfillment one might be able to find outside of academia (if it exists for folks like me).

Response 752

Perspectives on the postdoc roles and responsibilities

Training but also critical valuable role to academic research productivity; mentorship to more junior researchers often delegated to post docs by PIs.

Fundamental issues and challenges

Salary, benefits (often treated more like student than employee despite having PhD—makes postdoc feel undervalued; staff with bachelors degrees have better benefits), parental leave and childcare support, moving support, social support, lack of job opportunities, inconsistent mentorship, lack of funding opportunities.

Existing NIH policies, programs, or resources

Salary, benefits, childcare support, longer parental leave support, increasing consistency in mentorship and treatment across programs.

Proven or promising external resources or approaches

Treat postdocs like valuable PhD-level employees they are not glorified students—the lack of respect and compensation is embarrassing and drives postdocs out of academia.

Response 753

Perspectives on the postdoc roles and responsibilities

The major component of academic postdoc position is of course research and paper publication. Very significant part is also the teaching/training of undergraduate and graduate students. In the spare times and if financial and time situation allows, travel conferences and collaborations with other groups or universities are an option.

The official description of a postdoc in academia is seen as a temporary trainee/intern—both by the academic and administrative staff.

Fundamental issues and challenges

1. You are a 'trainee'. Postdocs are the experts in the field, have the highest educational level they can achieve , design their own experiments, lead their own projects and very rarely actually have any part of their time spent by their own training. Further yet they spent significant time training others.
2. No stability and poor pay. Postdoctoral assignments are 1 year long. Along with very poor pay makes it a question of survival . how long you can 'afford' to waste doing a post doc before you reach financial and mental ruin? Sometimes it's a choice between food and a roof.
3. Lack of reward. The majority of grants are only possible through work carried out by graduate students and postdocs. Yet they are never considered for performance awards, never considered for merit raises or congratulated/thanked when a grant comes through based on their work.
4. Poor life-work balance. To succeed in a postdoc you give up your life for its duration both due to financial difficulties and the workload. Most postdocs work well over 50-60 hours a week yet are never allowed to get overtime pay (not even allowed to report having worked overtime). They can never complain about the work, after all they should be 'grateful' for the opportunity.
5. Visa uncertainty and J1 visas. International postdocs are even worse off as they rely on visas from their institutions. There is no negotiation power and it is a constant state of tiptoeing around, less you lose your support and your visa. Given that international postdocs have to uproot their entirely life to move for a 1 year contract at a time, this period is just a one big ball of mental, physical and financial stress and anguish.

Existing NIH policies, programs, or resources

1. There needs to be a shift in the way postdocs are viewed. They are not studying. They are not training. They are professionals carrying out their research and learning on the job like any other career there is.
2. There needs to be better monitoring for universities to follow NIH payscale rules. With payscale renewal in June, some universities do not recalculate postdoc pay until contract renewal (which could be in May) meaning a postdoc will always be paid even less than the payscale minimum requirement. WIth no negotiation power as a postdoc, there is nothing that can be done from their side if their PI refuses to change this.
3. J1 visas are a critical issue for postdocs trying to set up their life anew. They are 'student' visas, meaning postdocs are severely limited in their ability to support themselves. There is no opportunity to supplement income (which is needed with the poor pay conditions). It causes issues with international work/asset ownership—you have to give up everything when you move to get this visa yet you have to promise that you are not goping to use your postdoc as a way to get permanent residence (you are subject to 2 year home return rule)—this destroys their life abroad in your home country and prevents you rebuilding it here due to heavy visa restrictions. It's a catch 22. There needs to be a push to stop postdocs being viewed as students, as a cheap workforce, as a way to get expertise for free.

Proven or promising external resources or approaches

Any scientific journal in the last year reporting on the issues of postdocs! Numerous articles came out recently in science, nature and others describing the challenges and issues with the postdoc life.

Response 754

Perspectives on the postdoc roles and responsibilities

Its a lowly remunerated and highly vulnerable research job in an academic lab, in which the individual is required to perform high-end research and mentor graduate students. It is a high pressure job with many responsibilities. It has become a rite of passage for researchers wanting to open their own lab in the university.

Fundamental issues and challenges

VERY LOW Salary. Lack of human resources and protections in universities (specially for international post-docs). Subpar mentoring and support by principal investigators and universities. Lack of job opportunities beyond the post-doc level to do academic research.

Existing NIH policies, programs, or resources

Increase the post-doc cap salary required for hiring in a grant. Change the incentives for grant applications to require more professional opportunities.

Proven or promising external resources or approaches

Look at the Chan Zuckerberg foundation and the structure and purpose of industry based postdocs. Post-docs get payed better and the position is seen as a transition period (2-4 years).

Response 755

Perspectives on the postdoc roles and responsibilities

Postdoc is a training period for individual to be prepared to be independent and establish his/her own lab in the academy and/or join industry.

Fundamental issues and challenges

1. Salary is so low and cannot support the postdoc and/or his/her family
2. Some of the advisors are challenging postdoc trainees and lack the basic and fundamental ethics to help and support postdocs to develop their careers (in my opinion, this is a major issue in the academy nowadays, making postdocs leaving this toxic environment and gave negative impacts to prospective postdoc thus also avoiding postdoc training)
3. Lack of funding and financial support from appropriate agencies for postdoc.

Existing NIH policies, programs, or resources

Increase salary.

Increase funding to postdoc.

Train advisors to help current and prospective postdoc.

Proven or promising external resources or approaches

Mentoring and institutional environment could be a major key.

Response 756

Perspectives on the postdoc roles and responsibilities

The postdoc is a necessary step to reach faculty position—another few years of underpaid and overworked research project. I love research and the freedom that academia offers, which is why I'm fine with it. But defining postdocs as "trainees" is a misnomer—we are not trained to become PIs, and we are already trained to be scientists. The postdoc is an opportunity to show the skills we have learned as PhD students in our own project. It's a lot better defined in Europe, for that matter.

Fundamental issues and challenges

The root of all problems is the lack of funding—postdoc salary is ridiculously low for a highly educated and skilled workforce (especially compared to industry standards). There is also absolute uncertainty—the job market for faculty positions is ever shrinking, and the funding system does not allow for other long-term jobs such as research scientists. The combination of these two factors makes life as a postdoc unnecessarily stressful and very unattractive compared to industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Honestly, the best way to improve postdoc mental health and recruitment is to increase salary to allow postdocs to make a decent living, especially in bigger cities (postdoc salary should be better adjusted to the local costs of living). Someone with 12+ years of college education should not have to live with roommates to afford rent—this is insane. Allowing for stabler jobs by funding research scientists (instead of exclusively short-term, project-based funding) would also help retain postdocs, especially women. It would also benefit research—the amount of lost knowledge and know-how due to the constant rotation of personal in labs is staggering.

Additionally, forcing research institutions to have postdoctoral offices and associations to show that they offer a local network of resources and support would help greatly. The amount of administrative workforce doesn't have to be as great as for a grad school, but something similar would provide a modicum of protection against the feeling of uncertainty that comes with a postdoc.

Response 757

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low pay.

Demanding academic careers in largely a soft money environment with low pay.

Industry perks are more attractive with pay and life balance.

Existing NIH policies, programs, or resources

As a PI of a NIH T32 postdoctoral training program, the restriction for the gap in funding between allowed NIH trainee salary and departmental salaries for recruitment and equity to be funded only by non-NIH funds severely limits faculty being able to support trainees. Most faculty are largely funded through NIH funds and themselves and their departments do not have resources to cover the gap.

Proven or promising external resources or approaches

No response

Response 758

Perspectives on the postdoc roles and responsibilities

Ideally, the postdoc position represents an opportunity to extend one's scientific training, become a more independent researcher with the goal of becoming a principle investigator or other leader in science, and to contribute in a meaningful way to one's field through both scientific contributions and training the next generation of scientists

Fundamental issues and challenges

The most significant challenge facing postdocs is the mismatch between the postdoc salary and the cost of living (for example: https://doi.org/10.1038/s41587-023-01656-4). Many highly skilled postdocs are leaving academia because they cannot make ends meet on an academic postdoc salary. Most universities set their postdoc salaries at or slightly above the NIH minimum. This is nowhere near sufficient in many big cities. Childcare has become prohibitively expensive throughout the U.S. This issue has been brought to NIH's attention many times (e.g. https://postdocparentsforchange.com/postdoc-letter/). Several postdoc unions across the country have had to strike to earn raises to match cost of living increases (e.g. [redacted for anonymity] strikes in 2022-2023). Raising salaries and benefits would likely significantly improve recruitment and retention. If postdoc positions lasted 2-3 years, the salary issue would not be as significant. However, the average length of a Bioscience postdoc has increased by several years over the last few decades, largely due to increased competition.

Another consequential challenge is the lack of diversity in the scientific workforce. The NIH and many universities have publicly stated support for promoting underrepresented groups in science, but have done little in practice to materially change workforce diversity. A more diverse research group benefits all involved and produces more rigorous and more innovative results. Promoting diversity in science requires changes in many parts of society. However, the NIH and universities can help (see for example: https://doi.org/10.1016/j.cell.2021.01.011), and improving the financial situation of postdocs would have a significant impact. Salaries below the cost of living select for postdocs who can afford to work for low pay, and this often means people without dependents, who do not have student loans, and who may have the luxury of financial assistance from family members (see https://www.washingtonpost.com/business/2022/07/08/dept-of-data-academia-elite/).

Existing NIH policies, programs, or resources

Please see above.

Proven or promising external resources or approaches

Please see above.

Response 759

Perspectives on the postdoc roles and responsibilities

The role can vary a lot. To me, a postdoc is for preparing those who want to be independent researchers in the future. It is not always necessary from this point of view, we are doing postdocs only because the academic market is very selective. From the perspective of PIs, postdocs do contribute a lot to the success of the lab and their advisors, so PIs may prefer permanent or long-term postdocs but may be unwilling to pay them as much as research scientists.

Fundamental issues and challenges

International postdocs are stuck in the position because their visa (non-cap H1B) doesn't allow them to work in the industry. Because of their visa/immigration status, the postdocs are at high risk of academic bullying. Other than that I think postdoctoral life is not that bad if they have a supportive advisor.

Existing NIH policies, programs, or resources

The current grants for postdocs are so limited, especially for non-us citizens, which makes K99 very competitive. The K99 mechanism doesn't work for its purpose, because by the time a postdoc is qualified to apply, he is already good enough to find a faculty position somewhere, so staying for 2 more years just doesn't make sense. I think there should be a funding mechanism for junior postdocs that doesn't require postdoctoral publication or initial data and award the applicants based on the quality of the proposal itself.

Proven or promising external resources or approaches

Systematically, postdocs should be treated as employees, not trainees, they should have benefits (e.g., retirement) and promotion opportunities. Not all postdocs want to become tenure-track professors, there should be multiple career paths for them, such as the teaching track, or research track. This kind of system does exist in other countries, postdocs can be promoted to lectures or research scientists. This is basically lacking in the US system, so there are very senior postdocs (more than 8 years), whose only hope is to get that green card and move on.

Response 760

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low paycheck.

Poor employment opportunities.

No career follow-up.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 761

Perspectives on the postdoc roles and responsibilities

Spending 2 to infinity years trying to publish and write grants, just hoping that maybe someday a job comes along that you can apply for and actually get. Being a postdoc seems very hard, not because the work itself is hard, but because of the expectations and lack of support from within your institution You don't get the support of students or postdocs, you are expected to just kinda figure everything out.

Fundamental issues and challenges

The pay relative the amount of skill and expertise is abysmal. A main issue seems to be the lack of guidance, expectations, and the seemingly indefinite timeline. Doing a postdoc doesn't come with better chances of getting a job, it only seems to exist as a way to get paid until you find a job.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 762

Perspectives on the postdoc roles and responsibilities

After graduate school, Ph. D.s become independent researchers, this means that they will be able to join to an existing project with supervisor(s) and design their own experiments to provide more insights. Post docs are responsible for bringing in a new perspective for the investigation of the study.

Fundamental issues and challenges

The first problem is the pay for post-docs. Post-doc trainee salary and stipends are so much lower than industry jobs that a post-doc can get easily. The second problem is the lack of freedom that graduate students experience during their training, we basically lose our ability to think after many years without freedom of creation of perspectives to study. Finally, I want to point out the main problem for being a post-doc as an international Ph. D. During graduate school, international status is kept with F-1 visa and then if we want to find a job we need to do it before we finish our Ph. D. studies to keep our status in the US. We need to act faster, also we need a solid/non-ambiguous path to make sure that we will not be in trouble with our status in the US. Industry job path is easier and less painful for this for now. On the top of that, the post-doc fellowships and programs that Ph. D. student can apply often have permanent residency or US citizenship requirement, this becomes a problem when an excellent match between this programs/fellowships and student can not happen because of those requirements. If we want to keep those requirements, then we need more opportunities to apply for residency/citizenship.

Existing NIH policies, programs, or resources

I mentioned some of the policy problems in the fundamental issues sections.

Proven or promising external resources or approaches

No response

Response 763

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is in my view an opportunity to further develop skills, publication record, and collaborative relationships before applying for a more permanent position.

Fundamental issues and challenges

In many places, postdoc stipends are not sufficient to cover the cost of living. Additionally, with the small number of principal investigator positions available compared to the number of applicants and the irrelevance of postdoctoral training to most industry jobs, the chances of a postdoc leading to a better job than would have been possible without the postdoc are small. Thus, time spent doing a postdoc can feel like wasted time as it can incur a financial burden with no clear payoff afterwards.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

I think the development of more long-term but non-PI positions (e.g. "staff scientist") in academia and government would make the idea of doing a postdoc more attractive because it would widen the pool of available jobs that could benefit from postdoctoral experience.

Response 764

Perspectives on the postdoc roles and responsibilities

My department at a large biotech company sponsors both funding for academic postdocs located mainly at a university (those focused on research broadly relevant to our company) and jointly at our company & a university (projects closely aligned to our company interests). These postdocs gain immense experience in the 1-2 years we expect the position to be appropriate for recent PhD graduates. These postdocs are exceptionally strong applicants at our company as well as our peer group of companies. Keeping someone as a postdoc beyond 3 years is an indictment against a company or university -NOT the individual. If a postdoc has not been promoted or found other work of their choosing within 3 years the university and company has failed the person by not encouraging and providing opportunities for advancement.

Fundamental issues and challenges

We have never had trouble recruiting postdocs.

We pay at the same rate as a similar scientist position based on location. Postdocs that work at a company site are considered company employees with full benefits (we especially try to offer this to postdocs with families because universities nearly universally do not offer benefits that are helpful for families including childcare).

We accept and understand that a majority of the postdocs we sponsor will find employment at other companies that are our direct competitors. As a company we still gain immense value from the academic partnerships and hiring we do at the rates that we do.

Existing NIH policies, programs, or resources

Training options for specific relevant jobs should be emphasized. Those jobs in industry require leadership and teamwork. Both of which most university only postdocs lack. Postdocs should not be strictly at the bench doing experimental work.

Proven or promising external resources or approaches

Look to what large companies and startup companies do with young scientists.

Large companies have well developed training, mentoring, and other programs to keep employees happy. Startups try lots of ideas that should be explored.

Response 765

Perspectives on the postdoc roles and responsibilities

I was basically placed in a postdoc because I was told I needed it so that I would be competitive for future NIH awards, and it most consisted of self-directed learning of a new skill and figuring out how to navigate academia. I think a lot of people view a postdoc as a time to get papers from their dissertation published, which is great, but the pay is less than that of a clinician (I am a clinician scientist), so it was a bit disappointing to leave a clinical career for a PhD stipend for 4 years and then also have low pay as a postdoc. It wouldn't be sustainable if I didn't have the financial means to do that. To me, a postdoc was a temporary holding position to limit my responsibilities for a couple years before I started on faculty, and also limit my pay.

Fundamental issues and challenges

It was very hard for me to find a postdoc position. My mentor (NIH funded) is a documented bully, and harasser of women and didn't help me with navigating to find a postdoc within his network. I found other mentors who helped me a bit, but I didn't know where to look and couldn't find a consolidated resource where to find postdoc jobs. This meant that I was applying all over the place, to positions that already had internal selections picked out. I've seen other postdocs get kind of bullied into staying in that position for

longer than they should because the PI wants cheaper labor. There has to be better oversight for the intention to help postdocs grow and become independent or at least find the path they want, and not linger in a postdoc forever. At my school, we created a Postdoc Peer Mentorship Program (published in the postdoc journal—Journal of Life Sciences, https://doi.org/hkqh), which I think is necessary everywhere to ensure that postdocs, which is a separate class of employee that doesn't receive FULL benefits of regular staff/faculty (at least at my university), are protected.

Existing NIH policies, programs, or resources

There should be more information on

1. how to find a postdoc (too many people say Twitter! that is not sufficient!)
2. what to expect from a postdoc and
3. how to make a transition plan.

Proven or promising external resources or approaches

I think a peer mentorship program (see above), or near-peer mentorship program would be great. I also think an NIH hub for posting postdoc positions would be ideal.

Response 766

Perspectives on the postdoc roles and responsibilities

I think the academic post doc works more independently on research and is receiving continued training and mentorship compared to graduate students. This might mean developing their own line of research and/or applying for grants.

Fundamental issues and challenges

I think the most important issue for many students is pay. After receiving the highest level of degree possible and after years of work, it's difficult to justify accepting a post-doc salary that pays only minimally more than a graduate student stipend. In addition, many students are not aware of what kinds of opportunities actually exist for them within academia and research, particularly in the social sciences. Preparing to apply for an academic position (e.g., tenure track professor) requires an incredible amount of work and there are very few positions available. There is little flexibility around location or salary.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 767

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

LOW WAGES!!!!

The main reason why I am in academia is because I like the flexibility of hours and what I do with my day to day, but I am only able to afford it because I have a partner with a higher salary.

I decided to remain child-free mostly because I could not afford having a child.

The lab is also located in a small college town where people don't want to live for the little we get paid.

Existing NIH policies, programs, or resources

NIH min salary! We all get paid according to that table, even though it is the minimum, the institutions use it as the guideline.

Proven or promising external resources or approaches

Improve wages and people will come.

Response 768

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as one in which the goal is to both develop a scientific platform and leadership skills necessary to apply for academic faculty positions and lead an independent scientific team in the future.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 769

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a research position created to ensure the steady supply of highly-trained scientists who will work for minimum wage (The NIH postdoctoral scale does not exceed my locality's minimum salary for exempt employees until year 3). While nominally a training role, the reality is that I execute the research project grants of PIs and have negligible input as to my research direction.

Fundamental issues and challenges

It's no longer a training position it's just a badly compensated job. Either the salary needs to be adjusted to be livable, or the position needs to fundamentally change to not be "do someone else's R01 aims".

Existing NIH policies, programs, or resources

As someone who's had two children during my postdoc with my wife, who is also a postdoctoral fellow, I would say that the current NIH parental policies can best be described as "[redacted] them kids". My wife, for example, was given the same K99 eligibility extension for COVID that everyone got and told that she could not add a childbirth extension to it, despite giving birth to two children. Because it would be unfair to allow people to stack extensions.

Currently child care for one child is approximately equal to take-home pay if you are paid on the postdoctoral scale and the NIH has made no attempts to address this.

While I am sympathetic to a lot of the problems faced by the NIH in administering a funding system this complex, the complete failure to support "trainees" who have families is a major reason for the pervasive diversity and gender problems. I don't think there is any desire to use existing NIH resources to address this, and it makes me think there is a leadership and policy failure that can only be resolved by turning over virtually all of the NIH leadership.

Proven or promising external resources or approaches

Please stop calling this a training ecosystem. It's insulting, to be perfectly honest.

Response 770

Perspectives on the postdoc roles and responsibilities

Often acts as more of a PhD with no increase in independence, respect, or responsibilities. This results in minimal benefits doing a postdoc and a substantial deterrent.

Fundamental issues and challenges

Low salary, mistreatment from PIs, and extreme hours without a worklife balance. If you pay qualified individuals far below the industry average and expect them to work worse hours, fewer benefits, and less independently it shouldn't be a surprise people don't want to do it.

Existing NIH policies, programs, or resources

Increase the required pay for postdoctoral researchers to say the least.

Proven or promising external resources or approaches

If you could prevent PI's from constantly overworking and mistreating postdocs that would also probably help

Response 771

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a position where one gains additional experience, methods training, and builds expertise as they focus on a research agenda for their future career. I view the postdoc as an opportunity to make a name for yourself in your chosen field of study. I believe the postdoctoral position is a useful precursor to a tenure-track faculty position that allows you dedicated time to publish papers, develop research skills, network with other scholars in your field, and develop grant writing skills. The postdoctoral fellowship can also be a time for early career researchers to "catch up" to peers, who were privileged to be in high performing labs. I had a baby during graduate school and it put me behind my peers in publications and thinking through my research agenda. I'm using a postdoctoral fellowship as "catch up time" to help me be more competitive on the academic job market. So I think in some ways it can help "level the field", if you are fortunate enough to get a T32 postdoctoral fellowship that has additional funding to support training needs. However, it does significantly depend on mentorship and having access to data and projects that you can use to write manuscripts and develop ideas for funding. Ideally, mentors should take mentorship of early career researchers seriously, have the time and knowledge to support early career researcher development, work through complex research questions and problems with us, provide advice and mock interviews for job searches, collaborate with us on our research AND their research, help us make connections with experts in our field, and provide opportunities for us to take on roles that will move our careers forward.

Fundamental issues and challenges

The stipend and the length of time are two challenges for postdocs. Asking someone to move for a one to two year position for $53,000/year and limited benefits (part of my training funds pay for my health insurance) is just not realistic. In addition, the lack of adequate mentorship and the work environment significantly affects the quality of life of postdoctoral trainees in academic research. I hear horror stories about the lack of mentorship, lack of training/support, toxic work environments, and work expectations for postdoctoral researchers. There are many stories of bad behavior by PIs that gets shared in whisper networks, but doesn't seem to impact funding or prestige. There are also problems with how we are viewed within the research system. Some PIs view us as productivity machines that should be churning out papers using data from the lab. Other PIs view us as "trainees" without substantive knowledge in our field or good ideas for how to do research. Both of these views are toxic. We are doctors (all of us will either have an MD, PhD, or both) and we are likely taking this opportunity because we need more time to develop as scientists and want to pursue careers in research. Finally, I think the lack of a clear career pathway within academia is really inhibiting recruitment, retention, and quality of life for postdoctoral trainees. We are all working so hard to compete for fewer and fewer tenure-track academic jobs and I think many people are over it before they even get to the postdoc stage.

Existing NIH policies, programs, or resources

Increasing the postdoctoral researcher base pay rate would be a big step in improving recruitment, retention, and quality of life. Most postdocs not funded by NIH set their base pay rates to similar levels, so by increasing this NIH would increase salaries for a majority of postdocs. Policies that encourage and support virtual postdoctoral researchers would be another great policy action for NIH. Allowing postdoctoral researchers and mentors to engage virtually in new and existing T32 grants would improve recruitment and retention. I also believe NIH should be tracking and assessing mentorship in some way.

NIH cares if researchers meet their study aims; however, it would be great if they also cared about mentorship quality. Specifically, evaluations of postdoctoral mentors through NIH systems would be ideal. This type of system would give NIH the opportunity to gather data on mentors and their skills to identify areas where mentors are lacking, offer training, and set expectations for what mentorship should look like on funded projects. It could also serve as a whistle blowing system for toxic and abusive PIs. If a PI is creating a toxic work environment or has legitimate allegations of abusive behavior, that PI should not be allowed to mentor postdocs (or students!) and should not be awarded NIH funding.

Proven or promising external resources or approaches

No response

Response 772

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

We're not paid enough for the amount of work we're expected to do. To get a tenure-track faculty position, one must have multiple first-author papers in high-ranking journals, independent funding, K-99 etc., and some teaching experience. And that doesn't guarantee getting a faculty position! It's just so much work, that is unappreciated, takes up LOTS of time (5-7 years), and is extremely underpaid! There's absolutely no reason for anyone passionate about science to pursue an academic career —it's a bunch of road blocks! not worth it. Besides the fact that we have families that we not only want to support but also want to spend time with (surprise!)

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 773

Perspectives on the postdoc roles and responsibilities

I received my Ph.D. at Princeton in 2019 and am conducting an F32-funded post-doc at WashU. Most of my graduate school cohort did not pursue a post-doc, and I perceived this a successful realization of the efforts spearheaded by the NIH to encourage graduate students to 'pivot from the Ph.D.' I made a very considered decision to pursue a post-doc in the research area that I found interesting, and challenging, and which I believe carries transformative potential for biomedicine (namely applying polymer physics principles to understanding protein function).

Fundamental issues and challenges

To elaborate from above, I challenge the notion that a decline in post-docs is, per se, a problem. An oft-quoted statistic, initiated by an RFI from 2011(https://grants.nih.gov/grants/guide/notice-files/NOT-OD-11-106.html), was "only 10% of trainees end up in academia—it is the alternate career" The spoken and unspoken interpretation of this was (and is): make a very considered decision before entering into a post-doc. If that model is working as planned, then having enough high-quality post-docs, who want to be post-docs, to meet the needs of the biomedical research enterprise seems like a success. Still, there are a few specific issues pertaining to the prompt:

There is a clear economic inhibition in high-cost-of-living coastal cities where research excellence is concentrated.

The remuneration and lifestyle of non-post-doc careers are hugely attractive to exhausted graduate students planning their next step

Existing NIH policies, programs, or resources

Exceptionally remunerative transition awards from grad school to postdoc (e.g. 100k a year as a starting post-doc)

Deliberate and earnest conversations with students about the unique benefits of a post-doc relative to the perceived benefits of other career opportunities (e.g.'s life satisfaction, mission-driven work, building one's independence, etc.)

Simplify the F32 grant.

Proven or promising external resources or approaches

The granting mechanisms, while byzantine, are hugely helpful to a high-caliber post-doc at risk of disillusionment. Specifically, they are a necessary counter-weight to the HHW, JJC, HHMI, etc. very-low-odds-reward-absurd-ambition-and-prestige grants that many post-docs feel they must obtain. The NIH could telegraph that their awards are the bread-and-butter of a career.

Response 774

Perspectives on the postdoc roles and responsibilities

Independent research under the supervision of the PI, developing skills for future career goals and mentorship to junior lab members.

Fundamental issues and challenges

Complete lack of stability or postdoctoral support, the lack of consistency in mentorship and complete lack of childcare support. Childcare costs comprise almost 40% of my salary where I live.

Existing NIH policies, programs, or resources

Pay postdocs more in general, subsidize housing and childcare, or provide childcare for postdocs near where they work. Also increasing parental leave and support for productivity during parental leave.

Proven or promising external resources or approaches

No response

Response 775

Perspectives on the postdoc roles and responsibilities

The postdoc is intended for people who want to eventually become professors or faculty members. It is not meant for people who want to go into industry or other private entities. Postdocs are for universities to retain or recruit their exceptional students to eventually replace the old faculty.

Fundamental issues and challenges

Money and abuse by professors towards students. As a 3rd year PhD student at my university, I've been constantly berated and belittled by my professor, an endowed and tenured professor. I've constantly been told that I wasn't smart enough, and that I had deceived my professor to get into the program. On top of these words, I've been physically harassed by this same professor. When I moved to my new professor, I was told that I have $0 for research and conferences, despite being at a top-tier R1 university. I'm using stolen equipment from my past employment to do research. If a university cannot properly support their PhD students, how can they properly support their Postdocs? A PhD is supposed to be a training program, however I haven't received any specialized training in the past 3 years that I've been here.

Existing NIH policies, programs, or resources

More money for postdocs, and better mechanisms to defund professors that abuse their students.

Proven or promising external resources or approaches

Unionization of graduate workers. Speak with the unions at UC, MIT, Harvard, Emory, Johns Hopkins, etc etc etc. They'll tell you how the real situations are at their universities and tell you how to better the research ecosystems. Don't listen to the universities themselves.

Response 776

Perspectives on the postdoc roles and responsibilities

The 2-year T32 postdoctoral position that I held was essential to my development into an independent investigator. I published dissertation manuscripts, wrote my K01, and gained new mentors/colleagues who have expanded my research opportunities. I just received my first R01 and I am certain it is due to the additional training and time that I had as a postdoc to plan my career. My mentors were the key to the experience and they were exceptionally altruistic compared to other postdoc mentors. They focused on my career and development, not their own to-do list that they hoped I could help them tackle.

Fundamental issues and challenges

The pool of available mentors who are "in it" for the right reasons is too small, and that is the main challenge holding back greater recruitment, retention, and quality of life of postdoctoral trainees. It is so common to hear a faculty mentor talk about "their postdoc" who is working on essential aspects of the mentors' own research projects, with seemingly no attention to the postdoc's career goals. This situation is well known among PhD students, who want to avoid it, and rightly so. The low rate at which postdocs transition into faculty positions (while their mentors continue to rack up the funding in part due to the hard work of postdocs), is a sign of failure of the mentors. Poor retention of postdocs is a natural consequence.

Existing NIH policies, programs, or resources

There need to be higher expectations and greater accountability for mentors' practices and postdoctoral fellows' outcomes. Rather than setting a cap on the number of years that a T32 postdoc position can be held and also requiring repayment if the postdoc leaves, perhaps NIH should provide greater oversight for mentors' timelines for successfully helping postdocs submit grant applications and transition to faculty positions. There is very little reward within academic institutions for mentoring a postdoc well. A policy to reward mentors in some way would also be helpful. At the very least, the postdoc should not be penalized for poor having a bad mentor and needing to leave early.

Proven or promising external resources or approaches

No response

Response 777

Perspectives on the postdoc roles and responsibilities

Post docs to me are a position to go if you do not receive a tenure track position after undergrad. It feels like a step to take if you aren't ready to be a faculty member.

Fundamental issues and challenges

Issues:

This isn't training. We have full PhDs. It feels like an extension of grad school.

Low salary

Lack of health care.

Lack of benefits.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 778

Perspectives on the postdoc roles and responsibilities

As a postdoc we are the main drivers of projects, investigations, grant proposals, and even responsible for oversight and training of other lab members including technicians, undergrad and grad students and summer outreach. Without us, the system doesn't work, and yet we are treated as trainees? We are the reason why discoveries are made or fail and yet you treat us like the help that can easily be replaced. A good postdoc makes a project and you all know this, and yet you hire someone after years of hands-on training and treat them by rights, salary and benefits as if they are just starting out. I have never been mentored as a postdoc and yet the NIH suggested salary is tied to this fact. We bring expertise that is irreplaceable in a lab and yet we are not compensated for it. There is no way upward as the old white boys club continuous it's hold on PI positions. Minorities are required and invited to serve in endless committees addressing issues of inequalities and yet nothing is enforceable and nothing is done. Academia is stuck and flawed in a 100 year old view thinking it can exist on prestige and requiring passionate workers to ignore the fact that they are mistreated.

Fundamental issues and challenges

Poor mentorship, no opportunity to advance and become independent, biased NIH funding structure that awards old and established white males for useless science and ignores innovative and fresh approaches since the decision makers are all in it together. Poor pay and the title of a trainee is disrespectful and nt representative of the load the postdoc is carrying.

Existing NIH policies, programs, or resources

We don't need more training, endless courses, another webinar telling us what grants there are, none of this is helpful or leads to anything. The solution is simple—respectful and adequate pay as if we were the professionals we are, matching industry. And fully anonymous NIH grant submission process, it's not that hard, others are doing it too.

Proven or promising external resources or approaches

Australia has adequate pay and anonymous grant submission. NASA in most RFA's doesn't distinguish for the position of the applicant and also has anonymous submission in many areas.

Response 779

Perspectives on the postdoc roles and responsibilities

My postdoc is a time for me to get up to speed with processes and procedures at my institution, network, and write grants.

Fundamental issues and challenges

The fundamental issue is salary. During my PhD program, I worked as a research coordinator to pay for school. I earned $60,500 annually. My first year as a postdoc, per the NIH salary ladder, I started at $53,000. I won't reach my pre-PhD level for several years. Even the staff I work with make more money than me. It's not sustainable and it's demoralizing to earn a degree, land a postdoc at an amazing institution, and then not feel like I'm being compensated for my work. The only reason I took the postdoc was to move my daughter closer to her grandparents.

Existing NIH policies, programs, or resources

I applied for an F32 but maybe I should have gone for a K? Resources on how to decide between the two would be helpful.

Proven or promising external resources or approaches

I really like the NINDS podcasts—it's so helpful to hear the voices and opinions of other postdocs. I will likely never apply to NINDS so it would be nice if other institutes had podcasts. I also received pilot funding through a P50 which has been great. It felt like an easier, less competitive process to get my first NIH grant.

Response 780

Perspectives on the postdoc roles and responsibilities

As a current postdoctoral fellow at an academic institution, I view academic postdocs as a period of specialization within a specific field, additional training, and opportunities for teaching, mentoring, and supervision. Within my field of clinical psychology, it is also a period when you can receive supervision for licensure and become licensed, which is needed for many future academic positions.

Fundamental issues and challenges

Overall, I think that in my field, postdocs can be really helpful to kickstart an academic career and be competitive on the job market. At present, the main issue that prohibits individuals from completing a postdoc is low pay which is generally consistent with the NRSA stipend. This leads to people going on the job market earlier, which I think is long-term potentially detrimental to their career. Additionally and perhaps most importantly, I think the low pay also impacts the diversity of the academic workforce because high socioeconomic status trainees (who may not have as much debt, etc) may be more likely to be able to do a postdoc at present. Another challenge for my specific field within Clinical Psychology is the number of moves that a trainee needs to potentially make to be competitive applicant on the job market between Clinical Internship and a postdoc.

Existing NIH policies, programs, or resources

In terms of policies, I think one thing I think about is early stage investigator policies. There are lot of grant opportunities, awards, and policies for early career investigators. These are really helpful, but it might be helpful to have more support for these initial stages post-PhD specifically (e.g. the first 3 years) when postdocs are occurring. There is a pretty big difference between a first-year postdoc and someone 10 years post-PhD.

Proven or promising external resources or approaches

No response

Response 781

Perspectives on the postdoc roles and responsibilities

Further training on techniques that I did not have the chance to explore in more detail during my PhD.

Fundamental issues and challenges

SALARY TOO LOW!

Existing NIH policies, programs, or resources

Paths/opportunities are pretty well-defined. Noncompetitive salary is the only issue I face and as a result I will likely be leaving academia.

Proven or promising external resources or approaches

More NIH visibility on social media platforms (Twitter, Instagram, LinkedIn etc) could be useful.

Response 782

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is to learn research methods and what additional skills are necessary to achieve their career goals. The career goals could be for research in academia or industry, or for teaching biomedical topics in academia, or both. The additional skills should include administrative skills, writing skills, and interpersonal skills. As part of the process of postdoc training, they do research with mentors and write papers, supporting productivity for themselves and their mentors.

Fundamental issues and challenges

Perception that an academic research career is not viable or desirable, largely because of the difficulty to maintain sufficient funding under conditions in which universities rely almost entirely on NIH to pay faculty salaries.

Low salaries compared to industry, especially in locations that have higher costs of living.

For a long time, the quality of academic life with flexibility of intellectual pursuits was an attractive tradeoff of the difference in compensation, but the quality of academic life has degraded significantly, with increasing administrative burdens falling on faculty more junior.

For junior people, the burdens of pursuing diversity goals are falling disproportionately on female faculty and people from under-represented groups, often with no compensation.

To sum up, the pay is low compared to industry, and the stability of academic careers has degraded a lot. They see this from the way their mentors live and work.

Existing NIH policies, programs, or resources

Peg postdoc training salaries to the costs of living in various locations, analogously to reimbursement on the government web sites for per diem and travel expenses.

I think that the rest is up to academic institutions to change how they function (start paying faculty salaries and make sure that work on diversity is compensated and recognized for promotion.) Currently many universities pay faculty on the back of the U.S. taxpayer.

Proven or promising external resources or approaches

No response

Response 783

Perspectives on the postdoc roles and responsibilities

I view being a postdoc like being an apprentice/journeyman in science. The goal is to become more independent and take a more significant role in coming up with scientific ideas, writing papers, and writing grants.

Fundamental issues and challenges

I think there is a lot of gaps to be filled for the postdoc to professor pathway. There is a distinct lack of support for postdocs at an institutional level, where most job training for postdocs is run by other postdocs rather than at the department/school level. There is opacity for the hiring process that makes putting together a successful package complex at best.

Pay scale is impressively poor in comparison to almost any other job for the amount of training, with poor benefits and culture being entirely dependent on the PI of the lab. Job security is close to at will, again dependent on the PI, with less than poor job prospects without a significant move. It is likely one would have to move to another state to continue any training or get a professor level job, with little guarantee when any hiring decision is made.

Funding is a complex issue that has unclear benefits (and the unclear tax liability is a headache that should not be the responsibility of the trainee). I had an F31 as a graduate student, and F32 as a postdoc, which I was very fortunate to receive. The timing of the F32 essentially pushed me out of eligibility for the k99/r00, and my current institution will generally not support any other transitional NIH grants. I find that most of the interviewees for professor jobs in my area often have funding, either a the k99/r00 or similar training/early career grant.

Existing NIH policies, programs, or resources

I think more transitional funding in the postdoc to professor stage and either sincere encouragement or requirement for institutions to provide support for these grants.

Proven or promising external resources or approaches

No response

Response 784

Perspectives on the postdoc roles and responsibilities

I see my postdoctoral training as a part of a learning process. My experiences in this training will definitely help me build my career. I am yet to decide between choosing academia or industry for my future. Learning newer techniques and doing challenging experiments has been a part of my training.

Fundamental issues and challenges

1. The biggest issue is the PAY. More of my friends are drifting towards industry after completing their Ph.D just because of the pay disparity. The increase living cost is not helping people to stay in academia with such a low pay during postdoc.
2. Being an international scientist in the US is worse. I always have to worry about my visa status and on top of that we hardly have any fellowships to apply to. The NIH must have some fellowships reserved for international postdocs specifically.

Existing NIH policies, programs, or resources

Please have some fellowships reserved for international postdocs

Proven or promising external resources or approaches

No response

Response 785

Perspectives on the postdoc roles and responsibilities

Unstructured

Fundamental issues and challenges

Over work & underpaid

Existing NIH policies, programs, or resources

Restructure funding to pay the workers DOING the science

Proven or promising external resources or approaches

No response

Response 786

Perspectives on the postdoc roles and responsibilities

Post-doctoral positions are two-fold, in my opinion. They are first and foremost a research scientist position, where you get to use the experience, skills, and knowledge built up over the course of undergrad/graduate education towards solving scientific questions, with a degree of independence above and beyond that of a student. Responsibilities on this level may/should include supervising those more junior (i.e. techs, grad students, undergrads etc), planning and executing experiments at a high level, engaging with the bigger picture of a project, and providing a strong foundation of expertise and experience for the lab to benefit off of. Ideally post-docs should be treated like junior colleagues, and paid accordingly for their expertise and service. However, given that these positions are temporary and intended to build towards a more independent role, post-docs should be well-supported in developing skills towards more senior scientist roles, eventually reaching the point of being capable of running a research group independently. This requires that they receive periodic guidance towards independent leadership, high-level project design (at the level of a full group, not just a single project), financial decision making and so on.

Fundamental issues and challenges

1. First and foremost, compensation of post-docs is well under where it should be for their expertise, training level and roles they are usually fulfilling. Postdocs should be paid well above the affordability level of a city, at the level of an industry postdoc or entry level doctoral researcher. Many of my colleagues opted out of post-doctoral positions because they were not at a stage of life where taking a pay cut for additional training was worth it when their other goals include building a family, buying property, etc and other positions would appropriately compensate for their expertise such that they could both have a great job and afford to achieve their other goals. Many of these people would have been more willing to pursue a post-doctoral position if the pay did not require putting off these other goals.
2. The pressure on post-docs to be constantly thinking about next steps from the moment they step into their position, coupled with the precarity of job opportunities and funding available makes the job difficult to enjoy and be present in and imposes a lower quality of life. To some degree, this is the 'price we pay' for additional training and is somewhat inevitable, but more available resources for considering next steps, a higher likelihood of success after post-doc and career development planning would alleviate these stresses.
3. Transitioning from PhD to postdoc can be challenging, especially without strong guidance which can be hard to come by. There seems to be a bit of an unwritten curriculum regarding how to seek out post-doc positions, successfully apply for them, and choose the right fit, and then negotiate the transition.

Existing NIH policies, programs, or resources

Transitional awards from PhD to Postdoc, such as the F99/K00 award are fantastic mechanisms for retaining postdocs and providing support and a clear pathway into the next step. Expansion of these types of mechanisms will be fantastic but should come with appropriate support for navigating the transition, which some do not as they stand currently. For example, the NCI F99/K00 comes with an extremely stressful and difficult to navigate transition process that is at best inconvenient and at worst harmful for awardees. Specifically, the requirement that awardees transition to their post-doctoral position 2 weeks following their thesis defense and completion of hard thesis requirements is nearly impossible to accomplish and incredibly stressful for all involved. A period of AT LEAST 6 weeks should be the expectation. It is absolutely critical to the success of these grant mechanisms, and their awardees not to impose additional rules and/or restrictions on training and timelines, especially those that add stress to an already difficult process. PhDs must be supported in taking a brief break following completion of their degree before they jump headlong into their postdoctoral study; anything else can impose/exacerbate major burnout during a vulnerable period. The transition between PhD and post-doc often comes with expensive long-distance move, and allowable time periods should take this into account, encouraging new post-docs to settle their lives (sign leases, pack, transition families) NOT designed to be at a period concurrent with finishing thesis revisions, publishing papers and completing other soft requirements such as attending graduations. As the current F99/K00 transition works, it comes with major financial, logistical, mental health and academic consequences that are detrimental to grantee health and wellness, and take away from the benefits to this grant mechanism. NIH should restructure this program with the post-doc transition in mind.

Proven or promising external resources or approaches

No response

Response 787

Perspectives on the postdoc roles and responsibilities

1. Design and perform experiments within scope of lab/PI interests.
2. Acquire data that is mutually beneficial to PI and postdoc, e.g. can be used for papers that help both post-doc with career and PI acquire funding. Write papers and grants.
3. Train students.

Fundamental issues and challenges

Biomed academic postdoc is an extremely marginalized position. Pay is low for expected education and work hours (often more than 40 hours/week).

Most universities do not keep good track of postdocs and do nothing to protect them, unlike graduate students, who have a committee and graduation date. There is zero accountability for PIs regarding postdoc outcomes. E.g. if a PI has multiple 8+ year postdocs, and has never or rarely had a postdoc reach their goal of a tenure track position (eg they all end up going to industry as a backup), there is no easy way to find this out and the university and NIH do not know or care. Postdocs are often promoted to "Investigator" or "Research Assistant Professor" with zero tangible benefit, but this makes professors look good and obscures postdoc outcomes.

When I was a postdoc, almost all of the postdocs I knew (15+) were deeply unhappy with their situation, even the ones who were competitive on the job market. This unhappiness was unanimously because of their relationship with their PI.

The currency for success for postdocs and PIs is different. The #1 factor for finding an independent position for postdocs is first author papers in prestigious journals. Without these, you have almost no shot. However, PIs only need middle-tier papers, along with preliminary data to get grants and tenure. PIs are in many ways incentivized to NOT help postdocs find a new position, and instead keep them around as glorified technicians. I have personally witnessed many PIs who have postdocs focus their time and energy on small projects that will benefit the PI (e.g. getting preliminary data for grants) while avoiding focus on putting together a big story for a high impact paper.

It is obvious to everyone at this point that the job market for tenure track positions is extremely competitive, with many searches seeing 100-300+ applicants.

If intent is going into industry, there is minimal if any benefit in doing academic postdoc. Some data even suggests it is a waste of time and money in the form of lost income.

Existing NIH policies, programs, or resources

Maintain a public record of postdoc outcomes for universities and PIs. Track the number of years as a postdoc/investigator/research professor is supported by NIH, under what PI and university, and outcome. Mandate university and PI accountability for postdoc outcomes.

Proven or promising external resources or approaches

Again: Maintain a public record of postdoc outcomes for universities and PIs. Track the number of years as a postdoc/investigator/research professor is supported by NIH, under what PI and university, and outcome. Mandate university and PI accountability for postdoc outcomes.

Response 788

Perspectives on the postdoc roles and responsibilities

It's a training position where you get to practice multiple other aspects such as mentoring, managing and finances of a lab.

Fundamental issues and challenges

Low pay and high expectations from PI to work. No clarity in the future for a respectable academic job outside of being a PI. PI jobs almost impossible to get for an average postdoc.

Existing NIH policies, programs, or resources

Promote more scientist positions that are paid better—with clear policies on vacation days and expected work hours. Should not be under the mercy of the PI alone.

Proven or promising external resources or approaches

Mentoring

Response 789

Perspectives on the postdoc roles and responsibilities

Ideally, the postdoc position would be a temporary, short-lived position (maybe 1-3 years?) where a Phd-level scientist could hone certain skills for a future as a tenure-track faculty member at a university. These would include grant writing, developing course materials and delivering lectures, and developing the beginnings of a research program. As highly skilled scientists, what we give in return is a highly productive member of a lab that can advance the PI's existing projects and mentor graduate and undergraduate students.

In reality, the postdoc is an ambiguous position in both responsibilities and time course. Because of the "temporary" nature of the job, we are not treated as full employees of the university: this means no performance based raises, little oversight on even yearly inflation-based raises, worse healthcare than the graduate students or undergrads, and almost always no matching retirement plan. I worked extremely hard and succeeded during my PhD to land myself in a well-funded, established lab at an Ivy league institution. My university seems to have almost unlimited budgets for construction and recruitment, but somehow they are comfortable with giving postdocs the bare minimum while we carry research programs on our backs. Depending on the individual lab, postdocs take on massive responsibilities for the maintenance of the PI's lab and research program, and are left with little time to develop their own independent projects. This goes on for years, with no guarantee of a tenure-track position at the end of the road.

This is why postdocs are quitting in record numbers. My peers are in all the top research institutions in the country, and we all echo the same sentiment: to the outside world we are highly trained, accomplished scientists worthy of well-paying, stable, supported jobs. To the institutions we work at, we are "just trainees".

Fundamental issues and challenges

The number one issue is base salary and benefits. Realistically, labs will always feel tight on money and resources. That is the nature of funding these days. When given the freedom to do so, institutes will choose to pay the minimum allowed, or in some cases, even less. The base salaries need to be set by NIH and there needs to be a serious push to force NIH-funded institutions to adhere to the payscale. The NIH needs to raise minimums significantly, as well as significant % raises for each year of experience. It is appalling that NIH postdocs are paid through the IRTA stipend scale, which both allows for a range of salaries at each level as well as overall much higher salaries, but this model is not extended to NIH-funded grants at academic institutions.

Further, institutions must designate postdocs as full-time employees. The average age of a postdoc is 33—this is the age where people need to be seriously planning for their future—investing, saving, building a family if they choose. These are all impossible with the current postdoc compensation packages. If universities would improve the health insurance available to postdocs (for example at my institution, move us to the health insurance that residents, or even graduate students, are given), and provide some matching retirement, postdocs could view this time as an investment in their future career, rather than a financial blow that they may never recover from.

Finally, there needs to be mandatory COLA for postdocs in particularly high-cost areas. Many of the most prestigious institutions, with the most successful labs, are in areas where postdocs can't afford to live. Adjusting salary based on this factor would improve postdoc well-being and ultimately retention.

Existing NIH policies, programs, or resources

Set higher payscales for postdocs funded on NIH grants, and have even higher payscales for NRSA fellows and institutional training grants to incentivize postdocs to pursue these. Implement policies where NIH-funded labs must adhere at least to the minimum of these scales. Further, offer adjustments to the budgets of existing grants when raises are set, so that particularly junior faculty do not feel the financial burden of paying postdocs to a higher scale. Add on funds to these fellowships for independent research—so that the postdoc can order reagents or equipment solely for the development of their independent research program. Open up the eligibility of NRSA's to international postdocs, whose work is such a valuable part of American science.

Proven or promising external resources or approaches

Ways to improve postdoc recruitment, retention, and outcomes: Enforce mandatory training plans set at the start of the postdoc, outlining the mentorship structure and plan for the next 3 years. Put policies in place to support postdocs with families—particularly women. The postdoctoral period often coincides with child-bearing years, and women should not be carrying the burden of expanding their families and furthering their research career without adequate support. Subsidize childcare, extend eligibility requirements for fellowships and transitional grants, increase salaries across the board so that a choice doesn't have to be made between a family and a career. Provide more structured training, both for postdocs and the PI's that mentor them. The scientists of the future need to be well-rounded, versed in many techniques, and flexible in their research. Provide postdocs with tools to make them successful for the future.

Response 790

Perspectives on the postdoc roles and responsibilities

A postdoc shod an opportunity to establish independence while still benefiting from direct advisement.

Fundamental issues and challenges

Money. Simply put, salaries are unsustainable.

Existing NIH policies, programs, or resources

The NIH minimum salary needs to dramatically improve, and additional freedoms need to be given to PIs to supplement postdoc pay.

Proven or promising external resources or approaches

I stayed at my job specifically because my PI was able to give me additional funds.

Response 791

Perspectives on the postdoc roles and responsibilities

Training and preparation for faculty position. Whereas graduate school is more about learning scientific skills, postdoc is more about apply these skills (and learning more skills) to work more independently. Many postdocs also have at least a general idea of the type of research they want to pursue as a PI, so the postdoctoral training helps us define our research program and accumulate other experiences and skills (e.g. mentoring, teaching, networking) for being a PI.

Fundamental issues and challenges

Compared to non-academic jobs with similar requirements on education and experience levels, the salary and benefits of postdoc positions are very unattractive. This severely limits the postdoc workforce to people who can afford to receive sub-optimal pay for a significant proportion of their career (e.g. people who do not have student loans or debts, have few or no dependents, or those who have other sources of income). Aside from salary, the difficulty of obtaining work visas or resident status also limits the US's access to international postdocs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 792

Perspectives on the postdoc roles and responsibilities

Postdocs are semi-independent to fully independent researchers who work with PIs to develop projects along lines of mutual interest. There may be some skill development in the new lab but I would not consider it a training position

Fundamental issues and challenges

Problems:

1. Poor pay and benefits. When industry is paying significantly better/providing benefits it makes it challenging to want to pursue a postdoc. Postdocs in Boston should not be making 1/2 to 1/3rd of what their newly graduated peers do in industry.
2. Quality of life is dependent on PI so there is very little consistency wrt workload, work life balance, vacation time, etc
3. Poor outlook on number of academic positions. As a grad student I get the feeling that every year the standards for who becomes new faculty go up while the available positions stay stagnate or go down. Having to work for years after achieving a level of education most of the world never will just so you have a chance to get an academic job is disheartening.
4. Poor outlook on work as a young academic scientist. Universities are constantly raising the pressure on their young faculty meaning they work long hours and are constantly stressed. Hard to justify becoming a postdoc just so that you can then be mistreated by a university for X year until you get tenure.
5. Lack of control of life plan. Postdocs don't know when they will finish, where they will go, how their partner will be able to join them in the new location, whether they will be heading to another postdoc or a faculty position, etc. this makes planning for the future nearly impossible and makes the whole process of being a postdoc seem highly anxiety inducing.

Existing NIH policies, programs, or resources

The NIH needs to mandate postdoc time off, sick days, and adjust the minimum pay scale to the living wage on a per city basis. And to enforce these policies they should withhold funding to universities and labs that do not meet these minimums.

The NIH and other funding agencies should also increase the sizes of the awards they provide to allow professors to afford to pay their staff higher wages.

Proven or promising external resources or approaches

No response

Response 793

Perspectives on the postdoc roles and responsibilities

This should be classified as a trainee position, not as a traditional employee. I think of them as grad students who dont have a thesis/dissertation to write. They are here to learn and publish to advance their goals.

Many institutions are classifying postdocs as employees and therefore are subject to minimum salary requirements, payment of fringe benefits that exceed the NIH cap. It is hard to fill in the shortfall as investigators are caught in between a rock and hard place. Clarification from NIH that they are trainees would help in solving this problem. OR NIH should raise the cap on postdoc salaries.

Fundamental issues and challenges

See above. Also, low salaries, and lucrative employment market makes it hard to recruit top quality postdocs. Therefore, only non-US postdocs are available to me which poses additional problems such as visas, language, communication, and also different "culture" of conducting science.

Existing NIH policies, programs, or resources

See above.

Proven or promising external resources or approaches

Increase salaries, especially in high cost of living areas such as Seattle, classify them as trainees, not employees.

Response 794

Perspectives on the postdoc roles and responsibilities

A chance to acquire new skills, learn the culture of a different lab and institution, make connections, have more independence and control over projects and create an independent identity. Above all, having a period of time to focus purely on research with no other responsibilities.

Fundamental issues and challenges

Financial security was my main concern as a post-doc. I was lucky to get an F32 (on my second attempt) back when success rates were over 40%. The stipend level was not high, but it was supplemented by my PI. The F32 gave me a sense of independence and recognition of my abilities as a scientist. I think this is a critical mechanism and the success rate should be higher. But cost of living varies widely and F32 stipend levels often need to be supplemented.

Existing NIH policies, programs, or resources

Allow F32s to be supplemented from federal sources.

Proven or promising external resources or approaches

No response

Response 795

Perspectives on the postdoc roles and responsibilities

My original understanding was that a postdoc would a be a period of research intensive focus with the goal of finding a research focus and mastering research and writing skills necessary for starting a successful independent career. Hopefully this would include exposure to writing grants, the admin side of running a lab, and training mentees. However, the reality has been less research time replaced with more admin time as PIs struggle to handle the increasing number of admin and bureaurocratic items passed on to them that they have to start handing off more and more lab admin jobs to postdocs and down the line.

Fundamental issues and challenges

There seems to be at least 2 fundamental issues:

1. Funding issues from the top down and
2. Increasing bureaucracy.

Regarding funding, modular grant amounts have not kept pace with inflation for decades and is simply insufficient to fund even small research questions and groups. Grant success appears to require the "flashiest, newest" technology, when a cheaper traditional method is better suited for answer the questions proposed. There simply isn't enough money to do the research and pay postdocs what they are worth and could receive in industry. Postdocs are often classified as "temporary" or "consultants" and have little employee protections, and often no employee benefits extended to other staff in academic institutions. New NIH policies on data sharing require more data storage space, yet Universities are tightening their IT regulations that act in opposition to this without providing affordable alternatives or assistance (monetary, technical, nor otherwise).

Regarding increasing bureaucracy, PIs are increasingly being required to do more paperwork and justification of every decision and work under tighter regulations, by both the grant and academic institutions. This takes so much of PIs time, that they have less time to provide guidance and mentorship of their lab, often requiring they delegate admin and mentoring needs to their postdocs or senior graduates students.

Another major issue is the bipolar treatment of postdocs like infantile trainees or having them held to impossible standards based on what is convenient/easier/cheaper.

Existing NIH policies, programs, or resources

There appears to be no mechanism, or at least enforcement, of trainee stipend levels beyond when first hired. So if the NIH adjusts stipend levels, those of us already in labs are stuck at previous levels

(sometimes with minor raises if the department admin allows, but it's never as much as we should jump from year to year, and it doesn't seem to matter if the PI has budgeted for it).

Policies requiring significant expense or expertise need to provide necessary funding allocations and resources to allow labs to comply. Protection of federal grantees from academic or other institutions policies that are in opposition to NIH policies.

Proven or promising external resources or approaches

Better pay and gaurantee of benefits (maternity/paternity leave, insurance, retirement plans).

Response 796

Perspectives on the postdoc roles and responsibilities

To me, the existence of the postdoctoral position is largely to build an independent research program. At the start of a postdoc, you are likely already an expert in your field, so this time is meant to generate enough data to begin writing grants for your academic position (if that is the path you choose). A postdoctoral scholar may use this time to gain new skills either for industry or academia, but in my experience it seems rare to make large leaps across fields without some strong foundation in a nearby field.

Fundamental issues and challenges

There are many fundamental issues with the position of postdoctoral fellow, so I will list them.

- First and foremost, the very title of "trainee" is offensive. We are experts in our fields, and should be treated as such.
- Accompanying this belittling title are limited benefits (no retirement, no job security, rarely receive a set vacation allocation, etc)
- To go along with our limited benefits, we are paid at a level far below our degree and our skill level (lab technicians often paid at a similar level w/o degree)
- Often postdocs have an academic career in mind, but those positions are increasingly difficult to acquire.
- In many cases, work-life balance is poor, with expectations to work well over 40 hours every week.

These factors coalesce into the current situation of poor recruitment, retention, and quality of life of postdocs. Why should I accept poor pay, work-life balance, and limited respect all for a job that is becoming increasingly difficult to acquire? The reward just isn't worth the sacrifice.

Speculating, perhaps my PhD program providing exceptional information regarding non-academic jobs has helped inform my view of just how bad a deal a postdoc is. This issue may be recent, solely because postdocs of old were just dealing with less information.

Existing NIH policies, programs, or resources

At a policy level, the fix is relatively simple. Making the postdoctoral fellowship a competitive position from the perspective of pay, benefits, and respect. Assuming we are not going to solve the issue of too few open tenure-track positions, something else is needed to entice and retain talented scientists.

Obviously this will significantly cut into the budgets of PIs, so there would need to be larger-scale changes that need to occur (increased funding for the NIH/science, changes in project expectations, etc).

There are a range of cultural issues that persist that need to change to make academia a more welcoming place, but those will take longer and are hard to change at the level of broad policy.

Proven or promising external resources or approaches

Look to industry for inspiration. Many of my peers in graduate school made the shift to industry, and they all report being happier than they ever were in graduate school. There are other challenges of course, including job security. Unfortunately, postdocs also don't have any job security, are paid less, and are given less respect than industry scientists.

Everything else equal, an academic postdoc could be an enticing position, if only we compensate these postdocs in a manner consistent with their skills.

Response 797

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is a "must" for any individual who wants to become an independent investigator. It is the rare exception that I have found during my time as a faculty member, mentor, and PI of a T32 that I encounter someone who is ready to jump right to writing R-level grants at the time they complete graduate school or residency. This 2-3 year period allows them to develop their ideas and networks, collect pilot data, and understand the intricacies that go into running a research study and program.

Fundamental issues and challenges

Money Money Money—the salary levels from the NIH, particularly for MD's, are paltry, and the money for medical insurance is less than adequate. The single biggest barrier to individuals choosing a T32 postdoc is financial.

Existing NIH policies, programs, or resources

The level of funding for both stipend and insurance reimbursement needs to be dramatically reimagined and increased to start to shift people back towards academic research and postdoctoral research positions.

Proven or promising external resources or approaches

We have not encountered many issues in our T32 once we recruit applicants (mentoring pairing is a process that occurs during the application process to ensure a good fit and adequate seniority and experience in the mentor; we have balanced T32 requirements of all applicants with an individual's experience to provide a good mix of fellowship and independence). The challenge is recruiting. Although beyond the scope of this survey, I believe we are nearing a point where the financial model for academic research needs to be rethought out. From discussions with young graduate students and residents at conferences, the greater uncertainty of meeting one's salary requirements if they choose an academic position is negatively impacting them even before they find out about the meager amount of stipend and insurance support they will receive as a T32 fellow.

Response 798

Perspectives on the postdoc roles and responsibilities

As I began my postdoc position, I viewed it as primarily an opportunity for additional, specialized training in preparation for a tenure-track research faculty position. At the end of that training I realized I would not be competitive for a faculty position, and began to view a postdoc as a form of temporary employment like an internship that might lead to a more permanent position. At this point, I sought opportunities to branch out into science communication, leading to my current role as a science editor working at a university.

Fundamental issues and challenges

By now it is no secret that there are far more postdoc positions available than new faculty positions available. Knowing that odds do not favor the tenure-track faculty path, many will either seek an alternative path after graduate school, or as soon as they can while doing a postdoc. Another issue for those that want to go into industry is that having the additional postdoctoral experience can make them less likely to be hired in industry, where an older person with very specific training, strong opinions, higher expectations and no experience in industry is not what HR is looking for.

Existing NIH policies, programs, or resources

The postdoc training period continues to be a great path for those who do go on to tenure track positions. Reduce the number of postdoc positions to align better with new faculty positions, and increase the number of NIH/NSF-funded research support staff positions available for Ph.D. graduates (e.g., research scientist, project manager, science editor, lab administrator, etc.). This can be encouraged in the budgets of new awards given.

Proven or promising external resources or approaches

No response

Response 799

Perspectives on the postdoc roles and responsibilities

As a stepping stone to the "next thing." I typically see it as a requirement to go into academia post-PhD. I expect to be conducting semi-independent research while also doing some career exploration. Post-docs at the institutions I've been at have typically been in a sort of liminal space where they're not faculty but they're also not students.

Fundamental issues and challenges

Pay–it is really hard to accept a job with such low pay when industry pays 3x more. Clinician scientists (MD, PT, OT, etc.) have a lot of debt from their clinical training as well.

Existing NIH policies, programs, or resources

Making the loan repayment program more accessible.

Proven or promising external resources or approaches

No response

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

I do think we need a new Post-doc program with the goals of the Postdoctoral Research Associate Training (PRATIn) Program that instead of being restricted to the Intramural program is directed to the Extra-mural community (PRATEx). A combination of a new PRATEx program to train multiple post-docs at an MSI/RI partnership would go a long way toward increasing representation in the professoriate. The PRATEx in combination with MOSAIC could be a big winner. We have had good success with the IRACDA participants applying for K99 awards.

Proven or promising external resources or approaches

No response

Response 800

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an essential role for moving forward science and train new students to understand and maybe practice research in the future.

Fundamental issues and challenges

Low salary is definetely a challenge for mantaining a decent quality of time. Most often Postdocs works extra hours and they are not reflected in the salary. Also, insurance coverege is very bad. No pension.

Existing NIH policies, programs, or resources

Increase of NIH minimal postdoctoral salaries and strict roles on the working hours to maintain a healthy work-life balance

Proven or promising external resources or approaches

No response

Response 801

Perspectives on the postdoc roles and responsibilities

I initially felt as if the postdoc role was meant for additional specialization/skill development and to build my CV with academic achievements (publications, grant writing experience, etc) that I didn't receive in graduate school and that would help me be competitive in academia.

Fundamental issues and challenges

First issue is that postdoctoral positions are not very well paid with the salary cap limit often times forcing postdocs to pursue other career options. Additionally, many postdoctoral positions (including T32s) have become exploitive -meaning that they have become less about helping the postdoc develop additional skills/training and more so about just having someone help out with a research study or see clients in their clinics (i.e., an over-qualified research coordinator or an NIH-funded clinician).

Existing NIH policies, programs, or resources

Would be helpful to have guidelines that limit what can/can't be asked of postdoctoral trainees or at the bare minimum how much of their time should be allowed to working on other people's projects vs. their own career advancement. Require PIs and centers to submit yearly progress reports that not only report on research products and/or things that the trainee "will do" but rather has done—please also include a monitoring of how much time is being spent on research coordinating and track how often postdocs are meeting with PIs. Clarify clinical activities allowed on T32s—currently many T32s are requiring postdocs to see clients in their clinic (with no research relevance) because of the vagueness in what clinical work is/isn't allowed. Directly solicit feedback from postdocs at minimums at the exit of every postdoc (instead of postdocs having to submit their feedback to their PI/training center who then uploads it). Do not award funding to sites with a pattern of negative feedback.

Proven or promising external resources or approaches

No response

Response 802

Perspectives on the postdoc roles and responsibilities

A post doc is someone learning new techniques to investigate and analyze a topic but most importantly developing an interest in specific fields of science and finding what he really likes and would like to pursue in the future.

Fundamental issues and challenges

As someone who is not a US citizen or a green holder, I would say that this is the most fundamental issue in my opinion. It is really hard to apply for these positions especially when coming from a developing country.

Existing NIH policies, programs, or resources

I do not have knowledge about that to reply.

Proven or promising external resources or approaches

I do not have knowledge about that to reply.

Response 803

Perspectives on the postdoc roles and responsibilities

A postdoc feels like a step of additional training before moving on to your actual career. For the traditional academic track and some other careers, it's necessary (in my opinion); for many others, particularly non-technical paths, it is not as important. It should help prepare scientists to work independently, be good mentors (and able to follow evidence-based mentorship practices), critically engage with the scientific enterprise, etc.

Fundamental issues and challenges

Insufficient pay and benefits (a postdoc can delay the time until you can make a "real" salary, get retirement benefits, etc.). Pressure to publish in high impact journals to be competitive for jobs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 804

Perspectives on the postdoc roles and responsibilities

I am in the first year of my postdoc. While it is extremely unstable, I am finding ways of enjoying the instability—e.g., by assuming a very flexible work schedule, traveling a lot, enjoying the lack of teaching duties. However, I am only able to find these enjoyments because

1. I have very supportive hands-off mentors,
2. I do not have a partner or children who depend on me financially, and
3. I am funded by my own grant through a private foundation.

I have my own research program that is independent from my advisors, and view the postdoctoral years as a time to publish more and advance my research program in a supportive lab environment.

Fundamental issues and challenges

As a non-US citizen, I am not eligible for most NIH and NSF postdoctoral awards, except for the K99 and the Early Independence Award. Given that I have been a relatively highly independent researcher through graduate school (i.e., meeting with my advisor approximately once a term, establishing my own research program and work schedule, procuring my own research funding and stipend through graduate school), it is disheartening that it is difficult for me to retain my independence due to the lack of awards for international scholars.

Additionally, applying for a US work visa is both stressful and costly. In the past year, I have spent $1000+ of my own grant money on visa costs alone, when these funds could be directed towards research.

Existing NIH policies, programs, or resources

Please expand the eligibility of less competitive NIH postdoctoral awards to non-US citizens.

Proven or promising external resources or approaches

No response

Response 805

Perspectives on the postdoc roles and responsibilities

I think a postdoc represents the opportunity for additional training as a researcher. In my doctoral lab, my research focus was very narrow and with only one technique. This postdoc offers training in new techniques and fields. In addition, I felt that I wasn't sure if I wanted to continue in academia following my experiences in graduate school, and postdocs offer an opportunity to experience academic research elsewhere to help me make that decision.

Fundamental issues and challenges

Without question, the single most important is pay and benefits. Inflation is soaring and the NIH, which sets the standard nationally, still sets postdoc pay at $54k, which is absolutely ridiculous. New postdocs have just spent the last ~5 years of their lives barely making a living wage (a whole other problem), and need to begin to financially recover from that so that they can have an actual life. The expectation that we

postpone marriage, home ownership, having children, etc to complete our training is completely unreasonable.

Other very important factors include support for our fellow trainees who are foreign nationals, maternal and paternal leave, and extreme workloads to stay competitive for the incredibly few faculty positions available.

Given the scarcity of faculty positions to move on to after postdoc, there need to be clear pipelines, training programs, and support for postdocs who wish to transition to industry positions.

Existing NIH policies, programs, or resources

Increase the base salary for postdocs by at least $20k. Pretend I wrote this one 1,000 times over and over. Academia is losing postdocs to industry because of this.

Training programs and resources for those who wish for transition from postdoc to industry.

Proven or promising external resources or approaches

I think the real probability of attaining an academic faculty position after doing a postdoc should be reported annually by NIH.

I also think NIH is uniquely suited to facilitate a national network of postdocs. As trainees between graduate students and faculty for a very short time, it is difficult to maintain communication between active postdocs to create a community of support and resources.

Response 806

Perspectives on the postdoc roles and responsibilities

The postdoctoral position to me is an additional training period in which you build skillsets, publish papers and attempt to obtain grant funding to become more marketable within the academic space with the goal of obtaining a trenure-track position.

Fundamental issues and challenges

Currently, there have been multiple postdoc roles created attempting to draw in applicants from underrepresented backgrounds, but aside from the research question and hoping for the applicants research expertise to help with the project postdocs do not take into account the different challenges that many potential applicants from underrepresented backgrounds face when taking on a postdoctoral role, such as low-pay, continued high uncertainty, high cost of moving for a short time frame, etc.,. Many potential applicants from these backgrounds come from lower socioeconomic backgrounds making the continued time for making salaries as a “trainee” a larger deterrent, especially as many of us have gone through multiple years of PhD training in which we have earned low stipends and have not had a chance to earn 401ks or other means of gaining financial stability that is necessary. The lack of improvement in these areas make postdocs seem very undervalued. While I have focused on recruitment of postdocs from underrepresent backgrounds, I think this is still true for all recruitment as the current financial challenges in becoming a postdoc are creating a space in which those who are privileged enough to withstand these challenges will be able to stay within academia.

Existing NIH policies, programs, or resources

The NIH postdoc salary cap must be increased and verbiage must be changed within PI grants that allows them to use funding to increase postdoc salary if they have the funding.

Hybrid work environments for postdoc training should also be expanded as it is not feasible to take on the cost of moving for a short period of time, especially for post-docs that are offered in high cost of living areas.

Proven or promising external resources or approaches

There have been multiple publications currently that have discussed the barriers to becoming a postdoc, I think these papers really highlight some of these challenges and offer some helpful insights:

doi.org/10.1038/d41586-022-02781-x

doi: 10.1126/science.caredit.add4693

doi: https://doi.org/10.1038/d41586-020-02029-6

Response 807

Perspectives on the postdoc roles and responsibilities

Academic postdocs should, in theory, provide independent research experience with the purpose of PhDs becoming successful independent scientists. This may include starting their own academic lab or moving to industry to head a project, but I believe should not be a landing spot for PhDs who want to stay research track and do bench work without becoming a PI.

Fundamental issues and challenges

The essential issues for postdoc recruitment and retention are job prospects and pay. Many people don't even want to attempt postdocs because the outlook for becoming a faculty member and PI of their own lab is extremely poor. There are simply too few available faculty positions and most of the grant money goes to large, old, well-established labs while prospective and new PIs struggle to receive funding and other opportunities. Additionally, the starting postdoc salary being set below $60k is, frankly, a joke. Cost of living is soaring across the country, and for such highly trained scientists who have received PhDs to make less than their non-academia peers made directly after undergraduate degrees demonstrates that the NIH does not value postdoctoral fellows. The NIH sets the base salary, and many institutions follow the bare minimum as a result. The combination of these factors leads newly graduated PhDs to quickly realize their years of training is not financially valued, and even if they undergo 4-5 more years being underpaid as a postdoc, they very likely won't find funding or job opportunities to become a PI. This is a direct reflection of the value the NIH places on postdoctoral fellows. All of this is not even to mention the poor work life balance associated with academia as a whole. So why stay in academia? No financial incentive, no work life balance incentive, no opportunity incentive.

Existing NIH policies, programs, or resources

Pay postdocs significantly more. I would even say that postdocs should not be classified as trainees, as they are essentially full-time employees in labs and often work far more than 40 hours in a given week. Trainee classification limits the benefits and pay that postdocs can receive as part of their employment. Provide more grant money to young investigators and award more K awards.

Proven or promising external resources or approaches

No response

Response 808

Perspectives on the postdoc roles and responsibilities

Conducting research under the guidance of the lab's principle investigator. Since this is officially designated as a training position, the individual should receive training on new techniques, models, forms of data analysis, etc. with an explicit plan for how this will happen laid out by the PI. The postdoc may be involved in subsequently training or providing mentorship for graduate students and other lab members.

Fundamental issues and challenges

The NIH recommended minimum is what most institutions seem to use for their starting salary regardless of the cost of living for the city they are in. This is unacceptable. This is not a livable wage for someone like myself living in a major city with an infant and full reliance on daycare (no family nearby). Parental leave guidelines need to be spelled out explicitly and should guarantee at least 12 weeks of leave. Postdocs are just not competitive with the salary and benefits offered by industry.

Existing NIH policies, programs, or resources

The F31 childcare subsidy needs to be increased. $2500 covers 1.5 months of daycare for a single child in my city.

Proven or promising external resources or approaches

Yalcin, E., Martinez-Corral, R. & Chugh, M. Retaining postdocs by recognizing their worth. Nat Biotechnol 41, 296-298 (2023). https://doi.org/10.1038/s41587-023-01656-4

Response 809

Perspectives on the postdoc roles and responsibilities

The postdoc position is important for additional training to gain both scientific expertise and independence after PhD training. It is also a crucial period for professional development, networking and learning administrative skills needed to run a lab. My training during my postdoc has spanned multiple areas including benchwork, graduate student mentorship, grant writing and budgeting, equipment purchasing and maintenance, networking, classroom and laboratory teaching, and presentation skills.

Fundamental issues and challenges

The two major hurdles postdocs currently face are

1. financial insecurity and
2. instability in long-term career planning.

Pay for postdocs is low relative to other job opportunities given our training and skillsets. This is especially difficult given the life-stage many people are in when they enter their postdoc. Many are at a stage where they would like to get married, buy a house, save for retirement and have children. All of these steps require financial independence. Childcare availability and costs has been a major hurdle in my training. Even for major universities that offer on-site childcare the cost of such care is prohibitively expensive and not realistic on a postdoc salary. Postdocs often earn too much to qualify for any university subsidies that may be available to graduate students (for housing and childcare for example) but too little to comfortably pay for these expenses and save. Few institutions offer retirement programs and/or retirement matching for postdocs, even when they offer retirement matching for staff who earn a similar salary. Historically, low pay during the postdoc was temporary (2-3 years) before moving to a faculty position. But for many fields longer postdocs (5-6 years) are the new reality. This is in part due to high expectations for publications and an extensive CV needed to be competitive for a faculty position. Finally, the limited number of faculty positions means that postdocs are taking a financial hit for a job they may never get. Also, many postdocs are on 1 year contracts which limits long-term planning and makes our position dependent on ever-changing grant funding. Long-term career and life planning is also inhibited by the expectation that postdocs will most institutions/cities for their faculty position. This disadvantages people who depend on their local community for support (with childcare for example).

Existing NIH policies, programs, or resources

Some postdocs lose benefits when they receive independent funding. NIH fellowship should require that the institution provide healthcare, vision, dental, and retirement matching for postdocs on any independent fellowship. Fellowships should also allow PIs to budget for salaries raises that match or exceed yearly cost-of-living increases. Large NIH grants (like R01s) should offer more flexibility in how PIs pay postdocs. For example, when I received a non-NIH postdoc fellowship, the funds did not fully cover my healthcare benefits. These shortfall is normally covered with discretionary funds. Since my PI was more junior, and only had a single R01 the discretionary fund "bank" for the lab was small and we needed to negotiate with the department and college to help cover that shortfall. We were effectively punished for earning additional independent funding. NIH should allow PIs to budget for those types of costs when the goals of the trainee fellowships are in line with the overall goals of the R01. Earning independent funding (even from a private organization) helps stretch the dollar value of the R01 and is good evidence for scientific and mentoring excellence in the lab. NIH grants could also allow PIs to give "bonuses" to reward postdocs who go above and beyond to help move the lab forward. Finally, NIH should provide financial support for postdocs to stay at their current institution when they move into faculty positions. Universities lose institutional knowledge, and postdocs are hindered in maintaining long-term collaborations when they are forced to move for a tenure-track job. If the NIH actively supported postdocs staying in the same place, more departments would be willing to consider hiring their own trainees. This provides both financial stability and long-term career planning.

Proven or promising external resources or approaches

The NIH MOSAIC program which provides additional mentorship to postdocs as they transition to faculty is a great start. Similar efforts could be applied in other trainee fellowships as well. Additionally, trainee feedback should be an important component of grant renewals (R01, etc). If a PI is proposing to mentor graduate students and trainees as part of their research program, the NIH should be evaluating how

successfully they have done so. This feedback should come directly from the trainees and should not be determined by evaluating the types of positions trainees have moved onto. This would incentivize PIs to create a non-toxic work environment and improve overall quality of life for trainees. Moreover, trainees fellowships should be incentivized to favor small lab with fewer postdocs since those PIs can provide more high-quality one-on-one mentoring than labs with many, many postdocs.

Response 810

Perspectives on the postdoc roles and responsibilities

Additional training in a field other than their original training to enhance their likelihood of success in their career. However, this tier of training appears to be disappearing in many if not all fields of research.

Fundamental issues and challenges

The fundamental challenge is that graduates can now get positions in industry at 3-5 times the rate of a postdoc salary. We are losing postdocs every month to pharmaceutical industries, among others. However, unless NIH starts to increase the overall budgets of grants, it is hard to justify increasing the salaries of postdocs. A complete overhaul of the entire budgetary system really needs to be done in order to accommodate the changes to the economics of academia, including MUCH higher costs of reagents, personnel, etc. Postdocs want all the benefits they can get in industry and if we cannot supply those, this tier of training will disappear.

Existing NIH policies, programs, or resources

NIH should supply additional funding for postdocs for all grants (R21, R03, R01, etc). Otherwise, it is challenging as an investigator to hire postdocs.

Proven or promising external resources or approaches

At many locations across the U.S., postdocs cannot afford to live (nor can graduate students) with the current stipend levels. Some investigators have had to add additional funding to support these tiers of training, however, most investigators cannot afford to take that route. Changes must be made in order to preserve this important tier of training or it will disappear. Those making decisions about this need to be a diverse group from all areas of society and levels of income so as to represent similar living conditions around the country for those just starting in their careers.

Response 811

Perspectives on the postdoc roles and responsibilities

Depends on the lab. But typically a pillar of the lab who is independently driving a major project within the lab. With huge responsibilities regarding training and mentoring students and other trainees.

Fundamental issues and challenges

Many. Namely: it is a temporary position, putting you in line to be considered for faculty positions. Unfortunately, grad students have become aware that post docs are not guaranteed a faculty interview, as they are competing with 100-300 other candidates, and when they get one they are still competing with another 4-10 others for ONE position. That is a huge risk. Most people are unwilling to take such a huge time and effort commitment when it is unlikely that they will ever be able to get a job at the end. And more importantly they can just get a job immediately after graduation in industry. This risk is made even less attractive due to the low compensation, the increasing bar of what is considered a competitive postdoc (ie multiple CNS papers, K99 funding, etc.) and the absence of any other options for postdocs to fill in academia outside of becoming an assistant professor. You end up with people who made a huge sacrifice compared to their peers who did not due a postdoc in terms of a delay in earning a livable wage, a delay in starting a family, and delay in progressing their career. There are very few other industries where a 40 year old be considered “early career”. There is also a HUGE bias towards postdocs who were trained in “elite” schools in terms of funding (k99 and other funding agencies) and acquiring academic jobs. So there is no incentive to even pursue a postdoc if it’s not in one of these elite schools. Inflation has pushed so many people to prematurely end their postdoc careers. 300 words is not enough space.

Existing NIH policies, programs, or resources

Increasing the budget allocated for postdoc funding. Especially the K programs. It is too small and thus clearly biased to benefit a few trainees at "elite" schools. Finding a way to increase the minimum NIH suggested postdoc salary. Finding new programs that specifically target and fund postdocs at schools that exist beyond the coasts would be nice.

Proven or promising external resources or approaches

No response

Response 812

Perspectives on the postdoc roles and responsibilities

He is almost an independent scientist with full responsibility to run complete research project (with exception to worry less about funding).

Fundamental issues and challenges

Post doc Salary is really a shame for those who choose it especially in expensive cities (Boston, California, NewYork).

Science learning will never end, So PHD qualified scientist should be paid a fair salary according to their qualification, skills and degree, not a stipend.

Existing NIH policies, programs, or resources

I hope NIH can increase and impose a minimum postdoc wage or tax exemption as they are a main participant in advancing solutions in the biomedical field.

salary should be adapted according to the living expenses of the living state/city

Proven or promising external resources or approaches

Consider tax exemption, state/city wage adjustment.

Response 813

Perspectives on the postdoc roles and responsibilities

I view post doctoral position as a time when we learn to develop our own ideas and become more confident as a scientist and as a person.

Fundamental issues and challenges

I think there are several challenges and flaw in this system.

1. First and the most important issue and challenge is less salary. Even after finishing PhD, most of the Post-docs are getting lesser wages compare to any other employee of the university system with negligible salary increase over the years with increase experience (2-3.5%). For example, a HR of the department is getting more salary than a Post-Docs. The salary amount paid to Post-docs is not enough to get a good living when inflation is rising very sharply. This is one of the main reason why so many Post-doc are losing enthusiam doing science and staying in academia.
2. Several PIs get an R01 and hire people from their own country which leads to harrasment and abuse in these type of lab. NIH should monitor these type of labs and notify them about this. I myself faced abuse and harrasment in this type of lab.
3. Several PI does not help people for career development.
4. Very few options for funding are available for International post-docs, except K99.

Existing NIH policies, programs, or resources

Postdoctoral fellowships such as T32 and F32 give no guarantee that the postdoctoral trainees will continue a path in academia. The T32 and F32 programs (PA-21-048, PA-23-048) should end. Instead, the T32 and F32 grants should be reallocated to K99/R00 grants (PA-20-188) or other K-level awards to accelerate the transition of postdoctoral trainees to independence.

Proven or promising external resources or approaches

1. Increase grant amount.
2. Give more grants to young PIs.
3. Monitor the nationality of people hired on any grant. RO1 PIs should hire people of diverse background, sex and nationality.
4. Provide industrial training opportunities to all Post-docs which can help them to make their own products while working in academia.
5. Fire those PIs who harass PhD and Post docs.
6. Train all the PIs to be a better mentor not just a manager.
7. Allow Post-docs to apply for RO1 grant. This will reduce the burnout and transition to companies.

Response 814

Perspectives on the postdoc roles and responsibilities

It's a time to learn to drive a research on a small scale, learn to write papers and grants, and start steering your long term career goal.

Fundamental issues and challenges

Low wage, bad mentor practices regarding using them to do their work with little or no acknowledgement, not much help/orientation to get to the next stage (faculty) due in part to being cheap labor. Faculty jobs are very hard to get, which makes many valid researchers migrate to industry.

Existing NIH policies, programs, or resources

Require a clear plan to help the postdoctoral fellow become faculty at their institution or elsewhere, and ask for accountability to mentors/institutions.

Proven or promising external resources or approaches

No response

Response 815

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as one which I still learn new things and expand my career but am also acknowledged for having a PhD and am seen as someone who knows what they are talking about (because I have earned my PhD) and should be taken seriously. A postdoc is more than a graduate student and should be treated as such. As someone who expands their knowledge on scientific techniques while learning how to manage a lab and important mentorship skills necessary for the next stage of their career.

Fundamental issues and challenges

Unfortunately, many academic institutions don't view postdocs as employees and as such don't give postdocs the resources that staff at academic institutions receive. Many PhDs (PIs, research scientists) view postdocs as "glorified grad students" and don't take their ideas seriously. They give postdocs trivial work instead of challenging them and expect postdocs to work 12-16 hour days to earn their respect. Academic institutions also don't give postdocs full benefits, like dental and vision insurance, a retirement plan, nor any PTO. The pay is also minimal compared to other careers. There is no work-life balance for postdocs at academic institutions.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase postdoc pay, allow them to feel supported and like they are apart of the academic institution. Make it easier for junior investigators to get grants and not have it solely be political. Academic

institutions need a better onboarding process for their postdocs and higher ups need to understand that postdocs are people too and don't deserve to be exploited.

Response 816

Perspectives on the postdoc roles and responsibilities

I view it as necessary to refine bench skills and to learn how to bring in grant money. The main issue is that the research that drove us to earn a PhD is never the research we end up doing. It's always a case of doing someone else's work to make it to the post-doc but then you never get to do the work you set out to di because you have to start on a different path. Frustrating and a waste of good time.

Fundamental issues and challenges

The pay is a serious issue. For post-docs in high cost of living cities, the NIH and the schools do NOT pay enough. We lose the dignity of being an adult, often times living with roommates in share houses. It's undignified and frankly. you guys can [redacted] off for treating people that way.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 817

Perspectives on the postdoc roles and responsibilities

The academic postdoc position is an opportunity to seek further training and explore additional research topics after the PhD. By completing the PhD, the trainee has demonstrated that they have the learning skills to tackle one hard scientific areas from end-to-end and develop rigorous methods to solve a critical issue. In the postdoc period, the trainee again launches into this process—however, with more skills under their belt. The postdoc period really shows how the trainee can tackle a new issue or set of questions, potentially in a different topic area than their PhD. Their holistic ability to start a new postdoc project and bring it to completion highlights their abilities for either a future industry or academic job.

Fundamental issues and challenges

As a PI, I find there are fewer domestic trainees available to hire as postdocs. I believe that we need additional PhD students to be graduated. In turn, this is going to require either additional F31 fellowships or additional modular R01 support to PIs to train more PhD students. This is critical to increasing the number of trainees. The [redacted for anonymity] has just increased the salary ranges for PhD students and postdocs, and I recommend NIH increase the salary caps for students and postdocs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 818

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a transitionary period between being a graduate student and becoming a tenure track faculty member. During this period, you may work on many projects tangential to your graduate research and continue to hone your technical skills. You become an even more confident independent researcher following a PhD. A postdoc is primarily focused on performing research and perhaps writing fellowships or grants to prepare for a tenure track role.

Fundamental issues and challenges

From the perspective of a graduate student who sought to become a tenure track faculty member upon enrollment in graduate school, this is no longer my first choice route. Fundamental issues that influence my decision on pursuing an academic postdoc include but are not limited to: low pay, competition for tenure track faculty positions, uncertain career prospects, uncertain grant funding available should I become a PI, publish or perish environment of academia, and uncertain fellowship funding options.

I am a first generation college student that got into research later than most of my peers. I had no mentors early on and did not start on my publication record until graduate school. After seeing many faculty candidates at my college and others paraded around by their long track record of publications and fellowships, I feel I am no longer competitive for a tenure track faculty position. I have seen my PI with a 7th percentile score on an R01 wait in limbo for more than a year to know it was funded. I received a 17th percentile score on an F31 application that would historically be easily funded, but due to a large increase in the number of applications seen it will not be funded. While becoming a tenure track faculty still would be my first choice if I had control over these mechanisms, it is clear that I am no longer a competitive candidate judging by how current candidates are introduced at seminars.

Many have shown that doing an academic postdoc does not increase your earning potential when moving to industry vs. going straight to industry out of a PhD, and also that there is a steep opportunity cost of doing a postdoc. It does not make sense to do a postdoc if obtaining a tenure track position is unlikely.

Existing NIH policies, programs, or resources

Increasing fellowship opportunities for graduate students and postdocs will increase the competitiveness of many candidates. Mechanisms must be in place to where an increase of funding in a certain area of research does not lead to an influx of professors being hired at universities, then again driving down the payline of the funding opportunity. Indirect costs for universities must be capped at a certain amount so as not to drain the funding pool for universities that have more leverage to negotiate with the NIH. Salaries that can be paid off of grants must be capped at a fixed amount or as a low percentage of their salary.

While many of the mentioned proposals do not directly affect postdocs, they indirectly affect who will pursue a postdoc in the first place. If I was a competitive candidate that could obtain fellowship opportunities and know there would be realistically obtainable R01 funding once a PI, I would do an academic postdoc. If this was not the case but the pay of an academic postdoc was commensurate with what a comparable industry position would offer, I would pursue an academic postdoc. Given that neither of these scenarios are true at this moment, I do not plan on pursuing an academic postdoc.

Proven or promising external resources or approaches

No response

Response 819

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is primarily a research position but should also provide opportunities for other forms of career development (mentoring students, gaining teaching experience, etc). It is best for people interested in academia as a career; I don't think it provides much for people wanting to go into industry after a Ph.D.

Fundamental issues and challenges

1. PAY. I could easily make $20k+ more in industry than I do now as a postdoc. For reference, I have one child in daycare, and the cost per year is ~$20k.
2. Lack of credit received for mentoring students, managing lab activities, etc. All of this credit goes to the PI for the most part. I feel like I'm being treated as a lab tech when I already have a Ph.D.
3. The difficulty of getting a tenure track job. Given the amount of money I could make in industry, the only reason to do a postdoc is to continue on the academic career path. With tenure track jobs becoming harder to find, why should we put ourselves through postdocs where we're underpaid and under-appreciated when there's no guarantee (or even high likelihood) of a permanent job at the end?

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 820

Perspectives on the postdoc roles and responsibilities

To me, the postdoctoral position is a academic stage where I can deepen my understanding in the filed of my research interests after the graduate study. It is also a career stage for me to make preparation to become an individual investigator, to learn how to apply for research grant to start my own lab in the future.

Fundamental issues and challenges

As long as the NIH postdoc salary guidelines still exist, the decline in U.S. postdoctoral trainees in biomedical research will continue. There are some institutes, mostly in California, which pay higher salaries than NIH's guidelines to their postdocs, but almost all of the employers, regardless of for-profit or not-for-profit status, just pay their postdocs following the NRSA Stipend Levels. According to the data from U.S. Bureau of Labor Statistics, the NRSA Stipend Levels are not competitive at all, and "you get what you pay for". In addition, as most of my peers started their postdoc right after getting their PhD in their late 20s or early 30s, it is also the time when they got married, had their first child and started to feel the financial stress due to the increasing expense of family, which resulted in early termination of their postdoc stage. The graduate students also know this kind of situation very well as they learn from their postdoc colleagues about their poor quality of life, which might partially explain why more and more new PhDs nowadays choose not to be a postdoc, especially in the field of life sciences. Therefore, I am not surprised to see any further decline in both quality and quantity of postdocs in biomedical research in the next decade if they are underpaid.

Existing NIH policies, programs, or resources

1. The NIH postdoc salary guidelines (NRSA Stipend Levels) should be modified to make the salaries competitive.
2. Nearly all of the NIH K-series grants require U.S. citizenship or permanent residence, while there has been a long waiting line for foreign postdocs to get their permanent residence, which discourages foreign postdocs, even those who got their PhD from a US-based university, to continue their academic development in this country.

Proven or promising external resources or approaches

1. Solve the currently existing problems reported in this Request for Information (RFI) as soon as possible.
2. Collect and review the feedbacks from postdoc community more frequently in the future, respond in a dynamic, efficient but not bureaucratic way.

Response 821

Perspectives on the postdoc roles and responsibilities

A postdoc is no longer a training position that is used to learn how to be a professor. It is a required position where you are given slightly more responsibility than you had as a graduate student but are placed under extreme pressure to publish for your PI. If you are interested in receiving training in how to be a PI, then you will need to take an additional postdoc to gain that experience as a senior postdoc, which means even more time working with long hours with little pay. There are few incentives to take a postdoc, beyond the requirement to complete one to get a decent job out of grad school.

Fundamental issues and challenges

Pay is too low.

Existing NIH policies, programs, or resources

Change the maximum amount that can be paid to a postdoc out of grants. Cost of living is variable across the country. And while you are at it, change the stipends that can be given to graduate students.

Proven or promising external resources or approaches

No response

Response 822

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should be an opportunity to further training and meet certain training goals. However, this is often accomplished through research production and/or clinical work, meaning that while the postdoc is indeed learning and growing professionally, they are also contributing to the academic community, providing essential input/work, and generating new ideas.

Fundamental issues and challenges

Issues that inhibit postdoctoral trainees' quality of life is predominantly practical ones. Postdocs are not paid sufficiently and sometimes are not even offered essential healthcare benefits. The lack of livable circumstances surrounding academic postdocs are actively repelling graduates. How are postdocs supposed to grow in their personal lives at all with poor salaries and benefits? The mentorship that academia provides cannot be the end-all be-all.

Existing NIH policies, programs, or resources

Pay more

Proven or promising external resources or approaches

Pay more

Response 823

Perspectives on the postdoc roles and responsibilities

A post-doctoral research position is an opportunity to gain additional specialized training for scientists who want to pursue academic or industry careers. It is an opportunity to gain further inroads of expertise after one's PhD while establishing a name for one's self via research and other intellectual contributions.

Fundamental issues and challenges

Post-docs are not acknowledged for their critical contributions to research. Post-docs are paid poorly, without cost of living adjustments for expensive research hotbeds. Post-docs often write grants and peer review for their advisors without seeing any credit for the work. There are often implicit expectations by senior faculty that post-docs work very long hours (more than 70 hours/week), even though the low pay does not justify these hours. Post-docs must delay settling down and starting a family due to the low pay and transient nature of the research. With the explosion in new technology, post-docs must keep abreast of more skills than ever, resulting in longer post-docs and further delays in settling down and starting a family. Post-docs are in a position of powerlessness where they cannot advocate for themselves if they are treated poorly by their advisor (no human resources or consequences for poor treatment by advisors).

Existing NIH policies, programs, or resources

1. Pay post-doctoral researchers more and account for high cost of living in certain research hubs (Massachusetts, California)–the NIH minimum is an outdated model that encourages professors to pay their post-docs poorly. I want to do a post-doc, but I simply cannot afford to do so in today's environment (especially when I can be paid >$100,000 to start an industry position).
2. Assign funding to post-docs rather than their research supervisors to help reduce transient nature of post-doctoral research (similar to recent changes in Princeton's funding model). I have seen countless post-docs dismissed mid-project, just because their advisor ran out of money.
3. Streamline the grant submission and review process so universities spend less on administrators and can provide a better research experience. There is so much bureaucracy in academia right now which slows down research and contributes to uncertainty in the post-doc job market.
4. Acknowledge post-docs for their unheralded contributions to science–for example, all individuals who contribute to a grant should be listed as an author on the grant, as opposed to just the PI. Encourage publishing agents to incorporate post-docs into the peer review process.
5. Clearly define expectations for post-doctoral researchers to prevent bullying. Is the expectation a 40-hour workweek, 60-hour workweek, or something else? Clear expectations and financial compensation commensurate with those expectations would help reduce the high rate of burnout.
6. Clearly define academic bullying and take allegations seriously. So many post-docs experience bullying, but they cannot speak up about it without harming their career prospects. A clear definition of bullying, a hotline for allegations, and consequences for perpetrators of bullying would help prevent post-docs from being bullying.

Proven or promising external resources or approaches

Industry and national labs pay post-docs much better than NIH guidelines, so perhaps increasing the NIH guideline (with a cost of living adjustment) to be equivalent with those rates could improve retention. Help post-doctoral student feel valued by acknowledging post-docs for their contributions to grants, peer-review, etc. Increase funding for T32 awards, and perhaps modify these awards so that post-docs are considered as PIs, to help increase independence in funding. Provide clear expectations in terms of work hours and intellectual contributions for post-docs.

Response 824

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are the bread and butter of academic research. They have so much expertise from the 5+ years of graduate school and often are very driven to do the work necessary in any research lab. They work hard, long hours not only on their own research, but also mentoring and training junior lab members (staff and graduate students) on various necessary skills in the lab. The best postdocs are often jack of all trades, able to perform any benchwork, with many model systems.

Fundamental issues and challenges

The simple reason being compensation. Postdocs are not compensated enough for their time. While postdoctoral positions are considered training positions, it is simply absurd to require individuals in their late 20s into their 30s having obtained a graduate degree to earn a mere $50k a year. Postdocs are often required to pull long hours, with no overtime, and little benefits that would provide a better quality of life. Several institutions do not even offer 401k for their postdocs, which means these individuals are even further behind on their savings for retirement. $50k is the starting salary of someone with an undergraduate degree, when institutions opt to pay their postdocs such a low salary, it is essentially conveying the message that postdocs are just "glorified graduate students". It is no wonder that several PhD graduates go on to work in industry to try to recoup their lost years of money making during graduate school. Additionally, several postdocs end up being in this training position for 5 or more years, as they continue to seek that high impact first author paper to allow them to be a competitive candidate for a tenure track position. There are few positions available, as few tenured and aged professors choose to retire. It is common to observe several aged faculty continue to manage their labs well into their 60s. If there is a lack of positions (and grants) due to these aged professors taking them all, how are we to

expect PhD graduates to be motivated to stay in a postdoc position where their future as a tenure track investigator is uncertain.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 825

Perspectives on the postdoc roles and responsibilities

More research time .

Fundamental issues and challenges

More funding and higher salary is needed

Existing NIH policies, programs, or resources

More funding and more salary please.

Proven or promising external resources or approaches

More funding and more salary please.

Response 826

Perspectives on the postdoc roles and responsibilities

A postdoctoral role is one where I can

a) learn a new set of skills and research methods (or a new set of theoretical perspectives for my field),

b) Become increasingly independent and

c) Apply for and get a desirable position in academia or industry

Fundamental issues and challenges

The main burden is cost. The cost of living is so inflated in many University cities that PhD graduates are forced to make difficult decisions about joining the industry workforce and starting a family, purchasing a house, building savings, etc., or delaying aspects of their personal life to pursue uncertain futures in science. This is often particularly untenable for women, who cannot delay starting families as long as men, or for low-income individuals who do not have savings or family resources that can help them absorb the costs of a postdoc. The long duration of so many postdocs, the uncertainty of the job market, the low pay, all combine to make starting a postdoc a risky decision. Industry options are much more appealing and plentiful than they were even a decade ago, and PhD programs continue to enroll many more students than could possibly get academic positions. However, it comes down to cost. I chose to do a postdoc, but my salary level feels (frankly) disrespectful given my level of expertise and length of experience. My colleagues in industry make anywhere from 4-8 times my salary. I can barely justify my current salary level given the sacrifices in both long and short-term stability, and the fact that I have had to move to start this job and rebuild my personal support network in a new city. I decided a priori to only do a two-year postdoc because I am unable to afford to stay in the field longer. The biomedical sciences are filled with well-trained early career scientists who have looked at the data and made decisions accordingly: postdoc positions are a financial risk.

Existing NIH policies, programs, or resources

Raise our salaries to account for inflation and the cost of living. Further limit the length of postdocs to stop ‘academic inflation’. Expecting people to have done two 2-3 year postdocs before landing academic positions is untenable. The prospect of moving 3-4 times in your late 20s and early 30s is daunting and not possible for many people.

Proven or promising external resources or approaches

No response

Response 827

Perspectives on the postdoc roles and responsibilities

Unnecessary training for people who are already highly trained without the possibility to advance in academia. the general hope of postdoctoral training is generating novel knowledge that can be translated bench-to-bedside.

Fundamental issues and challenges

Low salary (i.e. industry offers three times the salary)—having the highest degree not being able to support family of 2, can't think of having two postdocs and a child! Horrible health insurance, personal time off, sick days—all that in every postdoc contract is a lie and a joke. Expected to work 60-80 hours a week, no paid overtime, not even recognized overtime—it is treated as "normal" and "acceptable". Expected to be available 24/7. Overworked and underpaid, treated as disposable with no job stability. Again—being paid 120-150 k a year might help retaining the postdocs.

Existing NIH policies, programs, or resources

Universities all over the US are accepting foreign students into graduate programs, with no opportunity for grant and funding applications—how does that make sense? Being a graduate student, paying taxes and not being able to get early career awards that would motivate or propel someone's career. Holding PI's responsible—i.e. PI who hasn't promoted or helped advance a single postdoctoral fellow in 20-30 years of career should be held accountable. Majority of postdoctoral fellows are internationals, and afraid of retaliation if they speak up.

Proven or promising external resources or approaches

None that I am aware of.

Response 828

Perspectives on the postdoc roles and responsibilities

A Postdoc position is an opportunity to grow in-depth expertise, learn grant writing, and gain a supervising experience in a research area to help you become an independent researcher.

Fundamental issues and challenges

Money, Money, Money. During long PhD years, we have suffered from a notoriously little, inadequate, and inequitable stipend. Even after having a PhD degree, postdoctoral trainees suffer from significant financial stress due to a small compensation. Especially, due to inflation, the current NIH postdoc salary is ridiculously little. This little compensation prevents scholars from the disadvantaged group from pursuing academic careers.

Existing NIH policies, programs, or resources

Money, Money, Money. The current postdoc salary is ridiculously small. Postdocs are seriously underpaid and need a side job to pursue their academic careers.

Proven or promising external resources or approaches

Money, Money, Money, Money! Stable financial support can help postdocs from disadvantaged groups can work for their dream academic job.

Response 829

Perspectives on the postdoc roles and responsibilities

I believe a postdoctoral position is an opportunity after graduate school to continue learning and acquiring new skills. However, I do not believe this position should be viewed as a "trainee" as currently is the case

in most academic settings. A postdoc carries the bulk of the research being done in the lab, trains new students/researchers coming in, writes grants, and publishes papers.

Fundamental issues and challenges

There are a number of issues in the postdoc culture which leads PhDs to not pursue one entirely or leave the position early. The first issue is salary. It is not enough or anywhere near competitive with other positions. Additionally, when the issue of pay is brought up (at least in my experience) I am stonewalled with responses such as "you don't choose a career in academia to make money" or "you should do this job because you love science, not for money". This is incredibly frustrating and breeds contempt. There are more and more universities raising the minimum postdoc salary to $65,000, which is a good starting point. The second biggest issue is benefits. Universities label postdocs as "trainees" to purposefully get away with not giving them the same benefits as employees. Postdocs either do not get a 401K/403b plan entirely, or if they do they do not receive the employer match. This sets our retirement savings back years. We also do not receive other benefits such as life insurance, health-savings accounts, the ability to open other investment accounts etc. Finally, another issue is the unwillingness to increase our pay. My institution states they pay us the NIH stipend levels. However, that is only true for half the year. Example, the NIH just raised the postdoc stipends for 2023. My institutions response to that was "we will bump you up in July when everyone else receives their yearly raises". Meaning in reality we only make the NIH stipend for 6 months and the other 6 months we are paid below NIH levels. Overall, universities need to stop treating postdocs as expendable "trainees". Many young scientists feel postdocs are not respected by the universities they work for and compensation is too low.

Existing NIH policies, programs, or resources

A big issue is my opinion is the NIH grant system towards postdocs and early stage investigators. Reviewers are often too critical and harsh on early stage investigators attempting to receive grants to fund their labs. Additionally, too critical of the postodcs applying for F32 from these same labs. Stating reviews such as "the PI is too early stage and has not trained enough postdocs". How is an early stage investigator supposed to get money to recruit and train postdocs if the funding agency will not fund a grant? Or how is a postdoc supposed to stay if an F32 is not funded solely because the PI is young. It should not be a criticism to be a young investigator or to be a postdoc in a young investigators lab. Instead the NIH should award this and want to promote young investigators towards a successful lab.

Proven or promising external resources or approaches

No response

Response 830

Perspectives on the postdoc roles and responsibilities

A post-doc is a time for more specialized training in both the laboratory setting as well as for training to be a future independent investigator. A post-doc is a staff member in the lab with more responsibilities and subsequent independence than a graduate student. Post-docs should serve in a mentor position for the graduate students and undergraduates in the laboratory setting. This should be a mentored position where the mentor/supervisor supports the post-doc in generating data that can be used to support future independent projects.

Fundamental issues and challenges

1. Pay is low, benefits are often horrible and/or non existent, and post-docs are often over worked and not supported.
2. Universities fail to treat post-docs as staff or students. They are given the bare minimum of support if any. Often, post-docs are punished by removal of benefits, such as health insurance options, when they receive grants.
3. Post-docs are often highly encouraged to take on extensive responsibilities that they have not necessarily received training for.
4. Often there are no offices for post-docs to take their issues to. Basically, post-docs are somewhere between staff and students and often receive none of the benefits of either.

Existing NIH policies, programs, or resources

The F award system does not provide enough funding for most post-docs to keep their university benefits.

Funding opportunities for post-docs currently request grades from undergrad and graduate school which may not accurately reflect the success of a post-doc and are often used as easy ways for post-docs to be scored lower for funding.

Awards are highly competitive and make it difficult for anyone not at the massive R1 research institution to get funded. Perhaps there could be changes so awards are scored differently from differentially supported institutions.

Proven or promising external resources or approaches

More post-doc associations are necessary. There needs to be a centralized system for post-docs to get improved wages, improved benefits, and more training for academic or alternative positions.

Response 831

Perspectives on the postdoc roles and responsibilities

Post doc is part of the overall training required to become a PI. Being a PI is my goal. However, being a postdoc is more than a full time job and hence has to be compensated as such.

Fundamental issues and challenges

1. Poor institutional decisions. For example, during my 7 year postdoc, we gradually lost desk privileges and parking privileges. I live in a very cold state making it impossible at times to commute to work and while there I have no place to sit and work. Contact worry whether I would get my work done. Additionally when we get grants, institutions still does not ket us have the salary allowed on grant despite us getting the grant. So we have no way of improving our lives.
2. Low salary compared to the super stressful demanding job. I often worked over 100 hours a week just to have average metrics. No appreciation from PI or institution or really anywhere. I was postdoc the end of my 20s and into my 30s and I live paycheck to paycheck and barely afford necessities.

Existing NIH policies, programs, or resources

1. Salary should be improved from NIH side.
2. There has to be more accountability for bad PIs and bad institutions. Institutions shouldn’t be rewarded for taking basic necessities away from their postdocs.

Proven or promising external resources or approaches

Some form of PI and institution audit by NIH. More grants for early postdocs. More resources for postdocs to see the NIH review study sections.

Response 832

Perspectives on the postdoc roles and responsibilities

I think it was a process that made me more mature as a scientist. It was also the process to get papers and grants for the next step. A good opportunity to go one step further from what I already learned during PhD and develop a niche for my future independent career.

Fundamental issues and challenges

It really depends on the research groups, but the key issues that I see, from the lab I am in and neighboring lab is that:

1. PIs would take whatever postdocs came up with, take all the credit, and do not give postdocs anything. They take the ideas from postdocs and methods they developed to start companies, or present in front of various audiences, claiming all the credit without even properly acknowledging the people who actually came up with the idea and did the work. Lack of fairness really inhibits recruitment, retention, and quality of life of postdocs;
2. Some PIs lie a lot, often choose to say things that are most convenient to them in a situation, at the cost of quality of life of postdocs. PIs would always consider their own interests first, disregarding postdocs' career goals or quality of life;
3. Unlike students, who have the university to back them up in situations that would normally favor people who have power, postdocs have no one to back them up. In situations that are unfair for them, there is nothing much they can do;
4. Many postdocs are from foreign countries, which makes it harder for them to turn to anyone when in need. Some PIs also use the status of postdocs (i.e. being able to legally stay in the US) against the postdocs to get what they want from the postdocs;
5. postdocs are lowly paid, they are struggling to make a living, especially for those who are single (without a partner) or married and have kid(s). Standard postdoc salary barely covers daycare for a kid;
6. No one really knows what national policies or resources that would help postdocs out.

Existing NIH policies, programs, or resources

Not aware.

Proven or promising external resources or approaches

Not aware.

Response 833

Perspectives on the postdoc roles and responsibilities

I see academic postdoc as an opportunity to build and establish myself as a scientist who can do rigorous science and publish well. Also I see it as a training period where I am mentored by my PI to excel at mentoring, writing papers and grants. One should learn more about the administrator stuff.

Fundamental issues and challenges

Postdocs are largely underpaid and overworked. My personal life is suffering because of the work load and we are not payed enough so we live on the line of poverty in cities such as Boston, SF. (and we have Phds)

Existing NIH policies, programs, or resources

Open more training grants for the international students!

Proven or promising external resources or approaches

No response

Response 834

Perspectives on the postdoc roles and responsibilities

It is the bridge for training me as a independent PI.

Fundamental issues and challenges

1. Low salary means a lot of inconvenience and difficulties in life, distracted from focused research
2. International visa issues. J-1 is so hard to keep the career going and most schools only support H1B after you have used up 3yr OPT and 5yr J-1.

Existing NIH policies, programs, or resources

1. Increase postdoc salaries to make sure all postdocs can get the lift they deserve
2. Give international researchers more conveniences on visa status

Proven or promising external resources or approaches

No response

Response 835

Perspectives on the postdoc roles and responsibilities

I see this as a stepping stone to a tenure-track faculty position. It's an opportunity to learn more and broaden my expertise, but not a particularly welcome one. It feels more like the result of an exploitative system that produces more PhDs than there are jobs, and forced low-wage work for highly skilled people for many years while their peers in other fields establish their careers, set aside savings for retirement, and comfortably start families. My role is technically to learn and pad my CV so I am a better applicant for faculty positions, but this wasn't necessary in most fields ~30 years ago, when it was common to go straight from graduate school to tenure track. I am reluctant to accept that this is just another step in the career path rather than the result of universities taking on far too many graduate students for the cheap labor.

Fundamental issues and challenges

Money. I live in [redacted for anonymity] and have been making between 55 and 70 K for 3 years, and have wound up in nearly 40 K of high-interest credit card debt because it is simply not possible to live in [redacted for anonymity] on that salary and maintain any reasonable quality of life. But I also was not going to live in a smaller university town as a mid-30s single gay man, where community would be small, dating pools even smaller, and feeling uncomfortable in my own skin would probably be an issue. Other issues that I see as more inherent to the career choice and not necessarily something that can be addressed are the constant anxiety about work–every moment that I am not working is a moment longer that I fall behind my peers and potentially delay getting a tenure track job by another year if I miss this year's job cycle. I virtually never stop working or thinking about work.

Existing NIH policies, programs, or resources

Funding. The NIH should mandate cost of living adjustments for grantees and for postdocs paid off of federal grants. I'm not sure whether it's ethically problematic to pay postdocs in [redacted for anonymity] $60K given that I am choosing this career path, but it certainly contributes negatively to my mental health and quality of life. Meanwhile I know postdocs in small cities in the midwest who are saving–and even buying houses.

Proven or promising external resources or approaches

No response

Response 836

Perspectives on the postdoc roles and responsibilities

The postdoc role is one of advanced training in the context of advancing independence and responsibility. Training implies a mentor providing education and opportunities.

Fundamental issues and challenges

Work-life balance is increasingly important to graduate students, and they want things to improve after they graduate. A postdoc is seen as a step too far into an exploitative lifestyle. I've also encountered a

number of graduate students that do not want to do a postdoc because they do not want the responsibility of funding themselves by writing grants, now or ever.

Existing NIH policies, programs, or resources

The NIH has many requirements for institutions to be eligible to receive PHS funding. A similar requirement could be made by the NIH for institutions to have Postdoctoral Affairs offices that guarantee postdocs are receiving mentoring and growth opportunities, and have reasonable expectations for their work. Like an IACUC, this office would ensure that no postdocs at an institution receiving PHS funding would be exploited.

Proven or promising external resources or approaches

No response

Response 837

Perspectives on the postdoc roles and responsibilities

My view of the traditional role of the academic postdoc is that it is meant to serve as a means for a recent PhD recipient to gain additional research experience that serves as the foundation for developing an independent academic research program. Thus, I don't think the responsibilities of the postdoc should focus on purely conducting research for their mentor. While this research should fall under the umbrella of the research program of the mentor, thus contributing to that research program, it should also seed for the development of a research program that can be carried autonomously by the postdoc in their next position.

Fundamental issues and challenges

The major challenge inhibiting recruitment, retention, and and quality of life of postdocs is the mismatch between the number of postdoc positions (both filled and unfilled) and the limited number of available academic positions that postdocs have specifically been trained for (faculty positions). The fact that there has been a glut of postdocs that were very unlikely to find positions as faculty in recent decades, coupled with the fact that mentors often treat postdocs as a primary source of cheap labor for their own research, has led to the expectation that completing an academic postdoc is essentially training for a non-existent job. Given diminishing prospects for the ability to apply postdoc training to get a faculty position, it seems logical that recent PhD recipients would be less inclined to choose that path. This has especially been the case in recent years because of the increase in the number of industry postdocs, which are a more attractive alternative if one does not intend to get a faculty position because they offer better pay and benefits as well as more realistic career opportunities.

Existing NIH policies, programs, or resources

Most existing NIH **policies, programs, or resources**appear to be designed around the traditional academic career path (PhD > postdoc > faculty), and changing these would not get at the root problem that there are simply not enough opportunities for postdocs to develop an academic career as faculty. To address the root problem, policies or programs would need to shift drastically to provide greater support aimed at increasing the number of opportunities available in academia for postdocs once they complete their training (more faculty or scientist level positions). Alternatively, if postdoc training were to be expanded to include non-traditional training opportunities beyond what is expected for academia, it could potentially be more attractive for recruiting candidates who want to keep their options open because they may not be able to get that faculty position. Right now, it seems like doing a postdoc is like playing the lottery for a faculty position; if you win, that's great, but if you don't, it feels like your wasted your time. If you want to improve the postdoc ecosystem, you need to change that ecosystem to increase the value of time spent regardless of whether someone wins or loses the faculty lottery.

Proven or promising external resources or approaches

No response

Response 838

Perspectives on the postdoc roles and responsibilities

Postdoc is a time for training and exploring novel avenues to leverage towards your (hopefully) future laboratory. It is a highly challenging time, as you transition from an expert, newly minted PhD into a whole new area. Comfortable moves and postdoc's really are not the point, but the barriers to success are much higher than the barrier to going into industry.

Fundamental issues and challenges

While postdoc is supposed to be about training, lately it has taken on a role that is highly labor exploitative and little hands-on training from PI's. Being 'risky' in project direction is not incentivized, because negative data or a lack of an early publication is a huge problem (tied in with time to publication have sky rocketed). Major challenges include poor mental health, long hours (>60 hr a week), and lack of financial stability. This is why many postdoc's are running to industry ASAP, where expectations are clear, hard work is rewarded regardless of the scientific result, and they are paid a living wage. Even F99/K00 and K99/R00 are going into industry because of the lack of support.

Existing NIH policies, programs, or resources

NIH postdoc salaries are not sufficient. Many postdoc's are forced into Boston/SF/etc. because this is the only way to be competitive for R01 institutions, but these areas are also the MOST expensive areas to live. NIH should require more than one mentor per postdoc.

Proven or promising external resources or approaches

St Jude recently promised higher postdoc salaries to help spur on retention and hiring.

Response 839

Perspectives on the postdoc roles and responsibilities

Postdoc positions are supposed to be a way to get additional training/expertise in a chosen field of study. Instead, they are usually long-term, underpaid positions of skilled labor. Because of the bottleneck in academic positions, and increased time it takes to publish, postdocs are stuck trying to publish (usually multiple) papers before they can be "competitive" enough to go on the academic job market.

Fundamental issues and challenges

The fundamental issue is the long-term nature (5-10 yrs) of a position that was designed to be short-term (1-3 yrs). The low pay, lack of benefits and lack of stability (knowing what comes next, or even how long one will be employed in that position) make it an incredibly stressful position, and moreover it usually coincides with a time in which people are trying to start families and settle down. Thus it is fundamentally incompatible with most people's life-stage, and is particularly difficult for women who are navigating trying to start their families and have an increased need for stability, income and health care benefits.

Existing NIH policies, programs, or resources

Existing NIH policies are woefully inadequate to meet the needs of postdocs, especially when it comes to salary, childcare benefits, health insurance, and retirement planning. They are also inadequate when it comes to maternity and paternity leave. A large expansion of these programs is needed. However, the biggest issue is the low salary and long tenure. Unfortunately, simply raising postdoc salaries without raising grant amounts is not a realistic solution (an entire modular R01 cannot go to the salary and benefits of a single lab member other than the PI.), especially if postdocs continue to be long-term positions.

Proven or promising external resources or approaches

Some institutions (both in this country and other countries) have staff scientist positions that are not paid for off of an individual PI's grant. Creating special NIH grants given to institutions to specifically fund highly paid staff scientists may solve many problems at the same time. By creating a competitively-paid "research" career track within academia, we will retain talented scientists who would otherwise move to industry. Labs would benefit from a highly-skilled and stable workforce, that would not be paid out of their individual grants. These positions would be filled by PhD students who wish to stay in a "bench" position

for the long-term, or by postdocs who quickly realize they do not want to become a PI (or who completed a short postdoc to gain the relevant skills for a particular staff-scientist position). Postdoc positions could go back to being true short-term training positions. For many, they would be used to gain a technical skill for a staff scientist or industry job (rather than amass a publication record). Labs wouldn't mind, because most of the stability would come from their staff scientists. Only those postdocs that truly wanted to stay on the PI track would stick it out for longer tenures—but the pressure on the academic job market would be reduced since fewer postdocs would be vying for these jobs.

Response 840

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is, to me, an apprenticeship. As a postdoc, you connect yourself with an established scientist who you work under in exchange for training and preparation for becoming a scientist. My role in the lab is thus one of a high-level/independent trainee, where I am distinguished from techs/postbacs/graduate students by the amount of experience I have (both in terms of general knowledge and skill) and by my ability to build on active work in the lab through that work. My role for other trainees is as a mentor and supportive figure, which I have learned through observation and trial and error since there is limited formal training available for postdocs (or graduate students) on how to effectively mentor.

Beyond daily tasks in the lab, my responsibility is to ensure that I am getting the adequate training and preparation for the next step in my career. That involves balancing benchwork, writing (grants, papers, CVs, and other materials needed for apps), mentoring, teaching, networking, continuing education (in research methods, computational skills, ethics, philosophy of science, statistics, etc), and exploring career opportunities. As such I hope to use this period of time to ease out of grad school burnout and see if I can see myself continuing in academic science or another scientific career.

Another responsibility is scientifically distinguishing myself from my mentor, particularly if I anticipate continuing as an academic scientist. The amount of training and aid that a postdoc can expect from a mentor in this regard is extremely dependent on the mentor in question (with some mentors putting effort towards setting postdocs up with a question to take with them and others making it an "in your own time" effort that must be done in addition to ongoing lab projects).

So, the postdoc is an apprenticeship.

Fundamental issues and challenges

The age at which the postdoc starts is a critical period of life. This is when people start families, parents get older, and previously dormant health issues become more of an issue. As such, it's a time of reflection on life goals and what values we hold as people. There are key factors and values at play that prevent people from choosing to start postdocs and make academic-track positions less desirable in the present climate:

1. Funding. Postdoc positions do not offer competitive salaries, particularly for scientists with computational training. International postdocs are subjected to even lower (read: criminally low) pay. We are told that "it's not about the money" when we consider postdocs, but if you are trying to make science an equitable, diverse field, then lack of generational wealth and familial financial support absolutely prevent students from being able to take these lower-paid positions.
2. Academia is perceived as a poor working environment. There is an over-reliance on volunteerism, poor responsiveness by institutions for policy infractions (i.e. harassment and discrimination), and an overwhelming culture of "kill yourself for the science" that has students burned out before they even receive a phD. Leaving academia (postdocs included) is seen as salvation for many students. Having optional "mental health awareness" sessions is not the same as promoting mental health.
3. Funding. Yes, it's in here twice. Grant funding (a microcosm of the wider peer-review problem) is obtuse and luck based. There is an understanding that, starting as early as grad student level, you will not succeed if you do not get grants. The only response concerned students get for this is "you don't need to worry about this yet".
4. Isolation. Postdocs enter systems/labs alone. This leads to social isolation which worsens mental outlook.

We need well-rounded training at all levels.

Existing NIH policies, programs, or resources

Build more clarity into the grants system. Put in oversight for reviewers to ensure that their responses reflect the grant itself and give reviewers adequate time to properly read through and assess the merits of a review (honestly, the NRSA is way too long. No one can read a whole NRSA in a short period of time and not go cross-eyed, let alone a handful of NRSAs).

Build in more training that spans the breadth of the skills that scientists need to have throughout their career. Training in mentorship, communication, financial planning, how to pick a paper to publish in, more detailed/comprehensive/regular statistics refreshers. Give people the skills to bolster their mental health in practical ways (I appreciate that meditation seminars exist, but they feel like someone slapped a band-aid on a gaping wound and said "that's probably good enough"—requiring people to come to an hour long seminar in the middle of the day is counter to the culture of "kill yourself for science". If you want to combat the mental health problem, combat the culture)

Require compensation for time. Volunteering is lovely when it's a choice, but academia relies too heavily on students, postdocs, and faculty giving freely of their time. If a person is going to spend a 60 hour week reading and reviewing applications for a grad school app cycle, they deserve compensation for that. If a group of graduate students is volun-told to spend months planning and executing a program-wide event, they should be compensated for that. The amount of volunteerism required for success in academia is predatory and is foisted even more heavily upon underrepresented communities.

Foster the creation of postdoc associations and their inclusion within the academic environment.

Proven or promising external resources or approaches

I went to a talk in the fall where someone from Stanford was discussing holding postdoc interview "days" where postdocs could come in and interview and meet one another as a part of that process. That sort of program could help foster a sense of community within incoming postdocs. To that note, setting up cohorts of "onboarding postdocs" would be helpful. Cluster hiring can be particularly beneficial for underrepresented communities, but even having a short orientation shared between a small group of postdocs would be an excellent way to add social support to the early stages of postdoc-ing.

Response 841

Perspectives on the postdoc roles and responsibilities

It should be a temporary (1-2 year) time period whereby phds gain experience in a new lab before they go on to become independent scientists. It should not be the "postdoc treadmill" we have now whereby institutions view postdocs as cheap labor and pass them around for many years with no stability and no clear upwards career path

Fundamental issues and challenges

Postdocs are NOT trainees. Postdocs are TRAINED scientists. They are fully qualified to carry out research. Stop treating them as trainees, and start treating them as valuable employees.

I am a postdoctoral "trainee" at the NIH and I receive no formal training whatsoever. I'm left wondering what exactly I'm in "training" for? When I complete my postdoctoral years I will not leave with a qualification, which you'd think I'd get if I were "in training" . A medical student completes their training and becomes a doctor. A law student completes their training and becomes a lawyer. Postdocs complete their "training" and become—.well, a postdoc somewhere else.

I carry out the tasks of a staff scientist. The only difference is that by calling me a "trainee" I am paid half that of a staff scientist, I have no employment benefits and I have no stability.

Existing NIH policies, programs, or resources

Increase remuneration for postdocs. Postdocs are paid at least less than half (but often much less than half) what they are valued at by industry standards

Proven or promising external resources or approaches

One approach might be to remunerate postdocs according to market value, as is done in industry

The UK employs postdocs as temporary staff. While salaries are still lower in UK academia than UK industry, employment comes with benefits that people care about: salary (not a stipend, which makes thing like loans/mortgages hard to get), employer-contributed pension plan, time off, vacation days—normal things that we should expect from a job

Response 842

Perspectives on the postdoc roles and responsibilities

I personally see the postdoc phase more as a transition phase than a training phase, you have already proven that you are able to conduct (up to a certain point) independent scientific work because you went to grad school or (in some European countries) actually didn't even do any course work, but just a research project on your own. In any case you got a PhD before which means you should have somewhat of an idea what you are doing. As a postdoc you can use your previously acquired skills and learn some new skills (mostly on your own, so you are not necessarily a trainee because nobody trains you in anything besides yourself) to put them into a research project of your own (if you didn't end up in one of the papermill labs for which you are just a less expensive technician). To me, the postdoctoral phase basically it is a career phase where an academic scholar spends time in the lab and works through their own projects and tests their ideas to find out in which direction their future lab would want to go (research interest wise) and where you can pick up some more skills, develop collaborations, etc. By doing all of this you should learn to lead a lab or group of your own in the future, how to write grants and how to teach your future students how to do things. Although all of this you apparently have to learn via osmosis because there is no official training. Which is totally fine, but then don't call it a training position! If you are lucky your institution offers some courses or workshops about leadership or grant writing or on how to navigate the faculty job market. They are sometimes, more sometimes less useful.

Fundamental issues and challenges

My quality of life has decreased on all levels, but especially financially since I started my postdoc. Even though my institution raised the minimum salary for postdocs I can't profit from that because I am on a scholarship which comes from a different country. They want to supplement it but they can't find a way to really do that and even if they would, it would probably get me into a whole different set of problems tax-wise. I am on a J-1 which has to get renewed every year in my home country but I can't fly there that regularly because it is too expensive. If I don't renew my visa I can't travel and if I would have to travel home for e.g. a family emergency I would be stuck there until my visa is renewed which takes over 4 weeks and my PI wouldn't be happy with that. I pay half of my salary for rent although I live over an hour away from campus in a not exactly save area of town. I can't save any money because there is not much left at the end of the month, I can't accumulate credit history here because I wouldn't get a decent credit card to even start doing that. That means I can't get a loan for a car or anything else. It would be entirely impossible to have kids or raise a family under these conditions. Nobody expects industry salaries. But if it would be possible to have at least a little bit of financial security (rent, food, basics) I am sure that would boost the productivity in science way more than any other of the big NIH or other initiatives because folks would spend less time worrying and more time thinking about their projects.

Existing NIH policies, programs, or resources

Don't make a permanent residence a requirement for the K99/R00 award!! The majority of postdocs in the US comes from abroad!!!

PAY US MORE $$

Proven or promising external resources or approaches

I think all of those should be improved! But mostly the salaries. Institutions could save all the money they spend on "mental health awareness workshops" and just pay us more, I guarantee you, mental health will automatically increase when salaries increase. Working environment: I do not even have an office and I am using my private laptop (which is ten years old and about to kick it) for everything. Give people contracts which allow for more than 1 year of visa. I have to renew my driver's license every year because it is tied to the visa, this costs a lot of money. Many credit institutions see that you are here "temporarily" and don't work with you then. Mentoring: yes please! Lots of stuff on paper never happens in real life. Training: sure I would love that! Most people I know at our institution are doing 6 year plus (sometimes ten year long) postdocs which is insane for a "trainee" position. It simply is not that. They are basically

running the lab and are small PIs under a big PI. They are not trainees. I am not at a small university. It is one of the big R1 institutions.

Response 843

Perspectives on the postdoc roles and responsibilities

As a postdoc, you pursue a research project in line with your PI's lab interests but is of your own conception and driven with your forethought, ideas, and mainly by your hands. Your responsibility is to produce reliable research that furthers scientific knowledge and hopefully produce an influential journal article. You are still learning but you also have an obligation to mentor and teach students or technicians.

Fundamental issues and challenges

After having 5 to 6 years of intense training to gain a Ph.D., a postdoc is not fairly compensated for their training or knowledge in academia. I received a minimal pay increase, changing from a graduate student stipend to a postdoc salary—with no relocation assistance. Then after getting a prestigious NIH grant, I lost my employment status with my academic institution, causing a loss of critical employee benefits, including a downgraded health plan, no eye insurance, complete loss of sick and vacation accumulated leave (without any compensation), and total loss of any 401K contributions. Not to mention the NIH set salary does NOT account for the cost of living in the city you are employed, nor does not adjust due to inflation.

Existing NIH policies, programs, or resources

Increase the minimum salary to what a Ph.D. makes in the biotech industry. Force the academic institutions to still consider postdocs as employees—so we can have the same benefits as administrative secretaries with no advanced degree. Give extra living assistance for postdocs who live high cost of living cities. Give MONTHLY childcare benefits that adjust depending on the cost of living to postdocs with children. A one time $3,000 assistance barely covers one month of childcare in Boston.

Proven or promising external resources or approaches

Create a human resources department that postdocs can go to away from their academic institutions so they can report mistreatment from their PIs and not depend on their academic institutions for further action. As long as a PI still brings in large grants it is highly unlike the academic institution will discipline the PI in any meaningful way. If the NIH would step in and withhold grant awards to the PI there could be real consequences for PI abuse of postdocs. Ultimately you need to increase postdoc pay and increase PI accountability for postdoc treatment.

Response 844

Perspectives on the postdoc roles and responsibilities

Unclear what roles and responsibilities are, much of the power is set in that by the lab head rather than the institution and even when there are institutional rules they are often at the discretion of the lab head (paid time off, etc.) Without a specific program like graduate school checking in to ensure that one is making adequate progress is difficult. Although I am a permanent resident, postdocs as opposed to graduate students and faculty seem to be much more likely to be employed on a visa sponsored by the university which complicates the role of postdocs. It is my impression that many on visas see one primary goal in their postdoc lab to be changing their residency status. At my institution there is little support for training of postdocs other than providing resources to do bench science. I view postdoc training as an opportunity not only to do research in a different environment than my graduate research but to continue training in other skills for my future career, which will vary by person (continue teaching, interaction with biotech companies for those who plan to pursue a career in industry, understanding grant writing and other aspects of the faculty job for those seeking an academic faculty track, etc.)

Fundamental issues and challenges

Postdoc pay is low. While higher than in graduate school, the low pay of graduate school and postdocs generally being old enough that life events that had been put off due to finances being harder to keep putting off as one continues to get even older as a postdoc. By this I mean student loan repayment (as one is no longer a student), starting a family, or even just wanting to construct an independent adult life

and save for retirement. Given that other jobs will pay more it is a difficult sell to pursue a postdoc if too many of these financial burdens just cannot be put off any longer.

Existing NIH policies, programs, or resources

widen timeframe of K99 eligibility. Providing more leeway for life events affecting graduation time of K99 eligibility. Training grants for graduate programs do a lot to help keep departments paying attention to the training they are providing their graduate students, from the focus on average graduation time and publication rate to the requirements for presentation within the department. I wish there were ways that NIH funds can be leveraged to similarly check in on institutions training of postdocs.

Proven or promising external resources or approaches

No response

Response 845

Perspectives on the postdoc roles and responsibilities

Opportunities to broaden experience, skills and toolkit; mentorship from the PI particularly in aspects of the job that are not often directly trained.

Fundamental issues and challenges

Lack of funding (for both salary and research budget), toxic or neglectful advising, expectation of that postdoc work independently to the extent of running projects with little support or mentorship (extractive/cheap labor), short term contracts often necessitating moving every 1-2 years.

As a graduate student looking for postdoc opportunities, I have found that (perhaps due to the rich-get-richer funding mechanisms in the US), the labs/PIs that have funding are often overcommitted and unable to provide meaningful support (or have actively toxic working environments), while lots of labs/PIs who are interested in postdocs don't have the funding. The funding mechanisms that graduate students/postdocs can apply for themselves are limited and highly competitive, but then don't actually provide sufficient funding for both research and life needs, including benefits.

Existing NIH policies, programs, or resources

More funding for postdoc fellowships, with stronger monetary support for both salary and research expenses. In particular, the NIH salary minimums are often used as caps by other institutions, and this limits cost of living adjustments and more.

Proven or promising external resources or approaches

Cohorts of postdocs/other community building. Clear mentorship expectations or connections to outside mentors. Other professional development (e.g. teaching, lab logistics, etc.). More awareness and resposniveness to toxic advising/mentoring/lab situations.

Response 846

Perspectives on the postdoc roles and responsibilities

My view on the postdoctoral position has evolved ever since I started my postdoc training. Initially, I thought a postdoctoral position was just about being trained in performing and analyzing experiments and learn as many technologies as possible, and at the end of the training to choose a field of study and go from there. Nowadays, and after some struggles, I am much more educated in what the position implies. I understand now that a Postdoctoral training is meant to be a transition whose purpose is to fully prepare us (make us competitive) for an independent career in an academic setting, to significantly contribute with our field. I know now that a Postdoc is not meant to be just the hard-worker who executes wonderful expensive experiments; but that also needs to have the proper training (through courses and healthy peer-discussions) to conceptualize those experiments and projects, to actively seek for fundings for those projects, to have their ideas criticize and/or validated among their peers and mentors, and to expose their ideas without being shut-down.

Fundamental issues and challenges

In my opinion, issues inhibiting recruitment include:

1. low stipend, not even not competitive, just simply low stipend. Undeniably, postdocs' salary doesn't compensate for the amount of effort the position requires. Also, postdoc salary increase is not always respected depending on the institution and/or PI, and merely taken it as an "inspiration". And
2. in some institutions, extra health expenses (health insurance) not including in our already-low stipend.

Issues inhibiting retention include the lack of postdoctoral training from PIs. Some well-experienced PIs look at postdoctoral fellows as, in the lack of a better word, machines, meaning that they only see a couple of hands ready to work; and other types of PIs will leave their postdoctoral fellows to be entirely independent, neglecting the training they stated we would have when giving us our appointment. In my experience, there is a group of PIs that are indeed interested in providing a good postdoctoral training to their postdocs and they should be more incentivize.

Existing NIH policies, programs, or resources

I think international postdocs (non-citizen) should have the option to apply for other grants opportunities and awards, other than the K99. Grants and training opportunities are extremely limited for international postdocs who don't hold a permanent visa status or a citizenship.

Proven or promising external resources or approaches

No response

Response 847

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as a way to get more experience as an independent researcher and develop my own future research program. I view it as a shorter term position (4-5 years), before I am ready to go on the job market with the intention on staying in academia.

Fundamental issues and challenges

My biggest issue is currently related to salary. Although I am part of a postdoc union that has increased its salary recently, it is still not high enough to pay all of the things that I need to pay for (bills/loans/etc). To save extra money I currently commute 1 hour+ each way to work in order to put more money towards my student loans. I could live closer but I would a minimum of 2-3 roommates and I think that it is a little absurd that with an advanced degree the only way I could afford housing in the city that I am employed in, is to have roommates.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase the minimum postdoc salary that the NIH sets.

Response 848

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Pay: the NIH should adjust the pay according to the cost of living, especially in high cost of living areas. Fair and equal treatment: domestic and foreign postdocs should be treated equally. Foreign postdocs have to deal with visa and immigration issues, and some labs take advantage of their vulnerable status.

Recruitment: a lot of PhD graduates have an options to go into industry or government for better pay and benefits. Not all universities provide great benefits for postdocs, and they should be relatively similar across all universities to improve retention and overall quality of life.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

The NIH should have more career events and workshops for postdocs, provide some small scholarships and professional development opportunities for foreign postdocs.

Response 849

Perspectives on the postdoc roles and responsibilities

The postdoctoral fellowship position is proposed as further training to prepare researchers for the PI career track; this is dishonest at best and downright exploitative at worse. Most postdocs are treated like more skilled graduate students that can complete projects faster and don't need additional training. The training aspect is not mandated nor is it clear how postdocs need to be trained before they are ready for the PI track. This is a cheap labor hack that the NIH is supporting that abuses vulnerable and highly skilled people. The postdoc shortage is a manifestation of these exploitative and abusive policies.

Fundamental issues and challenges

1. The Fundamental issues and challenges really all boil down to compensation and life stage. Postdocs and graduate students are at the age where they are trying to get married, start families, buy houses, and start saving for retirement; but, academia makes this nearly impossible. Not only are there no mandated holidays, hours, or family leave, but the pay is abysmal. Industry will hire a PhD with no postdoc experience starting at 90K. The only way for academia to recover is to have pay parity with industry.
2. In addition, there should be an academic career track that allows a postdoc to continue working in the lab as a research scientist after they're done with their postdoc that does not require them to advance to the PI career track. If a scientist is good at doing bench science, make a position that pays them 90K to continue doing it instead of forcing them to sit in an office doing something they're not good at—i.e. writing grants, writing publications, teaching classes (which we are not all trained to do), running departments, etc.

Existing NIH policies, programs, or resources

The NIH pay scale needs to be the minimum mandatory, not an option that institutions can elect to follow. If an institution refuses to match NIH pay scales—REVOKE FUNDING. Stop supporting the exploitation of labor under the guise of training. Postdocs need salaries that are on par with what they can make in industry. Until there is a meaningful effort to address the pay issues, the postdoc shortage will not resolve.

Proven or promising external resources or approaches

Look at industry for salary scales.

Look at industry for benefits.

Look at industry for work life balance.

Response 850

Perspectives on the postdoc roles and responsibilities

After being a postdoc for a handful of years now, this postdoc position means absolutely nothing to me but as a means to get my US Permanent Residency. I have totally lost my love for science and sometimes regret ever doing my PhD.

Fundamental issues and challenges

Extremely poor salary as compared to work load specially in high cost of living areas.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 851

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

K99 TIMELINES!!!!

So many postdocs I know are actually hindered in their transition to independence because of the slow pace of K99 review timelines. For example, I applied for a K99 Feb 2021 with a proposed 9/1/21 start date, got my 10 score May 2021, and then didn't receive an NoA until June 9, 2022! With my score in hand (and radio silence from PO all summer despite numerous enquiries) I embarked on the job market fall of 2021 in order to secure a position within the expected two year window to start 9/1/21 as I proposed. I then received a job winter 2022 and had to delay the job one and a half years until June, 2023 for the required K99 training window that didn't begin until, I reiterate, the NoA came THIRTEEN MONTHS AFTER A 10 SCORE. I know my experience is not an isolated incident. Postdoc timelines are simply too uncertain and rapidly changing for such an important mechanism to be so

a) slow and

b) prescriptive.

You can be prescriptive if rapid and adaptive, but the current system is broken.

Proven or promising external resources or approaches

No response

Response 852

Perspectives on the postdoc roles and responsibilities

Career preparation, clarification of career goals, (ideally) improved work-life balance, pay, and workplace climate.

Fundamental issues and challenges

Stigma towards taking time out of the lab to teach/pursue career development opportunities

Stigma towards taking time off to have fun, having boundaries

Limited institutional investment in creating community among postdocs

Limited spots in programs aimed at addressing these issues (ie IRACDA)

Limited or no institutional oversight on how postdocs are treated (for example, I knew of a lab where all were expected to work extremely grueling hours and treated poorly, PI was a longterm employee and faced no consequences from university for inhumane treatment of postdocs)

Academic culture thriving on making feel insecure and inadequate, creating workaholic environments, competition for underfunded grants without enough spots to really support people, emphasis on individualism over collaboration, etc

Existing NIH policies, programs, or resources

Expand IRACDA (including bigger cohorts in existing programs and more programs) and offer similar fellowships for additional career paths if possible

Assess and change the climate in academia. People who treat postdocs badly, and people whose mentorship style is cruel, should not be in positions of power regardless of how rigorous or "excellent" their research is.

Normalize self-care, not just in the form of little workshops about it, but in the form of top-down embracing of reasonable work hours and less constant pressure

Proven or promising external resources or approaches

I think across the board in academia there's too much normalization of the idea that academic work has to be grueling, feedback has to be delivered without tact or compassion, everyone has to be working on their own, etc.—as long as these issues remain, academia will continue to have diversity, equity, and inclusion issues, because a culture that thrives on stress will have a more difficult impact on people who are already stressed about being the only person who looks like them in a room full of possibly hostile power figures.

Cultural reforms need to happen, and creating more funding opportunities or programs, etc., without addressing culture and climate, will always only be a bandaid.

Response 853

Perspectives on the postdoc roles and responsibilities

Postdocs should be receiving additional training as their primary role. If they are expected to have 100% of the skills right away, that's a Research Scientist.

Fundamental issues and challenges

Payment and hours. If someone offers you better pay, treatment, and more reasonable hours, why wouldn't you take them up on the offer?

Existing NIH policies, programs, or resources

The pay scale is way too low, especially considering the density of roles in Boston, NYC, San Francisco, and DC, none of which are cheap markets.

Proven or promising external resources or approaches

Let's be honest, these issues have been around for years and will continue. The question is when will the NIH decide to actually address them. You shouldn't need this survey to tell you what the problems are.

Response 854

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as a transitional launchpad towards an independent academic career. Admittedly, however, the stiff competition for academic positions makes it feel like an otherwise unnecessary training period to boost one's credentials for the job market.

Fundamental issues and challenges

Low pay. This is linked to a demoralizing outlook on future career prospects, low self-esteem, family conflict, and perpetuation of systemic inequalities. Postdocs without external financial support (spouse, parents, etc) are often forced out of the system.

Existing NIH policies, programs, or resources

Increase in minimum salary requirement/NRSA guideline

Proven or promising external resources or approaches

No response

Response 855

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 856

Perspectives on the postdoc roles and responsibilities

Postdoc are only required/useful if you plan to stay in academia

Fundamental issues and challenges

Cost of living vs stipend. Industry salary for scientist I, no postdoc experience needed, is over 2x higher salary versus postdoc stipend.

Postdoc experience does not make someone a more interesting candidate for an industry position in R&D. Industry experience is more relevant for hiring.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 857

Perspectives on the postdoc roles and responsibilities

I love being a postdoc research fellow and being a physician-scientist is my goal since I started medical school. I've been learning a lot and discussing important topics in responsible conduct in research, but I also see this being applied at the institution I work at. For me, this postdoc is an opportunity to learn more about clinical research and be trained to produce meaningful clinical research in the near future that can impact patients' outcomes. I'm an enthusiast in clinical research and finally, I have access to an excellent program.

Fundamental issues and challenges

The main challenge is the wage. Postdoc requires almost exclusively dedication and the wage is not compatible with the one clinical physicians earn (it is less than one-third). Is is difficult to recruit and retain physicians to be trained as physician-scientists if their earn in not enough to maintain a minimal house income. Most of the physicians i know that wanted to become a postdoc gave up when they discovered the salary.

Existing NIH policies, programs, or resources

I don't have an opinion on this question.

Proven or promising external resources or approaches

Publication of vacancies on Twitter and LinkedIn. Increase the salary of physician-scientists training to be closer to the ones that are in clinical work. When doing research gets less compensation than clinical work you lose young investigators that finished their residency especially because they carry the burden of loans from medical school (that's not my case but I know many in this situation).

Response 858

Perspectives on the postdoc roles and responsibilities

I think having more clarity to ensure academic postdocs have sufficient time to develop their own program of research would be important. I view postdocs as junior colleagues whom I am collaborating with to support their transition to their first career award and eventually independence. I am concerned some colleagues treat them as economical lab managers.

Fundamental issues and challenges

Salary and benefits have not remained competitive with other potential opportunities. In addition, developing a clearer pathway to stability would probably greatly increase the likelihood someone would pursue an academic postdoc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

I’m unsure but do think some sort of assessment of organizational culture would be important for improving local procedures.

Response 859

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low salary.

Existing NIH policies, programs, or resources

Fix the stipend levels published by NIH.

Proven or promising external resources or approaches

Double the salary.

Response 860

Perspectives on the postdoc roles and responsibilities

The role of the postdoctoral fellow is to :

Do guided research which lead to independence

Develop a project that they can take with them to start a lab.

Take advantage of grant writing opportunities

Become aware of interpersonal interactions that are critical in running successful research

Attend meetings to meet other reaserchers in the field and become known to the scientific community.

Fundamental issues and challenges

Industry pays more.

Being an academic is not an easy 9-5 job that can be done from home.

Many graduaate students and postdoc fellows continue to prolong the undergraduate experience as a default pathway.

Many graduate students and postdocs are not given a sense of passion and sense about following one’s interests in academic research.

Many postdocs see the degradation of the tenure system and the emphysis in making money for the univerisity through amount of grant funding their mentors are supposed to bring in.

Existing NIH policies, programs, or resources

Raise the module grant levels to give postdocs a competative pay.

Eliminate postdocs from grants and have them be paid separately from the PIs grants through a NIH funding mechanism.

Proven or promising external resources or approaches

Most universities have instituted, grant writing programs, how to get a job programs.

Many universities give full health benefits to postdoctoral fellows.

Response 861

Perspectives on the postdoc roles and responsibilities

Postdoc is a research scientist position, not a training position. Exploring and expanding one's research program.

Fundamental issues and challenges

Postdocs are not paid enough (which disproportionately affects people who come from low income backgrounds). I make more money as a part time research analyst than I do as a postdoc (though I shouldn't need to supplement my income!). I have also heard that NIH postdocs are not paid the same rate as the postdoc salary standards released by the NIH (they are paid more). I think this is an injustice. Postdocs also need family support, especially if we aim to retain female scientists.

Existing NIH policies, programs, or resources

Standards should be set to be more inclusive—enough pay for people living in expensive cities under a recession, and enough for people to have families.

Proven or promising external resources or approaches

None that I know of.

Response 862

Perspectives on the postdoc roles and responsibilities

Postdoc was a training period and opportunity to do exciting research and interact with other smart people. This period was supposed to prepare us for the next career step, but I think most people get less guidance and/or support to successfully move to the next step.

Fundamental issues and challenges

1. Salary. No wonder why most a
2. American PhDs avoid doing postdocs and transition fast to companies. Most postdocs in US are from poorer countries (even worse, those individuals are even recruited with even lower salaries that do not fullfill NIH standards even if they are actually paid by NIH funds). It's almost offensive to postdocs how you can end up being below mean American salary (particularly in expensive cities that salaries are not adjusted to cost of living) when their educational status is 2SDs above the mean. PIs and Insititutions should be reviewed for following minimum recommended postdoc salaries. With codt of living skyrocketing and Postdoc salaries not significantly changing, postdoc in US has ended up almost slavery.
3. Dependence on getting grants. Research Intitutions provide minimal support to PIs and postdocs. We are all relying on grants that is extremely difficult to get. This increases the stress of all parties and reduces retention.
4. Quality of life is poor. Postdocs are extremely dependent on PI's personality. Although I have been lucky on that respect (which is part of the reason I survived longer in academia), many PIs act as slave drivers (require postdocs work 24/7, even they know they are underpaid).
5. Career prospects very poor.
6. Mentors are not supportive.
7. NIH doesn't have many grant options for non American postdocs.
8. Visa conserns for international postdocs.
9. Almost impossible to have family during postdoc. No support from American system for families.

Existing NIH policies, programs, or resources

There is a dire need to establish requirements for minimum postdoc salary. I think PIs that do not respect that should be banned from NIH funding. Salaries need to be also adjusted to cost of living at least per State, right now only CA seems to consider that. E.G. MA is so much more expensive than FL. If PIs follow NIH guidelines, a postdoc in FL might be ok, but in MA will be almost poor, struggling to find a house or daycare they can afford.

Proven or promising external resources or approaches

Provide training to PIs on what their mentees need as well as to postdocs.

Response 863

Perspectives on the postdoc roles and responsibilities

When I started my post-doc, I viewed it as an opportunity to gain more training and exposure to different ideas, to prepare me for a professor position. While last year I was successful in receiving multiple tenure-track R1 professor offers, looking back, I honestly regret my decision to do a post-doc at all. I did not have support from either my institution, department, or my mentors, did not receive any clear training, and was constantly battling antiquated NIH policies and procedures. I think post-doctoral positions should be eliminated in favor of permanent research positions.

Fundamental issues and challenges

Number 1, the salary. It has not kept pace with inflation, and it is laughable to compare it with how a PhD is valued for research positions in industry, and there is no consideration for different costs of living. This is also an equity issue because it impacts the decision to pursue academia for individuals from lower socioeconomic backgrounds. Number 2, the lack of support or accommodation for dual careers (two-body situation), this is also an equity issue as this is especially and disproportionally important for females in science. My partner and I were both post-docs at institutions separated by a 5 hour plane flight. Number 3, the job security (or lack thereof). Each year, I lived in suspense as to whether my contract would be renewed. Post-docs should be given multiple years of guaranteed funding, not exploited as temporary labor. This is an equity issue also especially for international post-docs on visas.

Existing NIH policies, programs, or resources

When I earned an NIH post-doc fellowship, my salary decreased and many benefits were eliminated. These polices should be changed: First, I earned the fellowship 1 year and 10 months into my salary, so I did not receive the an annual raise at the appropriate time (Proposed change: receive annual raise the month eligible). Second, I was not eligible for retirement benefits or matching from the university, and I lost the employer retirement contributions that I was not vested in (Proposed change: continue to be eligible for university retirement as an employee). Third, my PIs tried to make up the difference, but they were not allowed to use money from a federal grant (Proposed change: allow supplemental funding from NIH grants, so a fellowship salary is a floor not a ceiling). Fourth, I had to learn how to pay estimated taxes because I was no longer considered an employee, even though I was still employed by the university (Proposed change: post-doctoral fellows should be categorized as employees). Fifth, my health insurance was taken out of the money that was supposed to be used for training (Proposed change: standard this across universities). Finally, an importantly, international post-docs should be eligible to apply for all federal funding. The treatment of international scholars in the US is abysmal, especially considering the disproportionate proportion of scientists who live on a precarious visa status and many of whom were prevented from seeing their families for years during Covid, and how much international scholars overall contribute to science.

Proven or promising external resources or approaches

Increasing the salary (and taking into account cost of living differences), transitioning from post-docs to permanent research staff. Universities should also be required by NIH to have actual HR for post-docs, so that there is independent accountability and support.

Response 864

Perspectives on the postdoc roles and responsibilities

There is very little support for postdocs in academia. Its not uncommon especially at elite institutions for them or mentors to demand more work from one postdoc than is allowed, reasonable, or feasible. Many often hire one postdoc to fullfill 2-3 positions because we are cheap, smart, and as easy to take advantage of. Yet theres nothing we can do given our vulnerable position, especially if we aspire to stay in academia. It truly doesn’t pay mentally, emotionally, or financially for anyone to stay in academia. But those who do, stay because they are passionate about the work despite negligible support. Anyone with a doctoral degree in another industry or doing clinical work is paid more than double what postdocs make. It’s unfathomable how affluent institutions underpay postdocs, especially in expensive cities, where the NIH stipend isnt enough to afford rent and basic expenses. But these institutions thrive on exploitation: arguing they cannot pay postdocs more because it isn’t allowed by NIH. Its also unreasonable for nih to have a national postdoc stipend when the cost of living varies drastically all over USA. Not to mention the current standard is incredibly low for our experience, expertise, student loan debt, and years of lost wages pursuing advanced degree. This makes it even harder for minorities who are already struggling to get into or stay in academia to survive and prosper. And it’s even worse for women, esp women of color. who want to start famililes but know it will sig hurt their career & they cannot afford to on a postdoc salary. This takes a Detrimental toll on their well-being as starting a family on postdoc is done after already postponing as long as possible for our careers and now at a critical point when fertility is vulnerable.

Fundamental issues and challenges

Nih needs to stop providing institutions with so much money or require them to supplement a percentage of costs and benefits for their researchers for getting so much money. institutions offer little to no recognition or additional salary support to postdocs who bring in funds and pay their own salary. So not only do we work for free and they get paid to have us they are happy to keep exploiting us as cheap labor knowing the difficulties we experience daily in this role and how vulnerable we are. Instead of caring institutions continue to demand more and it only gets worse if we are successful in obtaining grant funds or publications, yet still we are never compensated for that success. And if we are not successful then they threaten to let us go for someone better especially elite institutions. This is enough to drive someone to their breaking point so it is really no wonder why recruitment and retention is such an issue. In addition, neither Nih nor individual institutions actually keep mentors accountable to their mentee’s or check in with postdocs about mentor or dept abuses, so postdocs have no where to voice hardships or concerns they are experiencing on top of fears of retaliation or being blacklisted from academia. This is all made worse

and exacerbated by unlivable wages, little to no financial support for childcare or access to in-house childcare service if available, and adequate healthcare benefits at reasonable costs. Childcare for one is $2000 a month minimum all over USA. Yet NIH provides 2000 for an entire year and doesn't require institutions to supplement childcare cost for their postdocs when paid so unreasonably low. Research assistants with bachelors make almost the same salary or sometimes more than postdocs. It's unacceptable and shameful.

Existing NIH policies, programs, or resources

There needs to be more accountability or institutions. It would be ideal if we could have a third party that worked as a liaison between an NIH and institutions to make sure researchers and mentors are held accountable and oversee institutional abuses / exploitations. NIH should also implement a system to obtain confidential progress reports from postdocs that are completely independent from the institution so that they can disclose any issues they may be experiencing there or with mentors. When such issues are reported, there also needs to be a way for those matters to be handled justly, responsibly, and confidentially so that the postdocs do not have to fear retaliation from either a mentor or institution as postdocs are in a vulnerable position of power and must be protected from retaliation. Possible entities that exist to protect postdocs include postdoc unions. NIH should require institutions, especially large institutions who frequently receive NIH funds, to allow postdocs to unionize and reasonably negotiate.

Proven or promising external resources or approaches

Postdocs Unions, 3rd party liaisons to work with postdocs to communicate institutional issues to nih, nih should perform confidential check-ins with post docs independent from the institution to obtain information about ongoing issues

Response 865

Perspectives on the postdoc roles and responsibilities

Advanced research training; carrying out projects with high level of independence and skill; providing training to more junior lab members; writing grants; writing papers; generating data to support PIs grants.

Fundamental issues and challenges

Low pay, minimal accountability for progress, lack of community, not valued by institution.

Existing NIH policies, programs, or resources

Increase RO1 modular budget so postdocs can be paid more.

Proven or promising external resources or approaches

Postdocs are relied upon to keep labs running and successful. Right now, most of our formal training is geared towards remaining in the academic system and assumes the goal is to become faculty. However, there is a problem of numbers. Firstly, there are many more postdocs than faculty positions available, and secondarily there are not necessarily suitable academic jobs such as senior scientist positions. If the system does not want to lose the talent & value of postdocs have developed during their training, a viable career must be made available. Otherwise, we are all going elsewhere where we will be valued commensurate with our skills.

Response 866

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The fundamental issue I've seen with the retention of highly skilled postdoctoral fellows is compensation. The average time in a postdoctoral fellowship that is needed to land a position at a top-tier institution is 4-6 years. In that time, a highly skilled researcher in industry could move up the ranks and be making between $150-$250k per year. Alternatively, if institutions stick to the NIH stipend, by the end of that time, the postdoc would make 1/3 to 1/4 of that while likely working more hours. Because being a

postdoctoral fellow often coincides with having children and buying a home, postdoctoral fellows often have to make the choice between an academic career and a family. If you look at the cost of living in major cities such as Boston or San Francisco, housing and daycare for young children (not including food or other expenses) can cost north of $80k per year. This makes it almost impossible for postdoctoral fellows to live off of their stipend without going into debt. When faced with the choice of financial stability and independence or debt, most people would choose the stability. While academics will never make as much as their industry counterparts, postdoctoral fellows have to start being viewed as the highly educated and skilled workforce they are, not the work horses of academia to be pushed aside.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 867

Perspectives on the postdoc roles and responsibilities

I treasure my current postdoctoral academic research position so much. To me, it is a way to transit from PharmD to clinical pharmacology. I was trained with clinical knowledge during pharmacy school, meaning to develop the ability to clinically judge which drug is best for the patients based on their clinical picture. However, as I was going through pharmacy school, I realized my interest is more on the base level sciences (i.e., molecular and cellular interaction). Sure, there are different industry roles for pharmacists as well, but they just don't intrigue me. To be honest, this is really the only field that interests me. In short, I view this fellowship as a learning opportunity that will get me a Clinical Pharmacologist role in the pharmaceutical industry.

Fundamental issues and challenges

What inhibits recruitment can be lack of marketing and promotion. I actually didn't find out about my current post-doc fellowship until the end of the application cycle. It just didn't pop up on my search. It was made known to this fellowship through connections. Another problem was that I thought I must stay in academia if I get a academia research fellowship. I guess I wasn't well informed of the career path that follows.

I cannot speak to the retention much. If anything, perhaps better dental insurance, but that is at the institution level.

I think quality of life of the post-doc trainees around me is quite good. Nothing is wrong at least. It is all up to how much the trainee would like to learn. I know I can make myself as busy as a Director in terms of time contribution to work, and I can also make myself as chill as the polar bear in the North Pole. I'm keeping myself very busy now because I know what I learn here will be foundational to my future career. This is precisely the time to sacrifice some level of quality of life, as tolerated, in exchange of a solid foundation moving forward.

Existing NIH policies, programs, or resources

Perhaps set up policies for academia research fellows to allow for summer internship. I'm trying to get one now, but there's conflict of interest as to who should be paying me (NIH, the company offering internship, or both). Each party has their own rule, so they are trying to figure that out.

Proven or promising external resources or approaches

No response

Response 868

Perspectives on the postdoc roles and responsibilities

Doing good translational research in order help the community/society.

Fundamental issues and challenges

As a family man, it is very hard to run my family with current payment.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase the pay for research people

Response 869

Perspectives on the postdoc roles and responsibilities

In my perspective, it is a position which prepares you to be an assistant professor. As an academic postdoc, one should learn how to manage students from all levels (undergraduate and graduate) in the laboratory, to give a course to be ready for the upcoming professorship position, and to learn the budget management for a project.

Fundamental issues and challenges

In academic research, there is no such thing like private life. You either need to work in the laboratory or think about what you are going to do next. I believe the fundamental issue is the mentors who treats postdocs as data producing machines rather than mentees to teach how to survive in an academic environment. Another important problem is the salaries. They are extremely low. In Boston, I could not rent even an average apartment with my salary, which was devastatingly unfair for a person with a PhD. At the same time, my friends with an industrial postdoc/scientist salary could rent an apartment easily. This salary gap creates difficulty to retain academic postdocs.

Existing NIH policies, programs, or resources

I have a J1 visa, but my salary is paid by NIH. The current application is that after I am done with postdoctoral training, I am supposed to go back my home country, work there for 2 years, then I can come back unless I have a J1 waiver. I just do not understand the idea here. I am trained with US taxpayers` money, but after my training ends, US does not want me to stay and contribute to the US economy/academia. Instead, the visa rules require me to go back to my home country. To my opinion, "2 Year Home Residency Requirement" is not beneficial to US. Please exempt NIH-paid postdocs from the "2 Year Home Residency Requirement" for J1 holders. To my opinion, it seriously damages research career pathways of international postdocs. We have all our connections in US. If we go back, how we are suppose to keep our connections here for 2 years and come back.

Proven or promising external resources or approaches

Please be in contact with your postdocs during the postdoctoral training and after they move to another position. This is my 3rd year as a postdoc, but first survey about improving postdoctoral training. I truly appreciate this effort, but please have these surveys more often.

Response 870

Perspectives on the postdoc roles and responsibilities

Opportunity to diversify scientific experience.

Fundamental issues and challenges

Poor salary, Lack of proper immigration support for international postdocs, no retirement benefits, poor healthcare options, lack of faculty positions, industry jobs don't necessarily need post doctoral training.

Existing NIH policies, programs, or resources

Financial grant support for international trainees, competitive salaries, immigration support.

Proven or promising external resources or approaches

Relevant exposure to jobs industry jobs via internships, immigration support, financial incentives.

Response 871

Perspectives on the postdoc roles and responsibilities

I think that postdoctoral fellowships are a way for Universities to ensure they have expert labor at reduced cost. I think that if done well a postdoc can be an opportunity to grow independent research and secure initial funding to make the leap into the next stage of one's career but often this is not necessarily the case because mentors don't know what they should be expecting of postdocs nor providing good guidance to help them transition to independence.

Fundamental issues and challenges

Postdocs are underpaid for their level of expertise. It is also frustrating that scholars who have years of professional experience outside of their doctoral program are treated as the same (i.e. starting at 0) as someone who went through academia without ever having other professional experience.

There are also a very broad range of postdoctoral experiences that are highly dependent on the mentor's capacity to provide appropriate guidance and strategic career support. Mentors rarely receive training in how to mentor or support postdoctoral scholars and are thus do not necessarily have appropriate expectations nor able to provide strategic career advice. I don't understand why we assume in academia that because one has a PhD you know how to mentor or teach. For example, postdocs should be encouraged to pursue independent funding but also could benefit from writing research proposals in collaboration with mentors to learn how to do well. Further I think that some mentors don't understand how to treat postdocs as they are used to having students and thus treat them as non-independent trainees—it feels quite insulting to be treated as if I don't also have a PhD or expertise in my field. My understanding of a postdoc is that it is for building your capacity to do research.

Existing NIH policies, programs, or resources

I would love to see specific funding opportunities that are intended for collaborations between postdocs and faculty mentors. These could provide financial support and incentives for more engaged mentoring AND provide specific guidance about the roles of postdocs and mentors. It would be great to see something where they expectation is that the postdoc would take a leadership role on part of the project. I know that K99's may be one option for this but it would be great to see something where they mentoring is also valued and incentivized. Further, there is a lot of confusion about what funding mechanisms postdocs are eligible for. Some think only training grants when in reality other postdocs have gotten R21s and R03s, further some PIs don't think that postdocs can be named Co-Is on projects. It feels quite disheartening to be underestimated constantly.

Proven or promising external resources or approaches

I wish I knew of some. Paying postdocs more, setting standards about mentoring and valuing postdoctoral expertise would be a great start!

Response 872

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The pay is way too low and completely prevents postdocs from supporting a family at an age where many people expect to start a family.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 873

Perspectives on the postdoc roles and responsibilities

Postodcs are highly qualified scientists. They are deeply specialized professionals with both technical skills and profound knowledge on their area of expertise. They perform original research, write manuscript to share their work with the scientific community, train technicians and grad students and are at a driving force for scientific discovery in the USA and around the world.

Fundamental issues and challenges

Little respect and recognition. Risible pay for highly skilled work. No pension and family support! Poor HR support at many accademic institutions. Poor mentorship and enabling of abusive behavior by too many Professors. Foreign postdocs depend on their PIs for their J1 and H1B visa and are often abused and taken advantage of. Many PIs have a high turnover of grad students and postdocs in their lab but department heads overlook these behaviors. Focus ison publications and skewed notions of prestige rather than on good quality science. How can a single parent survive on a postodc salary ?

Existing NIH policies, programs, or resources

Double blind review process. Remove PI and institution name from first round of review. Old boys club gets preferentially founded over innovative proposals from less recognized institutions. Same goes for hiring. Stop equating impact factor with quality. Increase salaries or the best talents will keep moving to industry where besides better salary ypu also get HR that considers you a full fledged employee(Genentech has a postgrad program and the pay range is 120-170k).

Proven or promising external resources or approaches

Better HR support, penalize or fire abusive PI, offer proper benefits. Facitate lab switch within institution.

Postdocs are not “students” they are workers and these reference the same benefits as every university employee. Better support for foreign postdocs.

Response 874

Perspectives on the postdoc roles and responsibilities

Highly skilled worker

Fundamental issues and challenges

Low salary

Existing NIH policies, programs, or resources

Increase pay minimum through NIH

Proven or promising external resources or approaches

No response

Response 875

Perspectives on the postdoc roles and responsibilities

The postdoc is a training position: postdocs gain more independence, acquire new skills, and build their individual reputation, all while working under the mentorship of an established scientist. In a practical sense, the major responsibility of a postdoc is to produce independent research for publication in scientific journals with their mentor as a co-author. The scientific output of the postdoc community is a major driver of new discoveries in academic science, which go on to produce new science funded by new grants built on the previous work. Historically, the purpose of postdoctoral training been to facilitate the transition from graduate training to an independent career as an investigator at a major research institution. Today, only a tiny fraction of postdocs will ever start their own laboratories as independent investigators. This reality creates a serious conflict between the stated goals of postdoctoral training (including by NIH) and the reality of the lived experience of postdocs in the U.S. The overwhelming majority of postdocs will use the position as a transition from their academic PhD training to the professional workplace. Thus, one has to

conclude that the typical postdoctoral experience is a mentored research phase, where postdocs produce new scientific research and acquire new skills that set them up for a professional, non-academic career.

Fundamental issues and challenges

Postdocs are highly educated, skilled workers. They have acquired the highest academic credential (a PhD) and obtained technical and knowledge skills at a high level during their graduate training. Despite these qualifications, graduating PhD students who enter postdoctoral training are compensated far less than peers who pursue private sector employment. In many cases, an academic postdoc will be paid less than workers with only BS degrees just starting biotech careers out of college. Postdocs are also beginning a new phase of their training at a pivotal life stage where it is possible and desirable for them to start families. Low pay in the academic postdoc track is the greatest threat to the future of the postdoc position.

Existing NIH policies, programs, or resources

NIH should embrace and incentivize the reality that most postdocs will not become independent faculty investigators. Current funding explicitly or implicitly prioritizes the rare outcome of achieving independent positions, while neglecting the much more common outcome of accomplishing private sector employment. NIH should dramatically increase the minimum stipend levels for postdocs paid through research grants (e.g., R01) as well as fellowship awards (e.g., F32 and K99). NIH should also allow supplementation of fellowship awards with federal funds--currently, this is a major source of inequity, where fellows are routinely compensated less than their peers as an unintended 'punishment' for their accomplishment of winning a fellowship. Finally, an absolutely essential change is to increase the direct costs per R01 award. Without an increase in R01 award dollars, it will not be possible to support higher compensation of postdocs, as the R01 is the major source of funding used to pay postdocs in academic labs.

Proven or promising external resources or approaches

I am not aware of any.

Response 876

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Lack of money

Existing NIH policies, programs, or resources

Increasing money

Proven or promising external resources or approaches

Funding and money

Response 877

Perspectives on the postdoc roles and responsibilities

The postdoctoral training is a transition stage towards a faculty position. During this training, an individual is expected to contribute in projects. He/she is supposed to improve his/her research skills in order to become an independent researcher.

Fundamental issues and challenges

Postdoctoral position has a key role to carry on a project from scratch. Once the project is approved, the 100% workload comes on postdoc shoulder. The PI only writes and submits the project proposal which is also based on the preliminary data generated by a postdoc.

Now, the key issue is recruitment is the short term contract and yearly renewal. The puts a lot of pressure on postdoc and he is always insecure about future. Furthermore, this short term contract give a chance to PI to misuse postdoc like work overload, off hours work, night shift experiment.

These things impact the postdoc's mental and physical health.

There is not a good salary package offered to a postdoc. In fact, postdoc run the whole project.

Existing NIH policies, programs, or resources

It is kindly recommended to consider the yearly contract policy of the postdoc's appointment. A postdoc should be appointed at least for the period of 5 years. In this five years, he could get enough time to establish himself as an independent researcher.

Secondly, there should be a pay rise for the postdoc as I said, they are the one who involved physically in projects and fulfill the project goals.

Proven or promising external resources or approaches

There are few things needs to consider in order to improve the postdoc training ecosystem.

1. Appointment of a postdoc for at least 5 years
2. Including some teaching courses in the postdoc training
3. There must be a pay rise, because postdoc salary is just equivalent to a phD scholarship.
4. There should be extra resources and training for postdoc apart from only doing research.

Response 878

Perspectives on the postdoc roles and responsibilities

Increase their breadth of knowledge in the area of inquiry while refining their skills in research. Enhance grantsmanship skills.

Fundamental issues and challenges

Salary is much less than practicing in a clinical environment. If the postdoctoral positions were open to allowing individuals to reside elsewhere with some onsite visits, pool of recruits would be bigger. To retain postdoctoral trainees, mentors must be encouraging and have soft people skills. The postdoctoral trainees should not be treated as a general research assistants. Family and personal development should be encouraged.

Existing NIH policies, programs, or resources

Consider enhancing the Early Stage Investigator resources.

Proven or promising external resources or approaches

If the postdoctoral positions were open to allowing individuals to reside elsewhere with some onsite visits, this would help individuals residing in rural and less urban areas. Allow for collaboration between universities.

Response 879

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Having competent mentors for postdocs is extremely critical, and I believe that the NIH may not have much authority to address this issue.

Existing NIH policies, programs, or resources

In my opinion, it is crucial to require Principal Investigators (PIs) to create and implement comprehensive training plans for their mentees, while also reporting on their progress to funding agencies in their annual reports. Unfortunately, many PIs tend to exploit postdocs as a means of securing their own success, without showing genuine concern for the postdocs' development and career prospects.

Also, it is just as crucial to cultivate exceptional next-generation scientists as it is to conduct groundbreaking research. Unfortunately, in academia today, it seems that only postdocs working for well-established researchers will have the opportunity to become future Principal Investigators (PIs). Merely publishing research in prestigious journals seems to be the primary factor determining one's success, rather than the quality of the training they receive. As a result, many postdocs are simply investing time in training that will not contribute to their future academic prospects.

Proven or promising external resources or approaches

No response

Response 880

Perspectives on the postdoc roles and responsibilities

Postdoc is the continuation of the PhD training, with the goal of developing independent research skills, leadership, scientific communication skills, etc. Thus, the academic postdocs should be able to:

1. Carry out research projects relatively independently;
2. Supervise or train students;
3. Commute or present their work to the bigger scientific audience.

Fundamental issues and challenges

Two main issues:

1. Low salary, as compared to industrial job with the same degree/capability requirement.
2. Competitive job market. There are very low percentages of postdocs that can continue to academia because of the overcrowd job market.

Existing NIH policies, programs, or resources

Provide more postdoc fellowships or training grants; organize some conference (with specific research area focused) to bring postdocs together to exchange ideas and experience.

Proven or promising external resources or approaches

No response

Response 881

Perspectives on the postdoc roles and responsibilities

I did my PhD in India , and my postdoc offered me a ticket to emigrate to a country where I could do cutting age research and rub shoulders with stalwarts in the field . I was also fortunate to have a mentor who was invested in my success, was a good person , and supported my aspirations, including becoming a mom during my postdoc.

Fundamental issues and challenges

I was very satisfied professionally during my postdoc . However, financially, I knew it was just not sustainable to continue on a meager postdoc salary , specially without free childcare. If I was offered 100k+ wages , and some stability in my job , such as a 2-3 year contract , I would have been happy to stay in my postdoc lab as a Staff scientist for longer . Also , can we please stop calling postdocs trainees?

Existing NIH policies, programs, or resources

1. Increase salaries to reflect the amount of skilled work and hours that postdocs put into the world of research. In my opinion ,if postdocs were paid 100-150k, they would not flock to the industry.
2. Have paid time off that is defined.
3. Have an annual review where the postdoc reviews the lab environment so PI is aware of unfavorable circumstances

Proven or promising external resources or approaches

No response

Response 882

Perspectives on the postdoc roles and responsibilities

A postdoc position is advanced training that goes beyond didactic knowledge and wet lab bench skills. It is a stepping stone to prepare a trainee for an eventual job. It should involve management experiences, of personnel and of projects. This is to gain experience useful in academia and also in industry. It should have grant writing experience, teaching etc that is tailored to the career goals of the trainee, but also those skills that the trainee/mentor see as lacking.

Fundamental issues and challenges

I've seen retention become an issue when there is a disconnect between the trainee and mentor expectations of what the postdoc position is.

Postdocs are expected to move for work, uprooting family and spouse careers, but aren't provided moving expenses or bonuses like people often do when they get a non-academic job.

Postdocs are staff that don't always get full benefits that other staff receive at the same institution. For example, my institution offers employer matching of how much we put into our retirement accounts. This is not the case for postdocs.

We are encouraged to seek funding but how we are taxed and how the funding affects our position is institution dependent. This makes it hard to know what will happen when you accept a fellowship. For example, both myself and my husband received institutional T32 grants. Nothing changed for me in terms of salary and taxes because I am an employee. For my husband, his institution switched him to an independent contractor making him now responsible for taxes on all payouts of the T32 including health insurance premiums. This means his taxable income went from 60k to 72k but his salary certainly wasn't 72k.

International postdocs aren't allowed to apply for fellowships. They have no credit to use to apply for housing and are at the whim of institution provided housing or egregious guarantor schemes. This is a great hardship to some international postdocs.

Existing NIH policies, programs, or resources

In general the NIH website is very confusing especially once you get past the first few welcome pages. I applied to the wrong funding announcement (an older one) because it wasn't obvious which was the current one. Most postdocs don't traverse the NIH website or use the resources until they are grant writing. Our postdoc association doesn't even give info on relevant NIH resources. Again, I think because the information is hard to access.

Proven or promising external resources or approaches

If somehow NIH could more clearly dictate the role of a postdoc to employers (full staff benefits, equal benefits) like how they do minimum salaries that would be great. It's hard to change a culture where many people see postdocs just as glorified grad students. When that's the culture, of course people are going to accept better paying and stable positions elsewhere vs a 3 year stint in a new town that they will then have to move again. Constantly moving every few years is hard on people.

Response 883

Perspectives on the postdoc roles and responsibilities

Postdoc job is not considered as a real job. This is just a transitional one to two years to get more experience or a publication.

I have done four postdocs in four different institutes: I am very against it! Because this is a very low paid difficult job dealing with difficult people and dealing with difficult projects. I personally discourage people from going to this path to do a postdoc, when there are a lot of private companies they can go and earn some money and good life and be a good scientist as well.

Fundamental issues and challenges

$

If there is no money how do you expect people to do a job for you?

This is a real issue this is very important to consider if there is no investment for a job why do we expect people to do and do a very low paid job? Why should we expect smart (IQ EQ, and hard working, dedicated) people choose a job? Just for their fun or being enthusiastic about science/working for a low paid job? No, this way you don't get the best ones.

Whatever you invest you will gain profit. Spending 2 years of your precious life at an age that you can be the best in your career working for only around $53,000 per year in an expensive city does not mean much. The only reason I did four postdocs was to get green card. Simple. If you are American then why do you need to do postdoc?

The second issue is Visa policy.

When you cannot recruit people from inside because those people they have freedom to go to other sectors and work and earn more money, the easiest option is to bring educated a smart people from outside. I know a lot of Iranian educated medical doctors and PhDs who want to escape Iran and come to the US for an imaginary better life. But they cannot come here easily because of the Visa policy. Right now they are 100,000 smart educated Young enthusiastic to science people from Iran who wants to come to this country even they can be self-funded, they don't need even money, the only reason they want to come here is to escape the theocratic dictatorship that makes their life like hell. Why not allowing them to come here? This is just an example.

Existing NIH policies, programs, or resources

Invest more $ and job security. There is no job security for a postdoc. As a postdoc I could go to a lab and be fired in the next week. This has happened to me. This only reason is enough to discourage people from going to this path. There is no job security as a postdoc. As a postdoc, you have to work with people who are eccentric sometimes and who have issue themselves as an narcissistic boss or antisocial people who are in science and academic institutions and because they can earn money and bring funding (God knows how they produced data or fake data) then institutes keep them around but it doesn't check on them if they treat their employee or postdoc well. There are many of them around. Noone care how they treat postdocs as much as these narcissistic antisocial OCD bosses (some are highly intelligent-but defenitly with real diagnosed psychological disorders) can secure funding. There is no job security for a postdoc. Postdocs are treated as slaves under such bosses. Simple. That is why it is better to import desperate highly educated smart people.

Proven or promising external resources or approaches

Invest $. Care about postdoc life! It is not complicated if you are serious about it.

Response 884

Perspectives on the postdoc roles and responsibilities

I see postdoctoral position as another training mechanism added on top of graduate work. While I was able to attain critical thinking, application, and certain technical or experimental skills, I still felt I was not fully equipped or skilled in any manner to perform or apply any of the newer or innovative techniques. The reason for this was that my PhD laboratory was in a very niche field with only certain techniques that are applicable to this field. For instance, we didn't do any CRISPR or genetic techniques or applications in order for me to be competitive to apply for a transitional grant (ie K99).

Fundamental issues and challenges

Salary is not sufficient, no paternity leave, no retirement funds/opportunities are available to postdoctoral researchers at certain institutions. Child care is expensive—institutions should have them heavily discounted. In addition, we don't have access to certain software to do research—PIs are not willing to pay since they are costly—institutions should up front the cost of adobe or SigmaPlot for example.

Existing NIH policies, programs, or resources

I had to go do another postdoc after 2 years of my first postdoc because of my family relocation. Even though I was able to publish a first author paper and acquire NIH postdoctoral funding, I had to restart my research in a new environment (second postdoc) and lost my ability to apply for the K99. I do not regret leaving my first postdoc. My major regret is that I couldn't apply for a K99 in my new lab since I transitioned to a new research field. I wish that NIH can make exceptions to the K99 if we restart a new postdoc in a new field. K99 eligibility could be extended to 6 years instead of 4 years. This may attract more researchers to give them chance to enjoy the research instead of rushing to collect data and publish within 3 years prior to submission.

Proven or promising external resources or approaches

The major issues are established mentors who are verbally abusive, non compliant to work-balance life, and using excuses that they can't provide competitive and higher stipends or salaries when they openly brag about the large amount of available NIH fundings. We need mentors who are supportive of our personal and family hours as well as encourage/support us to attend seminars and explore careers outside of academia if we feel that research may not be a fit post-graduate school due to life circumstances. Again, I view postdoctoral training as another method to learn and acquire more skills since we couldn't acquire them in graduate school as PhD students. Some established mentors only treat us as "specialized or skilled technicians" not as trainees. Established PIs/faculty should also be reviewed on their ability to train and retain postdoctoral trainees—this could be a major determining factor for their NIH grants—maybe better scores for track record of training and "retaining" postdoctoral trainees for a certain length of time.

Response 885

Perspectives on the postdoc roles and responsibilities

Prior to thinking about the postdoc scenario, one needs to look into the positive upbringing of PhDs.

1. All master's PhD be allowed parental presence for their wellbeing.
2. Get a rise in yearly stipend as postdoc 0 to 7.
3. Get full travel funds for all conferences.

To ensure unlimited postdocs.

Fundamental issues and challenges

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Existing NIH policies, programs, or resources

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Proven or promising external resources or approaches

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To ensure unlimited postdocs.

Response 886

Perspectives on the postdoc roles and responsibilities

Post Doctoral Research

Fundamental issues and challenges

Nothing

Existing NIH policies, programs, or resources

Not Applicable

Proven or promising external resources or approaches

No response

Response 887

Perspectives on the postdoc roles and responsibilities

A postdoctoral TRAINING position should serve two (sometimes overlapping) purposes.

1. Development of an independent academic vision for a research laboratory, contingent on acquiring both unique skills for approaching a problem as well as teaching, writing, speaking, mentoring, accounting, and management competencies required for running a research group, securing funding, and distributing findings to the public; and
2. Accrual of in-demand skills that make a candidate marketable for careers in industry or government or for staff scientist and teaching positions in academia.

Fundamental issues and challenges

Almost none of the above mentioned factors are included in the majority of postdoc positions. In general, PhDs are hired to perform specific tasks laid out by mentors project-based funding mechanisms, and arbitrary requirements for "high impact, first author publications" box many qualified scientists out of independent funding and ultimately job prospects. Chaining postdocs to specific PIs and institutions for an amount of time it takes to publish can trap postdocs in unproductive environments they cannot leave for fear of job loss and sometimes actual poverty. That a PI's recommendation holds so much sway over future prospects is an inherent power imbalance.

Existing NIH policies, programs, or resources

1. Decouple ESI status from terminal degree. Instead make it shorter and link it to the beginning of an independent position: this will make postdocs less afraid to deal with life and family events and make it easier to transition into a successful independent career.
2. Create R01-equivalent grants that intentionally favor labs interested in real mentoring plans. Maybe follow up with the mentees to actually gauge whether mentoring is being provided?
3. Maybe don't include postdoc (or grad student) funding as a part of project grants at all. Favor funding through training grants and individual fellowships (that encourage moving between multiple labs).
4. Don't let labs that have a ridiculously high number of "mentees" claim that they are actually providing mentoring.
5. Provide more direct funding for what many postdocs actually end up as (in many cases by choice): Staff Scientists
6. Past performance as a metric of future success is an illusion created by biased review processes at every level. We need to create a system that doesnt continue to disproportionately reward privileged children of past professors who went to elite coastal universities. New strategies for holistic fellowship reviews should be adopted. Undergraduate grades should not factor in to any discussion of a postdoctoral fellowship, for example.

Proven or promising external resources or approaches

I think you should just trust what new faculty and current postdocs tell you in the survey.

Response 888

Perspectives on the postdoc roles and responsibilities

Postdoctoral researchers are integral to the scientific research process, responsible for designing and executing experiments, analyzing data, and disseminating research findings. They also contribute to grant writing, mentor students, and manage lab operations.

The postdoctoral position provides a unique opportunity for researchers to expand their skill sets, deepen their understanding of research methodologies, gain a broader perspective on their field, and expand their professional network.

In addition to these benefits, the postdoctoral position serves as a launching pad for a career in academia or industry. It provides an opportunity to develop an independent research line, distinct from that of their PI, and prepare to establish their own research lab.

Overall, the postdoctoral position is a valuable tool for enhancing scientific knowledge, acquiring new skills, and positioning oneself for future success in research institutes. Through the postdoctoral position, researchers can build on their academic achievements, develop as independent researchers, and advance scientific knowledge for the benefit of society.

Fundamental issues and challenges

1. Lack of career prospects: There is a limited number of tenure-track faculty positions available in academia, which can create a sense of uncertainty and instability for postdoctoral trainees who have invested many years in their education and training.
2. Limited funding: Postdoctoral trainees often rely on grant funding, which can be limited and competitive. The current funding climate for research in the United States is challenging, with fewer resources available for scientific research.
3. Inadequate compensation: Postdoctoral trainees are often paid less than they would earn in other professions, which can create financial strain and make it difficult to afford basic needs, such as housing and healthcare.
4. Lack of mentorship and support: Postdoctoral trainees may not always receive the mentoring and support they need to succeed. A lack of mentorship can make it difficult for postdoctoral trainees to navigate the complexities of academic research and to develop the skills and knowledge they need to succeed in their careers.
5. Work-life balance: Postdoctoral research can be demanding, with long hours, tight deadlines, and a heavy workload. Balancing work with personal responsibilities, particularly families, can be challenging
6. Lack of institutional support: Postdoctoral trainees may not always receive the institutional support they need to succeed, such as access to resources and facilities, training and development opportunities, and career counseling.
7. Limited diversity and inclusion: There is a lack of diversity and inclusion in postdoctoral training programs, which can create a sense of isolation.
8. Operational disconnect: There is no mechanism exist (or if available they are less effective) which could bring all postdoc at one platform and train them to get skilled over the period of 3-4 years to get the competitive positions in academia. No special conferences or workshops have been initiated by NIH to train the postdoc for the future.

Existing NIH policies, programs, or resources

1. NIH could expand and improve the several programs by increasing funding for individual awards, providing more support for mentoring and career development, and enhancing the program's emphasis on diversity and inclusion. NIH can modify and expand the programs to include additional eligibility criteria and increase the amount of funding available.
2. Offering more opportunities for resubmission: Starting research at new place is stressful and often time consuming for Immigrants. NIH can provide more opportunities for resubmission of unsuccessful K99/R00 grant applications. This can help to encourage persistence and increase the chances of success for immigrants and non-immigrant students. NIH could simplify the application process and provide more resources and guidance to help immigrants and non-immigrant students navigate the process.
3. NIH could expand and improve the diversity and inclusion supplements to provide additional funding and support for immigrants and non-immigrant students and make then eligible for more funding programs.
4. Providing more support for international students: NIH could provide more support for international students who may face additional challenges in securing funding and navigating the visa process. Extending
5. NIH could increase transparency in the grant review process to ensure that immigrants and non-immigrant students are evaluated fairly and objectively.
6. NIH can provide more support and resources for non-native English speakers, such as translation services.
7. Offering more workshops and training: NIH can offer more workshops and training sessions to help immigrants and non-immigrant students develop the necessary skills and knowledge to apply for the K99/R00 grant program
8. Visa requirements: Immigrants and non-immigrant students may face additional challenges in securing the appropriate visa required to work in the United States, which limits their eligibility for the K99/R00 grant program. This need to be addressed at the administrative levels.

Proven or promising external resources or approaches

By leveraging following external resources and approaches, NIH can enhance the postdoctoral training :

1. Professional societies and organizations: Professional societies and organizations, such as the National Postdoctoral Association (NPA) and the Association of American Medical Colleges (AAMC), provide resources and support for postdoctoral trainees, as well as advocacy for policy changes and best practices in postdoctoral training. NIH should collaborate them to setup annual workshops.
2. Career development programs and workshops: Career development programs and workshops, such as those offered by the Burroughs Wellcome Fund and the Howard Hughes Medical Institute, provide training and mentorship opportunities for postdoctoral trainees to help them develop the skills and knowledge they need to succeed in academia or other career pathways. Opportunities like these need to be made available to all postdocs in the USA.
3. Online resources and communities: Online resources and communities, such as the Future of Research and the Academic Mental Health Collective, provide information, support, and advocacy for postdoctoral trainees, as well as opportunities to connect with other postdocs and share experiences and best practices.
4. Funding and grant opportunities: Funding and grant opportunities, such as those offered by the American Association for Cancer Research (AACR) and the American Heart Association (AHA), provide financial support for postdoctoral trainees to pursue their research and career development goals. More such opportunities need to be linked to the NIH's extramural grants to maximize the impact.
5. Industry partnerships and collaborations: Industry partnerships and collaborations are needed to provide opportunities for postdoctoral trainees to gain real-world experience and build valuable professional connections outside of academia.

Response 889

Perspectives on the postdoc roles and responsibilities

Post-doc is a privileged position to do outstanding science under the guidance of several mentors (one specific research mentor) to develop into an independent scientist.

Fundamental issues and challenges

Current is cost-of-living, including housing and childcare costs.

Future (actually current) is availability of jobs in my area. Due to family constraints, I cannot move across the country (and have been doing so for the last 20 years as a physician-scientist). I continue to be told that I need to pursue the low paying job in hopes that an academic role will open up; all the while tightening the funding and grant structure making it near impossible for people with families to do research and live in areas where we want to live. Instead, we continue to support an archaic system that says to put your science above all else; this is both ludicrous and bad for science. The Federal Government needs to better support policies that help scientists with families.

Existing NIH policies, programs, or resources

K-award system; better child-care support; an understanding that living in places like the San Francisco Bay Area, Seattle, Boston, Washington DC are prohibitively expensive and that we are losing outstanding scientists due to an archaic system that supports only a few powerful labs, and does not select the 'best science,' or the 'most promising' in many cases, but those of us willing to give up a tremendous amount to stay in academia.

Proven or promising external resources or approaches

Better funding for early career awards; stricter commitment standards by universities for multi-year contracts (e.g., places like Harvard and Stanford retain post-docs or Instructors on year-to-year contracts with the promise of something more). A real 3 year contract would actually make a huge difference.

Response 890

Perspectives on the postdoc roles and responsibilities

It feels like a waste of time for anyone that doesn't want to be a professor. It's just more of the same after the long road of grad school. And for a third of what I could make in industry? With no guarantee on when it ends? Unless I specifically want to be an academic researcher constantly begging for grants, why WOULD I choose an academic postdoc over jumping into industry immediately?

Fundamental issues and challenges

They aren't paid nearly enough and they aren't treated like an actual employee. They're treated like glorified grad students.

Existing NIH policies, programs, or resources

Give a benefit over industry. Get money funneled to pharma companies to instead be put into postdoc specific grants

Proven or promising external resources or approaches

Grad school departments invite speaker's constantly. Maybe send people to do their best to convince people towards academia

Response 891

Perspectives on the postdoc roles and responsibilities

The postdoc is primarily a position from which to develop an early career fellowship or faculty/research scientist job application.

Fundamental issues and challenges

Pay is the number one issue above all. Current salary ranges do not compete with the entry-level salaries of many technical college graduates with Bachelor's degrees. Pay increases are not adjusted for inflation if they occur at all. Postdocs do not even cost labs as much as graduate students at many institutions.

Existing NIH policies, programs, or resources

To provide a realistic outlook on the academic job market, institutions should be required to publish forecasts for the number of academic positions they will hire in the next 5-10 years in each department.

Proven or promising external resources or approaches

No response

Response 892

Perspectives on the postdoc roles and responsibilities

Postdoc must be a training for independence. And we know training without practicing is pointless. There must be mechanism, e.g. leading research projects, applying for funding, to allow practicing independence. Right now, all universities only "teach the theory", but at the same time, job requirements look for "experience".

Fundamental issues and challenges

For retention: postdoc salaries are ridiculously low. Postdocs are the main driving force in the billion-dollar research industry. It's unbelievable how low they're paid.

Also important: matching expectations and what they're provided with (see my comments about independence).

Existing NIH policies, programs, or resources

Higher salary, and eligibility to apply for funding and leading research projects.

Proven or promising external resources or approaches

More salaries. It's proven to help with retention.

Response 893

Perspectives on the postdoc roles and responsibilities

From my experience; being a postdoc means being a PI of a very small lab without full independence and without teaching responsibilities. We oversee our own research while we mentor junior members of the team to a certain capacity like a PI. We also write grants like PIs do, albeit with a limited focus and a limited timeline. Our scientific scope is narrower than a PI's because we primarily focus on our own research and our tenure is limited.

Following are my responsibilities as a post-doc (which I believe apply to my colleagues as well);

Research responsibilities: These for me include performing experiments, analyzing data, reading papers relevant to my research, presenting my research at conferences, finding immediate research questions and thinking about the best ways to address these questions, optimizing new experimental methods, writing papers. The most challenging parts of my research responsibilities are finding interesting and novel research questions which I can address and performing/optimizing experiments which are new to me and my immediate research environment.

Mentoring responsibilities: As relatively senior member of our research team, I frequently help students and other members of the research team to optimize experiments and analyze data. I also give advice on their research projects, their career paths and other topics (i.e. how to forge collaborations, how to prepare an efficient presentation for a conference).

Other responsibilities: Forging and maintaining collaborations, writing grants, volunteering for outreach activities, attending to workshops and talks.

Fundamental issues and challenges

1. Financial obstacles: postdoc salaries are often a fraction of industry salaries. After going through graduate school, which also doesn't pay well, having an extended postdoc is a massive financial burden. During this time, we also often do not get proper retirement or health benefits, which adds up to the
2. Limited academic prospects: Academic job market is extremely competitive and it seems almost impossible to get an academic job. Therefore, pursuing a postdoc seems like an unfavorable option and postdocs want to transition to academia as quickly as possible.
3. Limited resources: As I elaborated above, childcare, healthcare, mental health and retirement benefits are almost nonexistent in several institutions for postdocs, which is making postdoc life more difficult.
4. Visa issues: For many international postdocs, visa issues limit the duration of postdoctoral training, cause financial problems and added stress.
5. Unfair standards for productivity: The personal struggles we go through, the bumps in the road during our training or our scientific potential are mostly overlooked. Mostly, we are reduced to impact factor of our papers and the grants we manage to secure. However, the postdocs coming from big labs with lots of resources have an unfair advantage compared to postdocs from small institutions with little resources.

Existing NIH policies, programs, or resources

1. Salary increases could help with retention.
2. NIH could enforce institutions to provide necessary benefits for postdocs.
3. Initiatives to help postdocs gain independence earlier (i.e. K99-like grants) would help to limit the duration of postdocs and assist successful postdocs to become more independent.
4. In addition to grants like F32 and K99, NIH could provide small grants that postdocs could apply to fund their research expenses, which again would help with independence and also level the playground for postdocs from smaller labs. Alternatively, postdocs with existing grants (i.e. F32, K99) could be allowed to request additional funds just for research expenses.
5. Pay cap for grants could be lowered, and the eligibility window for postdoc grants could be extended. Given that many postdocs last longer than 5 years, the eligibility window for these grants are relatively small and push the postdocs to publish very early.

Proven or promising external resources or approaches

I am personally excited about the MOSAIC K99/R00 program. I think initiatives like these could improve the experience of postdocs by providing them a support network.

Response 894

Perspectives on the postdoc roles and responsibilities

I co-wrote a grant while I was a graduate student based on an app that I created. It was rejected, in part because I was listed as a co-PI. We resubmitted the grant with me as an unnamed postdoc, and it was accepted (our personnel score was much higher without my name on the grant). I declined the position and left for industry because I could not afford the postdoc paycut. I am still working on the grant on the side because it was my passion project, and I am the only one who can write the code to update the app. But, I could not afford to move somewhere new for two years for $55k a year when I make 2.5x that in industry. I can not uproot my family for something temporary that would not provide high-quality benefits and parental leave. To me, this postdoc position would have been a full-time job that required a high level of expertise in a particular field, and I deserved to be compensated as a co-PI. I feel that I was pushed out of academia by other academics.

Fundamental issues and challenges

Low pay, low respect, need to relocate family somewhere temporarily, doesn't lead to better employment prospects afterwards. Industry treats us better.

Existing NIH policies, programs, or resources

Pay postdocs a living wage. Don't pretend that we are still in need of additional training—we have PhDs. We can continue learning while earning enough money to pay our bills. Allow postdocs to work remotely if possible so that they don't have to uproot their family for 1-2 years. Include 3 months parental leave minimum.

Proven or promising external resources or approaches

Pay postdocs a living wage. Provide a minimum of 3 months parental leave. Demonstrate that doing a postdoc leads to better employment prospects afterwards.

Response 895

Perspectives on the postdoc roles and responsibilities

Both graduate students and postdocs do not earn enough for the work that they do. I chose to go into industry without a PhD over a job in academia because I could be paid a respectful wage with a bachelor's degree doing as interesting work as I could have in academia without sacrificing years of my life with subpar pay.

Fundamental issues and challenges

Pay and respect for work-life balance.

Existing NIH policies, programs, or resources

Improving pay for postdocs and encouraging universities to pay graduate students a fair wage.

Proven or promising external resources or approaches

Look to industry for what a person's wage potential is. Postdocs should be competitive for the years of experience the person has.

Response 896

Perspectives on the postdoc roles and responsibilities

A view a postdoctoral position not only a place to get specialized training from a mentorship team to further our careers, but also one in which we are productive and contribute significantly through research, clinical, administration roles.

Fundamental issues and challenges

there are much more profitable and balanced (for work/life) options out there that are easily accessible. The route of a traditional postdoc will be archaic

Existing NIH policies, programs, or resources

It needs much more money to provide for stipends, but also to fund research. Why would a postdoc elect to enter a the ultracompetitive (as quoted but individuals at the NIH) world of applying for grant funding for an expected rejection (at least for the first time around)? It's not a very rewarding ecosystem for postdocs thinking that this could be their lives as academics.

Proven or promising external resources or approaches

The pressure of external jobs that offer a better "reward" systems (e.g., money, respect, work/life balance) are postdocs biggest threat. The prestige and the specialized training that drive people to postdocs is something people care less and less over time.

Response 897

Perspectives on the postdoc roles and responsibilities

The postdoctoral role is a mentored training position designed to help foster the skills and competencies necessary to thrive in a variety of jobs, both inside and outside of academia. It typically involves some combination of scientific research, interaction and communication with the scientific community,

mentorship of other trainees in the lab setting, classroom teaching, and institutional service. At its best, the postdoctoral position is mutually beneficial to the principal investigator of the lab and to the postdoctoral fellow: The postdoc conducts high quality research and service to the lab, while the PI oversees the mentored growth of the postdoc toward their personal and professional goals. At its worst, the postdoc becomes an unwanted, but necessary step toward career goals marked by long and difficult working hours, unclear expectations, lack of clear mentorship, and numerous other problems that have been documented elsewhere.

Fundamental issues and challenges

1. Perceived lack of ability to negotiate salary and other job benefits. The fact that institutions adhere to the NIH recommended salary is likely the single largest factor inhibiting recruitment of high-quality postdocs. It does not take into account cost-of-living for the geographic setting and thus is simply too low to be a compelling draw for individuals who already have achieved a PhD. The evidence for this is clear in the large-scale migration of PhDs to industry positions where salaries are substantial.
2. The personal/professional costs, both in time and in finances, of completing an academic postdoctoral position are high alongside the difficulty of securing a tenure-track job. The hopelessness that faces even talented postdocs for competing for tenure-track academic positions is substantial.
3. Many (but not all) postdocs have observed/experienced a major work-life imbalance in their PIs, and decide not to follow in that path, therefore seek employment elsewhere.

Existing NIH policies, programs, or resources

1. One example of poor policy surrounding the incentive structure for quality postdocs to continue in academic science is the financial incentives around fellowship awards. After being awarded an F32 fellowship, my personal salary did not change and I was removed from the retirement contribution system from my employer (since I was no longer technically an employee as my salary came from Federal Funding sources.) By being removed from the retirement contribution system, I've lost out on the 50% match contribution, a substantial loss for my retirement savings, early in my investing life. The NIH should alter policy to better incentivize talented individuals to compete for fellowships (like the F32 and K99) by not only covering their salary and helping the lab financially, but also providing additional salary for these individuals. Otherwise, as in my case, their is actually a financial incentive to not apply for fellowships as it weakens my retirement savings.
2. The NIH salary guidelines should scale with geographically-based cost of living. A flat rate is not equitable, nor is it fair to those living in high cost-of-living areas.
3. Postdocs should be allowed to negotiate salary, working hours, benefits, and other aspects of their positions. This would grant postdocs more power and make the position more attractive as it would better fit their personal and professional needs. The NIH could do a better job of branding postdoctoral training a professional role (not merely trainee) in which individuals should be granted bargaining power and additional priveleges. As it stands now, it's more similar to completing another PhD, albeit with a slightly higher salary.

Proven or promising external resources or approaches

No response

Response 898

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is essential for developing an independent research program, but it need not be as long as it is now.

Fundamental issues and challenges

With a modular grant with significant effort for a PI and 100% effort for a postdoctoral fellow, there is not much left over for the research, itself.

Existing NIH policies, programs, or resources

There should be many more fellowships and K99R00 awards. An individual postdoctoral fellowship was critical in my career development.

Proven or promising external resources or approaches

I was pleased to see that postdoctoral salaries would be increased.

Response 899

Perspectives on the postdoc roles and responsibilities

Postdoctoral Training is an excellent opportunity to perform research from a trainee and a leader perspective. In addition to research, the training is useful to learn management and acquiring funds for future independent research.

Fundamental issues and challenges

There are many concerns but I would like to highlight a few of them:

1. Funding opportunities for international postdocs are really low which is a real struggle in Science. This makes the scenario highly competitive leading to either leaving academia or compromising for roles.
2. The salary is also another major issue. At postdoc level, majority of fellows have family responsibility and the salary is not sufficient for childcare and living expenses especially after the inflation.

Existing NIH policies, programs, or resources

The K99/R00 should be expanded till 5 years of postdoc experience as in the fourth year majority of international postdocs with J1 visa struggle with waivers and other visa related issues.

Proven or promising external resources or approaches

No response

Response 900

Perspectives on the postdoc roles and responsibilities

I view postdocs as largely independent scientists who work in collaboration with a mentor to gain additional expertise in their subject matter, or to gain a new perspective on their subject, prior to ultimately leading a research group on their own. I think this role comes with increased mentorship and responsibility, and frequently involves helping advisors mentor or teach younger students.

Fundamental issues and challenges

Postdoc salaries are abysmal compared to any other job that highly qualified phd holders could take up after graduation. This is particularly true for people that choose to go into industry but even public sector jobs pay more with way higher job security and long term prospects than a post doc. For example, the NIH minimum last year for a new post doc was on the order of 53,000$ a year I believe. In my field (psychology/neuroscience) common route that people take after graduation include data science type roles (where the starting salary is approximately 150,000 a year), or government policy roles where the starting salary is around 90,000$ a year. Either of these choices provide more flexibility on location, longer term job stability, and significantly higher pay than a postdoc. Currently, doing a postdoc means spending 4+ years in undergrad, 5+ years earning very little as a phd student, and then committing ~3 years to earning still very little during the time in one's life when family and childcare and housing costs frequently rise. For anyone not from a family that could support them financially this is virtually untenable.

Existing NIH policies, programs, or resources

The NIH minimum postdoc salaries need to be raised by a large amount. This year they were not raised even by enough to match inflation, much less to match any type of wage growth seen in other sectors. This increase needs to be helped by federal funding agencies increasing the amount the provide for postdocs in grants, not keeping the grant amounts the same and requiring faculty to pay postdocs more from the same amount of money (this is an unfair burden on faculty members).

Proven or promising external resources or approaches

Pay postdocs more

Response 901

Perspectives on the postdoc roles and responsibilities

Responsibilities include the design and execution of a project that could ultimately result in both publications and an early career award grant. Mentorship of junior members in the lab is also an important component.

Fundamental issues and challenges

In all of academics there are no fixed hours. People work very hard with a major reward being discovery and sharing knowledge. As this is an intense process and a labor-intensive one stress around being able to support oneself financially and perhaps a Family should not be added to the mix. Unlike 40 years ago most post docs do not have a stay at home wife caring for their Children and home responsibilities. Most post docs are balancing work and family life just like the faculty. Raising the minimum salary for postdocs is a great initiative but without putting the money into grants like r01s there's no way to pay for this

Existing NIH policies, programs, or resources

Increase of minimum wage for postdocs while concomitantly raising the standard budget for grants

Proven or promising external resources or approaches

Many private foundations have fellowships that both provide an increase salary for the postdocs as well as networking opportunities

Response 902

Perspectives on the postdoc roles and responsibilities

A postdoc should be treated more like junior faculty than senior grad students.

Fundamental issues and challenges

1. Lack of academic positions/funding beyond postdoctoral position.
2. Perception of zero value to pursuing a postdoctoral position if thinking of eventually moving on from academia.
3. The value the government and academic institutions put on postdoctoral positions is too low especially when compared to positions in industry.
4. Industry is now allowing for more intellectual freedom in R&D work making the assertion that "all you do when you work in industry is work to boost profits" false.
5. Postdocs are often ignored or treated as disposable in the academic departments in which they work.
6. Postdoc fellowships are at a time in life (late 20's-mid 30's) when stability is valued over job satisfaction.
7. The role of a postdoc is ill-defined and varies greatly from place to place; there is substantial risk in taking a postdoc because a factor as simple as not agreeing with your PI can seriously hinder your career.

Existing NIH policies, programs, or resources

1. Increase salary funding; postdocs (at least in my field of neurophysiology) have considerable training that is worth a great more than the NIH minimums.
2. Promote a new mechanism (which isn't the F31) that funds postdocs to pursue academic research without having invested months or years in obtaining preliminary data for a F31 that might never get funded; something like the Dutch NWO talent programme which funds investigators and not projects.
3. Boost the role of postdocs in grant-funding decisions; why can't postdocs take on a more serious role in academic research beyond the bench.

Proven or promising external resources or approaches

The NIH needs to take on the role of supporting its postdocs with more than just the occasional, and often elusive, F31. The institutes we work at will always support their faculty over their postdocs and its time we had a group (like the NIH) to support us in that same way. Ultimately NIH needs to fund PIs that are good mentors, not just good grant writers.

Response 903

Perspectives on the postdoc roles and responsibilities

I believe that a postdoc is meant to be a training opportunity. It's a chance to build preliminary data and skills that I will carry to my own lab. This means taking on a leadership and mentoring role in the lab. We are not simply research staff that generates data for our PIs (though sometimes PIs treat us that way).

Fundamental issues and challenges

1. Salary and benefits: All of my colleagues from my PhD program that went to industry instead of an academic postdoc position make about double my salary or more. At this stage in my life, I am ready to settle down, buy a house, start a family, etc, but I'm unable to do that on a postdoc salary. I'm not able to save money to buy a house or start a family. Leaving academia for those personal goals is appealing. I also have no mechanism at my university to save money for retirement. Most benefits available to employees/faculty are not available to postdocs. We are treated as trainees or employees depending on what is convenient for the university, but this means missing out on all of the benefits of either (even something as simple as commuter benefits).
2. Non-research activities: Most postdoc fellowships available punish you for teaching or pursuing other non-research activities such as service or outreach. These activities are critical for our careers, but we are not allowed or encouraged to pursue them. Sometimes this is built into fellowships (>75% research) but other times it is the reviewers themselves who take points off based on the professional development done outside of research. There also aren't widely-available resources to teach us how to run a lab (i.e. lab finance courses, management courses, etc) which sometimes makes us feel like we're not ready to move on.
3. Community: Graduate students have a community and activities that unite them. Postdocs don't really have the same network. It's hard to find and meet other postdocs with similar goals, which can make you feel alone. Having postdoc "cohorts" may help this.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 904

Perspectives on the postdoc roles and responsibilities

The academic career has been always appealing to me in spite of the known fact that the paid salaries are always lower compared to industry jobs. The curiosity to understand the process in life which can help in the discovery of a drug for any disease or health complication in the future is exciting and allows us to enjoy our work. The postdoc position is very crucial for training to become an independent researcher and learning to administer a laboratory as well as plan and execute experiments on our own. The role helps in writing grants so that we can eventually upgrade to early career scientists and explore the field using our expertise. Currently, as a postdoc, we have to maintain the lab funds, ordering of reagents, perform experiments and communicate the results to the supervisor as well as the collaborators and other scientists in the field at conferences, and train graduate students to gain interest in the field, write protocols, write grants to obtain extramural as well as intramural funding to the lab to sustain salary and funds for reagents. It is a lot to handle as a postdoc but this rigorous training helps in shaping us to become future independent scientists and have our own funding and lab to explore science.

Fundamental issues and challenges

The Fundamental issues and challenges in recruiting and retaining postdoctoral trainees in academic research are the low salary paid, the low amount of funding available, and the increasing expenses due to inflation. The lifestyle of a postdoctoral fellow has been plummeting due to the steep increase in the price of general necessities in the market with no appreciable increase in our salary to balance the inflation. Anyone would prefer to work in a field where their hard work is compensated with a respectable salary and benefits. However, that transition has failed to occur in academic research which is forcing the good quality postdoctoral trainees to divert towards industry jobs and be able to sustain a minimum lifestyle and support their families.

Existing NIH policies, programs, or resources

The existing NIH policy should consider increasing the postdoctoral trainee's salary on a national scale and implement every institute and university in the USA to follow it. The increased salary should compensate for the inflation and will surely provide a better lifestyle which will not make a postdoctoral fellow think about sacrificing their dream job and joining an industry just to sustain their livelihood. The NIH should also consider providing a training platform for the postdoctoral trainees to write extramural grants to become early career research scientists and have more open positions for grant funding. The crunch and high competition in obtaining grants and funding is another factor that forces postdoctoral trainees to leave the field and join the industry as they don't have the stress to obtain funds for their survival in the job.

Proven or promising external resources or approaches

The increase in postdoctoral trainee salaries overall in the country will surely improve their recruitment and provide job satisfaction and will prevent their diversion to industry jobs. The working environment will also get better with the increase in funding and removal of stress in the personal financial life of the trainees to make the work environment energetic and a place where one would like to come and work.

Response 905

Perspectives on the postdoc roles and responsibilities

Advanced scientist but still during a period of training. Has good understand of biological systems, theoretically and experimentally. During the postdoctoral time will improve skills both experimentally and theoretical and identify a research direction that follow for an academic career. Ideally by year 4 will apply for a K award.

Fundamental issues and challenges

The major issue is the salary, which is not competitive with industry. The NIH $250k/year does not help even we want to pay more. Impossibility to apply for fellowships for the non-domestic postocs. this is really a major issue, as a lot of the international postdocs are very good and competitive.

Existing NIH policies, programs, or resources

increase the R01 from $250k/year, increase the salary for postdocs, allow international postdocs to apply for fellowships. Make sure that fellowships do not go to the same groups that already have T32 awards.

Proven or promising external resources or approaches

All these depend on the following:

increase the R01 from $250k/year, increase the salary for postdocs, allow international postdocs to apply for fellowships. Make sure that fellowships do not go to the same groups that already have T32 awards.

Response 906

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as sort of a stepping stone, and a way to gain further expertise before starting one's own laboratory. I do think that it's essential to expand one's research during the postdoctoral phase.

Fundamental issues and challenges

There are several issues. One is the fact that post-doctoral positions simply do not make enough money compared to industry positions. This means that many people who might have done a post-doc leave for

industry. Second, is the lack of support from universities for post-docs when they obtain grants. Many institutions take post-docs off their retirement and insurance benefits if they obtain NIH grants such as the F32. This means there is a serious disadvantage to obtaining one financially, despite the upside on the professional level. For individuals without large family support or other means, this results people who might have applied deciding not to simply based on the fact that they will lose the benefits that normally come with a postdoctoral position. Third, the issue of overwork. Personally, I have achieved a better work life balance in my post-doc, but many post-docs I know are pressured by the PIs to work insane hours and produce results despite not having access to the resources they need. This results in a disillusionment with the academic field. Overall, I think this results in many people seeking work outside of academia. I have recently observed that many labs, even prominent ones at highly sought after institutions, are unable to obtain and retain postdoctoral scholars.

Existing NIH policies, programs, or resources

Yes. My primary concern is the fact that when researchers obtain NIH grants, they lose out on the benefits the university provides them. This is a serious disadvantage to obtaining a grant, and I'm not sure why this became something that was widely accepted in the scientific field. I know I was actually relieved when I did not receive an F32 for this exact reason.

Proven or promising external resources or approaches

I think asking for responses from postdocs is a start. I think actually enforcing certain guidelines on universities when postdocs obtain grants would be another step. Universities do not have much accountability in my understanding for the outcome of what happens after postdocs obtain grants, i.e. do they actually go on to academic positions, are they successful, are they supported with what they need? All of the burden is on the postdoc/grant obtainee, and little on the university, yet they benefit both financially and from the prestige that comes with this. There needs to be more accountability of the universities in providing a support network.

Response 907

Perspectives on the postdoc roles and responsibilities

I view it as an opportunity to increase my knowledge base of a different field prior to starting my independent career. I also see it as an opportunity to increase my skills as a mentor to younger scientist prior to running my own lab.

Fundamental issues and challenges

The biggest challenge in recruitment/retention/quality of life of postdoctoral trainees in academic research is the amount the postdocs earn on a yearly basis, especially in areas where the cost of living is so high. On standard post-doc pay, it is very difficult (if not impossible) to pay for a one bedroom apartment in an areas such as Boston or San Francisco. Upon earning a PhD, postdoctoral trainees who are single and living in the higher cost of living areas should not require having a roommate(s) in order to pay their monthly bills.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 908

Perspectives on the postdoc roles and responsibilities

I was a post doc for almost 5 years in [redacted for anonymity]. The Role of postdoc to me is a training for me to become an individual PI. But this is not the case from my experience. PI are just treating postdoc as a slaves to get the job done for their lab. Treating immigrant postdoc due to their visa as a slaves more prominent here in USA.

Fundamental issues and challenges

The main issue which need to be addressed.

1. Give some decent salary (70000$/annum atleast) for postdoc. They are highly educated individuals. If you need quality you need to pay.
2. Treating Immigrant postdoc as a slave due to their visa issue is highly prominent. Those are should be monitored with internal and external fellows.

Existing NIH policies, programs, or resources

1. Salary policies should be modified.
2. Some policy should be made to help, how the postdoc are trained to get into their own academic position.

Proven or promising external resources or approaches

No response

Response 909

Perspectives on the postdoc roles and responsibilities

Great opportunity to work on developing specific skillsets and networks, but it comes at a significant financial opportunity, social, and emotional costs as well. Positions must be chosen wisely so as to not negatively impact one's career. The recent trends towards increasing numbers of postdocs required for true return on investment in one's careeer are concerning.

Fundamental issues and challenges

The academy is driving many self-starters away because it is a highly politicised monoculture which enforces conformity to its increasingly bizarre views—often in area's completely unrelated to one's work. This was completely unacceptable until recently. Having done a postdoc in the UK, it's absolutely shocking how bad the academy behaves in the US. Researchers there are laughing at us. The job is hard enough, and this serious cultural overreach makes it near impossible to focus on one's work. This cultural shift also significantly impacts international students, frustrating and confusing them and leading them to pretend to comply for fear od losing opportunities. Often cultural ideas are enforced by the people who hold unrestricted power over the futures of early career scientists, and they abuse this power with veiled threats and a smile. It's disgusting, and really not as bad in industry—people and their views are treated with privacy and respect. Many of my colleagues from across the political and social spectrum have spoken to me privately about how they're glad to have left such a toxic environment, and how bad it's gotten in the last 6 hears or so. It's not that people don't want to work hard—we just don't want to work with tyrants who bin us on immutable characteristics on a daily basis.

Existing NIH policies, programs, or resources

Stop enforcing political and social views in the workplace. You know you do it, but when people leave, you don't listen to the reasons why. Remember that the loudest voices are rarely the most numerous. Either adjust your policies, or accept that people will continue leaving for places where their merits are truly valued over their perceived virtue on social and political topics.

Proven or promising external resources or approaches

Conduct honest political and social climate surveys, without loaded questions, and actually to ALL perspectives (yes, even those you don't personally like) without judgement. Then remember, when adapting policy, that silencing a minority, even a tiny minority, chills the entire culture. They manage to keep open debate alive in the UK, so it can be done.

Ultimately I don't believe the academy will take the necessary actions to save what remains of rationalism, which is why I'm leaving. Good luck.

Response 910

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

There are two basic problems:

1. pay for postdocs is too low and
2. academia is a pyramid scheme.

The pay for a post-doc at our institution is almost criminally low for someone with so much education in a place with such a high cost of living (and we do pay above NIH salary scale). Post-docs only make slightly more than research assistants with a BA (42k vs 60k). For people in their late 20s and early 30s, you can't support a family on that, especially working the hours that are typical for a post-doc. But, from the other side, paying postdocs more eats into budgets, so the standard R01 budget would need to increase. The second issue is that there will not be academic jobs for all the postdocs at the end. (There simply cannot be, since there are generally multiple postdocs per lab. The number of academic positions is not expending exponentially). So from an individual's perspective, does it make sense to toil for years at low pay, only to have no payout at the end? If you're going to end up going into industry because you can't get an academic job, why not just go earlier?

Existing NIH policies, programs, or resources

Improve pay scale. Allow budgets to increase each year to account for salary increases. Administrative supplements for high cost of living areas to allow higher pay scale.

Proven or promising external resources or approaches

No response

Response 911

Perspectives on the postdoc roles and responsibilities

A postdoc is a training position in which young scientists can explore new research areas, refine their research skills, and expand their academic/professional network to prepare for a career as an independent scientist and to become more competitive on the academic job market.

Fundamental issues and challenges

Recruitment: in my experience PhD candidates "apply" for postdocs by reaching out to potential advisors that are in their PhD advisor's academic sphere. More concrete recruitment efforts by "hiring" parties such as reaching out to university graduate listservs or posting on job websites or linkedin would likely increase recruitment, especially of high quality candidates from "less-prestigious" universities or with PhD advisors who are not as well-known.

Retention/Quality of Life: reducing postdoc isolation by building a more cohesive postdoc community

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increasing scientific engagement and networking amongst postdocs with similar research interests through internal, informal meetings/symposia perhaps on a regular schedule.

Response 912

Perspectives on the postdoc roles and responsibilities

Research, write grants, training, and publishing/presenting/disseminating

Fundamental issues and challenges

My salary was 47,000 at [redacted for anonymity] with a new family and I had a mentor who did not allow me to network with others. She wanted everything to go through her or be about her projects. It was hard to learn the skills I wanted to learn (and was hired to learn). A lot of the postdoc became me working for "less" on her research projects and not networking (as I had expected to do). It was not a good experience and I then joined another government fellowship, which guaranteed me a career in their

organization and paid me twice my original postdoc salary to be trained. I have not recommended a postdoc to similar scientists, and encouraged them to find fellowships that are more targeted and will serve as a pipeline into their career.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Ensuring that mentors feel connected to other similar students to ensure that they can recognize a problem/oppression; opportunities to transition from mentor to mentor as needed; and generally, more accountability across the postdoc experience. For example, if one supervisor is training their mentor and forming a faculty member or industry expert vs. someone who is asking their postdoc to work nonstop to improve their faculty portfolio.

Response 913

Perspectives on the postdoc roles and responsibilities

I got my PhD degree from China, and then came to US to have postdoc training, hoping to get improvement on research training, have novel insights into my research field, and pulish high quality papers. And based on my discovery to establish my own lab in either China or US.

Fundamental issues and challenges

This is my eighth years working as postdoc. I worked as postdoc in [redacted for anonymity] from 2015. At 2020, I relocated to [redacted for anonymity] to continue my research on retinal development and disease. It is frastrated that I cannot get a position so far, although I get serveral first-auther papers (Journal of Neuroscience, Cell Reports, iScience). The biggest block is that I cannot apply for NIH fundings without permenant resident identity.

Existing NIH policies, programs, or resources

Have some more fundings for foreigners works in US. So that postdoc could have more freedom on doing research, but not totally obey the mentors.

Proven or promising external resources or approaches

Have a survey on the postdocs' satification to their mentors who are supported by NIH.

Response 914

Perspectives on the postdoc roles and responsibilities

Gaining expertise on handling scientific projects at individual level. Get upgraded with the recent scientific techniques and application. As much as possible share the knowledge to the students and colleagues.

Fundamental issues and challenges

Its situation specific. Funds are the major hurdle. Project timelines, and its interference in getting deep in the topic.

Existing NIH policies, programs, or resources

Increase in the Post doc fellowship.

Proven or promising external resources or approaches

Improving post doctoral .

Response 915

Perspectives on the postdoc roles and responsibilities

The roles and responsibilities are unclear; a lot of people are unresponsive and gatekeep certain roles.

Fundamental issues and challenges

Pay your postdoctoral trainees more. They are all going to industry since they can make over $90k annually compared to $45k.

No one can afford to live on $45k.

Existing NIH policies, programs, or resources

Pay your postdoctoral trainees more. They are all going to industry since they can make over $90k annually compared to $45k.

No one can afford to live on $45k.

Proven or promising external resources or approaches

Pay your postdoctoral trainees more. They are all going to industry since they can make over $90k annually compared to $45k.

No one can afford to live on $45k.

Response 916

Perspectives on the postdoc roles and responsibilities

The postdoc is a woefully underpaid position that (ideally) allows a scientist to gradually transition from a mentored position (Ph.D. student) into being a truly independent researcher. This change happens gradually because a postdoc is given a significant amount of intellectual freedom and resources while not being immediately bogged down by the administrative aspects of a leadership position (i.e. constantly applying for funding, serving on committees, etc.). Additionally, postdocs still do receive formal mentoring, including career advice, and can use the time to become recognizable experts in their sub-field.

Fundamental issues and challenges

1) Salary,
2) Salary,
3) Salary.

Postdocs are highly trained individuals who are typically at the age when one hopes to begin "settling down" in personal life, having kids, beginning to save for retirement, etc. The current academic postdoctoral salaries are not commensurate with the amount of training/education required for it and are typically insufficient to support a family in almost any major city in the country.

Existing NIH policies, programs, or resources

More funding for postdoctoral salaries, higher minimum postdoc pay scale.

Proven or promising external resources or approaches

No response

Response 917

Perspectives on the postdoc roles and responsibilities

A transitional role for a professional with an advanced degree which gives independence to the scientist and treats them as professionals (not "students" or "trainees")

Fundamental issues and challenges

Low salary and benefits, uncertainty about the future

Existing NIH policies, programs, or resources

Higher salary, better support for parents, specifically for NIH—treating postdocs as employees (both in terms of benefits and giving them paid parental leave during their first year if they convert to a research fellow position as currently they are not eligible for PPL)

Proven or promising external resources or approaches

Look at Europe—better work conditions overall

Response 918

Perspectives on the postdoc roles and responsibilities

I houh I would e doin he same thing as PhD. Focusing on one project and develop myself on it. However, the reality is not the same. I am working actively on six different projects (they each has different focus) and non of them are going to be my first co-author. I don; think staying in academia is helping me to improve myself. I could do the same thing in industry with a higher pay.

Fundamental issues and challenges

The pay is not enough. I have a roommate which I passed the age to have one. I want to have my place and be able to afford the things that I want to have.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 919

Perspectives on the postdoc roles and responsibilities

I view my postdoc as a training opportunity in preparation for a tenure-track assistant professor position.

Fundamental issues and challenges

The pay given to postdocs is too low and too inconsistent across the nation, not reflecting different costs of living in different cities. These positions should be more equivalent to staff scientist positions in terms of pay and benefits (ie full employee status). It is ridiculous that a person with a PhD should not be compensated for it.

Existing NIH policies, programs, or resources

Support for women having children, including funding for a technician during the pregnancy / birth year. This should be more widely available and normalized as an expectation of support from the NIH for anyone qualified.

Proven or promising external resources or approaches

Higher salaries for postdocs is the only way

Response 920

Perspectives on the postdoc roles and responsibilities

I see my postdoc as an opportunity to apply my previous acquired knowledge to a new set of projects and an opportunity to acquire new knowledge. Not only involved directly in research but also in navigating the path to independence to become a principal investigator (PI). This task comes with many obstacles since English is not my first language but also because the research system harbors its own complexities. For example, awards and positions are not granted by one research council but from different research institutions either through individual grants or institutional efforts, each with its own recruiting criteria, requirements, and eligibility.

Fundamental issues and challenges

1. Complex immigration policies add to everyday burden of not knowing how long we can stay; how difficult it will be to transition to the next type of visa and if that will be even possible. All this relying only on the willingness of each institution's Human Resources department to make this process easier (or even harder).
2. Scarce salary for the high level of training we have compared to positions in industry or even jobs that do not require any skillset. This is even worse in areas with expensive living costs. It impacts motivation and willingness to pursue a career in academia.
3. Job insecurity: we rely and depend exclusively on the PI that hired us, their grant situation and willingness to maintain the postdoc position available. For international postdocs this is even worse: termination of our postdoc position means we must leave the country, without the possibility to apply what we learn along the postdoctoral experience in the US.
4. Uncertain career prospects:
5. very few PI positions available; for international postdocs it's even harder to obtain training grants and fellowships that would make us more desirable for PI positions.
6. Transition to other career paths seems murky and unclear. For example, industry requires a skillset we are not trained for (language, structure). Additionally, it's even harder for international postdocs to apply due to harder immigration policies in the non-academic sector.
7. Lack of unionization: if postdocs make the research enterprise possible, we need to be heard consistently, not only when things go awry. This will enable all interested parties to correct the pathway before the system loose track and will be much better for the future of science in the country.

Existing NIH policies, programs, or resources

Since more than 50% of postdoctoral fellows are from outside the US, the system would benefit from allowing foreigners to apply to all the NIH grants and awards. Not only K99-R00 seems to be the only opportunity we have but it is a very tough competition at a very high level. Other foundation awards are scarce and highly competitive as well. Smaller grants and career development awards for earlier stages (first-third year postdoc) would benefit the community to improve training in grantsmanship and slowly build a successful track to finally apply to the K99-R00 at the end of the postdoctoral experience.

Proven or promising external resources or approaches

Our salaries are directly paid by NIH grants to the PIs. Why don't create a unified job search and application engine for all postdoc candidates? This would make it easier to apply to different positions in diverse institutions that are funded by NIH. As it is today, research institutions impose requirements that are difficult to navigate and eligibility-recruitment is a black box. Like other research councils around the globe, the selection process would be more transparent and accessible if there were centralized committees that evaluate all the applications and grant the positions to the best qualified individuals. This would not only help find the most suitable candidate for the project but also make clear expectations on both sides to look for the best fit in the triad: postdoc, PI, institution. The committees would be formed by PIs and advanced postdocs in different areas of research from funded institutions.

Response 921

Perspectives on the postdoc roles and responsibilities

A training step toward achieving an independent status, opportunitygain additional technical and scientific information and training, gain experience in teaching, administration of grants, training of grad students, and communication skills oral and written. All of this can be done in a 2-3 year period.

Fundamental issues and challenges

Salary and benefits. Inability to have funding to support the training experience. While postdocs can write grants they are generally not equipped to get a k99 in the first year or two if postdoc. That means if they do get this, they are pushing a 4-5 year training period. This puts them off a career in academia.

Further postdocs who become pregnant and are on a training grant should be allowed to take the full 3 months of federal leave. Currently they are only allowed 8 weeks. NIH level salary should be a required

minimum. There are postdocs in some very expensive cities like SF or NYC being paid below NIH levels. There should be some flexibility in this salary

Should have opportunities to work on training beyond research-things related to leadership and independence.

Existing NIH policies, programs, or resources

Be careful about requiring too many programmatic level training. If you do require travel for postdocs, please appropriately recognize this-plane tickets are exorbitantly high and not everyone lives next to a hub or on the east cost. My last 5 plane tickets cost 900-1200 and thus you need to consider appropriate travel expenses.

Proven or promising external resources or approaches

No response

Response 922

Perspectives on the postdoc roles and responsibilities

As an NIH funded scientist, a postdoctoral relationship is symbiotic, I train and mentor the postdoc and they perform experiments, learn how to plan studies, address hypotheses and write papers. This benefits us in that it advances my research program and helps them develop their own

Fundamental issues and challenges

People can graduate from college and get jobs as consultants. Postdocs need to go to grad school and even as fellows make less than those consultants. There is little to no job security, unlike other lower paying/high education jobs which are driven by the person's passion, eg school teachers have unions and guaranteed salary. This is due to the "soft money environment" that academic researchers rely on. Industry has higher salaries, but is also not 100% stable and allows less autonomy and creativity.

Existing NIH policies, programs, or resources

The recent pipeline issues is due to the impact of the low NIH funding rate. I have been constantly funded by NIH since 1993 as a PI. When the NIH funding percentile was in the 15-20 range and for several years after, it was not difficult getting postdocs I presume because they saw a future in research. With funding percentiles now being less than 10 in many institutes, most excellent / innovative grants remain unfunded.

Proven or promising external resources or approaches

Improving job stability and a future where the postdocs could envision successful careers in research. Personally, I think NIH should receive income from in any and all patents baed on data generated by NIH grants. That would significantly increase the budget and perhaps alleviate some of the fiscal concerns.

Response 923

Perspectives on the postdoc roles and responsibilities

To me it means a position of training to become an independent primary investigator while using advanced skills to run a project in the lab. It should include programs where we are trained on writing grants, managing lab members, conducting other (unknown) administrative duties that professors have to do, managing funds and teaching and/or communicating our research (written and oral). It should also include running our project as independently as possible because that training has presumably happened in grad school; so less spoon feeding in research, more in other aspects of running a lab.

Fundamental issues and challenges

Toxic culture—most PIs think postdoc trainees can be "used" as technicians to run experiments more efficiently for them to submit grants or papers. There seems to be no respect of us as scientists who can spear-head a project, think of experiments and of course be allowed to make mistakes.

Lack of professional development—most PIs don't enjoy the concept of trainees taking time out of daily experiments to participate in professional development activities that will actually train them to run a lab

Lack of privacy—Post pandemic PIs have figured out a way to constantly keep in touch with trainees (through apps like slack) and that completely shuts out the concept of privacy. We are expected to answer immediately to any message from anyone in the lab on slack as opposed to the time it took to reply to emails pre-pandemic. We are judged if we don't respond immediately because the assumption is we can see the message as soon as it is being sent.

Implicit bias—Organizations keep talking about DEI initiatives but on the ground postdocs don't feel that difference. Women and minorities have to still work twice as hard to convince PIs that

1. they know how to do experiments
2. their data is believable. I have seen female postdocs are critiqued much more thoroughly than male counterpart whose raw data are never questioned

Existing NIH policies, programs, or resources

NIH needs to send people over to labs to watch what is happening and interview postdocs confidentially. Our biggest problem is no-one is watching us in action and trying to judge our situation from forms we are filling over so many years now. Additionally there is no guaratee of anonymity and that we will not be attacked professionally for speaking up. I think by now there is a ton of evidence that there is no point is asking for statements of research integrity/inclusivity etc from PIs. they write those without ever implementing them in the lab. Improve our working conditions if you wish to retain us. Simply giving us more money is not going to change anything.

Proven or promising external resources or approaches

No response

Response 924

Perspectives on the postdoc roles and responsibilities

I completed a T32 Postdoctoral Fellowship. As I see it, postdoc is a time to gain more specialized skills in research and grant writing, and perhaps above all, it is the time to write the training grant that will launch an independent career.

Fundamental issues and challenges

I completed a T32 Postdoctoral Fellowship. The biggest problem is that postdocs end up not being wanted by the academic job market after postdoc. The very departments that take postdocs don't want to keep us as permanent, K-funded investigators. They force us to write K99/R00 grants instead of traditional Ks, so we will stay for two more years only as a postdoc and then go elsewhere for permanent employment. Even if we do manage to get funded in a department, they often sign us for one year contracts at a time, constantly reminding us that we are not wanted permanently, that we must continually prove our worth in funding. For postdocs, who are seeking their first secure job after years of graduate school and associated poverty, this lack of permanent job opportunities is devastating and causes us to look at other industries.

Existing NIH policies, programs, or resources

The stipulation that academic departments provide jobs for us even if our K grants aren't funded was almost such a deal breaker that I was not allowed to submit a grant. Although I see how this policy was intended to protect postdocs, it actually just made me into a worse burden than I already was in the department's eyes.

Thank you for providing a humane 8-week paid parental leave policy and livable wages for postdocs.

Proven or promising external resources or approaches

I wish I had ideas here, sorry.

Response 925

Perspectives on the postdoc roles and responsibilities

My PhD is in the social sciences, as is my postdoc research. Postdocs are not required in my field, but I chose to do one because of the pandemic--I didn't want to go on the job market when it was so uncertain

or commit to a permanent job via zoom. I was additionally interested in a T32 because the early pandemic was (necessarily) isolating and I was interested in being part of a community/cohort. My postdoc peers have been one of the greatest strengths of the T32. We have varied clinical/social science training and work with different faculty on different projects. But we have many shared interests and they're an outstanding resource and support system. I'm working on projects with multiple postdoc peers.

The postdoc has been a great choice for me intellectually. My mentor is outstanding. I appreciate that being on a T32 means my time is funded, rather than attached to a predefined project. I am responsible for the research project I've committed (which I defined) to and to be an engaged member of my postdoc cohort. I do not have outside responsibilities to other people's research unless I choose to collaborate. I think of the postdoc as a job, despite not being paid a professional wage. I anticipate that my next job will be a TT position, and this is how my training program/mentor treat me. My postdoc position is oriented to how this time is preparing me for what I want to do next. I'm at a major research institution and my mentor/department/institution are very experienced in developing new scientists —it's quite evident to me that I am getting a master class in becoming a successful independent researcher and I feel very fortunate.

Fundamental issues and challenges

FUNDING. FUNDING. FUNDING. FUNDING!!!!!!!!!!!!!!!

I cannot emphasize enough how inadequate the NIH postdoc salary is. I live in an expensive city on the east coast so I moonlight doing clinical work on the weekend to make ends meet, otherwise the postdoc would be impossible. Mathematically it is not possible to live on a postdoc salary in my area without a partner or roommates or a second job. Money is a tremendous source of stress that affects my daily lifestyle, well-being, and professional performance.

I am genuinely happy in academia and in my postdoc, however money is the #1 reason I'd need to leave. I started the PhD after previous grad school and 5 years of work experience. With the PhD + postdoc, I've now spent 7 years on a graduate stipend--and while I've made it work in the moment, it has been impossible to save responsibly. My financial future is precarious since I have spent prime earning years unable to prioritize retirement savings, etc. Being in a health field, I'm acutely aware of financial insecurity among older adults, especially women. Unlike physicians, professor salaries are not transformative and I'm cognizant that my long-term financial security may force me out of academia one day.

The current NIH postdoc compensation is INCOMPATIBLE with improving science. We know the structural economic inequities in our society as well as the deficiencies in the composition of the scientific workforce. The NIH must put its money where its mouth is when it comes to improving the pipeline of people who are underrepresented in science. Targeted resources are great but lifting the baseline is crucial because we know that the resources to navigate systems is not equally distributed--improved compensation needs to be automatic and clearly signaled. Science cannot afford to continue losing all this talent.

Existing NIH policies, programs, or resources

SALARY is far and away my 1st-Nth priority. Nothing else comes close.

Within existing resources, I do wish some of the T32 training funds were more flexible. With a PhD and prior master's, formal coursework is not an area where I need development--I wish those funds could be allocated to support my research projects or the (paltry!) conference travel budget. I appreciate that automatically making the funding flexible might dissuade people from taking courses who want/need to, but I wish there were some criteria for an exemption for people in my situation where the tuition money will go unspent because this is genuinely not a training need.

Finally, a rate limiting factor in my work and among my social science colleagues is having to deal with IRB processes designed for clinical trials rather than our research. I completely endorse the careful protection of human subjects, but there is a strong mismatch between the oversight a clinical trial needs vs. an observational study with secondary data. I deform my research studies to get through the IRB--e.g., it's prohibitive that an interview-based study where I can physically bring myself to multiple locations (solely for participant convenience!) is evaluated in the same way as a multi-site clinical trial. This issue is common to peers across the country. I wish the NIH would consider distinguishing types of science/risk when setting RCR/IRB policies. Doing minimal-risk research, in my PhD I was able to conduct multiple (exempt) studies using my time as the only resource. However, the discordance between the university IRB and medical center IRBs is startling. Medical center IRBs require so much more compliance that even

submitting an application is a full-time effort that assumes a research team is supporting the work. This is a huge issue for postdocs and early career researchers. Please help!

Proven or promising external resources or approaches

I'm at a very large research university with affiliated clinical organizations. I receive frequent communications from the postdoc office at the university and the health system about workshops and other activities. The TT market in my field is pretty robust and my mentors are very engaged so I don't require most of the institutional support that is available to me. But I am glad it exists and hope that the NIH invests in these structural supports for trainees —I think clear organization-level commitment to trainees is essential and filters down to how we are regarded and treated in the workplace.

Response 926

Perspectives on the postdoc roles and responsibilities

I think that the academic postdoc is an extremely important role, particularly transitionary for early-career researchers who plan to continue on in academia. Not only is postdoc experience becoming more and more often a requirement for getting tenure-track positions, but I think that it is an extremely valuable position/experience that really helps to build upon graduate school experiences to transition individuals to higher-level positions.

Fundamental issues and challenges

I think the primary issue with recruitment, retention, and overall quality of life for postdoctoral trainees is the compensation. Postdocs work long and hard hours after receiving an advanced secondary degree, and many times we are being paid less than entry level jobs in industry that only require a bachelors degree. That, combined with the fact that postdocs are often for short durations requiring an uprooting of the individuals life before and after, makes the positions often untenable to trainees who may need or want to support a family. I think this is the primary reason that academia is bleeding scientists into industry roles instead, even if that may not be the individuals preferred role.

Existing NIH policies, programs, or resources

Improved pay and parental leave, along with policies regarding relocation would be helpful. More communities within universities for postdocs to be a part of would also be an essential element towards improvement.

Proven or promising external resources or approaches

No response

Response 927

Perspectives on the postdoc roles and responsibilities

I view it as a training position that is mixed with faculty requirements. It's a weird dichotomy whereby the university picks and chooses the times when you are faculty vs. a trainee. You only get some of the faculty benefits, but when it comes to paying for things or money savings, you are definitely viewed as a staff/student and have to pay. There are countless of faculty benefits unused by tenured professors, that would save big money for the underpaid postdocs that we don't get to receive the benefit of (e.g., discounted train fares, staff parking).

Fundamental issues and challenges

There is no cost of living adjustment for the NIH minimum for postdoc salary. Unfortunately, most postdocs are at large R1 institutions in major cities where cost of living is high. You essentially cannot do a post doc unless you live below the poverty lines or have a spouse financially supporting you.

Existing NIH policies, programs, or resources

Pay them more and view them as faculty.

Proven or promising external resources or approaches

No response

Response 928

Perspectives on the postdoc roles and responsibilities

The postdoc should be the launching stage for my career as a faculty member, it would require the right mentorship and opportunities

Fundamental issues and challenges

Very low salary, high discrepancy of treatment between fellows receiving a stipend and officers receiving a salary, and poor mentorship/leadership training

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 929

Perspectives on the postdoc roles and responsibilities

Being a postdoctoral research fellow means getting additional specialized training and trying out being more independent than the graduate student. Primary responsibilities for a postdoc fellow are to participate in mentors' research studies through data collection, analysis, and publishing, as well as planning for how they are going to shift into their own independent program of research. Depending on whether a postdoc is part of a training grant or funded through a mentor's study, the postdoc might also have responsibilities around taking coursework or seminars, mentoring undergrad or grad students, or project management responsibilities.

Fundamental issues and challenges

I think the biggest problems with recruiting and retaining postdocs are around salary and the temporary nature of postdoc. It is really hard to want to move across the country for a year or a few years, when you're likely going to have to move again, and grad students don't usually have a lot of money to do that. On top of it, postdoc salaries are woefully low when you consider what someone can make if they go straight to a permanent TT position or industry job. People don't want an extension of the austerity of grad school life—they want to make the money that having a PhD should provide. Additionally, people want to move on with their lives, by getting married, having kids, buying a house, or any other life goals, and that is challenging when you're living somewhere temporarily or not sure when or if you will be staying there.

Existing NIH policies, programs, or resources

Number one is increasing minimum salary by at least $20k. Number two is providing relocation stipends. Number three is requiring universities to treat postdocs as employees, even those on training grants, so that their pay can be treated as earned income and they have access to all the benefits of the university (e.g., retirement saving accounts, housing support in expensive areas) that aren't accessible to stipend recipients. Number four is increasing support for childcare/family care expenses. Finally, some minimum requirement of protected time for all postdocs to be able to work on their own projects (e.g., 20%) for those funded through faculty grants or other funding that currently doesn't include or require protected time.

Proven or promising external resources or approaches

There are several universities in the country that have done all of what I mentioned (not necessarily all of them at the same university). Additionally, offices of postdoctoral affairs are useful (we have one at [redacted for anonymity]).

Response 930

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is another stage of research training that is en route to an independent career either as a principal investigator or staff scientist. It should clarify a trainee's ability to manage a project, refine

experimental techniques and thought, and in part manage others working in the same laboratory while receiving guidance from more senior scientists. It is also a mid-career professional position, meaning that postdocs also have high competence, many years of training, and keen scientific understanding that make them semi-independent and invaluable scientific workers. They are the backbone of almost any lab in terms of equipment management, reagent management, safety guidelines, and so on. The fact that postdoctoral fellows are so integral to function of any one laboratory is in part an issue for science due to the nature of the postdoc as a transitory position. The lack of long-term lab members aside from PIs for many labs is something NIH should take into consideration, and the crisis in replicability can in part be traced to the high rates of turnover in science.

Fundamental issues and challenges

Salaries for postdoctoral researchers have fallen in real wages for at least the past 20 years, meaning that mid-career professionals, often with family obligations, are working in under-compensated positions for long hours. Postdoctoral fellows need to be making commensurate with mid-career professionals in similar fields. Likewise, there has also been a falling rate at which faculty positions are opening (and those that exist are increasingly precarious in terms of funding and appointment), as well with staff scientists. Because the purpose of postdoctoral training is to expand and develop an independent research career, the lack of academic appointments is seriously discouraging to anyone considering a postdoc (due again to the long hours and poor compensation). NIH should invest in programs that will allow for more senior positions to open—both principal investigators and staff scientists—and also investigate why the rate of faculty hires has decreased relative to the production of PhDs, especially in a time when universities have more resources than ever. It is also important to the structure of science that there are opportunities for advancement in publicly-funded scientific research for new doctoral researchers. We are in a moment of corporate capture of not only science & scientific knowledge (e.g., publishing), but of scientific labor into the growing biotech sector, and the NIH should resist this incursion by making sure there are ample academic and public-sector positions for mid-career and higher scientists who want to continue doing science which will enter the public record, rather than end up as proprietary information.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Postdoctoral fellows absolutely need higher wages, doable through grant funding. Likewise, promoting the hiring of staff scientists through grant funding is also crucial.

Response 931

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The NIH stipend level for postdocs is low for [redacted for anonymity] standards. This limits the retention and quality of life for postdocs applying for fellowships specifically. By not allowing fringe benefits, this limits the health benefits a postdoc can request from the institution as well.

Existing NIH policies, programs, or resources

The F32 fellowship should be expanded to include higher wages and fringe benefits to not switch benefits and to allow for greater retention.

Proven or promising external resources or approaches

No response

Response 932

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position to be refining your independent skills as a scientist in your field. This can, and likely should, include learning new techniques/approaches/skills along with extensive further

development of your independent thinking/ideas and ability to (and confidence in) conducting scientific experiments, troubleshooting, and problem solving independently. The postdoctoral position should also include exposure to things that will be critical for success as an academic scientist running an independent lab: mentoring students, writing grants, interfacing with administration for purchasing, giving talks/attending conferences, and building a network of colleagues.

Fundamental issues and challenges

The two primary issues I think are impacting postdoctoral trainees are

1. pay, and
2. the uncertainty of success in an academic track and high level of competition for available faculty jobs.

The current first year NIH postdoc salary is equitable to the average entry level human resources position with no qualifications or advanced degree (according to GlassDoor). With a substantial rise in cost of living across the country the current salary caps for postdoctoral trainees puts significant limits on standards of living, particularly for trainees in bigger or more expensive cities. While some cities provide a bump to postdoctoral trainee salaries due to cost of living, the bump is often not enough to make a significant difference in actual quality of living, and often has to come out of alternative PI funds that aren't the primary grant the postdoc is paid off of. Additionally, as a postdoctoral trainee academic institutions do not match or even contribute to retirement savings, and with an increase in number of years in postdoctoral positions before going on the faculty job market (for my field at least) most postdoctoral trainees are dealing with low pay and the possible inability to substantially save for 5-7 years instead of 2-3 years during a key window for saving for retirement. If the ability to succeed in academic science is uncertain given issue/challenge #2, dealing with years of financial insecurity may not be worth it.

Secondly, when observing colleagues go through 3 rounds of applications to 20+ available positions and still not have an offer, it is easy to be concerned about your own ability to succeed on the job market and consider alternative career options outside of academic science.

Existing NIH policies, programs, or resources

Given the increase in number of years spent in postdoctoral positions (at least in my field), an increase in the age and year-since-degree requirements for some transition grants would be helpful. Increasing postdoctoral salary would also be helpful.

Proven or promising external resources or approaches

No response

Response 933

Perspectives on the postdoc roles and responsibilities

To me, the academic postdoc represents an opportunity for a scientist to define the scope of their future career research and begin to make an impact on their chosen field, alongside the sponsorship and mentorship of an experienced scientist working in that field (their mentor). While I believe that most of those who begin a postdoc are already skilled scientists as a result of their PhD work, I also see the postdoc as an opportunity to learn more about the ins-and-outs of actually running an academic lab, including obtaining funding, navigating politics within academia, leading and mentoring others, managing a budget, etc. It is also an opportunity to refine skills and learn new scientific techniques. Thus, the roles and responsibilities of an academic postdoc are to define scientific questions and execute complicated research projects designed to address those questions on a relatively independent basis, and to obtain funding for these projects (with guidance and input). Mentees should of course also aim to provide benefit to their mentors, in the form of: helping with other projects, mentoring students, managing the laboratory, communicating science, and representing the laboratory at conferences and in publications.

Fundamental issues and challenges

1. One of the primary challenges for postdoctoral scientists is salary and benefits. A highly educated scientist with a PhD needs to be able to afford to live comfortably, support their family, afford healthcare, and comfortably save for retirement. With current inflation, a salary of $50-60k is really not going to allow someone to accomplish any of these key factors. Further, this low salary supports the notion that these are "trainees"; inexperienced and not capable scientists. Overall, salary and benefits in industry (commonly >$100k for an entry-level PhD Scientist with a myriad of competitive benefits) are much more supportive to quality of life.
2. Oftentimes low salary in academia is justified by some notion that one should have to suffer before they attain the coveted tenured faculty position, but that the eventual success is worth it. Nonetheless, the amount of available faculty positions just keeps dwindling while we crank out thousands of newly minted PhDs each year. Now, people are stuck in postdoctoral positions for 5-12+ years and unable to get a faculty position. Career opportunities and opportunities for advancement are essentially none.
3. A more fundamental issue to the enterprise of academia itself is an utter lack of diversity, professionalism, accountability, and mentorship standards. Despite the increase in trainee diversity, faculty and leadership across the board remains woefully full of white males. In academia there is rampant sexism, racism, abuse, and unrestricted competition. Even in circumstances that are not overtly illegal or abusive, many mentors are never taught how to mentor, how to lead a lab, how to manage conflict, etc. which results in serious challenges to wellness and mental health in trainees. There are usually no metrics to measure performance of mentees and mentors, no clear expectations and performance metrics, and no easy way to resolve these challenges.

Existing NIH policies, programs, or resources

1. Raise postdoc salaries and consider cost-of-living. Continue to raise salaries annually in line with inflation. Provide actual benefits (retirement, healthcare, parental leave, mental health care).
2. Stop considering postdoc as a "trainee" and start treating them as capable scientists. Provide more clear career advancement opportunities outside of tenured faculty positions. New scientist positions within academia tied to raises.
3. Build systems to incentivize good behavior and stop rewarding abusive behavior. Stop giving grant money to scientists who are abusive just because they are publishing exciting papers. Stop relying on CNS papers to determine career success. Build more measurements of true success.
4. Train mentors.
5. Build performance review systems.

Proven or promising external resources or approaches

No response

Response 934

Perspectives on the postdoc roles and responsibilities

When I joined this position, the postdoc position was a stepping stone for a faculty position.

However, exposure to the biotech industry, interactions with individuals from the industry, and the higher monetary compensation (very important for an immigrant like me whose parents cannot provide financial support) has made me desire to explore a career in the industry. However, due to the discrimination against persons of Indian origin in the US immigration policies, I am stuck in the academic world which allows me a basic immigration stability. I have an amazing mentor and I am enjoying the science in my current position. But in my career trajectory, the position predominantly means a shelter from the immigration policies.

Fundamental issues and challenges

Postdoc salaries are extremely low. Similarly qualified individuals can make at least two to three times the salary in industry.

Existing NIH policies, programs, or resources

NIH postdoctoral fellowship (T32) eligibility criteria severely limits international postdocs who are performing research in the US. A significant number of these postdocs have obtained their PhD in the US, carry out their postdoctoral work in the US, and are aspiring to build a career in the US. Due to discrimination in the immigration policies, highly qualified from India cannot obtain a permanent resident status (a green card) for decades. In light of this, the eligibility criteria should be revised.

Proven or promising external resources or approaches

Proven approach: Higher monetary compensation attracts and retains better candidates.

Response 935

Perspectives on the postdoc roles and responsibilities

To me a post-doc serves 3 primary functions. First, It is a chance to diversity an individual's technical portfolio, knowledge areas, and network. Second, one should grow from "a pair of hands" to the leader of research directions. Third, it's a time to pursue development in non-lab-based areas—anything from teaching, leadership, and mentoring skills to experience with roles in industry, regulatory, government, and/or advocacy—if that fits with an individual's desired career path/goals.

Fundamental issues and challenges

Many undergraduate students see a graduate degree leading only to an academic position and do not understand the opportunities in industry, government, and non-profit sectors for people with PhDs. Thus they never enter/complete graduate school to become a post-doc. Those who do complete graduate school understand how competitive faculty positions are to obtain and may not even really want one. Also, academia simply does not pay as well as industry (or so the perception is) Thus, there is limited value to them to do a post-doc. They'd rather go ahead and pursue a job outside of academia. As for quality of life, I think we need a cultural shift where the post-doctoral period is seen more as a junior colleague than an advanced graduate student. Often the expectation/perspective is that this is a life-period of working extraordinary hours even more so than as a graduate student. This is a potential burn-out issue in general and particularly problematic if a post-docs has children. It's much more likely for post-docs to have children. We need to better respect their work-life balance rather than expecting them to work even more hours than a graduate student. I think it's very doable while maintaining productivity, but it's a mentoring and cultural shift.

Existing NIH policies, programs, or resources

I'm not well versed in what is already established, but I appreciated the move to support childcare. Programs that supported supplemental training (teaching, industry, government, NGO) would be particularly valuable to those not interested in pursing a traditional faculty position and entice them to do a post-doc.

Proven or promising external resources or approaches

Mentoring and a optics change would be huge. People within and outside of academia need to see value in a PhD beyond academic institutions. I think it's there, but many just aren't aware. Those of us who stayed in academia don't have great connections to those that left so we can't adequately educate our students. Nor can we provide experiences like shadowing or internships which would ultimately help them pursue those paths. They're kind of having to do it on their own. Many companies are only now starting to see the value of a PhD educated individual. They come with different critical thinking skills. Albeit, I see the industry hesitation on "ownership". In a PhD or post-doc an individual is in charge of a project from start to finish—it's their baby. Industry does not work that way and has difficulting determining who is going to be fine being a step in a larger process and who needs that academic model of carry through. So perhaps a different training experience would be more appropriate for post-docs intending to leave—which means the mentors need to be retrained to manage this different process when needed.

Response 936

Perspectives on the postdoc roles and responsibilities

Postdocs are the back-bone of research labs. They bring invaluable expertise, knowledge, and independence that PIs rely on to build a productive and thriving research environment. At the same time, there is a training component. A postdoc is a temporary position, and the expectation is that the experience will help improve some of the skills that are important for becoming a PI.

Fundamental issues and challenges

The pay is too low. This is the fundamental issue. Any other conclusion made by NIH would be embarrassing. Sure, there are other improvements that could be made. But, relative to an increase in pay, their general impact is so minor that I do not want to mention them. They are often tools that are used by institutions to pat themselves on the back without actually addressing the fundamental issue. I could only do a postdoc because my spouse makes a higher salary. Without this, doing a postdoc and starting a family would be mutually exclusive options.

Existing NIH policies, programs, or resources

Pay us more and adjust salary by cost-of-living. Support more permanent senior scientist positions. Limit the size of labs so that more funding and more tenure track positions are available.

Proven or promising external resources or approaches

No response

Response 937

Perspectives on the postdoc roles and responsibilities

Essentially, Postdocs are the ones that are driving the scientific discovery process and shouldering the workload,

While being not only underappreciated and ridiculously underpaid, but also being trained towards future academic positions that do. Not. Exist

It is almost as if we are being tricked into believing we could become a PI in order to make us work harder. In this respect, I feel taken advantage of by my PI who gets the discovery credit for very little money input while living of the extensive hours and sacrifices that postdocs made.

I fundamentally regret my decision to undertake a Postdoc. The opportunity costs for not taking an actual industry job over those 5 years are hundred(s of) thousands of dollars.

Now I have

Zero relevant industry experience,

Zero savings,

An expired visa and

Zero clue how to move forward.

Fundamental issues and challenges

Poos academic job prospects

Poor pay

US-Visa battles (repeatedly)

Work-life balance

Existing NIH policies, programs, or resources

Pay us a salary we can live on.

Provide training skills beyond the academic job market

Provide resources for well-being

Proven or promising external resources or approaches

National Postdoctoral Association

Local Postdoc committees at universities

Surveys conducted by scientific publishing groups (e.g. Nature and AAAS)

Response 938

Perspectives on the postdoc roles and responsibilities

The purpose of postdocs is for recent PhD graduates to develop the skills to become independent investigators. It should be viewed as similar to residency programs for recent MD grads.

Fundamental issues and challenges

SALARY. I don't understand why the most brilliant minds in the world don't understand this. Recent PhD grads can easily get a position in industry where they make 2-3 times the postdoc salary. In addition, individual institutions do not even follow the NIH payscales for non-NIH funded postdocs. At my institution when I was a postdoc, there were full time postdocs making $15,000 less than the NIH minimum. NIH should mandate that any institution receiving NIH funding must pay all postdocs on the NIH scale.

Existing NIH policies, programs, or resources

Make institutions receiving NIH funding commit to and prove that all postdocs are funded on the NIH scale.

Proven or promising external resources or approaches

My institution (Big 10) doesn't have a postdoctoral affairs office or coordinator. HOW?

Response 939

Perspectives on the postdoc roles and responsibilities

Postdoc is in my opinion the necessary step to transition to independence, thanks to the guidance of a mentor. The guidance should span from discussing experiments and idea conception, to inspiring on how to become, in turn, a good mentor. In my opinion it should prepare the scientist transitioning from graduate school to future independence in academia or in government, to seek opportunities for writing, reviewing, presenting and teaching.

Fundamental issues and challenges

Surely the biggest issue is salary. Postdocs are highly skilled scientists with years of experience and training, and mostly in academia, the quality of life is greatly affected by the large amount of time spent on working at experiments, proposals, presentiations, teaching, which is not corresponded by a salary which would allow to manage better working and off time, childcare, and so on. Medical insurance should cover way more than it currently does, because with the high level of intense work and stress postdocs face, they should at least receive mental health care at no cost, and preventative medicine as well.

Existing NIH policies, programs, or resources

The situation for international postdocs is very difficult, with almost no possibility to apply for postdoctoral fellowships (very few allow non US permanet residents/citizens to apply) and so with more difficulties in tailoring a competitve CV. This would be for sure an area of improvement that NIH should consider.

As an international postdoc, I have perceived many times an ignorance in the bureocracy that takes for an international to be able to move to the US and stay in the US, and not enough care of ensuring an equal treament to internationals vs US citizens and permanent residents when it comes o opportunities.

Finally, resources for postdocs to transition to independent investigators are really needed. When getting a career transition award or directly a job as faculty, there are really no resources for the new investigars on how to become good mentors, lab managers and leaders. NIH should consider this additional level of training (and should make sure that it is available also for internationals with no permanent residence).

Proven or promising external resources or approaches

No response

Response 940

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Poor compensation for postdoctoral researchers reduces recruitment, limits retention, and negatively affects quality of life.

The current hiring practices for tenure track positions require lengthy postdocs for most fields, as generally the longer the postdoc the longer the CV/publication record/funding. The K22 (5 years eligibility post PhD) and K99/R00 (4 years of eligibility, then a K99 period in the postdoc lab) encourage long postdocs, because the most competitive applications are from postdocs nearing the end of the eligibility window. I don't foresee the length of the postdoc prior to tenure track position shortening in length, so making those 5-7 years more bearable would be a worthy investment.

Existing NIH policies, programs, or resources

Compensation for postdocs should be improved, but this is complicated by the NIH budget lagging inflation over the last many decades, and the absence of increases in the modular budget amount.

A fundamental issue is that many universities use the NRSA extramural stipend guidelines for their postdoctoral salaries. The NRSA salary levels are so low that the NIH pays its intramural postdocs more. Of note, the NRSA stipend levels have no adjustment based on location, an exception to the locality pay adjustment available to nearly every other federal government employee. Whether nor not the NIH intended NRSA stipend payscale to be used by universities, the reality is that most adhere to those salary levels, meaning many recent PhDs will pursue other jobs.

Proven or promising external resources or approaches

No response

Response 941

Perspectives on the postdoc roles and responsibilities

A vehicle for additional training for the post-doc to develop expertise in a research niche to allow them to launch into their next job, be it academia or industry, etc.

Fundamental issues and challenges

The salary is #1. These people are in their early thirties and are highly trained. Making $50,000 per year is insulting. Especially when they can go to industry or consulting without a post-doc and make nearly double.

Existing NIH policies, programs, or resources

NIH salary minimums for postdocs should be increased but there has to be a commensurate increase in NIH R01 budgets or PIs won't be able to afford them anyway.

Proven or promising external resources or approaches

No response

Response 942

Perspectives on the postdoc roles and responsibilities

To me a postdoc is a highly knowledgeable person, that can independently conduct experiments, manage projects and advise other trainees on methods and background information. The postdoc training is to

learn how to conduct independent research, learn about the strategies in terms of publishing, project management and teaching as well as deepening or expanding the understanding of the field.

After a postdoc the person should have all the tools in hand to move to a position where they can conduct independent research (faculty, group leader etc) in industry or academia.

Fundamental issues and challenges

The salaries of postdocs (but also for graduate students) have not kept up with the increase in inflation and prices in general. Especially science hubs have a high demand for housing and the cost of living is high (Bay area, Austin, New York, Boston, Cambridge etc). While industry has adapted and offers competitive salaries based on the cost of living in the area, faculty is limited in what they can offer postdocs.

Post doctoral training is inherently insecure, there is no degree at the end and no clear path to success. In a world that feels more and more uncertain (inflation, wars etc), a stable job in industry might be more appealing to many.

With the cost of living rising so much, many have put off life goals (buying a house, vacation, paying off debts, having children) to after they graduate. Entering again into a situation with low pay and uncertain payoff seems daunting.

Postdoctoral training usually involves moving far away from family and friends and in times where the world feels very unstable and suddenly very large again (Travel bans during the pandemic for example), many might decide to stay closer to home and forgo additional training.

Existing NIH policies, programs, or resources

The biggest part would be an increase in salary, possibly tied to the location/local cost of living. Or a grant where people can apply if they do live in one of these high cost areas.

Not sure what the NIH has in terms of family leave/family support, this definitely needs to be expanded.

Proven or promising external resources or approaches

What is the outlook for a postdoc? Re-frame postdoc position from a loosly defined training to more of a pre-faculty or pre-group leader position. This can include courses on teaching, leadership etc. So even if the science doesnt work out, there where still tangible skills gained. Also if they do move on to be faculty/group leaders they already have some management skills and are not thrown into the cold water.

Response 943

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The most significant issue is the salary limit and lack of provisions for postdoctoral trainees with families or other social commitments.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 944

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a training position to prepare recent PhDs for a career in academia. It is a period in which the postdoc should be able to cultivate a research direction that will allow them to start their own lab, independent of their PI’s. While the postdoc’s research should complement and support the

PI's, they should also be granted some independence/distinction from their PI's personal research goals. I.e. a postdoc should not simply be cheap labor for PIs.

Fundamental issues and challenges

Postdocs are second class citizens in academia. We are not provided a salary that matches our training level, making it very difficult to support ourselves (especially when many of us live in academic/biotech hubs like the Bay area, Boston, and NYC with extremely high costs of living). This is not necessarily the fault of institutions or PIs. The NIH has not raised their funding levels commensurate with increased costs of living, or, more generally, with how much postdocs should be paid for their level of education/training. Thus, even when institutions raise the minimum salary for postdocs, PIs don't have the funds to support this and end up having to hire fewer postdocs. Postdoctoral fellows are in an even worse position. Fellows bring prestige to institutions and alleviate their salary costs from PI's grants. Yet, fellows are not considered employees—rather, they are "independent contractors". This causes fellows to be taxed on funds that go to paying their health insurance costs (this is NOT income) and end up in a higher tax bracket, paying more taxes overall. Further, they often lose benefits because they are no longer "employees". This distinction between postdocs on a PI's grant and postdocs with fellowships is a ludicrous, technical detail that hurts fellows. Postdoc fellows are doing the exact same work they would be if they were still supported by the PI's grant, but somehow they are no longer employees? This could be fixed across all institutions, if the NIH were to alter guidelines for how NRSA fellows are treated (important note: some private fellowships already do this, so it is not "impossible").

Existing NIH policies, programs, or resources

NIH policies regarding fellows should consider them employees of their host institution. NIH should increase the minimum salary of postdocs, and perhaps needs a sliding scale based on local cost-of-life metrics. I understand this may need to come from Congress—the NIH needs more money, generally, to increase grant funding lines.

Proven or promising external resources or approaches

No response

Response 945

Perspectives on the postdoc roles and responsibilities

Starting point to become independent.

Fundamental issues and challenges

Salary.

Unable to focus on projects that are interesting to me.

Existing NIH policies, programs, or resources

I don't know much about policies.

Proven or promising external resources or approaches

No response

Response 946

Perspectives on the postdoc roles and responsibilities

As a PI, I see a postdoc as someone who is learning some new skills and concepts to supplement those obtained during the PhD in order to assemble a research path for their subsequent career.

Fundamental issues and challenges

Quality of postdoc life is much improved since my postdoc, when the pay had us living single, in group housing shared with roaches. Postdocs now have families. However:

1. The main problem with the postdoc experience is that there is no longer a reasonable expectation of a good job at the end. Universities are hiring adjuncts to teach 5 courses per year, with no job security and little opportunity for research. Companies are only hiring postdocs who have green cards or are citizens. So increasing postdoc pay is not a solution.
2. A second problem is that journals now want 5-10 person-years of work in a paper, whereas the postdoc needs a paper in 1-2 years.
3. As a result of these dim prospects, bright science students switch majors long before considering a PhD. Although at an Ivy League University, I see no American or Japanese postdoc applicants, few European (typically in the HHMI labs), and progressively fewer from China. Those from India are often weak or misrepresent their credentials. Central and South America have been good.
4. In general the quality of postdocs has gone down, particularly with regard to curiosity and critical thinking. So I don't think we need to fund more postdocs. We need to improve the selectivity and then training in the position.
5. If the postdoc is really a training position, we need to consider the trainee and his/her future rather than the PI's need for labor.

Existing NIH policies, programs, or resources

In the absence of being able to improve job prospects, a solution would be to return to the days where a PI spent time in the lab, assisted by a couple of grad students and postdocs rather than 10-20, instead of writing grants and filling in regulatory paperwork. This could be done by increasing the percent effort that grants can pay the PI to 40% and requiring universities to cover at least 20% of PI salary. This would

a) be better use of the many years of training that were spent on the PI, improving the thoughtfulness going into the project;
b) reduce the amount of PI time spent writing grants and NIH funds spent reviewing them; and
c) reduce the number of mediocre postdocs who go on to compete for grants by proposing safe projects that generate data but not new knowledge.

Proven or promising external resources or approaches

No response

Response 947

Perspectives on the postdoc roles and responsibilities

I view it as a job, not a training experience. Most postdocs are hired to work on a particular project due to their existing expertise. They deserve adequate compensation for their work, recognition as employees, and regular professional development opportunities.

Fundamental issues and challenges

Salaries are too low. Moving is expensive, especially for a temporary appointment. We should not stigmatize people for remaining in a specific geographic area, recognizing that it is destabilizing to move multiple times in the decade preceding a "permanent" job placement.

Existing NIH policies, programs, or resources

Raise NIH minimum salaries for postdocs. Allow fellowship recipients to benefit from existing federal funding related to their research (for travel or topping off salaries).

Proven or promising external resources or approaches

No response

Response 948

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as one designed to improve training and prepare a postdoc for a future career in academia or industry. I believe that being a postdoc means that you will receive mentored guidance on how to develop your own scientific research plan, implement it, and use said plan/experiment/data to generate a research plan for yourself moving forward to write grants, apply for industry/faculty jobs, etc. This is done within the context of the mentor's research so that there is some overlap, but enough new ideas that the postdoc can branch off into their own research while providing useful data and publications for their current mentor. It should be a mutually beneficial relationship between mentor and postdoc that covers both the present and future of both scientists.

Fundamental issues and challenges

While postdoctoral pay is an issue (particularly in expensive areas to live), issues extend greatly beyond this. Postdoc mentors do not benefit from a postdoc doing research to generate an independent grant. This means that the postdoc will leave and no longer produce for the mentor. This becomes a problem as work done for the postdoc's interests is unlikely to generate a new grant for the mentor, and possibly a lower impact/no publication that would benefit the mentor. The current wages also mean that even later stage postdocs do not make as much as a research scientist/research assistant professor, but likely produce as much or even more data for the mentor, leaving little incentive for the mentor to encourage the postdoc to leave. While it is understood that a mentor should be consistently encouraging a postdoc to acquire skills/data to move on, that is often not the case due to the aforementioned benefits for the mentor in keeping a postdoc. This often coincides with limited grant opportunities for postdocs as well. Speaking as a non-clinician, K01 grants are useful to both parties early on, but may not provide the postdoc with research on which they can build future grants as the K01 is connected to the mentor. More importantly, the K01 isn't even offered by many institutes of the NIH. This extends to the K99/R00 as well, depending on the mentor, postdocs have a limited opportunity at this grant (4 years) and not much else after this award. Only a few institutes offer the K22 grant, therefore if a postdoc does not have research that fits into those 2-3 institutes, they are left to fend for a job without any grant opportunities as a postdoc, but likely little on which to convince hiring committees of receiving a faculty job.

Existing NIH policies, programs, or resources

I believe that expanding grant opportunities would go a long way. For example, as an non-clinician eye researcher, I can only apply for K99/R00 grants as a postdoc. They do not offer a non-diversity/special interest K01 or a K22. This leaves very little opportunities in that field for non-clinician postdocs. I believe creating grants that provide both the mentor and postdoc with benefits would also help. For example, it could be included in the K01 that the postdoc must receive ownership of their project, preventing the mentor from possibly not allowing the postdoc from moving forward/out of the lab with it. Perhaps a mentor would receive additional funding if they have a postdoc who receives a K99/R00 or some other career transition award so that they too benefit (especially if a mentor has a postdoc that receives a faculty job). It's also possible that raising postdoc salaries (especially for later stage postdocs), will force mentors to allow/greatly encourage postdocs to receive transition awards due to budget constraints.

Proven or promising external resources or approaches

I am not sure if there are any current promising resources. I believe that postdocs are receiving good training and mentoring on the scientific level, but it is severely lacking in career trajectory impact. Job satisfaction would certainly be improved through increase pay, but outside of this, postdocs need more protection of ideas and opportunity to leave the postdoc for improved academic roles. It is widely understood that a postdoc who accepts a non-tenure track job has difficulty getting independent grants funded, as review committees will attribute the ideas to the mentor/PI not the research assistant professor/recently "promoted" postdoc. Therefore, funding mechanisms need to reflect that and provide postdocs/young research assistant professors/scientists with opportunities to secure independent funding. Without these mechanisms, there will continue to be a decline in postdocs for career paths that provide increased pay and job security/promotion opportunities. While the NIH is unable to directly alter faculty hiring practices, they can provide more/better opportunities for postdocs to acquire independent funding and protection of postdoc's ideas/future research so that a postdoc cannot be restricted (either inadvertently or, unfortunately, on purpose) by a mentor, and allow talented postdocs the best chance possible to advance their career as an independent scientist.

Response 949

Perspectives on the postdoc roles and responsibilities

Further training in an area of specialty or related methodology.

Fundamental issues and challenges

I'm a Latinx woman who just accepted a faculty position. Prior to that, I wanted to apply for a K99 to stay at the institution where I'm completing my pre doctoral residency. I was told I couldn't submit a K99 without a doctorate and after emailing several POs, was told there were no exceptions. I had already obtained an R36 and have 90 publications and the work required to obtain an F32 compared with the compensation was not something I could afford.

Existing NIH policies, programs, or resources

1. Higher salary for postdocs.
2. Change submission requirements for K99. Why couldn't I submit a K99 at the institution I was planning to stay at for postdoc?
3. Offer a predoc + postdoc training grant—the F31 & F32 individual mechanism is highly inefficient.

Proven or promising external resources or approaches

No response

Response 950

Perspectives on the postdoc roles and responsibilities

I have staffed my lab with foreign postdocs for nearly 40 years. I have had only 2 US postdocs in that time (they did not apply). I believe I have hired over 50 people over the years. I have had some wonderful people and I very much enjoy the interaction with them. They also bring skills that are not in the lab. My view is that it is a mutually beneficial arrangement. I give them the opportunity to learn new skills they want to learn (I ask) and also the opportunity to move forward in their careers by showing productivity during their time with me. During this time, most have been able to publish well with me, and no matter what they choose to do next, this shows they can take a project from the beginning to the end.

I expect independence from them in setting up and interpreting their experiments and I believe a postdoc with the right skills for the lab should be able to create a starting protocol from the literature.

Fundamental issues and challenges

In 2022, I realized that it is no longer possible to recruit foreign postdocs who can work independently and be productive. I had one postdoc who was extremely bright but essentially hated bench work; she just didn't do it, for nearly three years. After she left—someone actually hired her without my recommendation—I hired two others who I found totally lacked basic research skills, and I let them go within months (both immediately found other jobs, since I brought them over to this country). There is clearly a place for everyone, but I myself can't work with highly dependent postdocs who cannot absorb new information, ie don't read our publications or new ones in the field.

I now staff my lab with college graduates who perform very well as technicians; I do not expect postdoctoral level engagement. While I know I have only a few years before they leave for grad or med school, these people do have the passion, the intellect, and the work ethic that I expect. But the high turnover will be costly for me in terms of training time.

Existing NIH policies, programs, or resources

NIH needs to increase the size of grants to increase postdoctoral salaries to be competitive with industry: at least 70K to start and finishing at 90K. This would draw people back to academic research.

NIH AND host institutions also need to realize there is a place in research for the semi-permanent research staff—research assistant professor—who should start at 100K. Again, grants have not increased in size over time to accommodate this.

Proven or promising external resources or approaches

I think the yearly mentor reports in the grants (also required by my university) adequately address the mentoring aspect. The working environment is difficult to control as it varies from lab to lab. Job satisfaction usually relates to productivity, personal interactions—and also salary. It should be possible to have children on a postdoc salary.

Response 951

Perspectives on the postdoc roles and responsibilities

Cheap Labor exploited for their love of science.

Fundamental issues and challenges

Recruitment: Money. There is no other reason why fresh PhD holders want to not join an academic postdoc.

Retention: Working hours are non-existent. PIs are not always supportive of the Postdocs growth. Cannot afford a livable wage, especially if the postdoc is the sole earner of the family.

Quality of Life: Postdoc salary is barely enough to pay rent for a 1 bedroom apartment in a class A or class B city in the USA. weekly outings, movies and other social activities are out of the question unless they are free/paid for by the University or the PI.

Existing NIH policies, programs, or resources

Mandatory increase in NIH stipend amounts for Postdoctoral fellows to $80,000 plus benefits as the baseline. This is the amount industries are paying a postdoctoral fellow or junior scientists in their labs.

Removal and banning of J1 Visa programs that employ foreign postdocs at lower than NIH stipulated salary wages, especially when their grant is being funded by an NIH grant. This allows for a fair pay for all postdocs removing preference for foreign cheap labor over local talent.

Proven or promising external resources or approaches

There is literally no reason other than MONEY why postdocs do not want to join academia. Increase the stipends and the students will flock to academic postdocs over industries. Academia is a lot more chill and satisfying over industry postdoc. Students will want to be in academia and nurture basic science ideas over purely translational ones.

Response 952

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are important aspects of my laboratory research. The experience that they enter with provides a great foundation for me to help them learn how to think about science broadly and for their future careers.

Fundamental issues and challenges

Limits on funding due to R01 funding limits and low paylines

Lack of structured training experiences in academic settings

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Structured training experiences in academic settings similar to those that exist for graduate education

Response 953

Perspectives on the postdoc roles and responsibilities

An academic postdoctoral position is a professional research science position and should be treated as such. The current postdoctoral situation allows mentors to treat postdoctoral researchers as essentially glorified graduate students, and that should not be the case. Academic postdocs are highly educated researchers who should be conducting research aimed towards developing scientific skills to transition to industry or conducting research to lay the foundation for their own lab. These are highly skilled individuals trained to a high level conducting research projects that have the potential to change human health, and they should be treated and compensated as such.

Fundamental issues and challenges

This is largely a financial issue. Starting salaries in industry can be more than 2x a postdoc salary, and with excellent retirement packages. The overall pay for postdocs is horrendously low for the amount of training PhD's receive, and by the time people finish their post-graduate education they should not be expected to wait another 3-5 years to start receiving retirement benefits. Furthermore, the postdoc system is largely abusive, and unless you get a lucky with a good mentor, you run the risk of being subjected to unrealistic expectations and required to work an excessive number of hours, with the mentors virtually held to no standards for work-hours.

Existing NIH policies, programs, or resources

Increase starting salaries to align with industry standards (95k starting salary). Consider postdoctoral associates full-time faculty at institutions, eligible for all institutional benefits, particularly retirement benefits. There should be strict regulations regarding work hours so that way trainees are not required to work an unreasonable number of hours for little pay.

Proven or promising external resources or approaches

More money. More benefits. More oversight to prevent mentors from abusing postdocs time. Quite literally pay people what they are worth and have a system with clear rules to prevent abuse, and more people will be interested in taking a postdoctoral position. These are highly educated people who want jobs that are commiserate with their training and experience, and the current postdoc positions are woefully behind the curve on this.

Response 954

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a period that allows for additional training and development as an independent scientist. More responsibilities are given as well as some potential additional research freedom depending on the funding source and PI. Additional responsibilities include increased supervision and mentorship, increased role in the development and execution of the project, and may include additional administrative tasks.

Fundamental issues and challenges

Funding is a major challenge. Although postdocs are payed more than grad students, they no longer fit the role of student and the additional protections and benefits that those entail. Despite this, it is still considered a training position and therefore temporary and often not provided the support structure that a student or faculty role may offer within an institution. This includes lack of support or direction regarding benefits, training on proper mentorship (which is a major role of the position), and support in obtaining funding and how the different funding mechanisms may impact their pay, benefits, employment status, and more. Unless the trainee is in a large lab group or department with interaction between groups, there may not be much peer support if there is no institutional support mechanism in place. Furthermore, the dearth of academic positions means that most postdocs will remain a postdoc for many years unless they are extremely lucky or consider roles outside of academia. Training and information about non-academic roles is growing, but many of these positions also may not require a postdoc experience to be hired. This leaves the postdoctoral research position superfluous unless the individual is strictly focussed on a future in academia or some other similar research role.

Existing NIH policies, programs, or resources

NIH webinars are helpful in providing insight into available opportunities and support. IDPs, when implemented correctly can be helpful to ensure both the trainee and supervisor are aware of developmental and career goals as well as how they might be accomplished. However, this is not universally adopted, especially if there is no NIH funding involved to require these plans.

Most corrections I can think of are more at the institutional level having come from a university with more developed graduate student and postdoc support and tranistioning into a postdoctoral position which is only beginning to try to develop these support structures.

There is a large gap between the academic postdoctoral pay and salary that might be earned in industry or even state or federal government. This makes it unfeasible for many especially if they have already delayed their income earning potential during the time in grad school.

Proven or promising external resources or approaches

I have found some training and developmental opportunities to be effective, such as "What can you be with a PhD" in NYC or other similar seminars or workshops on career related training and support.

Response 955

Perspectives on the postdoc roles and responsibilities

The postdoc is not well defined which can lead to mismanagement. My postdoc position currently resembles what my PhD looked like and therefore makes me feel like I'm just doing a second PhD. Even though the positions I am training for include managerial roles which I get no formal training on. Because we are over skilled and underpaid that means we are easily taken advantage of. Often it feels like we are just here to work and the "training" for our career development is secondary.

Fundamental issues and challenges

1. We are underpaid.
2. Our position is not clearly defined
3. Vacation policies at Universities for postdoctoral trainees are not generous.
4. Healthcare is costly and adding a spouse or children is inhibitory.

Existing NIH policies, programs, or resources

F32 postdocs should be employees. There are many financial consequences of us not being employees.

Proven or promising external resources or approaches

No response

Response 956

Perspectives on the postdoc roles and responsibilities

As a Postdoc I want to shape my skills as a future PI and learn to develop projects and ensure money and support for me and my colleagues ideas. I do believe that my responsibilities as PostDoc to supervise Master and PhD students as well as spearheading my own project while representing my lab to outside funding agencies and potential collaborators, give me the possibility to do that. I strongly believe that people look to me as a more experienced scientist for guidance and advise not only on a scientific, but also on a personal basis, as the academic curriculum can be challenging and sometimes overwhelming. I strive to be helpful in the lab and improve protocols and schedules in the lab in order to prevent misunderstandings and ease everyones work. In general I think a huge part of my work is to keep an eye on the bigger picture and try to broaden our view on how our work fits into the recent advances of the field. This is directly tied to making sure we can win over funding agencies to finance my colleagues and my work.

Fundamental issues and challenges

As a Postdoc in the Boston area I am mostly struggling to make ends meet because life expanses and especially the rent for a one-room apartment is simply ridiculously high. More than half of my salary goes into paying rent and this simply does not relate to the amount of work I am doing in the lab (including weekends, holidays e.g.). It feels like I am continuously being confronted with the fact that friends my age that decided to pursue a career in industry are earning more, working less hours and receive more appreciation for what they do. Me not being able to save up money makes me rather worried about pension and keeps me from being able to pay even for a small vacation, which I could really need. If it wouldn't be for my inredibly amazing PI, I would feel rather left alone on how to found your own group and how to take first steps into becoming a PI myself. On that note I am continuously confronted with other PIs that don't seem to respect the work of PostDocs in general, which adds on the feeling that the exhausting work we love is neither taken seriously nor is it appreciated.

Existing NIH policies, programs, or resources

Increase salary

Extend pension programs

Introduce a system of mentoring that is not solely dependent on the own PI but rather a network of people that ensures different perspectives

Increase seminar series or workshops that prepare Postdocs for PI positions

Encourage and support presence at international conferences, since collaboration and science communication is essential for new groundbreaking developments

Encourage and support cooperations with the industry further to ensure projects find their way into the clinic faster and in closer cooperation with the people that developed and are passionate about them

Proven or promising external resources or approaches

Increasing the salary!!!!!!!!

Response 957

Perspectives on the postdoc roles and responsibilities

In my opinion, postdoctoral positions are designed to overwork the postdoctoral scientists (PDs) with very little pay. There are not enough teaching position available for the amount of post docs in the market which ultimately leads to the PDs being a work force that is abused in the academic setting since not very low percentage of PDs end up getting a faculty position.

Fundamental issues and challenges

There are always been a PD retention issue but it was more evident after the pandemic since the amount PDs are paid to do their work is minimal. With the on going inflation and barely any change in PD salary, no one should really be surprised that recent graduates are not going into a post doc position. Additionally, PDs are not applying for a faculty position and not wanting to stay in academia. Money is not the end all be all issue. Even if there was a raise in PD position, there may not be an increase in retention rate because of what comes after post doc. PDs have to fight tooth and nail to secure a faculty position and even if they do end up securing a faculty position, it is not secure. They have to constantly apply for grants. The percentile threshold for grant funding is getting lower and lower. Due to all these issues PD positions are not very enticing.

Existing NIH policies, programs, or resources

More funding opportunities for international post docs, not just the K grant. Since non-citizen PDs cannot apply for F grants, their likelihood of getting a K grant decreases. MORE FUNDING!! Can't stress that enough. More funding at all levels. R grants so that faculty members don't have to struggle to get a grant. More funding to institutions so they can retain more faculty members and post docs. Higher salary for post docs! There are a lot of international post docs, please make it easier for them to get to the next phase of their career. Solicit suggestions from them. Hold a virtual town meeting. Ask them what they need from the NIH

Proven or promising external resources or approaches

See the prompt above

Response 958

Perspectives on the postdoc roles and responsibilities

The purpose of the academic postdoc is to develop the skills to transition from bench scientist with technical capabilities to PI that can initiate research and run an academic lab.

Fundamental issues and challenges

One of the largest issues pressing recruitment of postdocs is the indefinite length of the position. Postdocs are becoming longer and typically now go 4+ years. It is difficult to take a job that pays way less than industry and has no true end in sight on when the next promotion/pay bump will occur.

Existing NIH policies, programs, or resources

The NIH and academic postdocs already have standard raises. Make the raises significantly higher after the 3rd year but lock in their positions and guaranteed funding for 5 years. This will make 4th and 5th year postdocs significantly more costly and will encourage academic institutions to recruit candidates after the 3rd year.

Proven or promising external resources or approaches

No response

Response 959

Perspectives on the postdoc roles and responsibilities

I started the academic postdoc as a "natural" route to advancing my research career, but soon find that there is no prospect at all. I do not see myself becoming an assistant professor and fretting over someone borrowing 1 mg of ampicillin, or a well-established professor chasing after their postdocs and students to generate data everyday. The research scientist position in the academic environment is simply a "stable" version of postdoc, swearing loyalty to their masters for the rest of their lives. The academic postdoc is like a research nomad, wandering everywhere to find a greener pasture.

Fundamental issues and challenges

1. Low pay—spend half of your wages to rent an apartment in the city (close to work), a quarter for a shared room, or commute 2.5-3 h every day to work. Talk about reducing carbon emissions?
2. Fringe benefits—no 401k, minimum healthcare benefits, ineligible for all regular staff benefits.
3. Temporary staff contract—forget about getting a loan because there is no payroll.
4. Unreasonable expectation—why do bosses like to give postdocs the guilt of not working till late at night AND on weekends while they take 3 weeks' vacation after an "exhaustive" school year?

Existing NIH policies, programs, or resources

A postdoc with grey hair and wrinkles is worrying about his future after his mentor's lab shuts down. He told me that his skills are outdated for academia and the industry does not like long-time academic postdocs. I feel sorry for him and worry about my future too. Time to consider career transition.

Proven or promising external resources or approaches

1. If postbacs are not trainees, but have a "title" of research assistant; why are postdocs "trainees" and not get any staff benefits?
2. Even though not everyone might be good at running labs, we are trained to do research independently. Why can't we take advantage of shared facilities and get small grants to have that little financial freedom to conduct research of our own interest?
3. Public school teachers get professional training on teaching. Professors should get professional training on mentoring too!

Response 960

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a training position that people use after the PhD, MD or similar to consolidate research skills, acquire maturity, acquire new or diversify expertise, and prepare to transition to an independent job, which could be an academic position, and industry position, government, education, etc.

Postdocs are responsible for planning and conducting research with minimal supervision from mentors, writing grants and fellowships pertaining to their research topic, train younger members of the lab, and preparing for their own professional career.

Fundamental issues and challenges

Fundamental issues associated with the postdoctoral training that affect recruitment, retention and quality of life of postdoctoral trainees are: low wages, lack of stability, salary insecurity, salary inequity, lack of mentoring, absence of career development programs, and migratory uncertainty.

Most postdocs enter the system after PhD without a realistic plan of where they are headed professionally. The few faculty positions available for postdocs are taken by a slim fraction of trainees, leaving the system overpopulated by highly trained professionals without a clear perspective. Because of the low wages that postdocs are paid, they become a valuable asset for the labs, that don't see a real reason to push them to move on. Consequently, an aged postdoc population starts to have additional needs such as familiar commitments and a grim retirement perspective.

Individual labs or even institutions have very little power to correct this situation on its own. The NIH recommended pay scale for postdocs under the NRSA -which are followed by many research institutions does not contemplate adjustments depending on the state or city of residence. Individual attempts to correct that situation creates inequities, and hence institutions resist them.

In addition, a vast majority of postdocs who are foreign and depend on visas that tied them to institutions do not have the same capacity to negotiate salaries with the PIs. Data is missing with regards of wages in comparable positions of J1 visa holders vs US persons (citizen and/or green card holders) but it is reasonable to suspect that US persons make more money on the same position than a J1 visa holder.

Existing NIH policies, programs, or resources

Several changes can be implemented to improve the status of postdocs. Without trying to make a comprehensive list, I consider that huge improvement can be achieved by pointing to two key aspects: salary and migratory situation.

NIH R01 and similar federal grants should allow budgeting more money for postdoc salaries, by increasing the direct cost of the grant. Additional measures should include extending fellowship programs such as T32 or T31 to non citizen scholars. Extending access to mentoring and career development programs can be helpful to help postdocs identify career opportunities earlier and help them come closer to their professional aims.

Migratory situation can be improved by simplifying the visa system. While some of this may be outside the competence of the NIH, if institutions can issue visas for longer times that can help bring some stability to visa holders. Specially in the case of J2 dependent visas, which depend on the J1, this is very helpful in maintaining jobs, avoiding unnecessary paperwork, etc.

Proven or promising external resources or approaches

Getting in touch with postdoctoral associations from institutions or professional organizations, and using scholarly published data.

Response 961

Perspectives on the postdoc roles and responsibilities

I think post-doc can be an important continuation of the extensive training we have already received. It's an opportunity to build collaboraitons and begin an independent program of research.

Fundamental issues and challenges

To put it simply, and bluntly, after years of sacrificing time, money, relationships, it feels exploitative to continue making very little money. There are also institutional barriers that increase the costs that fall on our shoulders. For instance, my institution does not withhold taxes from my stipend and offered no tax support or counseling, so I incurred a fee from the IRS because I did not know I needed to pay taxes quarterly. My health insurance supplement comes from my research fees, which means I have less money for research in order to have health care. We are exceptionally well qualified scientists and we are still not receiving the financial support we need to thrive after years of training. We have loans, and not everyone has the distinct honor of receiving an LRP award. The field is pushing to increase representation of historically underrepresented people, and yet the only way to move for internship or post-doc is to come from a wealthy family or incur more loans. It all starts earlier down the pipeline. The graduate and internship stipends are too low. The post-doc stipends and benefits are too low. I'm not even considered an employee of my university (a prestigious and research heavy institution, mind you). The VA has at least acknowledged this in recent weeks and it's still not enough.

Existing NIH policies, programs, or resources

We need to be treated like scholars and staff of our universities. We need benefits and privileges that are commensurate with our training. My peers and colleagues are leaving the field to pursue careers in industry, where they are valued and paid more. My peers and colleagues are applying for faculty positions right after internship because they are that strong and competitive, why would they stay back and earn less and be undervalued as a post-doc? I understand that given the different fields represented at NIH, the definition of a post-doc is wide ranging. However, it is almost insulting that NIH provides a salary for post-docs that are 7 plus years post graduation. And the salary is still so low even for them.

Proven or promising external resources or approaches

I think this RFI is a late, but good first step.

Response 962

Perspectives on the postdoc roles and responsibilities

Post-doctoral fellows are the most important workforce in the biomedical research community. All hospital and medical school based research institutions rely completely on post-doctoral fellows to move the research forward in new and exciting directions. Without them, biomedical research will fall apart leaving research only to teaching universities, which do not have the clinical exposure/expertise that is needed to solve "real world" problems.

Fundamental issues and challenges

In the field of computational and quantitative sciences (including engineering), there are several challenges which I list below:

1. Phd graduates from these disciplines are increasingly attracted to the industry (which is a good thing as well). This is because, academic environments are not as attractive anymore. The starting pay for these post-docs or newly minted Phds is close to the NIH max for an established PI (about $210K/year). Thus, there is little incentive for them to join as post-docs where the salaries are around 50-70K/year.
2. The lure of academic freedom to pursue the dream drowns in-front of these fat salaries.
3. With less access to top class PhD graduates, the workforce is increasingly becoming less innovative as people who are not really interested in research are joining the workforce and thus are not so motivated to generate new ideas. This trend will have a long lasting effect on the quality of research and the leadership of USA in biomedical research.
4. Since the modular NIH budget is $250K/year and max is $500K/year —which has been fixed since 1999, yet the purchasing power by 2023 has gone down by 78% ! Unless we are able to increase the NIH grant budget (beyond $500K/year), we will not be able to increase the post-doc salaries to make it attractive for them to join the academia.

Some potential solutions:

1. Increase upper limit on NIH grants with commensurate increase in post-doc salaries.
2. Provide long-term K grant mechanisms for post-docs as well as senior faculty with 10 year grant cycles, which will provide a much better stability than current 5 year cycles. Such long-term grants will also fuel new risks and innovations that are not possible with the current grant system.

Existing NIH policies, programs, or resources

Some potential solutions:

1. Increase upper limit on NIH grants with commensurate increase in post-doc salaries.
2. Provide long-term K grant mechanisms for post-docs as well as senior faculty with 10 year grant cycles, which will provide a much better stability than current 5 year cycles. Such long-term grants will also fuel new risks and innovations that are not possible with the current grant system.

Proven or promising external resources or approaches

No response

Response 963

Perspectives on the postdoc roles and responsibilities

I view an academic postdoctoral position as a stepping stone towards a faculty position or an opportunity to gain further skills and expertise before transitioning outside of academia. The specific responsibilities should align with the fellow’s career goals and IDP.

Fundamental issues and challenges

The pay is not proportional to the skills or level of training; the position is short-term and therefore unstable with no guaranteed job afterwards; a postdoctoral position is often unnecessary for a position outside of academia, which means that it is more time where we are earning less money despite being highly skilled and educated; not always guaranteed to have more freedom in area of research/field of study.

Existing NIH policies, programs, or resources

It would be great to have more resources for positions outside of academia and how to attain those positions.

Proven or promising external resources or approaches

At present, it seems that most postdoctoral fellows are still expected to apply to faculty positions. Potentially reframing this expectation and providing more career resources to postdoctoral trainees could be helpful, or partnerships with non-academic agencies and companies.

Response 964

Perspectives on the postdoc roles and responsibilities

Academic postdoc is a role which specializes in research, being responsible by advancing in a certain field and/or topic.

Fundamental issues and challenges

The main challenge is compensation for work, which is low when accounting for inflation and recent increases in prices of overall life.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 965

Perspectives on the postdoc roles and responsibilities

The postdoc position is a time for me to gain some training in specialized technical and career skills. It is a time to develop my hypothesis and projects to be able to take them to the next stage as an independent research faculty.

Fundamental issues and challenges

Things that make me want to get out of academia are: Lack of support in covering benefits, Feeling devalued or degraded when the institution retains rude and inappropriate faculty, and knowing I may have to move far from my family and support system in order to get the career that I want.

Existing NIH policies, programs, or resources

NIH should include additional financial support to cover our health insurance, retirement payments and other required institutional payments they take from our paycheck. This will allow us to keep the intended salary equal to our foreign colleagues and maximize research funds.

Proven or promising external resources or approaches

The MOSAIC/K99 model. NIH provides annual grades to institutions and departments to give postdocs an idea of how supported they will be. Requiring institutions to fire faculty who degrade and harass students and postdocs. Require institution to pay 30% salary for insurance & benefits for fellows.

Response 966

Perspectives on the postdoc roles and responsibilities

I'm doing my second postdoc in the US and for me it means getting more and more independence and shaping my path for an assistant professor position. It means intellectual freedom and excitation about science

Fundamental issues and challenges

- Job insecurity since there is no fix scientist positions in US universities, that impacts on retention (and quality of work)
- We could be paid 2-3x more in the private and let's face it, if we have a family, the salary is not enough for people with the highest university degree
- The fact that we are considered as trainees is offensive, we are scientists, not trainees! What are we training for?
- One thing the NIH can not do anything about but the politics and social and societal issues in the US are discouraging international scientists to come especially women

Existing NIH policies, programs, or resources

I am personally not aware of any programs

Maybe a grant exclusively for postdoctoral scientists to acquire some preliminary data on their own to go into an R21 and get more independent

Proven or promising external resources or approaches

No response

Response 967

Perspectives on the postdoc roles and responsibilities

A postdoctoral position while touted as a training position is rarely one. I expected it to be one where I further honed my research skills, learned grant writing, lab management skills, skills to mentor and guide a students project, and setup collaborations that will help me setup my own lab.

Fundamental issues and challenges

I (and a majority of postdocs in my institution) are treated like high skilled technicians who are in the lab to finish projects and can be financially exploited under the guise of being called a trainee.

1. Exploitation of immigrant status
2. Low pay, no defined hours
3. No institutional or NIH oversight to prevent PI abusive behavior and harassment
4. No institutional or NIH support for parents
5. No PI repercussions for not providing mentoring

Existing NIH policies, programs, or resources

1. Ask for letters from previous postdocs of PIs when they submit grants. Ask the trainees to comment on if and how they received mentoring and support. Create another metric for scoring R01s or other grants : mentoring! Rate them on a scale of 1-10. Make mentoring the first priority when scoring investigators on R01s or other grants. A history of where postdocs from a lab end up is NOT a sign of mentoring. Many postdocs find other mentors in their careers who help them more than the PIs themselves. So just looking at history ends up giving false credit to PIs that transition a lot of postdocs to successful careers but dont do any of the mentoring themselves. Ask the previous postdocs for letters. We will be honest! This is also a method to equalize the skewed power structure in academia that leads to a lot of abuse. For new PIs without previous postdocs to offer letters, institute the requirement of a postdoc mentoring statement like facilities and resources statement when submitting grants.
2. Provide small grants for postdocs who are expectant parents: A lot of PI abuse occurs around the time of child birth when projects are suddenly reallocated or the annual contract extension for postdocs suddenly is in peril. Institute NIH policies of family leave for anyone supported by an NIH grant irrespective of institutional policies.
3. NIH providing institutions with overhead costs for 5 years should ask that institutional postdoc contract policies are for 3 or more years to prevent abuse and immigration status exploitation.
4. Improve the pay scale. A postdoc making $40,000 in NYC or SF is living well below the poverty line. With a Ph.D.

Proven or promising external resources or approaches

No response

Response 968

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions, in my view, are intended as a middle step where they focus is growing in the areas that a faculty member requires (learning additional technical skills, learn/practice grant writing, and potentially mentoring) while also completing research projects semi-independently. This position is meant to be mentored not just casting postdocs free into a lab with no support as though they were just staff scientists. If institutions still insist on referring to postdoctoral scholars as ‘trainees’ then they are beholden to provide and make time for training. Postdoctoral positions are meant to be a time to learn and do research; not a time to spend excessively long hours working on other people’s projects with no recognition for their efforts.

Fundamental issues and challenges

There are many fundamental issues with the postdoctoral experience in academic research. Postdoctoral positions are extremely underpaid given the actual number of hours worked (much greater than 50). This leads to financial stress as well as quality of life deterioration as postdocs have very little time for non-lab related things (family, friends, hobbies). As postdoctoral associations have become more vocal about the low pay, long hours, high stress, low quality of life, transient nature of the post, lack of academic positions open, and little recognition, graduate students are becoming deterred. The compensation simply is not there the way that it is with industry jobs that are less stressful, pay more, have fewer hours, and actually treat PhDs as humans.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

I think the NIH should survey all of the postdocs it supports and ask about actual working conditions. Recruitment is unlikely to go up if actual conditions remain as they are.

Response 969

Perspectives on the postdoc roles and responsibilities

This is a training opportunity for postdocs, so it should be guided by what training they want to get. It often involves writing lots of papers and early career grants.

Fundamental issues and challenges

Graduate students don't make a lot of money. Committing to another time chunk of time with a low salary when they could be making a lot of money in industry is a hard sell.

Having postdoc positions that transition into faculty would possibly help.

Many graduate students see the culture of academics as unappealing. There's an individualistic cut-throat culture in many departments with a lack of work-life balance and mediocre pay. They get the impression that they could work less in industry (often not true) and get to do similar work with more pay. They worry about their mental health in academics.

Existing NIH policies, programs, or resources

More pay

More programs & grants that facilitate transitioning at the institution where they are doing a postdoc to tenure-track faculty

Acknowledgment in the K/early career awards that many faculty positions are dependent on the person getting that award. It's silly that everyone knows it's how it works, yet they have to write the letter that the position is in no way dependent on that award. Rarely true.

Fund programs that facilitate recruitment of postdocs—maybe fund regional events where one large institution hosts graduate students and faculty who are interested in getting a postdoc and both sets of people can give lightning talks about their work

Proven or promising external resources or approaches

No response

Response 970

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are well trained scientists who can conduct independent research, and the impact and scope of their work is strengthened by working in the lab of a senior scientist with greater funding, resources, and experience than the postdoc themself. The postdoc is a senior trainee, whose training is more targeted towards mentorship, professional development, and highly specialized technical training, but not in the foundations of good science.

Fundamental issues and challenges

Funding/fair compensation. Postdocs hold doctorate degrees and are experts in their field. They also are typically in their late 20s to 30s, a period of life where securing financial and familial stability is important to most. NIH fellowship rates and most institutional payscales do not fairly compensate postdocs for their experience or expertise, and the gap between these rates and those offered in the private sector is now so large as to make choosing a postdoc over an industry position nearly indefensible. Meanwhile, the return on investment for this underpaid position is commonly the hope of a tenure track faculty position. These are too competitive and the funding rates and personnel needed to sustain them are also very difficult to

achieve or maintain. This creates a cost benefit equation in which both the financial and personal costs to the postdoc commonly exceed the potential benefits of seeking or even securing an academic position.

The increasing demand for more and more figures and data per publication also means these unfavorable positions take a longer and longer time to complete, which doesn't work for fellowships with their current limited eligibility timelines.

Finally, academia is perceived as only accessible to specific demographics. Limited diversity justifies this perception, and also limits the range of viewpoints of those trying to make it better.

Existing NIH policies, programs, or resources

Higher pay scales for F32 and K99 fellows, bringing them to greater or equal to the 80th percentile of first year compensation rates for PhDs entering biotech industry positions.

Longer periods of eligibility, such that postdocs can apply for the F32 until their 4th or ideally 5th year of postdoc (not after graduation), and can apply to the K99 until their 6th or ideally 7th year. Senior postdocs in the current scientific climate should not be penalized/excluded from these mechanisms.

Extending and increasing slots for postdocs on training grants.

Extending and increasing slots on fellowship programs to increase diversity.

Structured mentorship and training support for fellows, including a once-annual conversation with the PO or other institute representative to discuss the fellows career goals, and a once-annual networking session with other fellows.

Proven or promising external resources or approaches

I'm not sure what is meant by external resources in this context. Assuming it's money: not to be glib, but perhaps we should all be seeking private philanthropic sponsors for our postdocs and research programs. It's clear there's an unsustainable mismatch between the large increase in resources required to adequately recruit, support, and retain postdocs and what can be eked out from existing budgets.

Response 971

Perspectives on the postdoc roles and responsibilities

To me, the postdoctoral position meant an opportunity to receive additional training while having the opportunity to manage multiple simultaneous projects. Unfortunately, this was not the experience I have received and hence feel like the postdoc only held me back rather than helped to push me forward in my career.

Fundamental issues and challenges

The amount of money that postdocs make is laughable, how are we expected to pay off student loans, raise a family, pay bills, buy food when we are making wages that quite frankly feel like we are low income individuals. You cannot expect to retain and maintain scientists who have been training for 5-6 years getting paid minimum wage to then go into a position that does not respect them as research scientists, the pay speaks volumes to how we are not respected as scientists.

Existing NIH policies, programs, or resources

Pay postdoctoral research scientists wages that will allow them to pursue research and not be stressed out about whether they will have enough money to cover the growing costs of life in the USA. Provide scientists with support throughout the application process for TT positions. And for those who are not interested in academia, provide avenues for them to receive support in their application process as well.

Proven or promising external resources or approaches

Improve postdoctoral pay and you will be able to recruit and retain more diverse scientists. Those of us who do not have family who can pay our rent will be the first to go when there is an opportunity where we feel valued and respected as scientists.

Response 972

Perspectives on the postdoc roles and responsibilities

It is position that should prepare you to become a PI or an independent researcher. This should include developing your research field and the research you want to pursue. But also it should include training on writing grants, writing papers, type of grants you should apply, people management. None of this areas are currently cover in a postdoctoral training except for the research part.

Fundamental issues and challenges

LOW SALARY (borderline with disrespectful). Long hours you have to put for work. The insane amount of competition for the grant. The ridiculous amount of work you have to do beside research, such as teaching, serving administrative positions in academia, thesis committee, study section. We are doing more and more work for the same pay.

This left you with almost no time if you want to start a family, and rise your kids properly and not as an absentee parent.

Existing NIH policies, programs, or resources

Fix the amount of money in a grant that should be pay to the postdoc, that way is not just whatever the PI wants to pay.

Increase writing training (grants, papers, books)

Increase the number of positions available for continuing in academia. Why would I spend 5 years in a postdoc if I know there is no room in the next step of the scientific carree

Proven or promising external resources or approaches

No response

Response 973

Perspectives on the postdoc roles and responsibilities

This is typically a first 'job' after graduate school. As such, I believe that postdocs should be fairly paid and be classed as 'employees'. This means that they are eligible for benefits (health care, paternity, retirement, vacation, etc), which many Institutions still do not provide. Some PIs expect postdocs to be the ones training grad students in the lab, which is great experience, but postdocs should be paid for this work (which the faculty member should in theory be doing since they are paid for it).

Fundamental issues and challenges

Current NIH stipends cannot compete with starting salaries in biotech. I was recruiting a postdoc at entry level (~$53k) and she ended up with a biotech position that started at $85k. My Institution abides by the NIH stipend levels and would not let me offer more $ to try and get her recruited.

Our Institution treats postdocs paid by stipends (those on training grants, NRSA, etc) differently than those paid by wages (typically off a R01). Differences include vacation and sick time (determined by funding source, not the Institution), not eligible for Health Savings Accounts, they are eligible to contribute to retirement accounts, but on post-tax base only—there are no pre-tax benefits allowed. ALL of these add up to less $ in the bank accounts of postdocs who are on a stipend. These postdocs are meant to be elite having successfully competed for their own funding/T32, yet they are treated as 2nd-class due to these rules/regulations.

Existing NIH policies, programs, or resources

Changing policy to make postdocs 'employees' (not trainees) would allow them to be paid competitive salaries with benefits. This is important since many postdocs are child-bearing age and would then be eligible for many more benefits to care for their newborn.

Proven or promising external resources or approaches

Simply changing their title from 'trainee' to 'employee' would make postdocs immediately feel more valued.

For all postdocs on NRSAs/T32, provide an annual retreat from NIH with workshops to cover fundamentals such as how to write grants, RCR, setting up your first lab, managing people, etc. It would be very attractive for postdocs to learn concrete skills, while networking with other postdocs and meeting folks at NIH.

Response 974

Perspectives on the postdoc roles and responsibilities

Postdoc position is an wonderful opputunity for research motivated individuals and also allows us to work more closely with our PIs. The close association with PI provide a better insight to present yourself for next stage of career (academia or industry). Postdoc can run their lab, project and ideas, which is unique and fascinating in any job.

Fundamental issues and challenges

Challenges:

1. Low salaries and benefits as compare to cost of living
2. Strict visa conditions for International postdocs
3. Unequal finding opputinities to all postdocs, irrespective of citizen status
4. Low resources for faculty/industry transition
5. Travel grant/skill development programs are scarce.

Existing NIH policies, programs, or resources

1. As an international postdoc, we have very limiting options for grants and other competitions compared to US citizens. This imbalance hinders postdoc from staying as postoc in academia as it might not be fruitful in terms of faculty transition.
2. Visa conditions for postdoc is very strict. Most of the universities offer one year visa (each year), which limits scholars to meet and see their family in case of emergency (as renewing a visa is challenging in most of the countries)
3. Salaries and benefits are comparable to employees having much lower qualifications/skill sets, which makes it less apt career option.

Proven or promising external resources or approaches

Suggestions:

1. Increased salaries and benefits
2. Relaxed visa conditions for International postdocs
3. Equal finding opputinities to all postdocs irrespective of citizen status
4. Better resources for faculty/industry transition
5. Travel grant/skill development programs.

Response 975

Perspectives on the postdoc roles and responsibilities

It is what I expected it to be. I mentor student/technicians, plan experiments, teach, and start my own projects.

Fundamental issues and challenges

The only issues is not having enough time to do everything but that’s an issue with myself and not academia in general.

Existing NIH policies, programs, or resources

Honestly i know few other postdocs and I would like to know more of them. Again more of my own problem and not the NIH's.

Proven or promising external resources or approaches

I've really enjoyed being encouraged to start my own side projects. I wasn't as free to do this in graduate school so now that I have the opportunity I'm flooded with my own projects. Also why I don't have enough time.

Response 976

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

LOW SALARY.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 977

Perspectives on the postdoc roles and responsibilities

The postdoc position is a scam. It is a dead-end path that will only benefit a small percentage of trainees. The vast majority will find themselves with no faculty positions after their apointments and trying to find alternative careers in industry or in another career with no skills. It only benefits the PI and organization by obtaining cheap labor to further their goals. There is very little training during this period and the postdoc is most often seen as an object that has to give everything to the career aspirations of the PI and goals of the organization. It makes sense people are not joining postdocs.

Fundamental issues and challenges

As stated above, most postdocs won't gain anything from this period. They are underpaid and under-appreciated. In addition, they know that most likely they won't find a job after doing a postdoc and will have lost precious time needed to move up the ranks in an alternative career. Most postdocs are under a lot of stress because the uncertainty of their own and their family's future. It doesn't help that the environment in academic institutions is incredibly toxic and negative.

Existing NIH policies, programs, or resources

Terminate the postdoctoral contract. Instead of postdocs, there should be permanent positions still working under supervision. If people want to move up the ladder, they can do it, but if they are not successful at least they have a permanent job. I think it is a good thing that phD students are finding careers outside academia sooner than before. Isn't this a success story? or do we want them to be unemployed after we have used them for 5-7 years?

Proven or promising external resources or approaches

If postdocs cannot be made permanent with better salaries, at least, make the experience better by not making all of their career depend on one supervisor and one path. Also provide mentoring training for supervisors so they learn that motivation and encouragement are key for sucess. Provide easy access to industry or other paths. The postdoc cannot be about getting a job in academia because over 90% will fail on this endeavor.

Response 978

Perspectives on the postdoc roles and responsibilities

Postdocs are the workhorses of most research labs and the ones pushing forward research and results in the most substantive ways. Postdocs are the ones to carry out experiments, analyses, and writing that PIs do not have time to do, and mentor more junior lab members on a smaller scale that PIs do not have time for. Of course, all lab members are vital, but among trainees, postdocs provide the greatest impact for money—this has been observed and written about since the 1960s (by NIH no less).

Fundamental issues and challenges

The salary and pay. This is being said repeatedly by trainees, and NIH is refusing to listen and just issue more surveys on the topic. Postdocs are self-selecting to take postdoc roles, because they want to be in academia and continue this line of work despite that alternatives are more lucrative. However, the mis-match in academic and baseline industry salary is almost 1:2 ($54,000 vs. $110,000), making is extremely unattractive to be a postdoc. NIH should follow NSF and the minimum cost of living and inflation and raise their postdoc salaries extensively—to at least $75000. The vast majority of postdocs receiving NIH funding are located in major metropolitan areas, with high costs of living. The NIH postdoc salary for F32s, etc. sets the standard for the market. Indeed, many universities have clauses prohibiting the pay of postdocs above this level. By setting the industry standard, the extremely low NIH postdoc salary is the reason that postdoc positions are so unattractive and many post-grads and postdocs are leaving academia.

Existing NIH policies, programs, or resources

Again—salary and benefits. Taking an NIH fellowship is to take a financial cut, it's deeply disincentivized because of the loss of university benefits. I lost 5% of my annual salary as a grad student when I took the F31 fellowship because of the increase in student fees and healthcare cost that I had to then pay for. Now, as a postdoc, I would lose thousands of dollars in benefits, as well as my vision and dental insurance if I were to take a NIH fellowship. The NIH does not provide parental leave or a large number of other common (and necessary) benefits. This survey may be well-intentioned, but NIH's policies and pay are completely at fault for the current postdoc exodus, as NIH's fellowship stipend sets the industry standard for postdoc pay. Also, the nearly year-long process of grant review to NOA is problematic in an inherently short-term position as a postdoc.

Proven or promising external resources or approaches

I guarantee that the number one item people will advocate for improving is postdoc salary and pay—JUST LISTEN. The minimum salary should be $75000, which keeps on par with NSFs postdoc award, is the minimum livable wage in many US cities (where the majority of postdocs live), and cuts the gap between the average industry salary and NIH postdoc fellowship salary in half, which will substantially reduce the current bleed of talent from academia to industry.

Response 979

Perspectives on the postdoc roles and responsibilities

From 2000-2021, I directed a large Physiology of Aging T32, which had multiple PM and PhD post-doctoral trainees.

Fundamental issues and challenges

1. The additional funds required to support a post-doctoral trainee, beyond what is supplied by the training grant position
2. Funding for training program directors and faculty
3. Overall academic burnout
4. More time spent on career counseling and leadership training

Existing NIH policies, programs, or resources

See above

Proven or promising external resources or approaches

No response

Response 980

Perspectives on the postdoc roles and responsibilities

I view it as a bridge from a Ph.D student to become an experienced PI.

Fundamental issues and challenges

Working long hours without competitive salary and good benefits.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase pay

Response 981

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are meant to provide a space to help doctoral students transition to independent scientists.

Fundamental issues and challenges

Low salaries, costs associated with moving, uprooting my life (again)

Existing NIH policies, programs, or resources

Minimum postdoc salary should be increased. Healthcare coverage should be expanded. All postdoctoral fellows should receive a sizeable moving stipend.

Proven or promising external resources or approaches

No response

Response 982

Perspectives on the postdoc roles and responsibilities

Postdocs are supposed to work on building their research portfolios to be qualified to enter an academic faculty position

Fundamental issues and challenges

Postdoctoral trainees are not fairly compensated for the amount of work they produce. Industry pays much better. Additionally, the length of time many postdoctoral trainees must stay in their position before getting an academic faculty position is very long.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 983

Perspectives on the postdoc roles and responsibilities

Postdocs are hit or miss.

Lot’s of room for abuse and treating like an employee vs trainee (I.e. little emphasis on career mentoring).

Lack of term limits (as in graduate school) delay careers and life

Fundamental issues and challenges

Postdoctoral experience lack structure; depend on institution to provide structure.

Usually, no oversight of postodoctoral development and experience as with graduate students. They should have advisory committees

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 984

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is varied, depending on the end-goal, and should be tailored to the roles and responsibilities of potential future positions. The training for an academic scientist who wants to run their own lab and train undergrads and graduate students is different than someone who wants to enter industry as a bench scientist and is different still from someone who wants to enter the administrative side of science. In my case, I would like to continue in acadmic science and mentor students, and have been trying to gain experience in grant writing, administrative duties required of faculty (animal protocols, safety, etc). Ideally, I would also like to be teaching classes and mentoring rotation or other students. However, contrary to what was discussed in my interviews with my current PI (and what transpired while everything was very limited during the height of the pandemic), I will not have that opportunity because I am at the mercy of my PI.

Fundamental issues and challenges

Postdoctoral trainees are largely aware of the toxic nature of many academic labs and are actively trying to avoid these situations at all cost. We understand the lackluster pay and long work hours associated with academia, however on top of that, postdocs do not also want to join a lab where the PI or manager has a reputation for ignoring the well-being of their lab members and focusing solely on the science being produced. At this point in our lives, postdocs are trying to also move forward with things outside of lab—growing families, spending time with loved ones after sacrificing a lot during their PhD, and trying to adjust to a post-pandemic world. Long work hours and low pay are acceptable for some, as long as they can also enjoy the work and environment and see an end, however the temptation for more moderate work hours and better pay are too great when the work environment is awful. The prospect of trying to find an academic job in this job market is also daunting—the requirements are much steeper than they were even 20 years ago. Unless a postdoc is required, it is abslutely not worth the time and financial burden of a $50,000/year position after struggling at $30,000/year as a PhD student when your undergraduate friends either started at $70,000+ or at least enjoy their jobs and are able to go home and enjoy time with family and friends in the evenings and weekends. One of the biggest hurdles is the fact that graduate students and current postdocs are asking "Is this worth it?" and coming back with "No, it is not." as the answer.

Existing NIH policies, programs, or resources

There are a lot of potential funding sources for postdocs, they are very competitive, and are required to land a job in academic research after a postdoc. I have to establish my own source of funding to have the potential to secure an assistant/associate professorship, however the grants and fellowships depend on your ability to read through a hundred different pages and sources for each opportunity (no resources should link to other resources, which also link to other resources, in order for you to grasp what is required of you). The disjointed application instructions need to be streamlined, and are entirely out-of-reach for any postdoc that does not have a strong grasp of English, anyone with a learning challenge, or anyone that does not have strong institutional support from both their PhD institution AND their postdoctoral institution. The resources from the NIH are not well advertised, and need to be available at all times, because as mentioned in other comments—postdocs are often at the mercy of their PIs and cannot sit for hours at a computer or take a trip to take a class. Perhaps if more support for the PIs was

given, they would allow postdocs the freedom to extend their own training—this can also happen at the institutional level and does not necessarily need to rely on the NIH completely.

Proven or promising external resources or approaches

No response

Response 985

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Increasing the salary of postdoc would help.

In addition, when a PhD student does not want to become their PI one day after seeing the PI's struggle with funding, the PI's life quality (relatively low salary), and oftentimes experiencing bullying or micromanagement from the lab, they would not want to pursue this route by continuing the postdoc training.

So improving the PI's situation is also important.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 986

Perspectives on the postdoc roles and responsibilities

I am a PI of a T32 postdoctoral fellowship program. Postdoctoral fellowships are a wonderful opportunity to transition fellows to faculty jobs

Fundamental issues and challenges

The fundamental challenge we have every year is the low PGY pay scale. I urge NIH to consider increasing this!

Existing NIH policies, programs, or resources

Pay scale!

Proven or promising external resources or approaches

No response

Response 987

Perspectives on the postdoc roles and responsibilities

Pros

1. Opportunity to have protected time to develop grants and a pilot program of research.
2. Continued mentoring.
3. Higher starting salary after postdoc

Cons

1. Pandemic delays in finishing doctoral work makes it less attractive.
2. Wages are low.
3. Few opportunities to obtain postdoc.
4. Likely requires relocating possibly to a more expensive housing market.

Fundamental issues and challenges

I feel the entire postdoc system is unsustainable if academic research is committed to DEI. Many BIPOC people entering academia can't afford the reduced wage of a postdoc. They have financial or other obligations beyond their own household that makes a postdoc an unaffordable luxury. Further, lower wages for academic researchers without postdocs is a barrier (especially considering the heavy student loan burden). The entire postdoc system feels like a relic of an era where only the (overwhelmingly white) wealthy and connected could afford to be academics. It is a system that reinforces the existing social hierarchy.

Existing NIH policies, programs, or resources

Either radically expand postdoc opportunites so people with research degrees can stay in their community and earn a living wage or support all new tenure-track faculty with protected time and mentoring and eliminate the postdoc system all together.

Proven or promising external resources or approaches

No response

Response 988

Perspectives on the postdoc roles and responsibilities

A postdoc is an academic scientist is training. They are both proving themselves and aiding in a lab's research effort.

Fundamental issues and challenges

Pay is insultingly low.

Job prospects appear poor.

They aren't idiots and they can tell that the life of an academic scientist is challenging.

Our postdocs are way too old and the work-life balance issue it tipping towards life for them. They need to be mid-late 20's, not mid-late 30's.

In most communities, they are the "lost generation".

Existing NIH policies, programs, or resources

Much shorter training path —postdocs should end 10-11 years after college graduation.

The narrative about what it takes to "succeed" in academic science needs an overhaul.

For-profit glossy journals need to go away so they can stop allowing failed scientists to determine who succeeds in science and who doesn't.

In short, we need to blow the system up and start over.

Proven or promising external resources or approaches

No response

Response 989

Perspectives on the postdoc roles and responsibilities

In an ideal world there would be no postdocs. Postdocs are not trainee and it is a huge disservice to these underpaid professional scientists to call them so.

Fundamental issues and challenges

PhD scientists are not only making more salary in the industry than they would as a postdoc, they are making more salary right after graduation than most junior faculty. Increasing postdoc salary won't change that.

Existing NIH policies, programs, or resources

Expand early independence awards and make it standard for PhDs to start faculty position or move to the industry right after graduation. Postdoc "training" is unnecessary, pointless, abusive, and extortive.

Proven or promising external resources or approaches

No response

Response 990

Perspectives on the postdoc roles and responsibilities

- Generating research data
- Communicating findings (research talks, posters, peer-reviewed papers, etc.)
- Training students

Fundamental issues and challenges

Postdocs need more money and PIs need more money and flexibility to pay postdocs enough to live. NIH R01 budgets are prohibitive and postdocs suffer. There should also be greater accountability for minimum standards of postdoctoral training and how PIs function as mentors and managers.

Existing NIH policies, programs, or resources

Larger R01 budgets can help PIs pay postdocs more. NIH can provide support or incentives for a postdoc-focused career development office at NIH-funded instituitions.

Proven or promising external resources or approaches

IRACDA at Emory has a published study showing that creating cohorts and community among postdocs improves attrition of postdocs from URGs.

Response 991

Perspectives on the postdoc roles and responsibilities

It is very hard to identify and attract high quality postdoctoral trainee candidates. Many candidates are not very driven, not well trained and not very knowledgable. This is especially true for candidates who are U.S. citizens.

Fundamental issues and challenges

Academic science is not an easy or highly financially rewarding career choice. Therefore, the best students are choosing careers that are more flexible and lucrative than science. If they go into science, a position at a start-up company or big pharma, with no need for a PhD, much less postdoctoral training, is the way to go—there is no ceiling on advancement and much greater potential for financial rewards than in academia. Plus, the world has changed and Chinese postdoctoral trainees are staying home. Because of this brain-drain, it seems easier to find an experienced professional technician than it is to find a well-trained and highly-driven postdoctoral candidate. (Of course many of these professional technicians aspired be a PI and failed.) In addition, R01 grant budgets have not increased for decades, and there are few positions on training grants to support postdoctoral trainee salaries. It seems that R01 trainee supplements are only

available if the candidate in a minority. An outstanding postdoctoral candidate is worth their weight in gold, but given that postdoctoral salaries are relatively high and that excellent postdoctoral trainees are hard to find, a professional technician can be a more efficient choice.

Existing NIH policies, programs, or resources

The NIH obviously made the decision to support more big science, such as huge program projects and multi-million dollar internal projects, and to let education and training wither. I remember a similar RFI regarding how to reduce the number of students and trainees, for the reason that there just are not that many PI positions to fill. It seems it was successful. Perhaps it is for the best; the US no longer is the leader in biomedical science, China is. I am and Editor-in-Chief, serve on several editorial boards and review for many journals. I can attest that the number of papers being submitted from China is increasing at an alarming rate, such that it will soon dwarf the number from the U.S. The NIH should be sounding the alarm to Congress and the country at large regarding this relinquishment of our biomedical research leadership position! The NIH does not need to increase training if it cannot provide additional support for research that will increase the number of external academic research labs and increase the prospects for successful and rewarding careers in academic biomedical research. This would require an increase in training grants (of course), but also, an increase in FIRST grants, an increase in support for equipment cost so that labs can be outfitted, an expansion of R01 funding so that grant success rates can double and careers can be sustained, and more funding for P30 core grants (P30 budgets have been stagnant for years). I would also recommend that you relax your strong bias towards physician-scientist trainees, which is demoralizing for non-clinician scientists.

Proven or promising external resources or approaches

If there is no increase in overall funding for extramural NIH programs, then any effort to improve the postdoctoral training ecosystem will simply be for show. What will the improved postdoctoral training ecosystem produce—postdoctoral trainees with very little chance of obtaining and sustaining an academic research career in the U.S.? Perhaps the NIH should instead fund Chinese language programs for U.S. biomedical students; for then, U.S. trainees might find a promising career in the fast-expanding Chinese biomedical research academy.

Response 992

Perspectives on the postdoc roles and responsibilities

My perspective is that a post-doc is generally applying training from PhD to >doing< research. It is no longer officially a training position and I am now employed by the university where I am based. My own post-doctoral position includes continued training from my PI, but I know others post-doc does not have any continued training or supervision. The ‘continued training’ aspect of being a post-doc is variable and is often used as an excuse for reduced salary.

Fundamental issues and challenges

Of course, the fundamental challenge for post docs is being a highly skilled worker surviving on a low salary. If it were not for flexibility of academia that I am provided personally, I would not accept the NIH post-doc salary. In fact I actively work >less< than full time to make my reduced salary feels like I am being paid >more

Existing NIH policies, programs, or resources

1. NIH needs to overall increase post-doc salary in line with inflation or universities will continue to bleed postdocs to tech and industry, where jobs are well-paid and are becoming increasingly flexible. At the moment, the NIH seems detached from the issues post-docs face.
2. NIH needs to scale post-doc salary (and PhD funding) in line with cost-of-living for location. I know people in Wisconsin who bought a house on a PhD salary. I know PhD students in NYC have $400/month left over to survive. It doesn’t make sense.

Proven or promising external resources or approaches

You can pay us better so that you don’t have highly skilled employees struggling to pay for basics such as housing and groceries. I suspect this would lead to better post doc retention and job satisfaction.

Response 993

Perspectives on the postdoc roles and responsibilities

In my view, the postdoctoral position is very important not only on a personal level but also from a continuity perspective in the research community. The primary aim and objective of this training position are to train and enable the postdoctoral trainee to become an independent researcher so that she/he can contribute to scientific growth.

I am from a clinical background when I finished my MD degree and when I joined residency, the aim was to enable me to give myself enough experience and expertise to practice individually once the residency period is over.

Similarly, I believe that this long postdoctoral training (5 years vs, 3 years) aims to train and enable the fellow to contribute individually. I am very sorry that that's not the case, especially since I have been through it.

Fundamental issues and challenges

I am just a data production factory to my PI, with no scope for growth, after these 5 years, I am sure he will have another one to do the same as this is the most efficient way (low-cost, well-educated/doctoral labor).

The situation becomes worse when you are on an alien VISA status, your PI is a non-clinician, and your PI is from Asian country.

On an alien VISA status first of all your status you are not allowed to contribute outside your authorized institution, even if you try to ask for help outside or look at other avenues for career growth you get very hard repercussions (yes there are processes in place, but PLEASE think are they really practical? Yes, you can complain against your boss and do you believe he/she will still keep you? There are thousands of legal as well as ethical ways to teach you how to behave the way they want you to.

Existing NIH policies, programs, or resources

How many of the postdocs have a realistic individual development plan (IDP), and how often it is reviewed by the external agency in a similar way they scrutinize the budget and other key data before renewing the grant? Are the parameters mentioned on IDP ever met? Did these agencies ever ensure the growth and well-being of postdocs before renewing grants to the PI?

Proven or promising external resources or approaches

Like there are compulsory procedures and mandates to review data, budget, and publication by external agencies, before grant renewal, there must also be processes in place to make sure PIs allow the postdocs to grow in their career.

The authorities may impose severe penalties on PIs if their postdocs are not progressing as per the given guidelines (which may include such as participation in the seminar, and conferences, publishing papers, submitting a grant, participating actively in developing grant writing, IRB correspondence, etc.

Several mandates and guidelines have already been developed to ensure subject well-being why not some strict and mandatory guidelines for PIs on postdocs with severe penalties if not followed?

Response 994

Perspectives on the postdoc roles and responsibilities

A post-doc in my lab is someone who is being trained to function as an independent researcher as faculty in an academic setting. The responsibility of the post-doc is carry out (semi-) independent research related to the mission of the lab. The post-doc will contribute to and perhaps initiate high-impact work that will further their own career.

Fundamental issues and challenges

The supply of US (citizen/permanent resident) post-docs is highly restricted in my field because the number of US faculty positions available in the field are limited and the prospects for sustained NIH funding are further limited. The lack of highly motivated senior personnel has a negative impact on the

productivity of my lab. My solution has been to cast a world-wide net so that I am attracting skilled post-docs from other countries who will return to those countries and obtain faculty positions. I have also recently trained a US citizen who obtained a position in a prestigious foreign lab. The best thing that NIH can do to improve the number of post-docs available to domestic labs is to enable funding of non-citizen, non-permanent resident positions that could be time limited (eg, 2-3 years). Currently, a modular R01 in my lab can only provide support for 1 not TGE post-doc at the 50% level as I aim to provide an above average salary to help with retention and quality of life. The most-skilled and successful foreign postdocs will obtain faculty positions and NIH funding in the US, so this approach is win-win.

Existing NIH policies, programs, or resources

See above

Proven or promising external resources or approaches

See above

Response 995

Perspectives on the postdoc roles and responsibilities

I received the NIH Diversity Supplement in 2019 to fund my postdoc at [redacted for anonymity]. I was excited for the opportunity and to pursue research aligned with my interests in gender development. I initially had the goal of applying to tenure track faculty positions. I felt that I had a good chance—I have degrees from [redacted for anonymity] and [redacted for anonymity]; I also had 25 peer-reviewed publications at the time as well as over $650k won in funding, scholarships, and fellowships. However, I had to leave my postdoc and return funding in winter 2019 because I could not afford childcare and rent with the NIH postdoc salary.

Fundamental issues and challenges

I started graduate school at 27, and I had my daughter at 33 during the last year of graduate school. In Seattle, childcare is on average 25k a year. Rent is even more expensive. There is absolutely no way that I could afford to support my family with the low NIH postdoc salary. The salary assumes that the recipient has a partner who earns significantly more than them. It is impossible to have a family and live on this salary in an expensive metro city like Seattle. I left my postdoc and landed my first industry job making 100k a year with full benefits. It was life changing—we were able to afford childcare and eventually buy a house. I now make over double that starting salary. Women and POC like myself are pushed out of the academy because we

1. often don’t have family wealth to support the low pay and
2. offers almost no support for those with families.

Existing NIH policies, programs, or resources

Pay postdocs more. Give postdocs more money if they live in expensive metro areas b/c that is where the university is located. Have a childcare credit.

Proven or promising external resources or approaches

No response

Response 996

Perspectives on the postdoc roles and responsibilities

I believe a postdoctoral position is training to become an independent researcher and learning in detail the grant mechanism. However, most academic institutions do not have clear postdoctoral training guidelines, and hence fail to provide the intended training toward independence.

Fundamental issues and challenges

Postdocs are extremely underpaid, and the salary difference is significant compared to any entry-level post Ph.D. jobs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Postdoctoral mentoring varies based on the mentor. However, there should be some sort of performance measuring metrics for the postdocs, as well as for the mentor. At minimum, an yearly evaluation both from the postdoc and mentor should be on record.

Response 997

Perspectives on the postdoc roles and responsibilities

I serve to complete research objectives set by funding awards.

Fundamental issues and challenges

Greater emphasis on skill and career development of trainees would be promote recruitment, retention and overall quality of life. Major awards depend on postdocs for completion of research aims and this could be considered in grant applications.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

The IRACDA training grant has provided me with significant structure in achieving career development goals.

Response 998

Perspectives on the postdoc roles and responsibilities

Engage in rigorous research, increase ability to mentor and write grants and communicate science.

Fundamental issues and challenges

The NIH standard for salary is too low. I am at a UC institution and as the postdoc salary just increased we can not afford to have postdocs. Many labs are now having to not include postdocs bc the NIH salary is too low. If we do find one we often loose them to industry bc postdocs start out at a much higher rate in industry. The budget for grants in entirety needs to increase as it has been flat for a long time. With this increase should also come an increase in graduate and postdoc rates.

Existing NIH policies, programs, or resources

Increase salary

Proven or promising external resources or approaches

Increase salary

Response 999

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is designated as a “trainee” position. I expected this to be a stage in my career where I can explore my abilities as a scientist without the interruptions and formalities associated with being a graduate student (which is also a trainee position). I expected that I will be able to have at least a small amount of say in the direction my research takes and define my own contributions to science. At the end of my “training” I expected that I will have adequate preliminary data to “take with me” to start my own academic career. I expected institutions that try to attract postdoctoral fellows will be more invested in their future and devote resources to ensure that future and not just trust their faculty to “do the right thing”. I expected I will attend conferences (annually) and interact with other scientists as a postdoctoral fellow. In return, my role is to work hard in ensuring my work is performed with a high level of

professional integrity, dealing with the day to day training of students in the lab and being as productive as I can be.

Fundamental issues and challenges

Poor pay

1. A postdoctoral position is a "no man's land" in most institutions, where we don't qualify either as a student or staff/faculty. There are no committees or mentorship teams (at least in my institution) to check on my progress, find out what my goals are and help me achieve them. IDPs are voluntary in my institution and are rarely ever done.
2. Lack of avenues for funding: The K award time limits are a joke. Postdocs like me, who spent almost their entire tenure in the pandemic dealing with supply shortages, work shutdowns etc were given a one or two cycle extension. This amounted to ~8 months or so, given the 2-3 years the pandemic has set everyone back.
3. I was an immigrant scientist before I became a permanent resident and eventually a US Citizen. There are NO avenues available for immigrant scientists and this sets us back several years as we frequently find ourselves trapped in positions with very little leverage. Immigrants who have formed a bulk of the US postdoc population, are realizing this and simply not coming anymore.
4. It is increasingly unclear what advantage a postdoctoral training is actually providing. What used to be a 2 year stint has now extended into an average of 5-6 years, with no clear outcome in terms of improved job prospects both in academia and industry.
5. The needs of postdocs have always been treated as the lowest of priorities for everyone that benefits from our work. The younger generation of students are simply paying attention and choosing other careers.

Existing NIH policies, programs, or resources

1. All NIH institutes need to extend or preferably eliminate their K-award submission limits. The K99 submission limit of 4 years and some K22 limits of 5 years is completely unrealistic. While I support term limits for postdoctoral fellowships to disincentivize institutions from exploiting trainees, these terms limits are truly just hurting postdocs trying to find funding for themselves. Scientific progress does not happen on a strict schedule.
2. Increase the documentation required from PIs applying for NIH funding to show that they are committed to improving the lives of their postdocs. If a postdoc is funded by an NIH grant, ask the PI to budget specific events in their postdoc's training, such as attending conferences, workshops etc. Ask them to submit a clear plan for their postdoc's career under their care, during the term of the grant and evaluate that as part of their progress reports. Ask for reference/support letters from the postdoc as part of the grant submission process.
3. In my personal experience, I found very little support from my current institution towards my K award submissions. These awards provide no indirect support and I think institutions are not economically incentivized to support these grants. These are highly competitive grants with unreasonable time limits, which are additionally difficult to get without adequate institutional support.

Proven or promising external resources or approaches

Any educational institution that receives NIH funding, needs to get evaluated for their educational efforts. If the institution accepts trainees, there needs to be documentation that the institution needs to produce to show that their trainees are actually receiving training. Without that, score grants being submitted from these institutions lower than ones that prioritize training.

The fundamental problem is that postdocs do not participate in the economics of science in a visible way. Faculty are the ones that support institutions by bringing in money through grants. The money is awarded to them, they control how it is spent and so they get the final say on all decisions. In times of a funding crisis, the training priorities of the postdocs are the first on the cutting block. The reality is that even though the postdocs are the ones actually making sacrifices and doing the work described in the grant proposals, as long as they have no leverage over the money, there is going to be no incentive for institutions to do anything to improve their lives. The decline in the numbers of incoming postdocs is just a simple reflection of this reality.

Response 1000

Perspectives on the postdoc roles and responsibilities

Academic postdocs are at the core of scientific research. They are the only lab members with the time and the knowledge necessary to carry the research activity of a laboratory. PI do not have the time, and graduate students are rarely independent at this stage. In my department, all the successful research projects are carried or supervised by postdocs.

The view of a postdoctoral internship as as a period of additional training after the PhD should be dramatically revised. This could have been true when postdocs lasted one or two years. Nowadays, most postdocs do their full 5 years then change status (Research Associate). Our postdoc stay way to long in this limbo position. It does not take more than two years for a PI to identify postdocs unfit for research.

It is true that not all postdoc are independents, and some will never be able to fulfill the position of a PI. There should be the possibility for those postdocs to access positions where they will not be able to access to the PI status but will be able to carry out research project under the responsibility of a PI.

Fundamental issues and challenges

Academic salary are abysmally low. In particular in the university located in the main urban centers of the US, NIH is not adapting the salaries to the lab location. In [redacted for anonymity], postdoc who are single are making 50% of the median income of the city. They struggle to find decent accommodation and are living on a budget. The industry in the area is providing very attractive salary for people with their education and talent. We should not bet they will all want to live like monks to fulfill their love of science very long.

For American citizen, the burden of student debt is a major issue. In my university (state university), graduate students that are born and raised in the US are rare, postdocs that are born and raised in the US are not to be found. Removing the burden of student debts could be attractive to retain US talents in academic research.

The difficulty in hiring postdocs is worsened by the fact that most PhD recipient are not doing a postdoc or not postdoc material. It is becoming increasingly difficult to recruit talented graduate students. In my graduate program, the amount of applicant was divided by 3 in 10 years. Low salaries and the absence of benefits in having a PhD on the job markets are main factors of the lack of activity of PhD programs, at least for US applicants who usually have student debts. We are now recruiting mainly foreign graduate students. The graduate students we have are often staying in academia for lack of better prospect, most of them don’t want to stay in academia.

Existing NIH policies, programs, or resources

To me, the problem is extremely simple: You cannot not attract the extremely talented working 60 hours/week with $56,000 a year in NYC area. NIH must increase their graduate student and postdoc salaries. Their salary should be modulated by the lab location. The fact that NYC postdocs receive the same salary than postdoc working in rural US does not make sense. R01 modular should be moved to at least $350,000 so we can correctly pay our postdocs. My R01 can barely afford two postdocs as my F&A are through the roof (above 50%!!) and my research barely ask for consumable.

Also, we should be able to provide a future to our postdoc. Most of them see the task of staying in academia as impossible, even the most talented. The early investigator status should be provided so Research associate can develop an independent research program in the lab of their PI. This will facilitate the transition postdoc to PI and reduce the time between starting a lab and first R01.

Proven or promising external resources or approaches

No response

Response 1001

Perspectives on the postdoc roles and responsibilities

In addition to performing their own research, a postdoc plays an important role in helping to teach and mentor the more junior members of the lab. They bring with them the expertise and perspective obtained from their graduate school training, which can dramatically influence and breathe new life into the lab they

join as postdoc. Postdocs represent a major avenue for a lab to gain new techniques or avenues of research as they share their knowledge with the lab as a whole. Likewise, since they have had a training independent of their current mentor, a postdoc is more likely to question or correct their mentor in a way that improves the science being done in the lab.

Fundamental issues and challenges

Funding and the nature of grants (both postdoc-targeted and wider lab-wide funding of grants) is not keeping pace with inflation and the cost of living, especially in major cities. Even in institutions that have recently increased postdoc salaries, postdocs are accepting a substantial salary cut when they choose to stay in academia as opposed to going into industry, consulting, etc. Given the numerous/meaningful research opportunities in industry and the fact that there is no longer a stigma around going into industry, the "prestige" of staying in academia is no longer sufficient to justify the growing salary gap between academia and industry.

In addition, I think there is a concern of what is the step after a postdoc. Until maybe recently there were far more postdocs than there were PI positions, so the stage after a postdoc is uncertain. If a PI position isn't a sure thing, a postdoc may find themselves doing another postdoc (not tenable for many) or they may go into a non-academia career. If they go to the non-academia career they may as well do that straight out of graduate school. They will end up at the same non-academia position eventually in theory and will make more money along the way. The current postdoc shortage may be a response to this supply/demand issue at the PI level and while it did feel like there were too many postdocs previously, the current shortage may have been an overshot and there needs to be some added incentives for individuals to do a postdoc even if they don't need/want to be a PI afterwards.

A lot of other things feed into postdoc recruitment, such as graduate school experience and how that impacts their perspective on science, but those are too personal/varied. Paying graduate students better would probably help there.

Existing NIH policies, programs, or resources

Grants need to be increased to reflect the increasing cost of living for postdocs (as well as graduate students and technicians). This may lead to fewer grants, but that may simply be necessary if the grants are to be sufficient to encourage and allow for people to be academic scientists. It doesn't seem to be appropriate to return to old PI:postdoc ratios, but there should be a middle ground between that and the current shortage.

I think it would also be good to have more funding options for postdocs to transition to non-PI academic research scientist positions. I would be perfectly happy to work as a research scientist in my current mentor's lab, but there are few grants to support such positions, their salary caps cannot compare to a similar position in industry, and only the most successful of labs can afford to maintain such a person. If postdocs knew PI wasn't the only possible academia career after their postdoc, it would reduce the risk of doing the postdoc itself.

Any training or workshops are going to effect such a small percent of graduate students and postdocs so as to have no influence on the problem. Every graduate student has already been to plenty of panels on career trajectories and they have seen how postdocs live in their lab. A sense of inspiration and interest are the only things that can counter the difference in salary between academia and industry. There isn't going to be a simple set of resources that address this as inspiration/interest are impacted so much by the day to day of someone's life/career, and rarely does a panel/handout have any effect. For better or worse, more money to directly support postdoc salary is likely the best solution for reducing stress and increasing inspiration/interest in postdocs.

Proven or promising external resources or approaches

No response

Response 1002

Perspectives on the postdoc roles and responsibilities

The roles and responsibilities of academic postdocs can vary depending on their field, discipline, and the specific research project they are working on. Here are some common Perspectives on the postdoc roles and responsibilities of academic postdocs:

Research: One of the primary responsibilities of academic postdocs is to conduct research. They are expected to work on research projects independently or in collaboration with their supervisors, contribute to the design of experiments, analyze data, and interpret results. Academic postdocs are also expected to stay up to date with the latest research in their field and develop new research ideas.

Publication: Another key responsibility of academic postdocs is to publish their research findings in peer-reviewed academic journals. This requires them to write research articles and present their findings at academic conferences.

Teaching: While academic postdocs are primarily focused on research, some are also involved in teaching activities, such as supervising undergraduate or graduate students, giving lectures, and leading lab sessions.

Professional development: Academic postdocs are expected to continuously develop their skills and knowledge, both in their specific research area and in broader academic fields. This can include attending workshops, conferences, and training courses.

Collaborations: In addition to working independently, academic postdocs are often expected to collaborate with other researchers within their institution and outside. This collaboration helps to expand their network, exchange ideas, and gain different perspectives.

Career preparation: Academic postdocs are typically in a transitional phase between completing their doctoral studies and securing a permanent academic position or pursuing a non-academic career. As such, they are expected to prepare themselves for their future career by seeking mentorship, networking, and developing a professional portfolio of research accomplishments and publications.

In summary, academic postdocs play a critical role in advancing research, contributing to the academic community, and preparing for their future career.

Fundamental issues and challenges

I want to emphasize International postdocs in academic research and the Fundamental issues and challenges that can inhibit their recruitment, retention, and overall quality of life. These issues can include:

Visa and immigration restrictions: International postdocs often face complex and restrictive visa and immigration policies, which can impact their ability to secure funding, travel, and participate in research activities. These restrictions can also impact their ability to bring family members with them, which can contribute to a sense of isolation and loneliness.

Language and cultural barriers: International postdocs may face language and cultural barriers when they arrive in a new country. This can impact their ability to communicate with colleagues, build relationships, and navigate unfamiliar cultural norms.

Discrimination and prejudice: International postdocs may also face discrimination and bias based on their race, nationality, or religion. This can lead to a sense of alienation and may negatively impact their mental health and well-being.

Limited access to resources: International postdocs may have limited access to resources, such as health care, housing, and financial support. This can contribute to insecurity and uncertainty, which can negatively impact their overall quality of life.

career mobility: International postdocs may also face additional challenges in terms of career mobility. They may face limited opportunities to advance their careers in a new country or may be expected to return to their home country after their training, limiting their career opportunities.

To address these issues, academic institutions and funding agencies can take steps to provide more support and resources for international postdocs. This could include providing language and cultural training, creating mentorship and support networks, and advocating for more inclusive visa and immigration policies. Additionally, creating a welcoming and inclusive environment can help to reduce discrimination and prejudice, and promote a sense of community and belonging.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1003

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

One of the most fundamental issues inhibiting academic postdoc recruitment would be funding. Many graduate students leave PhD programs in debt or without many savings which makes deciding to do an academic postdoc challenging when they could be earning much more in industry. Another issue along these lines is relocation as that can be an expensive gamble when costs are not covered.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1004

Perspectives on the postdoc roles and responsibilities

A postdoc is an opportunity to acquire new skills, develop an independent project within the purview of a mentor's lab's goals, and develop necessary professional skills. A postdoc should not be a Scientist or technician position without intellectual freedom and at least some level of research independence.

Fundamental issues and challenges

Lack of training opportunities at institutions (i.e. career services), a typical lack of trainee advising (i.e. a lack of postdoctoral affairs offices), poor pay relative to other competitive research areas, poor career prospects (i.e. a lack of academic positions), poor funding opportunities and lack of career security for non-US citizen scientists, lack of child care.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Career transition programs at some institutions have been extremely successful for attracting and retaining talent, especially minority researchers. Uniform postdoctoral affairs offices or organizations that could be NIH funded or somehow influenced by the NIH may be useful. More grant opportunities for international scientists could help to retain new PhDs in the US and encourage existing postdocs to stay in their positions. Greater flexibility to carry grants with you, to escape hostile workplaces. Fellows programs that encourage camaraderie and inter and intra-institution training to provide a greater sense of community, better training, and enhanced networking opportunities for postdocs across fields and locations.

Many of these hanges would need to be implemented at home institutions, but NIH guidance, mandates in fellowships, or NIH awards to support greater access to such programs could be options.

Response 1005

Perspectives on the postdoc roles and responsibilities

In my words, postdoc is an employment opportunity and skill development program for Early career researchers like me from developing countries like India

It suppose to train future scientists.

Fundamental issues and challenges

Major issue is Salary. The Salary we get is does not support the small family and their dependents.

Salary is not attracting many researches

Existing NIH policies, programs, or resources

Annual increment should be changed according to inflation rate.

Or provide rental allowances like Indian funding agencies do.

Proven or promising external resources or approaches

If you provide the mentoring sessions for new faculties it would be good. Many of the new faculties doesn't have any clue on how to manage human resources in their lab. They waste money and pressurize postdocs (from my personal observation). Institute should evaluate faculties postdoc mentoring performance by taking inputs from the postdocs.

Response 1006

Perspectives on the postdoc roles and responsibilities

I view it as a transition period where my job is to figure out what is the next step (academic path, industry path, etc.). I am trying to gain expertise in new methods/areas of research.

Fundamental issues and challenges

Pay is my main concern. I am taking interviews elsewhere and considering leaving my current post-doc. l enjoy it but for this stage in my career the pay is not meeting mty financial goals. I cannot contribute to typical 401k employee retirements, when I am already significantly behind on savings because of graduate school. It is hard to feel especially like a post-doc is worth it when I could have gotten a job ~55k BEFORE going to graduate school. I do enjoy the freedom of the job, but it is not the best training if I don't go towards academia. The places I am interviewing at are offering between $80-140,000 for industry research roles with better benefits. It is hard to feel like a post-doc is worth sacrificing those things for the CHANCE at the lottery of an academic job.

Existing NIH policies, programs, or resources

Better pay, better training for paths outside of academia, more benefits like retirement, ACTUAL training (not just time to train myself/apply to trainings, but structured training experiences built within T32s), more leeway on clinician-scientist careers.

Proven or promising external resources or approaches

Better pay, mentors should receive training on HOW to mentor effectively, more discussion for roles in industry, non-profit world, etc. More intentional post-doc groups/connections. Too much of post-doc is navigating all this on my own—I have a mentor but I almost feel like sometimes a body to produce more research to meet the goals of the institution/training grant, not so much pure investment in my career.

Response 1007

Perspectives on the postdoc roles and responsibilities

Academia uses postdocs as migrant laborers, to execute their research plans and conducted their analyses, while paying them a low wage given the exorbitant costs of living remotely near their physical locations. The role of a postdoc should be to learn the skills necessary to run their our research program, not take the place of research staff that the PI doesn't want to hire to run the programs of PI because are too "busy" to execute their own R01s or other large grants themselves. Postdocs are responsible for their own research, not the research of exploitative PIs.

Fundamental issues and challenges

NIH has allowed academia to hire postdocs like migrant workers to labor in their labs with insufficient support, lack of commitment, and/or no promise of a future. Because of this, academia has no reason to change because the only people valuable to academia are senior and mostly White investigators that consistently score well in grant review and bring funding for indirect costs to the institution. Why would an

institution change their ways if NIH doesn't prioritize funding good behavior, treatment, and support of postdocs and other trainees and deprioritize funding senior researchers.

Existing NIH policies, programs, or resources

Quit pouring money into the research of PIs who's postdocs aren't given tenure-track positions, or other jobs, at the end of their postdoc. They have NO reason to change their habits if NIH keeps blindly funding them. The top NIH-funded institutions game the NIH system to increase their wealth, keep wages for those who aren't senior as low as possible, and maintain White supremacy/control at the highest levels of research. It is no coincidence that as the scientific student pipeline racially and ethnically diversifies, the conditions for postdocs are getting worse. There is a long track of such behavior in U.S. history. NIH is actively funding and maintaining White supremacy in research and it needs to stop.

Proven or promising external resources or approaches

Quit making the argument that this is an issue with the postdocs. This is a NIH-funded academia issue rooted in the exploitation of cheap highly-skilled labor, the lack of desire of creating tenure-track positions and other jobs after being a postdoc, and the maintenance of White supremacy/control at the top NIH-funded institutions.

Response 1008

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary is too low.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase salary.

Response 1009

Perspectives on the postdoc roles and responsibilities

An academic postdoc is an advanced research training for scientists interested in careers in research, particularly, though not exclusively in academia. As a more advanced trainee, a postdoc is expected to contribute to the execution of the research, but also contribute more significantly to the intellectual development of the research questions and methodologies.

Fundamental issues and challenges

The apprenticeship model of training in biomedical science falls short. PIs expect postdocs to be productive in accomplishing the aims of their research grants that pay the postdoc's salary. It has long been assumed that if a postdoc is successful at this, their future career advancement will fall into place. With the dearth of tenure track faculty positions available, this is not the case. Graduate students recognize this and, thus, are eschewing careers in academic research and are less likely to perform postdocs.

Existing NIH policies, programs, or resources

The fundamental problem is that postdocs are primarily paid by research grants awarded to the lab PI and these grants are based solely on the potential impact of the research objectives. American universities and research institutions have become completely dependent on federal grants to fund their research operations and so there is very little support available to build a different kind of training and development model. Separating funding for training from funding for the direct research may provide opportunities for institutions to provide a more well-rounded training experience that better prepares students and postdocs for the variety of careers now available to them, including academia. In addition, the NIH should expand

their institutional career development training programs and develop a format so that those institutions who receive these awards can (and must) share their findings and best practices with other institutions.

Proven or promising external resources or approaches

No response

Response 1010

Perspectives on the postdoc roles and responsibilities

I think the postdoctoral experience is crucial for trainees interested in traditional academic research careers. It allows the postdoc to learn and solidify new techniques and gives them an opportunity to grow their 'hard' science skills and their development and management skills.

Fundamental issues and challenges

Frankly, postdocs are underpaid compared to entry-level industry careers. Funding is difficult to obtain even for established investigators and postdocs are no different. If PIs cannot obtain funding, they cannot fund postdoctoral research/salaries. When those two things are coupled together, it does not make an enticing career option and most PhD graduates are opting out. Postdocs are not given any of the 'quality of life' benefits that peers at entry level careers are are allowed—we often have no choices for health insurance, retirement benefits, child care options, paternity leaves, etc. Postdocs are 'students' when it is helpful for universities and 'employees' when it is helpful for universities, regardless of what is best for trainees.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1011

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as a chance to be an independent scientist in a mentored position.

Fundamental issues and challenges

Personally, my career has been untraditional and I have found funding sources available to postdocs to be incredibly inflexible for anything but a traditional career path. In my opinion, this leads to the lack of diversity at higher levels of science that organizations are continually trying to fight against while still maintaining strict boundaries around postdoc funding. I did my PhD and first postdoc in quick succession and by the end of my first postdoc position had had two children. I decided to take some time off from research when my kids were young. This did not decrease my ability to do science, but most funding sources give flexibility of 1 year per child and no more. I taught when they were young to have more time at home and more flexibility with their care, as I could do much of my work in the evening after they went to bed. During this time I held a tenure-track position at a primarily undergraduate teaching university. Because I have more than 4 years of postdoc experience and have previously held a tenure-track position, I am ineligible for most postdoctoral funding sources. However, I need to do another postdoc position to get back into research (which was always my intention), as I have found that I am not competitive for faculty positions without recent publications. I am tenacious, but the roadblocks put up are pretty intense, and on many days lead me to believe that it is not going to be possible for me to succeed in an academic research career. If you want to have people, and particularly women with children and other people coming from less traditional backgrounds, interested in postdoctoral and academic faculty positions, you must create funding mechanisms that recognize and accept diverse career paths.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1012

Perspectives on the postdoc roles and responsibilities

It's a buffer position so academia can exploit (underpay) the labor of PhD-level workers and filter out most of them (there more post-docs than professor positions). I do believe that a young PhD is not fit yet for a PI position, but postdoc "training" implies kind of a student status that justifies the salary.

Fundamental issues and challenges

It's simple. As a postdoc, I have a skill set (problem solving, adaptability, learning skills, engineering, programming, surgeries, data analysis, writing, publication) that is worth at least 3 times more than a postdoc salary in the industry job market. Research is an intense job that requires personal sacrifices, and there's no certainty of getting a satisfying, well paid job in the near future. Along with these sacrifices, I barely make enough to pay a rent, my bills, and food in the [redacted for anonymity] area. This situation is not enviable and only a few very passionate people can reasonably make that career choice.

Existing NIH policies, programs, or resources

Give postdocs a decent salary, especially in the areas where the cost of life is heightened.

Proven or promising external resources or approaches

No response

Response 1013

Perspectives on the postdoc roles and responsibilities

I think a postdoctoral position is a valuable training step on the path to becoming faculty. Ideally, this should be a period of time where you are working almost totally independently on a question that you posed. However, its important to note that many postdoctoral fellows *are* prepared to run a lab themselves, but are staying in a postdoc as simply a job until they find a faculty position.

Fundamental issues and challenges

The primary challenge is that the postdoc salary is too low considering their qualifications. Postdocs are mostly at an age where they are starting families and wanting to settle down, but the NIH regulated postdoc salary is not sufficient to support a family.

Ideally, a postdoctoral position could be a full-time permanent job. It should not be necessary for every scientist for fight for a small number of faculty positions in order to make a living wage. If we had a class of full-time research scientists, the amount of institutional knowledge rate of scientific progress would increase substantially

Existing NIH policies, programs, or resources

The NIH standards for postdoc salaries need to increase substantially and should regularly increase with inflation. It's hypocritical that the internal salaries for NIH postdocs are 10K more than the standards for everyone else.

Proven or promising external resources or approaches

Postdocs need a salary and benefits that's most consistent with other fields.

Response 1014

Perspectives on the postdoc roles and responsibilities

I view the Postdoctoral position as a transition that allows PhDs to improve their knowledge and skillset on their field and that would prepare them for the future steps of their career.

Fundamental issues and challenges

As Postdocs, we have all the responsibilities of an "actual" job without having the "actual" job. Salaries are ridiculously low for a PhD, and benefits are basically not existent. The "training" aspect of the position is also mainly an utopia, with PIs prioritizing the productivity of their trainees over their professional development and not providing the required mentorship—not only a scientific one, but also from the point of view of discussing future career steps. Postdocs are normally left on their own at the moment of moving forward with their careers—reason why many of us end up staying postdocs for way too long.

Existing NIH policies, programs, or resources

Improve salary and benefits conditions—despite the transitional nature of the position, we are PhDs with years of experience, not students-, as well as the training aspect of the postdoctoral programs.

Proven or promising external resources or approaches

Improve salary and benefits conditions—despite the transitional nature of the position, we are PhDs with years of experience, not students-, as well as the training aspect of the postdoctoral programs.

Response 1015

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as a sort of limbo. Options can be either moving to industry or moving forward in an academic environment, but the lack of professorships available is definitely worrying. Watching faculty at my institution scramble because not enough new postdocs are coming in is interesting; we're often paid as little as possible and even if we are valued in our lab, it seems we are not valued by institutions. It is not a sustainable or desirable system and leaves me worried about what will happen as my postdoc draws to a close.

Fundamental issues and challenges

The biggest fundamental issue is pay. After spending the time and effort to achieve a PhD, it does feel a bit of a waste kept very low in pay but with many added responsibilities. On top of often being the scientific backbone of many labs, mentoring and training graduate and undergraduate students and building management skills, having to spend so much additional energy on trying to build funding and support to take control of your own lab—even before you can think about applying for limited faculty positions—sometimes seems like an impossible task. Overall quality of life can be decent though, as long as you are in a lower cost of living area.

Existing NIH policies, programs, or resources

The expansion of possible academic research career pathways seems like the most sustainable answer. I love my research, and I love my lab and the institutional projects we work on, but I don't necessarily want to become a tenured faculty member. That means less time at the bench, more time writing grants and managing students and staff, and a different kind of stress. But staying as a research faculty offers marginal pay and basically zero recognition or chance for advancement despite having a high level of expertise. It puts people in a tough position, which is why the vast majority of my colleagues cut out academics altogether and went straight for industry jobs.

Proven or promising external resources or approaches

Postdoctoral recruitment and job satisfaction would be vastly improved if we were simply paid better. Training is highly individual but many institutions do a fine job of offering training in grant writing and lab management.

Response 1016

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The number one issue I see with current postdoc retention and recruitment is a complete failure of the NIH to address cost of living and salary concerns. The NIH continues to turn a blind eye to an obvious

problem that everyone in the academic environment knows is an issue. Postdoc pay must increase drastically and a framework has to be put in place that allows for postdoc pay to keep up with inflation and adjusts to cost of living within the city where the postdoctoral tenure will be carried out. If the NIH is serious about the future of science in this country, it must make this its #1 priority.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1017

Perspectives on the postdoc roles and responsibilities

Postdocs are basically the day-to-day managers of the lab for PIs who have too much else going on to provide direct mentorship to their labs. Sure, there is probably some training required in new techniques or protocols, but that is the same for any job. There isn't enough professional training for it to be viewed as a training position, which is the justification for the abysmally low salaries of postdocs. Basically, the postdoctoral position is a research scientist position and shouldn't be broadly viewed as a fellowship/training position.

Fundamental issues and challenges

Faculty jobs—why suffer through 5-10 years of being underpaid and overworked to not even get a faculty job at the end?

Respect—postdocs are just treated like senior graduate students; give people respect for their work and expertise! Give people credit for their own unique research ideas!

Pay scale—we already have to live at the poverty line for 5-7 years of grad school. To do that and then barely get a pay raise after getting the degree is an unimaginable financial load, making so that the only people who can afford to do gradschool + postdoc financially are people with either family money or a spouse who makes enough on their own to cover almost all of the rent/bills/expenses. Pay scales need to account for inflation and I feel like I shouldn't have to say this but postdocs should be able to live comfortably with a reasonable commute above the poverty line with their own apartments (i.e. not have to have a roommate).

Control over one's own destiny—the current system necessitates ingratiating yourself to your PIs so that they write you letters of recommendation for the rest of your career. This means that everything is dependent on getting everything done that your PI wants, even if it isn't best for you and they are holding you/your paper/your recommendation hostage.

Management—no incentive for PIs to be good mentors, no mechanism to provide feedback to bad mentors, no punishment for being a bad mentor

Existing NIH policies, programs, or resources

Payscale payscale payscale

Make trainee feedback a component of awards, especially R01s

Proven or promising external resources or approaches

Look at industry work culture. People are happy, feel valued and respected. Sure, there is more pay and more pay would help postdocs too. But there is also a realization that people have entire lives that aren't defined by their research, which isn't the standard in academia. People expect and praise overwork culture, and it shouldn't be this way.

Response 1018

Perspectives on the postdoc roles and responsibilities

Cheap labor that is part of the system to climb a ladder with no guarantee of progress.

Fundamental issues and challenges

I believe that the expectations are too much with no guidance. So individuals that have the experience to succeed in the expectations will be successful, but individuals that were not trained and guided in grad school pr previous post-doc, that will not be successful. This turns away many post-docs from the academic lab. The time and effort becomes not worth it, and people steer away easily.

Existing NIH policies, programs, or resources

Unfortunately, I think there has to be a root change in the idea of training a post-doc. This types of training is not sustainable and therefore not worth remolding. It should not exist. A program-based program where certification in a field maybe more appropriate. (similar to a residency program in medicine)

Proven or promising external resources or approaches

No response

Response 1019

Perspectives on the postdoc roles and responsibilities

I plan to pursue a post-doc, likely in the academic sector. A post-doc has more responsibility and independence in the lab than a graduate student. They are also expected to come in with greater experience and be able to produce results faster than a graduate student. A post-doc is simply another stepping stone that acts as a time for you to secure additional funding prior to entering the job search. Many post-docs are spending 4 years in their position. Ideally I would like to be on the shorter side of this length because I don’t want to feel stagnant in my career trajectory.

Fundamental issues and challenges

Length of time for average post-doc. Expectations as far as work/life balance--I’ve been told that as a post-doc you have less work/life balance than when you did as a graduate student. Paygrade for amount of work hours expected of a post-doc may be an issue.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1020

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is supposed to be a ‘training’ position, required to transition to an independent academic career or to leverage better industry position and salaries. It’s essentially another PhD on top of your PhD. The main difference is that because you are not working towards a terminal degree, you can in theory walk away any time and only sacrifice an academic career path. On the plus side: I am more experienced and have more freedom, so its more fun and I can approach science at a higher level. But there are significant caveats in being a postdoc, which have driven so many people away (and I am struggling with leaving on the daily as well).

Fundamental issues and challenges

4. The salary is pitiful. Most postdocs are in their thirties, highly educated and making little money. As a lot of universities are located in expensive cities, in some cases >50% of our salaries goes to rent.
5. You are not a bona fide employee. Whenever the university wants, you are 'Staff' but when it comes to benefits, you are a 'trainee'. These years do not count for retirement.
6. Creating a family in parallel has been extremely challenging financially.
7. Securing a fellowship (which is viewed favorably when you transition to an independent position) is financially penalized. You are left to fend for yourself for taxes. In some cases health insurance is not covered because you are not 'an employee of the University'.
8. You are still at the mercy of the PI. If they are abusive, your work life balance can be abysmal, your mental health severely damaged and your career prospects can hang from this one person's whim.
9. You are still doing science alone for the most part. Academic science is mostly collaborative on paper only. Team work is always contentious and strained due to 'who's name will get to be first/last on the paper'. In short, doing a postdoc is unsustainable unless you have a supportive partner. and even then its highly masochistic.

Existing NIH policies, programs, or resources

- Expand Childcare support.
- Facilitate Access to training grants and Career development grants (F, K's). The mechanism as it stands is super intimidating, very bureaucratic and favors people from established labs, where grants are there to boost prestige and not really required to help with training.
- Make OVERHEAD conditional. The NIH gives 50-90% of the sum of an awarded grant to the university. Withhold funds from institutions until they provide proof that they are providing fundamental services to their postdocs (e.g. healthcare, a W2 form, employee benefits, child support etc)
- Accountability: Make mentoring a component of evaluation. Stop funding and supporting abusive PIs that get free rein and control over postdoc's careers.

Proven or promising external resources or approaches

I do not know of implemented, proven approaches because everyone loves convenience and inertia. Why change without pressure? And its exhausting and so unfair to constantly expect pressure to come from the bottom and least powerful entities (in this case, the postdocs). Systemic change is most effective when it starts from the top and because in the US, the NIH holds the lions share of the money, the NIH has the biggest sway to impart change.

Here are some suggestions:

- Childcare support.
- Subsidized housing.
- Facilitate Access to training grants and Career development grants (F, K's). The mechanism as it stands is super intimidating, very bureaucratic and favors people from established labs, where grants are there to boost prestige and not really required to help with training.
- Make OVERHEAD conditional. The NIH gives 50-90% of the sum of an awarded grant to the university. Withhold funds from institutions until they provide proof that they are providing fundamental services to their postdocs (e.g. healthcare, a W2 form, employee benefits, child support etc).
- Accountability: Make mentoring a component of evaluation. Stop funding and supporting abusive PIs that get free rein and control over postdoc's careers. Healthy mentorship is critical. Universities can't be supportive of title IX and anti abuse in theory only. There are no universal policies or follow through. So abusive PIs with lots of power over 'trainees' (that are grown adults), can reck careers.

Response 1021

Perspectives on the postdoc roles and responsibilities

I view a post doc as an independent scientist who is developing their skills and expertise under a more senior scientist. I think post docs are largely independent who may occasionally need guidance by their mentor. I think the most important resource that is provided to a post doc by their mentor is lab space and resources such as instruments to perform their experiments. Most importantly post docs, like graduate students, are underpaid for the amount of work they produce. Post docs often work longer hours and more days than staff scientists or even their mentor and are not compensated adequately for this effort.

Fundamental issues and challenges

The post doc salary is the largest challenge in recruiting, retaining, and overall quality of life for a post doc. As a graduate student nearing graduation I am not considering post doc positions because they are poorly compensated and have a poor work-life balance.

Existing NIH policies, programs, or resources

A new post doc minimum salary needs to be implemented.

Proven or promising external resources or approaches

Increase post doc compensation.

Response 1022

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

I believe the NIH grants and positions should not be limited to individuals that are only U.S. Citizen or permanent residents. This limits the diverse graduate and postdoc individuals with extraordinary ability from pursuing NIH-affiliated positions. I would advice you to try expanding the horizon to include non-U.S. citizens/permanent residents. Thanks.

Proven or promising external resources or approaches

No response

Response 1023

Perspectives on the postdoc roles and responsibilities

Postdoc is a second training period and opportunity to carve out my own niche in science that I can pursue going forward as a PI. i.e. it’s a transition to independence.

Fundamental issues and challenges

Cost of living, especially for positions in cities with high cost of living. I know many scientists from my PhD training who chose to go into industry rather than continuing in academia for this reason, even despite their joy for scientific discovery and curiosity. Additionally, despite a seeming lack of postdocs across academia (every PI is always looking to hire a postdoc), some PI’s still have unrealistic expectation for work and drive postdocs away from academia. For example, constantly telling postdocs that they don’t work enough despite working 60-70 hours per week. Essentially, you can make twice as much money, better benefits, and work 70% as much in industry. We could improve those things for postdocs.

Existing NIH policies, programs, or resources

Grants should be expanded for additional salary and funding for benefits for postdocs (and Ph.D. students, who will be postdocs soon). Maybe this could be tied to inflation. PI's should be encouraged by the NIH to allow vacation time for employees. The NIH should only fund PI's who show that they pay at least the NIH recommended salary for postdocs. This was an issue in my lab, which is very well funded, where one postdoc was paid more than the recommended salary while another was paid less than the recommended salary for the same work. The NIH should not fund PI's who do that, and it should be communicated to PI's that funding will not be given if they do so.

Proven or promising external resources or approaches

Higher salary and better benefits improve recruitment, training, working environment, mentoring, and job satisfaction. Especially in a field where positions are paid by salary rather than hourly, so working more than full-time is expected.

Response 1024

Perspectives on the postdoc roles and responsibilities

An academic postdoc seems to me like an obligatory step in an academic career, one that you have to do in order to stay in academia. Ideally a post doc should help you develop a new skill or establish yourself in a field of research, but my current impression is that you just have to do a post doc in a famous scientists lab to get a good academic job. I have thus far been mentored primarily by postdocs, they have taught me all the basic lab/bench skills that help me every day in lab, so my current standing as a scientist is indebted to post docs, however I am not envious of their position or excited to continue with a post doc after graduating.

Fundamental issues and challenges

The primary issue is money. I consistently see job opportunities outside of academia offering double the normal post doc salary for the same amount of experience. If an academic post doc position paid appropriately for the level of experience and training I would more than likely continue in academia with a post doc. Post docs often have to relocate/move from their graduate school which is another barrier to entry. Better post doc positions are primarily in more expensive cities (San Francisco, Boston, D.C. etc) so the cost of living is made more difficult by the stringent current salary.

Existing NIH policies, programs, or resources

Higher pay and standard benefits as with any other career track job in the United States. NIH policies set the standard for post doc pay and benefits across the country. The unionizing and striking done by the UC schools will inevitably spread if current policies are not altered.

Proven or promising external resources or approaches

Feeling valued rather than exploited by one's institution. Higher pay and benefits are the bare minimum for improving the postdoctoral training ecosystem.

Response 1025

Perspectives on the postdoc roles and responsibilities

Being a postdoctoral researcher means that soon after the completion of your Ph.D., you are expected to transition to a new lab to begin your development as an independent scientist under the direction of a more established researcher. This professional, academic, and personal development includes training in grant-writing, mentoring of junior research staff/students, leading projects and collaborations, attending conferences, and writing/publishing manuscripts. Once again, while this is happening, there is a well-established mentorship team that is guiding the postdoc by helping them get trained, guide them in the work they want to do, ensuring that the postdoc has what they need.

Fundamental issues and challenges

The mentorship within a postdoctoral position can be hit-or-miss and their is little consequence for bad/nonexistent mentorship for PIs. PIs need to be trained in lab management and understand that

different positions/levels have different needs (i.e. undergraduate vs. research tech vs. grad student vs. postdoc vs. senior associates).

The other aspect is that the pay for postdoctoral positions is far too low for the increasingly complex level of technical level of expertise that post-docs are expected to have even just starting out. Also, all PIs are not even paying the base-level salary so there is a lack of transparency on this. This lack of transparency can disproportionately impact systematically marginalized identities within STEM research and can perpetuate inequity.

Existing NIH policies, programs, or resources

Raise the salary for postdocs at all levels. Also, providing relocation funds to postdocs (as-needed) who may be moving from their home institution as moving is often a financially-draining process. This also provides postdocs time to ease into their new position.

Proven or promising external resources or approaches

No response

Response 1026

Perspectives on the postdoc roles and responsibilities

Training position to establish independence.

Should be a period in the career to scale up our knowledge to create a niche.

Fundamental issues and challenges

No need for 300 words: SALARY!

Competitive salary relative to industry folks AND cost of living!

Existing NIH policies, programs, or resources

It drives me crazy to see so many PD getting NIH fellowships and leave for industry with *no* papers. It is basically free money without any thing in return for the taxpayer. Higher salary for high productivity.

Also, K99/R00 transition award should be extended to 5years. It is nearly impossible to produce high quality and high impact paper within 4 years, especially if starting an independent project or working with rodents.

Proven or promising external resources or approaches

No response

Response 1027

Perspectives on the postdoc roles and responsibilities

It’s a great way to be stable after grad school and develop skills in existing deficiencies. It may come with teaching or training roles and often has a higher expectation than PhD roles. Generally it’s a respected role, but not a prestigious one. The academic postdoc does little influence for industry jobs and only bolsters professorship applications. Too much time in a postdoc is now necessary in academia. Generally the brightest and most dissatisfied PhD holders go for postdocs. The middle ground tends to go to industry.

Fundamental issues and challenges

Pay is abysmal. No guarantee or high chance of professorship. High requirements. Poor benefits. Poor institutional support. Lots of postdoc exploitation occurs with no potential relief.

Existing NIH policies, programs, or resources

Enhance pay, require benefits to be of reasonable quality, standardize work hours, standardize tasks and reasonable outcomes, limit term in postdoc. Limit postdocs seeking academic roles.

Proven or promising external resources or approaches

Look at industry pay and hours.

Response 1028

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a fellowship-based position one embarks on following the completion of their PhD work if they are planning on continuing a role in academia. It is a position in which the postdoctoral researcher gains more independence in planning experiments, learning new skills and techniques, and other necessary experience (ie teaching) in order to successfully transition into an assistant professor or other teaching role following their fellowship.

Fundamental issues and challenges

I think there are many challenges. The pay scale and job opportunities are the biggest hurdles. Postdocs are some of the most highly trained and educated individuals and paying them $56,000 which is well below the majority of college graduates who just have a bachelors degree in their first entry level job is too low, especially when many of these highly desirable positions are at universities located in major cities or university towns where the cost of living is very high. The starting salary for a fresh PhD is over 2X that in industry where they are actually paid for their skills and expertise

Also, usually postdocs are around their late 20s to early 30s where they want to be able to start a family, this low pay makes it particularly difficult for women and having to move around to different places to get additional postdocs prior to academic positions is not feasible.

Additionally, there are not great job prospects. Professors do not retire at the rate universities are churning out PhD students, and are only training them for academic positions and for most students, they will have to take more non-traditional careers due to the lack of jobs, many of which a post-doc is not necessary for.

Existing NIH policies, programs, or resources

Increase the payscale is the best way. If you want to compete with industry jobs, the pay and benefits need to improve. As for the lack of academic jobs, I am not sure how you fix that. The majority of students doing a postdoc want a tenure track assistant professor position at an R1 or teaching university and there just are not enough jobs for all of the students who want them. Most of them are being forced into adjunct or associate positions, with no job security, no benefits and short contracts.

Proven or promising external resources or approaches

Better pay

Better benefits

Better mentors

Better career outlook

Response 1029

Perspectives on the postdoc roles and responsibilities

I think in many/most labs postdocs are in exploitative situations. The role of a postdoc in my ideal view would be a mostly independent researcher who is supported by their PI and the lab but otherwise has a clear goal in mind before starting and a set time-frame they should be able to achieve the goal. It seems many PIs see postdocs instead as highly qualified and trained versions of graduate students who are under paid and kept in their position for far too long on exploratory projects.

Fundamental issues and challenges

As it stands for most postdocs the position is too demanding and long-term/undefined for many to agree to the lack of financial security while completing a postdoc gives no guarantee that the postdoc will secure their ideal job as a PI since that field is so competitive. For most jobs outside of the PI role the postdoc is dispensable so there is little reward to agreeing to such an undefined and underpaying job for many.

Existing NIH policies, programs, or resources

I think a closer definition of what a postdoc is in terms of time and project scope would be useful. Perhaps there could be some body that exists to provide framework and job definition so that in cases where PIs are abusing the role there is an HR like way to get help knowing rights ect. I also think the dogma should be dramatically changed, most PIs want as many postdocs as possible because they are highly effective, however it feels like a selfish use of labor. Perhaps each lab should have less postdocs but the postdocs should be compensated better.

Proven or promising external resources or approaches

I do not think recruitment is the problem, I think the nature of the postdoc appointment has shifted and been misused in the last few years and people are realizing how silly it is to take a postdoc position if they are not going to be competitive for the job market based on the status of their graduate school papers, if they do not have strong financial security from other means, and if they are unsure if they truly want to push for a PI job.

Response 1030

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a job for a fully-trained PhD holder to contribute to the scientific field. As with any job, there is some on-the-job training/learning, but I want to emphasize that in looking for a postdoctoral position I expect to be treated and compensated as the highly trained professional scientist that my graduate training has produced. I view the postdoc as an intermediate stage mainly for who are interested in an academic career path. The postdoc is an opportunity to establish a line of research that may directly translate into a PI's lab focus.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

The reason many PhD holders go to non-postdoc roles is the improved compensation and respect/autonomy that is granted in the industry setting. Postdocs in academic settings are poorly compensated and treated like transient employees/trainees, resulting in a lack of work and life satisfaction.

Response 1031

Perspectives on the postdoc roles and responsibilities

A postdoc should be an opportunity to further ones career by pursuing original research and (if desired) submit grants that list that postdoctoral fellow and thus continue to advance their career.

Fundamental issues and challenges

1) PAY. the fact that i could make literally twice as much money outside of academia is a major reason why I'm leaving. I'm in my 30s and tired of living like i'm still in college in a group home or other cheap accommodations.
2) We are often stuck doing admin work for the lab that we should not be doing and it takes time away from us doing science and other things that would actually advance our careers.
3) Stuck writing grants for the lab or PI where if these grants are accepted, our names our not on them and thus we receive no credit.
4) Stability. I'm in my 30s and I'm tired of moving around. I'm ready to find a stable job and settle down.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Pay should be linked with cost of living around the country, not a blanket postdoc salary. More opportunities that allow a postdoc to continue on in a permanent position. Better protections from PIs dumping their admin work/lab grants onto postdocs without a way for the postdoc to get reasonable credit for that work.

Response 1032

Perspectives on the postdoc roles and responsibilities

Postdocs are the main workforce performing scientific studies, alongside graduate students. They are highly skilled in their field and produce high quality work.

Fundamental issues and challenges

In general this position is precarious (especially international postdocs who must maintain their immigration status through work), and immensely underpaid. Quality of life is significantly lower than their peers due to low salary.

Existing NIH policies, programs, or resources

Minimum pay for postdocs should be increased to at least 75000 per year, and be adjusted for region rather than the same over the country. Some areas such as Boston/NYC are too expensive for the current standard pay.

Increased funding for labs by an increase in the modular R01 grant would help this.

Proven or promising external resources or approaches

No response

Response 1033

Perspectives on the postdoc roles and responsibilities

Training to future role.

Fundamental issues and challenges

The overall financial problems

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1034

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1) It's very clear to me that it is difficult for both clinical and research focused postdocs to compete with industry focused roles for new PhDs. My institutions (a highly prestigious VA and academic medical center) struggle to recruit for postdoc roles that offer significant support—eg for licensure, for K award development, etc. The reasons I understand are:
2) We can't pay enough money to compete;
3) Postdocs don't receive all benefits permanent staff do;
4) Student loan repayment looms, and postdocs don't receive repayment through VA programs (I remain ineligible for all federal programs as a VA-funded researcher—I cannot receive LRP or VA loan repayment);
5) New PhDs are looking for something that adequately recognizes their expertise while supporting their individual goals—and feel that postdocs don't receive that recognition, and perhaps not enough tailoring or support either. Many postdocs also require moving, and particularly in my field—clinical psychology—many PhDs have already moved twice for their doctoral program and internship. Finally, I think there are fundamental issues in terms of equity and inclusion that mean that some early career folks—postdocs and otherwise -receive more support and facilitation towards their career goals than others. New PhDs from underrepresented groups who know they are less likely to receive that needed support may opt-out rather than putting themselves through an already overly precarious process.

Existing NIH policies, programs, or resources

1) Change payment policies to increase salary and require full benefits
2) Advocate for loan forgiveness policies and fundamental changes to educational policies to reduce undergraduate, graduate, and professional training debt
3) Advance policies and programs that protect postdocs from abuse and exploitation
4) Advance equity in postdocs including related to retention and advancement
5) Protected paid leave for parents, caregivers, people with disabilities, etc. including extensions on grant funded postdocs—much longer time lines than current
6) Remote options and pay for moving expenses
7) Pay for licensure expenses

Proven or promising external resources or approaches

No response

Response 1035

Perspectives on the postdoc roles and responsibilities

In my view, the purpose of the academic postdoc is to either

1. prepare to be a principal investigator and/or, in more rare cases,
2. to gain additional training or skills for another career. Increasingly, it is the first case, because many other careers rightly consider a PhD sufficient training to perform well in a job environment.

Therefore, I think the roles **and responsibilities** of a postdoc include practicing the skills that will be employed as a PI in a mentored environment. This includes things like applying for grant funding, developing projects independently, teaching courses, mentoring students, presenting at conferences/seminars. I do not think the position should be viewed as just 'working for a PI', but really should be focused on facilitating the next career step and making scientific discoveries from one's own ideas.

Fundamental issues and challenges

To me, the core issues are that postdoctoral researchers are financially under compensated for the value that they provide, and the postdoctoral phase is too prolonged and restrictive. Relatively low compensation as a PhD student makes some sense (as long as the stipend is livable), because during the

PhD you are working toward a tangible credential and receiving substantial training. During the postdoc, however, every additional year is a massive opportunity cost for a gamble at a faculty position. The NIH F32 is an absolute disaster of a financial decision, despite the prestige, because in addition to the low salary, postdocs cannot contribute to a 403b (like other university employees), do not get credit as a 'worker' for social security purposes, and are (alarmingly) on the hook to pay back the money. The idea that postdocs continue to be 'trainees' in any real sense for a half decade post-PhD strikes me as ludicrous. I am certainly expanding my skill sets, but much of this is self taught and unregulated. I question whether we are trainees any more than anyone starting a new job. I think this bad financial decision could be tolerated if the typical length of a postdoc were a year or two. But it increasingly requires 4-5 years, with no guarantee of an academic job. This undervalued postdoctoral phase also corresponds with the time of life when many people want to move forward in their relationships, put down roots in a geographic location, and women in particular may have to contend with family planning. The prolonged uncertainty of the postdoc makes all of these factors difficult. One must be absolutely sold out on a faculty position to continue through the conditions of a postdoc, and I don't think that is the optimal way to advance the scientific enterprise.

Existing NIH policies, programs, or resources

- I suggest dropping the F32 and expanding the number of K99/R00s. I suggest expanding the 'Early K99' to more NIH divisions, so that postdocs can receive an award with adequate salary early in the postdoc based on their PhD work. I also suggest that the K99/R00 be more flexible in terms of the duration of K99 support, such that postdocs who get a faculty job are not penalized if it is awarded after their job offer. Imagine if the K99 were from 0-4 years, with renewals each year, for maximum flexibility.
- Adjust T32 awards to facilitate postdoc-to-faculty transition at the same institution. An increasing number of institutions are offering such a program and explicit support from the NIH would be ideal.
- Drop the penalties in fellowship proposals for working on the same model organism or at the same institution as the PhD. First, the focus should be differentiation from the postdoc and PhD advisors, rather than litmus tests such as model system. Second, the idea that people need to switch institutes at every phase of the career is difficult for people with families or other ties to an area. In an uncertain postdoctoral phase, at least let people live somewhere they are familiar with.
- Postdocs should be able to apply for some 'regular' grants (e.g. the R21) and transfer them to a new institution if they get another job. Frankly, I am not sure if this is possible now, but if it is, it should be more publicized. In general, barriers to switching institutions with grants should be lowered.
- Drop the payback agreement for F32/T32. Postdocs should be compensated like any real job without the threat of having to pay the money back, no matter how unlikely that possibility may be.

Proven or promising external resources or approaches

- Virtually ever other postdoctoral fellowship pays more and offers more benefits than the NIH F32/T32. Hanna Gray Fellows receive 70k salary, Jane Coffin Childs fellows receive 70-74k, Damon Runyon fellows receive 60-66k, Helen Hay Whitney fellows receive 61-65k, NSF Fellows receive 60k. I think 70-75k is much more reasonable, but the starting NIH salary of 56k with a payback agreement for a 'prestigious' PhD fellowship is almost an insult.
- Fostering community among people with fellowships would be nice. Many others have networking opportunities such as an annual conference, but even something like a Slack community would be helpful.
- An easy way to get funding for conferences would be ideal. By the time NIH fellows pay for their own health insurance, there is not institutional allowance left for experiments or conferences. Many grad students have easy ways to get $1000/year to go to conferences, but lack this support for postdocs. I think it would be nice to have such support that is easy to apply for and virtually guaranteed.
- Given that moving around is currently such a big part of academic life, a straightforward way to get moving expenses covered like any other job would be nice.
- Many of the approaches I am proposing are to treat postdocs like any other person with a job requiring a PhD. Scientific discoveries depend on postdoc labor, but this is not consistent with how postdocs are treated. I enjoy my lab and research but the institutional barriers largely in place due to the NIH make me uncertain whether this is a tenable path. Although we have collectively reached a crisis point, these issues are perennia–see the article "NIH Pledges Big Hike in Postdoc Stipends", published in Science in March 2001 (yes, 22 years ago). I sincerely hope that this feedback is considered.

Response 1036

Perspectives on the postdoc roles and responsibilities

The postdoc should be a temporary mentored position where they are meant to gain critical skills prior to entering industry, academia, or another field. Yes, it is meant to identify skills gaps in the lab, but the sole purpose of a postdoc (as a person) shouldn't be an extra set of hands to do the PIs work. This is a time to explore various paths, professional experiences, social settings, etc to see what they do and don't like, which will ultimately help them determine their values and strengths and help them better choose a career. The postdoc should be a time for constantly new and challenging (and fun) experiences to engage and inspire the postdoc.

Fundamental issues and challenges

Postdocs are overworked and underpaid. As mentioned below, they are expected to just stay in the lab and do work for the PIs without the PIs putting effort into making them well-rounded (professional development, public speaking, networking, grant writing, management skills, leadership skills, etc). There needs to be more of a postdoc curriculum that sets specific milestones or actively encourages sending them to conferences. Having a curriculum and guaranteed "you're expected to present at conferences, network, manage, lead, write proposals, and have a mentoring committee" would help with recruitment because they would know after coming out of their postdoc that they would have gained some of these skills. Having a mentoring committee in addition to their PI would also ensure they have someone else looking out for them and offering resources and guidance (not to mention networking outside of only their PIs circle).

They also need more resources on writing grants, the different kinds, and how to find them. They should be encouraged by their PIs to go out and find their own funding, but there is little guidance on how to start that process.

Existing NIH policies, programs, or resources

I think the NIH could require paying for whatever level of postdoc health insurance is required (be that single, dependent, or family level). Postdocs don't get paid a lot and insurance is high. Many postdocs are international and do not fully comprehend the high monthly out-of-pocket cost to cover their family. This leaves them

1. paying a high cost,
2. enrolling their family in inadequate insurance, or
3. having their family go uninsured.

This leaves them open to getting hit with huge bills should something happen and leaves the university liable if they go uninsured and are on a visa like a J2. Requiring that the PI pay for their necessary level of coverage would be an added benefit and would give the postdoc peace of mind.

Additionally, PIs should be encouraged more to send postdocs to conferences or participate in professional development programming. I would love to see this made a requirement for their funding. Too many times as the Director of Postdoc Affairs do I have postdocs come to me asking for conference/travel funding because their PI hasn't allotted them funds, or actively discourages it.

Proven or promising external resources or approaches

No response

Response 1037

Perspectives on the postdoc roles and responsibilities

I originally approached my post doc position as a way to broaden my skillset beyond what I had learned in my PhD program. While this was initially true, the longer I was there the more I encountered people who were in post doc positions because they didn't have the opportunity to start faculty position or similar jobs and so I quickly realized that I didn't want to remain in academia and instead pursued an industry career.

Fundamental issues and challenges

In many institutions, post docs get stuck in positions with no advancement. There is a real risk of people spending many years in the role with nothing to show for it before they find alternative career paths. PhD-educated students need to be made aware of the career options that are available to them so that they don't feel like post doc-ing is the only choice.

Existing NIH policies, programs, or resources

Overall, greater awareness of the many career paths available is needed.

Proven or promising external resources or approaches

Mentorship programs, industry rotations,

Response 1038

Perspectives on the postdoc roles and responsibilities

Postdoc position is obviously challenging. I love being a post doctoral fellow. But heard from many friends that , higher officials just consider postdocs as a machine that works. It's obviously energy consuming and draining and we are not properly rewarded.

Fundamental issues and challenges

We are not paid properly. Considering the fact that we have the most highest degree and not much paid. Also, we work more than 40 hours per week for sure. Because experiments need not to be finished in 8hrs of time. I have personal experience of being in lab for almost 16 hours continuous. Either we should be rewarded for hourly basis or pay should be increased. Many people go to industry because of this reason because I know many people who just have masters are earning more than we do. Quality of life is too bad in postdocs. We are working even in weekends.

Existing NIH policies, programs, or resources

More trainings should be done.
Also increase the wages.

Proven or promising external resources or approaches

Also, teaching opportunities should be mandatorily included for postdocs. At least they can show in their cv , that we have teaching experience.

Response 1039

Perspectives on the postdoc roles and responsibilities

Academic postdocs are important in the American system where few scientists exist to help train more junior trainees (e.g., PhD students). Academic postdocs develop their own independent projects under the umbrella of their faculty mentor and advisor to prepare the launch of their own laboratory. They also continue to develop new skills preparing for a career in biosciences (whether they pursue an academic career or they don't).

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1040

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary, salary, salary. Ultimately, nothing else matters if the postdoctoral salary is not commensurate with the degree of skills and experience of the employee. It is unsustainable to expect the academic enterprise to thrive on the backs of employees making $54,000 a year.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1041

Perspectives on the postdoc roles and responsibilities

A postdoc position within an academic laboratory should remain the least of all committed positions that a graduate student could have taken upon graduating. That is, the expectation should be that it neither positions them closer to an academic faculty position or employment elsewhere. That said, it remains the most typical path for a trainee aspiring to secure a faculty position. But over the years, the perception and reality of one's chances in landing an academic appointment, particularly in light of industry positions offering significantly higher salaries, makes the academic postdoc an unappealing choice for many.

Fundamental issues and challenges

The fundamental issue remains a lack of financial resources necessary to compete against many lucrative industry, biotech, startup companies (or similar). R level grants have remained largely static, and PIs are being asked to do more with less. At the current rate of each typical R level grant, there is not sufficient funding to support or compete for talented postdocs—who inevitably seek industries that compensate them more handsomely.

Existing NIH policies, programs, or resources

I think that two approaches to consider are to

1. Increase the baseline for modular and non-modular grants to a level that clearly reflects the financial reality that most federally funded PIs are having to deal with. And
2. Work with institutions to make the research track (non-tenure) faculty position a more viable endpoint for scientists who wish to remain in academic position. This should be done in a manner where postdoctoral associates transitioning into a research track position are able to apply for their own funding that is wholly separate from mechanisms that tenure-track investigators can draw upon—so as to mitigate conflicts of interest and perceptions of yet another cohort of competition. An extended consideration would also be for international postdocs to have their own funding mechanisms—since at this point the difficulty of recruiting postdocs is more concentrated with domestic scientists.

Proven or promising external resources or approaches

No response

Response 1042

Perspectives on the postdoc roles and responsibilities

The postdoc position is a transitionary time for an early career researcher to establish independence, while also having the opportunity to plan and carry out a research project that will promote their future career and directions.

Fundamental issues and challenges

The biggest issue for postdocs, by far, is the lack of competitive pay relative to fields outside academia. Without proper compensation, it becomes burdensome for researchers with PhDs to stay within academia performing research. In addition, graduate students and other trainees from underrepresented backgrounds have an even larger financial burden to overcome.

Existing NIH policies, programs, or resources

Significant pay increase (pay beyond that of year-to-year inflation) is a good start for alleviating the financial pressure and making it possible for scientists from all walks of life have a fair opportunity to succeed in academia.

Proven or promising external resources or approaches

Providing more financial resources as part of large research grants, as well as for training grants, will enable improved recruitment and provide for better job satisfaction, and working environments.

Response 1043

Perspectives on the postdoc roles and responsibilities

I really enjoyed being a T32 fellow but I am also very blessed because I won a coveted NIH LRP award.

For a physician this helps offset the trade off cost of going in to traditional clinical practice and balancing the loss in financing from doing a T32.

The T32 provides about 60 ish K, but with the LRP that help off set upwards of 100K and sometimes plus in student loans.

So I think that the T32 should also come with an LRP.

Fundamental issues and challenges

I am a MD. It comes down to finances. Typically for these people they are in the mid 30s. Some have young children and are starting a family. The exact time that its a big financial opportunity cost for these individuals.

Existing NIH policies, programs, or resources

NIH T32 + LRP combined program.

Proven or promising external resources or approaches

I would allow the post docs to have group national course. Maybe a consortia of universities, Harvard, Michigan, Penn, Stanford etc faculty can put on a year long course. 1 hour every 4 weeks.

Response 1044

Perspectives on the postdoc roles and responsibilities

A significant step in increasing your training and a necessary step for getting an academic position.

Fundamental issues and challenges

Science stress—poor work/life balance; unwielding goals; the push to always publish or perish culture; poor pay that is not commensurate with living standards; poor negotiating ability for contracts; poor access to resources (once you are a grad student you are entitled to a lot of school resources, but not when you are a postdoc); no paternity or maternity support for postdocs with newborns.

Existing NIH policies, programs, or resources

Increased stipends; increased training for PIs for hollistic post-doc training

Proven or promising external resources or approaches

Well first and foremost stipends commensurate with the private sectors.

Response 1045

Perspectives on the postdoc roles and responsibilities

I did an academic postdoc because I wanted to keep my options open and was still deciding what I wanted to pursue for my career. It was mainly between an academic faculty position, teaching and industry but I was also open to any career path. I see postdoc responsibilities as leading research projects more

independently than graduates students. I also believe that postdocs should be involved in training either undergrad or graduate students in the lab.

Fundamental issues and challenges

My experience with issues inhibiting retention is that PIs just don't know how to manage or train people, or the experiences with training vary widely from lab to lab. I've seen PIs that just expect them to function completely independently. Examples include not even editing or contributing scientific insight to grants and papers written by the postdoc. The other end of the spectrum are PIs that are completely controlling and don't allow the postdoc to make decisions about the scientific direction. Of course the low pay is also a big factor, but this is compounded by no useful training and so the postdoc experience loses its "training" value. In general, right now the postdoc position has no real training value outside of pursuing an academic position, and even that varies depending on the lab.

Existing NIH policies, programs, or resources

Having more institutions with established NIH BEST programs.

Proven or promising external resources or approaches

No response

Response 1046

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The most important issue is how little I am paid as a postdoc. As described in Yalcin et al., Nature Biotech, 2023, postdoc salaries are below the living wage in Boston. Because I am poor, I have intense stress and other mental health issues associated with constantly worrying about my financial situation. Because I am poor, I am unable to consider starting a family. Because I am poor, my quality of life is generally lower than I'd like it to be. Because I am poor, I waste a lot of time each year organizing temporary housing situations with strangers, as I cannot afford to live alone. Because of all these reasons, I am strongly considering leaving my postdoc for a position in industry where I am paid enough.

Existing NIH policies, programs, or resources

The single most important change that could be made would be to pay postdocs a living wage.

Proven or promising external resources or approaches

No response

Response 1047

Perspectives on the postdoc roles and responsibilities

The postdoc has become a necessary career stage to transition into being a scientist—usually as a faculty member at a university with research programs. Postdocs are mostly employed to conduct studies under existing research programs and further their mentor's and department's research successes, rather than given funds or opportunities to develop skills or their career. Postdocs often provide mentorship and teaching to students or other lab members, as well as within the department but are not often recognized for their efforts or compensated for their labor. Postdocs are expected to keep up with current research trends, and often provide resources or time to helping supervisors (principal investigators) maintain the modernity of their research programs, and update their lab resources to conduct cutting edge research. In the meantime, postdocs are not invested in by their supervisors or the department due to the temporary nature of the job, sometimes even on a rolling year-to-year contract basis, meaning no stability of livelihood and constant future planning and anxieties during the course of the postdoc. Further there is no help afforded to improve the postdocs' upward mobility in career. In addition, as an international postdoc, there are consistent struggles with the VISA and knowing that without the postdoc, I would have to uproot and return back to my home country and abruptly leaving all livelihood here behind.

Fundamental issues and challenges

The NIH pay scale is absurdly low for postdoctoral scientists, especially in consideration of their amount of labor and contribution to furthering science and in comparison to equivalent industry positions with the same qualifications. The NIH scale is not adjusted for cost of living in various states, and denies additional sources of income or top-up payments from the institution. It has not been increased beyond the rate of inflation and increases to cost of living.

Postdocs need to be given more recognition and credit for their work—especially in initiatives beyond producing publications such as initiatives to improve and reform science. Further, for their expertise, postdocs should be treated as specialists rather than trainees, or if they are considered trainees, given significant more funding and resources to develop skills. In fact, postdocs could be reformed to be continuing employment as research scientists.

Postdocs need to be provided more capability of getting faculty positions, especially tenure-track. The K99 awards that propose a pathway to independence are no longer getting candidates into faculty positions, because there are not enough positions and standards have risen to ridiculous heights as a result. There should be more awards and development to give postdocs the means to continue their research programs and establish a career path.

Existing NIH policies, programs, or resources

The NIH pay scale for postdocs need to be vastly reformed—including increasing the salary, establishing benefits that need to be provided by the institution for fair work conditions, transparency in payments beyond the pay scale such as topping up by institutions, transparency in how changes in the scale are determined each year and ensuring those considerations are relative to inflation and increases in cost of living.

The NIH grant funding to improving research rigor, such as by creating resources and training modules, in all of science needs to be expanded and perhaps marketed as potential employment opportunities and careers: https://grants.nih.gov/grants/guide/rfa-files/rfa-gm-18-002.html. Establishing careers and permanent science positions conducting review, quality control, teaching reproducible research, establishing Open Access and Open Science infrastructure is needed.

Proven or promising external resources or approaches

ReproducibiliTea is a grassroots community-based approach that establishes training in reproducible and Open Science and may provide a model in which postdoctoral training could be established (also applicable at the graduate student level).

Response 1048

Perspectives on the postdoc roles and responsibilities

Postdocs are highly trained scientists fully capable pf taking ownership for their projects—they should be able to submit RO1s—they are junior PIs learning to develop programs instead of projects—there is no justification to pay them poorly—it is exploitation

Fundamental issues and challenges

Most are non resident aliens—not only they do not have financial stability but they also live constantly threatened by their residency status—postdocs foreign or American should be eligible for support from T32

Existing NIH policies, programs, or resources

Better pay—ability to submit R grants and a path for residency—also eligibility to be supported by T32

Proven or promising external resources or approaches

No response

Response 1049

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a temporary position that provides opportunities for additional training that will prepare the trainee to enter the workforce in a related career of their choosing. I believe that the roles **and responsibilities** of the postdoc should vary depending on their career goals and trajectory which should be discussed with the PI to ensure that there is support prior to accepting the position. Postdocs wanting to be on faculty at major research institutions will need to focus on publishing in high-impact journals, securing independent funding such as career development awards, and building name recognition through conference presentations and networking. They will also need experience mentoring and with administrative responsibilities that come with running a lab. I think it's especially important to set realistic goals/benchmarks for those wanting academic positions, and to have a backup plan if those benchmarks aren't met. It is up to the postdoc to take initiative, be proactive, a self-starter, and to ask for help right away if it is needed. It is their mentor's responsibility to provide scientific and career advice, an environment that allows the postdoc to explore independent ideas successfully, and networking/sponsorship. It is the postdoc's responsibility to take initiative, communicate effectively, and to figure out the best ways to carry out the work.

Fundamental issues and challenges

Low salary and long hours are probably the most notable deterrents. It is also especially difficult for postdocs of child-bearing age, as many feel they have to choose between having a family and a career—some think they can have both and then turn 40 with neither. Child care benefits don't even come close to support that is needed.

Universities are now increasing postdoctoral minimum salaries above the NIH standard (esp. in cities where cost of living is very high), but are abruptly asking PIs to pay the difference which isn't always an option due to budget constraints. Such abrupt changes rather than grandfathering in can result in postdocs losing their positions.

But ultimately, I think it might be better to increase postdoctoral salaries and to have fewer postdocs. I think many people who pursue postdoctoral positions ultimately take jobs that didn't require postdoctoral training. It is also more equitable, because some don't have the luxury of taking a lower income to do what they love, and I think those who can tend to be from more privileged backgrounds.

Existing NIH policies, programs, or resources

T32s and F32s should have a locality adjustment, similar to GS scale. It would also be cool if those who were serious about a postdoc had the opportunity to secure funding for their salary/benefits and some small budget prior to beginning their postdoc, as this would give them a bit more clout to shop around and make it easier to match with a PI.

Proven or promising external resources or approaches

I wish there was some sort of database where interested postdocs on the market could match with PIs searching for a postdoc. I feel like it would make the postdoctoral search more efficient and less stressful. And also more equitable, because often people meet each other at conferences and not all grad students have labs that can support their attendance at conferences or can afford to pay out of pocket to attend.

Response 1050

Perspectives on the postdoc roles and responsibilities

When I was a postdoc, my roles and responsibilities are to do well in research and hope that it can help me to transition into academia or industry. I view it as a transitioning period and if I do well in postdoc, I could either stay in academia, industry or somewhere.

Fundamental issues and challenges

I am currently a staff research. After my maximum postdoc training, I transition into staff research in the same institution and lab and continue my research and at the same time train members in the lab. I am here for 15 years and for the last 5 years, I am getting very frustrated with the productivity of postdoc trainees. They are very different from postdocs whom I know and they are demanding, not demonstrating

interest, motivation, and not initiative. But there are a few postdocs who are in the top tier and those are being retained by top professors thus researcher like me or my PI, hard to get top tier postdocs. So the Fundamental issues and challenges are two ways: lack of great quality postdocs and great postdocs will join big labs. Those average postdoc will not stay long and will for certainly join industry or other sectors with higher paid. In the end, researcher like myself is frustrated.

Existing NIH policies, programs, or resources

Make promotion an easy step from postdoc to academic research track. Promote researcher that works hard, and demonstrate that, do not block their promotion. Make promotion for research career pathway, simple and easy. I have seen at my institution that postdoc/graduate student transition to administrative track much easier, without assessment and get promotion and higher paid than postdoc who want to transition into research career track (even for non-tenure track).

Proven or promising external resources or approaches

Personally, I have stayed on after postdoc, and my incentive and promotion to stay are very limited and frustrating. I worked hard for >15 years, and promotion is limited in academia and non rewarding. I stay because I love my research and many times I asked myself why I stay when after 15 years, I am only a staff researcher who work >70 hours per week, contribute the lab member training, contribute to grant writing, contribute to teaching. Honestly, I am determined to leave academia and in fact my New Year's Resolution. Bottom line is that even after my postdoc training and stay on as researcher do not get any better salary and promotion, so why should I stay even if I love doing my research? I feel that the institution need to revisit and should not make promotion so hard for staff researcher who stay on after postdoc and should give them easy path to transition to adjunct position without blocking them to get promotion.

Response 1051

Perspectives on the postdoc roles and responsibilities

I think academic postdoc in USA is big trap and it makes people hopeless, clueless and useless. There is no salary guidelines if you want to start family or having kids, postdoc cann't survive on this salary. More importantly, for international candidates, lack of funding opportunities of NIH to start independent carrier.

However, I am experienced (post PhD >5 years) in design, synthesis, and development of drug-like small molecules as new therapeutic agents. As I am international candidate on H1-B visa so I can't apply for most of the funding opportunities of NIH, therefore there is very less hope for academic carrier as I am also losing age and enthusiasm for research.

It is a big trap.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1052

Perspectives on the postdoc roles and responsibilities

Very critical period as it should provide opportunity to establish the framework for his/her entire ensuing career through discoveries.

Fundamental issues and challenges

Lack of guarantee for research career as university position is unstable, i.e. must leave and find another job if cannot get grant, even if he/she becomes a professor.

Existing NIH policies, programs, or resources

Another discouraging factors is that the process of applying for postdoctoral grant requires submitting ideas for research, which become distributed to so many other people in the process (as many as 35 individuals) so there is no confidentiality.

Further, if he/she cannot gain grant, the research idea is now given to other people who reviewed it–who will then have opportunity to pursue the idea although the idea came from the applicant.

If the grant was not funded, then the applicant will have gained nothing in the process and probably must leave the university.

Proven or promising external resources or approaches

Although the practice of providing a block funding to those who are considered pioneers are ongoing, the selection of individuals as pioneers are highly biased. It generally selects individuals who have faithfully followed the mentor's ideas .

Problem is that most researches did not lead to "cure" for cancer in the past as ~600,000 are expected to die from cancer this year.

So a drastic change in current practice may be necc—which is more based on one's achievement in curative medicine–though under this criteria, most of those working in the field may not qualify.

Also a more NASA like institution with a definite goal may need to be established (where job is not unstable) as it is quite clear whether you can go to the moon or not .

Also with strong training in fundamental of biology—very few postodoc with today's training have sufficient experience in DNA replication, transcription, recombination, structure, metabolism, repair.

Response 1053

Perspectives on the postdoc roles and responsibilities

Postdoc is an important bridge to academic career but these days I would consider it working for nothing from a financial perspective.

Fundamental issues and challenges

1. Lower pay, especially in cities with higher cost of living
2. Using postdocs to complete remaining works from existing grants without considering Postdoc's own research plan/getting ready to apply for small and early career grants funding.
3. Assigning meaningless Green Card requirements for some findings for postdocs like T32.
4. Opening the gate for more postdocs from other countries with established research background.
5. Considering full insurance coverage for postdoc s (not like a graduate research assistants).
6. Applying retirement plans during postdoc (maybe some Institutions do this already)

Existing NIH policies, programs, or resources

Removing Green Card requirements for grants that can potentially higher those without Green card but with work authorization, such as T32.

Proven or promising external resources or approaches

Requiring grants PIs for providing a personal and confidential reports from postdocs (written by postdocs) during their works at that institution/lab/university.

Response 1054

Perspectives on the postdoc roles and responsibilities

Ideally mentored training with considerable more independence than a PhD student. It should ideally also be a position where one gets to learn about a new system of a technique etc.

Fundamental issues and challenges

a) Extremely low pay.

b) Lack of investment from mentors in training, most PIs want trainees' who are already trained and do not invest efforts to mentor postdocs.

c) Lack of protections as regards mistreatment by PIs. PIs have way too much power over the career prospects of postdocs, and it's a complete hit or miss. Too risky.

d) There is no need for postdoc training unless one is determined to go into academia, and as things stand, there is little to justify going into biomedical academic research. Funding rates are abysmal, PI salaries are low, and the amount of free work expected of PIs (grant review, manuscript review, DEI work, outreach work, student recruitment, science communication etc) is absurd. The notion of 'Academic research is a calling, not a job.' is a privileged notion only applicable for people who have not had to or do not have to think about money.

e) Poor work and life balance. There is little opportunity for work/life balance as a postdoc if one wants to get an academic research PI position. Also, postdoc length is progressively increasing.

f) There already are far too many postdocs compared to the number of academic positions generally available. Why is there even a specific need for 'postdoctoral training' aside from cheap skilled labour (which is exactly how postdocs are treated)?

Existing NIH policies, programs, or resources

Increase postdoc pay. Provide paid leave. Require a postdoc to have a committee so one bad mentor cannot ruin a postdocs career prospects. Provide a term limit on someone being a postdoc.

Proven or promising external resources or approaches

NIH should not only promote academic research track or independent PI tracks for postdoc funding. Every trainee fellowships require postdocs to aim for independent PI positions, which is absurd given the lack of job opportunities. Also, provide more research support for postdocs in terms of fellowships available.

Response 1055

Perspectives on the postdoc roles and responsibilities

An academic postdoc gives an opportunity to further hone research skills, mentor students, apply for grants, and work to establish independence. It also provides opportunity to develop scientific maturity. Not all postdocs are created equal and not all institutions and PIs necessarily see the postdoc in this way. The creative energy used in designing experiments, reviewing papers, and writing manuscripts is the key to independence. Postdocs need to harness the skills that they have scientifically and prepare themselves professionally for different careers, as there are no guarantees.

Fundamental issues and challenges

Postdocs write papers to support their next steps and the lab of their PIs. PIs may be stressed with trying to maintain funding, which puts stress on the laboratory staff. PIs may move to different institutions, further adding instability to life. If postdocs choose to start families, opportunities for obtaining adequate support, especially childcare in already expensive cities are difficult. (There is no good time to start a family, but the biological clocks of scientists are ticking.) As industry has evolved, new opportunities for scientists have arisen and the concept of a postdoc has been challenged. People going into industry may not see a postdoc as being necessary or valuable. Some scientists who may have wished for academic appointments also realize that their lives may be put on hold and may also go into industry, which is also volatile.

Existing NIH policies, programs, or resources

The K awards seem to provide a number of opportunities. (However, many of these are geared toward clinicians.) Infographics are OK, but one could add more for the research scientist track. There seems to be more information for the veterinary or clinician pathways. How do we value the PhD vs. the DVM vs. the MD? Should a certain number of slots be offered for postdocs such that the potential for exploitation decreases? Can there be a check and balance system for evaluating a postdoc's progress after each year? Can institutions harmonize their postdoc offices to ensure all are aware of the benefits offered?

Proven or promising external resources or approaches

Consider providing dedicated time and space for those who explore: teaching at primarily undergraduate colleges, going into industry/partnering with industry partners, applying for science policy roles, etc. Integrate and align with the National Postdoc Association for feedback. Ensure that healthcare for postdocs is equitable, as are policies for parental leave. Consider the benefits of someone going into industry after the PhD and how this may be seen as a better choice from a psychological, financial, and practical standpoint. Consider the opportunities of having PhDs enter into physician-scientist roles. accelerated programs PhD --> MD = MD/PhD? Some people in the biomedical sciences may have not known about this sort of program and/or developed interest late. It seems that MD/PhDs in research get more opportunities for applying for and obtaining grants (and they can also still function as care providers).

Response 1056

Perspectives on the postdoc roles and responsibilities

To me, a postdoc should be an opportunity to design a novel research project in a supportive environment, which will allow you to generate publications for landing a faculty position and establishing grant funding. I would like a postdoc entering my lab to propose a research project that could be their own to take with them, in addition to working on a project in my own group that needs to be pushed forward. This requires a postdoc to have a decent skill set already for the work that my group does, some training is of course expected but they need to come in with 30-50% of the knowledge base or else it's essentially another PhD project.

Fundamental issues and challenges

Recruitment is a severe problem for me, I've yet to get any strong candidates. I am instead awash in weak candidates, who seem to be looking simply for a job, have no skills related to my research, and don't have any vision for a potential project. Some of these are just poorly trained, but some I think simply want a staff position. Having recently been a postdoc, I've been on the other side of this as well: I received almost no specific training in how to be a faculty member, and my last mentor was upset that I was spending time writing grant proposals and picking out equipment for a new group in the last months of my employment. The current postdoc is essentially a staff scientist, which is a waste of our youth and energy. The problem is that PIs are dependent on their cheap and experienced labor. I could lose my tenure because I can't find a postdoc to push projects through in these early years—graduate students take too long to train and I need papers now.

Existing NIH policies, programs, or resources

I have had NIH funding at every stage of my career: PhD, postdoc and ESI. Only in my PhD training grant (run through my university) did it ever feel like more than a paycheck and CV tick. It would have been very helpful to have some sort of organized meetings to talk about career development etc. as a postdoc, serve as an ad hoc ESI member of a study section to learn more about the inner workings of the NIH, have opportunities to travel to the NIH and meet with scientists in my funding institute. Essentially keep the programs as they are, but just provide a little more humanity so that in addition to the money (which is great!) we can also feel like we are participating in something larger. I think we also need more "real" staff scientist positions, for the people who want to stay in academia but won't become PIs.

Proven or promising external resources or approaches

A strong jobs board, free, would be a great help for recruitment. Perhaps people with NIH-funded postdoc positions available could post them? And better built-in ways to interact with PIs in the field who will eventually be the connections they need for jobs, which some of the foundations do for their fellows through yearly retreats. Many postdocs, myself included, don't get a lot of contacts outside their lab until they go on the job market. My experience may have been worse due to the pandemic, but I don't think it was atypical.

Response 1057

Perspectives on the postdoc roles and responsibilities

It is a transition time which provide an opportunity to switch to independent career. It also provide a platform to develop own parallel line of research.

Fundamental issues and challenges

Many PI do not consider them as trainee as they want someone to lead the project from day one and put lot of pressure. Many lab also do not prefer to hire senior postdoc so there must be some job hierarchy so that postdoc should not feel insecure and focus on research. PI or University must have plan to place trained postdoc. As postdoc is transition at both level personal and professional authority must provide support them to grow.

Existing NIH policies, programs, or resources

Some policy to retain and give job security.

Proven or promising external resources or approaches

While awarding grants to PIs, NIH should ask them to follow good mentoring practices and some weightage can be given for mentoring.

Response 1058

Perspectives on the postdoc roles and responsibilities

The academic postdoctoral training serves to develop leadership and individuality in scientific pursuits. It is should allow for academic freedom to explore fundamental scientific questions that would not be of financial interest to industry. This type of training creates new ideas and brand new fields of research. It is a critical sector of the scientific and translational process. Without these positions, there stops a flow of early stage investigators and chokes scientific discovery overall.

Postdoc training could also provide opportunities and a proving ground for under represented populations and under served graduate students to receive further training and develop leadership roles. These opportunities are invaluable to students that would otherwise be restricted to their social economic circumstances.

The academic postdoc should build on the creativity of motivated students and an exchange of new ideas. It allows for the exchange of ideas from across disciplines and global technological advancements. The critical mass of postdocs in the US and in the academic environment is unparalleled in generating and advancing knowledge.

Fundamental issues and challenges

Issues stem from multiple levels.

- Stagnation of graduate student and postdoctoral salary in the face of rising cost of living.
- Underfunding of lab operating budgets that do not match the reality of scientific research costs
- Poor graduate school training that lack leadership development and understanding of the scientific process
- The perspective that academic postdoc is a sacrifice in personal life (work life balance, family life, personal development) driven by unrealistic timelines and the publish or perish model
- Top down stress system of austere grant funding model for most labs and funneling of money into small subset of “star” labs
- Poor accountability of PIs in repeatedly abusive practices and a fear-retaliation system where a fear of a bad recommendation primes a negative work environment
- A lack of PI training for people management promotes and propagates historical malpractices

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1059

Perspectives on the postdoc roles and responsibilities

I consider the postdoc as a preparatory mentored phase before a potential academic career, as well as a chance to consider how to refine and further my own research agenda as I prepare for research independence.

Fundamental issues and challenges

Off the bat, the pay discourages one from seriously considering continuing in an academic career. The years of training to get through the PhD is met with an almost insultingly low pay, one that many undergrads will likely surpass in their first year of working full-time. As much as I desire to do research and teaching in an academic setting, the low wage and lack of childcare related benefits stings. I pay my childcare provider nearly as much as I earn myself per hour.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1060

Perspectives on the postdoc roles and responsibilities

I don't think there were clearly delineated roles **and responsibilities**, or if there are they get ignored. Ideally the job provides training for people so they can become better PIs, but given how many obvious differences there are between these two types of roles and what they do, that is plainly not true. In real life my experience suggests that most scientists including postdocs view them as slightly better-paid senior grad students.

When I joined my lab as a postdoc, my role was to learn the techniques and produce research product. That happened and projects have evolved (and I am still doing them), but now as our lab manager has left, my role also envelops what they have done, so it increasingly involves lab management (IACUC, mouse colony maintenance, management of junior lab members, etc.). In that sense I do think I am getting some "PI training". But what a postdoc means will easily vary from lab to lab, or situation to situation within the same lab.

Fundamental issues and challenges

Recruitment of postdocs—The challenge that made me question whether I should be a postdoc is the generally negative view of job prospects after the postdoc. If this job is to prepare me for an academic faculty position, yet there are so few academic faculty positions available, why should I even try?

Retention of postdocs—Poor retention is usually due either to a poor PI-postdoc relationship, the fact that postdocs can't afford to be postdocs (especially those living in expensive cities), or the PI runs out of funding to support the postdoc. Postdocs can get their own funding, but while there are several mechanisms for this, the overall proportion of fellowship-supported postdocs is still pretty low.

Quality of life—this depends on institution, department, and lab culture. The things that impede good quality of life include a PI that is not supportive or encouraging, a department that does not recognize the existence of it's postdocs, or an institution that does not support postdoc development or organizations.

Existing NIH policies, programs, or resources

I think there will always be an argument for giving more money to postdocs (fellowship awards or career development awards), as well as increasing the R01 budget so labs can better accommodate increasing postdoc salaries and other costs.

The NIH also publishes a payscale they recommend for postdocs, and this payscale is used by departments to determine how they will pay theirs. This payscale is not adjusted for regional differences in living expenses, and for postdocs who need to live in cities this high cost of living combined with low pay could result in poor retention.

Proven or promising external resources or approaches

There are a lot of possibilities here, but it's not clear to me what the best would be. The postdoc is supposed to be a training position for one to become a faculty member. But since there are not many faculty positions available, it's not clear to me that we should be trying to increase the raw number of postdocs. If you do, you're really just setting more people up for failure as they try to move on to their next steps. Rather than increasing the number of postdoc positions, I think It'd be better to focus on increasing quality of life for existing and future postdocs. This could be done by increasing salaries, or at a minimum ensuring that recommended salaries are accompanied by cost of living adjustments. Also, a very notable NIH fellowship disincentive is that fellowships prevent postdocs from receiving institutional benefits, such as matching for retirement savings plans. That should be solvable.

Response 1061

Perspectives on the postdoc roles and responsibilities

A Postdoc is a temporary research position that is typically taken on by someone who has recently completed a PhD or other doctoral degree. Postdocs work under the supervision of a principal investigator or senior researcher, and their primary goal is to conduct research that advances their field of study and contributes to ongoing projects.

Fundamental issues and challenges

The industry was booming and postdoc positions are exploitative. No one wants to be stuck in a low pay position when you can get better pay in the Industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Improve job satisfaction and opportunities after you complete the postdoc.

Response 1062

Perspectives on the postdoc roles and responsibilities

A postdoc is a PhD graduate who fails to launch. It is any necessary position that only exists to secure cheap labor at the expense of the individual.

Fundamental issues and challenges

No career advancement. No training. Under paid. Academia is dying.

I am now 5 years post PhD, working in industry. Current salary is ~600k (tech). In those 5 years I have earned a bit over $2M, been promoted 5 times and have held 3 roles at 2 different companies. I have started a family, purchased a home and have raised 3 children. The amount of experience I have gained is significant.

Had I stayed in academia. I would be just now finishing up my first post doc. I would have earned 50k/yr for a total of $250k. My experience would be far more focused and narrow. My home life would be on hold until I had secured a "permanent" position. I'd be facing a choice of either finding a PI position (rare/difficult, not desirable) or moving to industry where my 5 years of post doc industry "experience" would be rightly discredited and downplayed.

This did not happen overnight. This is years of failed leadership and policies in the making.

Existing NIH policies, programs, or resources

Why only existing and not new policies ?

Proven or promising external resources or approaches

Compete with industry on pay, benefits, career advancement and training.

Response 1063

Perspectives on the postdoc roles and responsibilities

I think the postdoc role is an opportunity. At it's best, it's an opportunity for someone to transition from the pace and narrow focus of research in a PhD to a higher level of research productivity, collaboration, and capability. A great postdoc should take someone who is already a capable scientist and help propel them forward by mentoring them through gaining complementary new skills (often including things like grantwriting), providing opportunities for productive writing through leading publications, and ultimately help them get their next job. I don't think this is true for many postdocs (will write more below)

Fundamental issues and challenges

Often I think PIs on grants (and I can't speak to training grants) often see a written in postdoc as a staff scientist position rather than a trainee, with a steep discount in cost. This is fundamentally unfair to the postdoc as they end up having a lot of responsibility (things like data management, data cleaning) for a project that is not theirs and will not result in publications or any thing that will stay with them when they leave. Wisely, many PhD grads are unwilling to take a position at a very low salary to do this sort of position.

Existing NIH policies, programs, or resources

I think if a PI writes a postdoc position on an R01, they should have to describe the amount of time that will be training and professional development for the postdoc and how the grant will allow for that. Grants that write postdocs in to do the job of staff scientist should be flagged and scored lower accordingly.

Salary increases and moving costs would be nice. Ensuring postdocs have access to funding for conferences and professional development is important. Training for PIs before they start postdocs (in mentoring, mentorship contracts, etc.) would be lovely.

Proven or promising external resources or approaches

Mentorship contracts can really help. For many, writing and grant writing classes are really important. I loved the OpEd Project "Write to Change the World" Workshop—not specific to grant writing but relevant.

Response 1064

Perspectives on the postdoc roles and responsibilities

It seems like postdoctoral positions are just another step in the inflation of training that is required for entry level positions. After I get a PhD, I should be done. But now we have to get a PhD and then essentially continue to go to school even more just to be competitive for many entry level jobs that should only require a PhD. It feels like a ridiculous scam.

Fundamental issues and challenges

At my institution, nothing is designed with postdocs in mind. They have no formal events or communities, they hardly know each other, and they struggle with basic admin issues because they're not students and not faculty/staff, so they are always wondering which rules apply to them and which do not.

Existing NIH policies, programs, or resources

I do not think the postdoctoral training system should be enhanced. I think it should be entirely reimagined (i.e. only for people in very specific circumstances who truly need that training) and reduced.

Proven or promising external resources or approaches

No response

Response 1065

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Subpar salary and benefits. Lack of childcare and moving expenses. Obtuse expectations and future career prospects.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Pay them a fair wage.

Response 1066

Perspectives on the postdoc roles and responsibilities

Narrow training geared toward academic professorship and grant writing. Very few ex-Gov and ex-industry persons in academia creates a bubble of experiences.

Fundamental issues and challenges

Pay. Pay. Pay. Training is almost exclusively geared toward a career of never leaving academia, so years spent in a postdoc are not applicable to industry seniority. Childcare support (pay). Housing (pay). Retirement (pay). Financial stability (pay).

Existing NIH policies, programs, or resources

Improve pay to be competitive. Pay rates for post-doc are approaching poverty lines for a family, which self-selects for people who don't/can't start a family. Work hours are typically incompatible with family obligations (80+ hours/week is typical across academia). Enforce or encourage work/life balance beyond self-reporting

Proven or promising external resources or approaches

Pay and increased success rates for grants (eg academia prospects) is proven to improve recruitment. Everything else is hand waving.

Response 1067

Perspectives on the postdoc roles and responsibilities

During a PhD one learns to perform ethically appropriate science, to formulate hypothesis and to critically test these. After the PhD follows the postdoctoral position, which is a time one can develop the skills needed to evolve into an independent scientist. Skills that are required for independence include having leadership roles, writing papers and writing grants. It can also be a time during which one learns new techniques, to enrich the researcher's toolbox to answer those critically formulated research question.

Fundamental issues and challenges

Currently many postdocs are more used as people performing the technical work and mentorship for career development often lacks. Professors don't have time for postdocs to sit down and go over their papers or grants in detail, whereas PhDs get actual training in the form of classes. In addition, postdocs are not socially taken care of as benefits are lacking and salaries are below standard. Job security has always been difficult in academia, but the combination of little job security and too little money to afford proper childcare and benefits make a postdoc position in academia very unenticing.

Existing NIH policies, programs, or resources

Improve the social regulations for the postdocs: increase pay, ensure proper healthcare, benefits, and maternity leave regulations. So that postdocs can focus on the science instead of making sure their families are able to eat. Offer NIH courses on grant writing for free!

Proven or promising external resources or approaches

No response

Response 1068

Perspectives on the postdoc roles and responsibilities

I think a postdoc is similar to any entry-level position where you acquire new skills building on previously guided skills. I think it is often generally viewed as a stepping stone to becoming a faculty member but it doesn't have to be.

Fundamental issues and challenges

I think that for the most part, funding agencies and PIs fail to see postdocs as an entry-level position. In any non-academic sector, an individual with the amount of training a postdoc has would be paid a highly competitive salary. However, in academia and at the NIH, postdocs are paid wages barely above those of a graduate student and the salaries are not even close to competitive with industry. A postdoc is a training experience but so is any entry-level position in industry.

Existing NIH policies, programs, or resources

Salaries should take into account the cost-of-living for the location of the postdoc.

individuals that come from families with wealth versus individuals with very little to no family support have very different experiences trying to navigate the finances of postdoctoral life and procuring housing, food, child care, etc can be much more difficult for individuals without family/financial support that does not come from the postdoctoral institute and/or funding. Mechanisms that enable postdocs to have easier access to childcare, summer programs for school-aged children, and housing (including the cost of moving and the expense of rent without assuming that every postdoc is in the position to split the cost of rent with another income-earning adult) would be hugely beneficial.

It could also be helpful to increase communication across disciplines for postdocs to learn about different funding mechanisms and to navigate federal funding mechanisms and the challenges that arise while navigating their use.

There should be more open communication about postdoc salaries and the process for negotiating salaries.

The NIH should have a postdoc salary range for each year of experience, not a single number.

Maybe the NIH, rather than changing the postdoc salary according to zip code, could have a standard set salary range but would also provide a cost of living allowance (COLA) similar to what the military does.

Proven or promising external resources or approaches

The D-SPAN F99/K00 works hard to provide platforms for fellows to communicate with each other for the duration of the funding. But, postdocs that are funded through other mechanisms don't have access to this same community. Maybe there could be something similar for all funding mechanisms.

The military provides employees with a cost of living allowance based on zip code to help defray differences in cost of living according to zip code. Perhaps the NIH could consider doing something similar given there is huge variation in postdoc living expenses depending on the location of the institution where the postdoc is employed.

Response 1069

Perspectives on the postdoc roles and responsibilities

The academic postdoc training experience is a personalized training time of growth that depends on the ultimate career goal. If a postdoc is interested in being a research-heavy investigator in academia, the

training should be tailored into how to be an investigator (e.g. how to write grants, how to increase publication output, acquiring new skills and theories relating to the field, networking with experts in the field, navigating the academic job market, managing a team, etc.). If a postdoc is interested in a career in the industry, the training should be tailored into how to be an industry-focused scientist (e.g. the business aspect of industry, entrepreneurship, acquiring new skills and techniques as to be a competitive candidate in the job market, how to be a project leader, writing industry grants, etc.).

Fundamental issues and challenges

1. The definition of a postdoc is not universal across institution (e.g. are they trainees or staff). As such, there is great disparity in postdoc benefits and salaries. In regards to the latter, although NIH sets specific guidelines for postdoctoral research pay scale, not all institutions (or principle investigators) are following it. The low postdoc pay relative to an industry position is what turns off many PhD students from entering the academic research after acquiring their PhD.
2. The time scale for eligibility of prestigious postdoctoral grants put a ton of pressure on the postdoc training experience. E.g. K99 4-year eligibility limit. What this means is that as soon as the postdoc joins a lab, they need to build their profile and publish enough to be competitive for funding. This means it doesn't even make sense to aim for an F32 fellowship because by the time the F32 starts the postdoc should already be applying for the K99.

Existing NIH policies, programs, or resources

NIH needs to implement and regulate the guidelines for postdoctoral pay in addition to ***how it relates to the location of training*** (e.g. more expensive to live in San Fran, Boston, New York).

The eligibility limit for NIH postdoc grants need to be revisited to lower the publication pressure of postdocs so that they could acquire a well-rounded training. This could be mitigated by

a) shifting the K99 eligibility limit from 4-year to 5-year or

b) make the K99 the 2-year funding of the F32.

Proven or promising external resources or approaches

I don't have any recommendations as I have not seen any that are effective. Many of the postdoctoral training ecosystem resources have been tailored over to acquiring a career in non-academia.

Response 1070

Perspectives on the postdoc roles and responsibilities

A postdoc is establishing independence and honing specialized skills for a faculty or industry position. They are usually also expected to support an existing lab culture by managing and training students, maintaining lab infrastructure, and obtaining their own funding.

Fundamental issues and challenges

Low salary, unrealistic expectations from supervisors, and extremely limited academic job prospects are discouraging to say the least. From what I've seen at several R1 institutions, postdocs are essentially persona non grata especially to administration.

Existing NIH policies, programs, or resources

IOM and NIH have talked for years about bolstering soft-money faculty positions, but nothing has come of it. I know many people who would be willing to go this route, but it seems inordinately risky.

Proven or promising external resources or approaches

No response

Response 1071

Perspectives on the postdoc roles and responsibilities

The current responsibilities of a postdoc are to produce high quality research in a high pressure atmosphere with little support and compensation. A postdoc position used to be a training role for

individuals who would transition to a professorship within a couple years. The goal was to learn how to mentor under the guidance of an already-successful mentor.

Fundamental issues and challenges

1. Professorships can be attractive positions for which the postdoc is seen as a necessary intermediate. More and more, individuals become trapped in one or more 5+ year postdocs without a clear path to obtaining a tenure-track professorship. This issue has become worse recently and is viewed as too large of a sacrifice to trade for a desirable professorship position. Senior profs have told me that they did a 2 year postdoc and then got a call from a friend at a top-tier research university asking if they would like the open professorship position. That would never happen now.
2. The low postdoc compensation has made the position a source of cheap but skilled labor for professors. Many professors no longer have the personal resources or motivation to act as the mentor they are supposed to be for postdocs. There is little interest among current PhD candidates to fill this role.
3. There is a problem with how professors and senior academics view postdocs and the academic track. The academia path is preached as a "passion" and if you have that passion you accept that you will do whatever it takes to fulfill it. This is a lie that the young generation of PhDs have realized. You shouldn't have to sacrifice your quality of life to pursue a high stress professorship to be able to tell yourself that you're happy.

Existing NIH policies, programs, or resources

1. Substantial increase to postdoc compensation. Would probably have to go hand-in-hand with an increase in grant size. The R01 grant has not gone up in ~25 years which means its purchasing power has been cut in half over the same time.
2. Hold professors accountable as mentors. I think restrictions to lab size could address this partially.

Proven or promising external resources or approaches

No response

Response 1072

Perspectives on the postdoc roles and responsibilities

Postdoctoral position sets one up for trainings that are important for becoming an independent investigator.

Fundamental issues and challenges

Low salary and uncertainty with career transitions

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1073

Perspectives on the postdoc roles and responsibilities

An opportunity to gain distinct, complementary skills to PhD work with expanded independence in mentorship, writing, and scientific direction

Fundamental issues and challenges

For a highly educated institution like the NIH this should be obvious. The pay. The NIH base postdoc salary is pitiful, and given current trends in cost of living unsustainable. Especially when considering the cost of living in many major academic hubs (e.g. Boston, Bay Area, DC metro), it is not sustainable to live off of the paltry NIH postdoc salary.

Second to this is the exploitive nature of the role, and the general toxicity and abuse of academic environments. It doesn't make sense to subject ones self to this environment especially given my first point.

Existing NIH policies, programs, or resources

The salary!!!! Literally, this should be so obvious. It's time that academics recognize that a postdoc position is more of a parasitic relationship than a symbiotic one. A relationship where PhD trained scientists work very hard for very little pay to perform mostly independent research. Any 'training' that happens at this stage does not justify the extremely low wage deemed sufficient by the NIH. There is no other policy, program, or resource that would have as significant of an impact on postdoc recruitment as salary. Until the NIH grasps this fundamental concept and recognized the basic right to fair compensation , I don't expect the trend in postdoc numbers to change.

Proven or promising external resources or approaches

Literally the money. Just pay people livable wages. That's it. This isn't hard. It's literally what everyone is talking about. Did you even consult the literature before designing this survey? I'll say it again, it's the money. People want to be able to live while they do their work.

Response 1074

Perspectives on the postdoc roles and responsibilities

A post-doc is a fully trained, PhD level scientist whos job is to fully devote their time, energy, and passion to answering a question. These individuals are preparing themselves to train future scientists as well as developing their skills further in order to drive research in their field in their own labs.

Fundamental issues and challenges

Post-docs are generally paid starvation wages with little to no benefits. They are expected to work long hours, with little breaks to push projects forward and publish at high level in a very short amount of time, in order to be competitive in the academic job market. These individuals are generally in their late 20s and early 30s and are often times in a period in their lives in which they are settling down and trying to start families of their own, but are expected to be able to do this with no money. Post-doc salaries are a joke compared to what individuals with the same qualifications are making in the private sector. Why should we expect highly trained individuals who are trying to build lives to want to do this work for almost no compensation and no guarantee of a tenure-track position at the end of it? Love of science can only carry you so far when you are struggling to take care of yourself and your family.

Existing NIH policies, programs, or resources

Pay post-docs more! Increase health and other benefits so post-docs can take care of their families as well as prepare for their futures. The cost of living of individual cities should also be considered and perhaps implemented in a post-doc pay scale. A 54,000 salary may be enough in places like Buffalo NY, but for post-docs in programs in Boston or San Francisco this salary is poverty wages. Also set a minimum post-doc salary, the amount of foreign post-docs who are being underpaid is egregious and should be illegal.

Proven or promising external resources or approaches

Look to the private sector. What are they offering potential workers that academia is not? If you want to be competitive with the private sector and continue to supply academia with high level scientists who will continue to innovate and produce cutting edge science, the future of academia (post-docs and PhD trainees) need to be given more support, and I mean monetary support as well as in other areas.

Response 1075

Perspectives on the postdoc roles and responsibilities

As an independent researcher, the Postdoctoral Researcher will be responsible for devising and implementing intricate and experimental procedures that are grounded in established scientific protocols. They will also have the flexibility to design novel protocols when necessary. The Postdoctoral Researcher will be expected to meticulously summarize and analyze the findings from these experiments and then prepare and publish their results in research journals.

Fundamental issues and challenges

I spent a considerable amount of time weighing my options between pursuing a career in the pharmaceutical or biotech industry versus a postdoctoral position and academia. My mentor has always wanted to work on similar projects being conducted in industry for years, but the funding was never there, and many of his ideas were not viable for grants for reasons like being too out there or too difficult. It is incredibly frustrating for him to see concepts and strategies he's thought of half a decade in advance being explored by companies now. The biggest draw of academia was the ability to peruse your own research interests but that is only true if it's fundable and if said funding is available. Chasing grants honestly seems demoralizing and Bruce is really good at it. Moreover, there is the financial aspect to consider. Pursuing a PhD is an expensive endeavor. It is a financial cost to my future and the costs continue during the postdoc phase. I don't rely on my parents for financial support at this age and wouldn't even if I could. It seems irresponsible to live in Boston on a postdoc's salary of 55k-62K before taxes (average rent is 31K a year) when I could do the same work at a company for more than double the pay without considering additional compensation. The post doc salary in SF is slightly higher with a far higher overall cost of living. I would have been interested in pursuing a postdoctoral position but the current climate surrounding this career path makes it an irresponsible pursuit. It's likely that the individuals asking for this information come from a different and older generation than current postdocs, as this this is widely recognized as notorious barrier among my generation. I am 30 years old.

Existing NIH policies, programs, or resources

The solution to improving the postdoctoral experience is twofold. Firstly, postdoctoral researchers should be paid a salary that is comparable to the industry standard for a Scientist 1 position, along with similar benefits. Without this, it is financially irresponsible for individuals to pursue a postdoc. Secondly, the funding climate needs to be revised and corrected, as it is currently in a dire state. The incentives of working in academia are negated when funding, rather than scientific potential, dictates which research is eligible for support.

Proven or promising external resources or approaches

I'm struggling to understand the intent of this question. It's widely recognized that postdocs receive significantly different funding than research scientists in industry. As a postdoc myself, I'm barely able to make ends meet in a costly city like Boston. Recently, I was offered a job in industry that pays 2.3 times my current salary, and I couldn't be happier. If we want to improve the training system for postdocs, we must start by valuing them more and stop treating them as underappreciated resources. Financial compensation is a crucial and proven means of demonstrating that value. It's naive to think otherwise, especially in this economic environment. Consider what your quality of life would be like if you had to survive on a postdoc's salary in Boston or San Francisco, especially if you have dependents to support.

Response 1076

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary is not enough. The only reason I am going into industry is because the post doc salary is not sustainable.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1077

Perspectives on the postdoc roles and responsibilities

In general, a postdoctoral position is one of training, where I can learn new research skills and improve soft skills that make getting a job easier (i.e., publications and grant writing). In practice, there is very

little mentoring and often new skills have to be learned on my own time. I have also found a disconnect from a PIs idea of what a postdoc should be doing (i.e., just research and writing papers). It is very hard to get time to develop my own soft skills (i.e., speaking, writing, leadership). Additionally, I was only allowed to do teaching if I did it on my own time (after putting in 50-60 hrs in the week), which was completely unreasonable. I have found that PIs are just treating postdocs as a cheaper version of a research assistant / staff scientist.

If an academic postdoc is a trainee, then there should be a formal program with professional development during the working week and not on top of research responsibilities.

Fundamental issues and challenges

Biggest issue is salary. I am a computational postdoc, but get paid less than a 3rd of what I would make in industry. If I had a family, I would not do a postdoc for that salary and no family healthcare. I can only do this postdoc because I do not have any other financial responsibilities. Otherwise, I would have left after just one year. Now, it is very easy to skill a postdoc as a computational biologist and I do not see that changing without more competitive salary.

I attempted to get a raise, not market rate but more than 5k increase. My academic institution used the NIH pay scale to deny me. If I wanted to get more money, I would have to leave academic. That was made very clear. I can honestly say that I would not feel comfortable paying a computational postdoc anywhere near the NIH pay scale as a PI.

Another issue is that there are no protections for postdocs against abusive situations. Because the postdoc is only sometimes an employee, this places us in a gray legal area. My PI just decided to move my authorship because they could. I had no recourse. PIs have so much control without any kind of protections for postdocs.

Existing NIH policies, programs, or resources

Modify the NIH pay scale to be tied to cost of living. The government already has a travel per diem that changes based on location, this should also be implemented for NIH pay scale. Increase the pay scale based on inflation and require any institution that accept NIH funding to use this.

Require paid family healthcare for NIH funded programs.

Proven or promising external resources or approaches

There are a number of places that are Unionizing to get reasonable treatment. Look to those situations to see what is not being addressed.

Response 1078

Perspectives on the postdoc roles and responsibilities

I believe that the postdoctoral position should be about learning something that isn’t taught in a PhD. A postdoc should be learning new and innovative ways to consider the field of science and research as a whole. Many PhDs wind up as a keystone cog a machine which they drive forward every day, but my hope for perform a postdoc to learn how to make new machines. Other purposes such as moving into a new subfield of biomedical research could also benifit from a postdoc before moving onto other positions.

Fundamental issues and challenges

BUDGET. I have offers from industry over $200,000 per year for my current skill sets as a 5th yr PhD student, and people want me to take a job that makes 1/4 of that instead. People keep encouraging me that it’s twice the pay that I make now as a PhD student, but they also want me to move to somewhere like Boston that is twice as expensive. Postdocs are not getting a liveable wage.

There are many abusive practices surrounding postdocs as well. Some labs take 3-5 international postdocs on 1 shared salary and barter visas for labor. Many of the labor practices in labs are unethical. Refusing to give lunch/breaks, demanding 10-30 hours of overtime a week just to be considered at baseline. Requiring students to ghost author grants, papers, etc that the PI will eventually take full credit for. There are little to no rules about how postdocs may be treated and it shows in the daily abuse that they experience.

Existing NIH policies, programs, or resources

Raise the minimum salary for postdocs to at least $75,000 for a year 0 postdoc. Put a maximum limit on monthly work hours with a reliable reporting system that requires PIs who over work students to pay them overtime for the extra hours. Make a limit to how long someone can be kept at a postdoc position (5 years is plenty). Help financially with child care, personal extenuating circumstances, and cost of living supplements. Create true accountability for abusive and discriminatory behaviors of PIs.

Proven or promising external resources or approaches

No response

Response 1079

Perspectives on the postdoc roles and responsibilities

The post doc is the engine of the lab and the only clear path to academic independence. Without the post doc, the lab does not train new members, innovate, or discover at a competitive rate.

Fundamental issues and challenges

Salary is the single greatest issue inhibiting recruitment, retention, and overall quality of life of postdoctoral trainees in academic research. The current salary is far below sufficient and abysmally below competitive for industrial positions (often not requiring a phd).

Existing NIH policies, programs, or resources

Improve post doc salary to compete with industrial salary for equivalent work. Improving salary would improve quality of life, recruitment, and retention.

Proven or promising external resources or approaches

People pursue fair and competitive monetary compensation for their work. Pay pod docs more to compete with industrial salaries.

Response 1080

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a job, just as a research scientist in industry is a job. However, traditionally, postdocs are viewed as trainees by the university and left in limbo as they are no longer students and not yet faculty. This may be the result of the failure of the academy to adapt to the changing demographic and needs of postdocs, the increasing competitive nature of the academic job market, and the elevated costs of conducting research and paying researchers equitably. A postdoctoral position should be part of a defined pathway to obtaining a faculty job or an industry job, depending on the individual. For academically-focused postdocs, this involves adequate support to conduct independent research, continuing to develop skills that would lead to successful careers as independent researchers, and focus on skills important for success as a PI such as mentoring and teaching.

Fundamental issues and challenges

The primary issue with postdoctoral recruitment, retention, etc. is lack of adequate compensation. While industry salaries have kept up with inflation, academic salaries have not, especially for cities with high costs of living. This absolutely must be addressed at the NIH level as many universities report they do not have adequate funds to pay postdocs higher salaries. As evidenced by the difficulty filling postdoctoral positions and recent strikes around the country, this issue will continue to persist as long as it goes unaddressed. The NIH sets the salary standards for postdocs, and universities will continue to use these standards because postdocs have become a form of cheap labor in the academic system.

The second issue is the uncertainty in job security. Completing a postdoc does not guarantee one a future job in academia due to the extremely competitive nature of the academic job market and mobility limitations (ability to uproot them/their family to move to another state). As the demographic of postdocs diversifies, there is less ability and willingness to move locations every 3-4 years to find a new job. This structure (PhD to postdoc to faculty job in different cities) disproportionately affects those who are economically disadvantaged or BIPOC as one must have both the financial means to make these sort of

cross-country moves and also the ability to safely exist in a given location (not all cities are friendly for people of color, transgender people, etc.).

Finally, a lack of universal guidelines and standards for postdocs prevents them from being treated fairly and not exploited by universities. Defined as students by some, staff by others, and neither by many, postdocs are often left out of health care benefits, retirement savings, and find themselves financially disadvantaged as middle-aged adults, many with partners and families to support.

Existing NIH policies, programs, or resources

The greatest impact could be made by NIH restructuring postdoctoral salaries, increasing compensation appropriate for one who has completed a doctoral degree and appropriate for the cost of living in a given city. Further, NIH should provide resources for universities who would like to increase postdoctoral pay but are uncertain how to restructure guidelines and grant budgets to do so. Increasing the size of R01 grant budgets, as well as the size of postdoctoral career development grants would also help encourage postdocs to continue along their career trajectory, as would increasing the number of diversity supplements and access to these supplements for both US-born and international scholars.

Proven or promising external resources or approaches

One approach that could be helpful is implementing a postdoctoral to faculty position pipeline and a NIH-provided guideline for such a pathway. The degree of job uncertainty that postdoctoral positions require has become unsustainable. However, a few universities (see review of such programs and their implementation specifics here: https://www.frontiersin.org/articles/10.3389/fpsyg.2021.733995/full) have started to implement such programs, which offer a 2-3 year postdoctoral scientist position and opportunity for a faculty position upon completion. This would create a more sustainable pathway for postdocs who invest an enormous amount of time and resources into their work at a university by providing them with the opportunity for a faculty position in a defined timeline. Creating such a pipeline paired with adequate salary compensation would most certainly improve retention of postdocs and also help them achieve a more defined status separate from graduate students.

Response 1081

Perspectives on the postdoc roles and responsibilities

Additional specialisation in the field.

Fundamental issues and challenges

Average age of a post doc coincides with average age of a person with small children. Average income is 4 to 5 times less than similar industry position and below poverty line. Obviously not attractive to live with small children below poverty line after 6 years of graduate training.

Existing NIH policies, programs, or resources

Pay more.

Proven or promising external resources or approaches

No response

Response 1082

Perspectives on the postdoc roles and responsibilities

The role of the academic postdoctoral researcher is to drive new discoveries. While teaching and service can at times support this mission, they are ancillary to their primary role as a researcher. Postdocs should be focused on experiments and efforts that unearth new knowledge. For many, this will mean the majority of their time (>90%) is spent in a lab running experiments, analyzing data, composing manuscripts, revising manuscripts. They are the front-line of trained, high-functioning, and productive scientists in the scientific academy.

Fundamental issues and challenges

Low-pay. This is not complicated. They have earned a Ph.D. and deserve to compensated in a way that constitutes a life-long value proposition for each individual. Whilst in their post-doc, many accept lower earnings as part of their continued development as a scientist. This has always and will likely always be the case. However, the economic landscape is always changing and post-docs today face many remunerative challenges that jeopardize the overall lifelong value proposition of post-doctoral research. Here are a few:

1. Postdoctoral (and graduate) stipends as defined by NRSA stipend guidelines should be adjusted annually to account for inflation and costs of living. These guidelines should be specific to the institution and municipality. If necessary they should be negotiated with a local postdoc office or group of postdoc representatives directly with the NIH. Faculty and administrators at universities have too many conflicts of interest and should not be involved in this process. They should, however, be given ample notice of changes to react in grant budgets.
2. Affordable childcare. Universities should be incentivized to provide affordable childcare at cost to postdoctoral researchers in their prime child-bearing and rearing years. Postdocs should not in any way be penalized for their decision to have children. This is a natural and understandable decision that other professionals, often earlier than post-docs, choose to do.
3. Employer matched retirement plans and financial literacy programs. Post-docs should all have access to an employer-matched program. It should be formally codified in NRSA stipend guidelines. As a starting point, post-docs should be encouraged to contribute 3% of their annual pay to a tax-advantaged 403b or 401a account. In exchange, they will receive a matching contribution by their employer. This is on the very low end of most corporate employers or employees with graduate degrees.

Existing NIH policies, programs, or resources

The guidelines for gradate and postdoctoral training for NRSAs have become the de fact starting point for most institutions. Either this program announcement should become more detailed and granular or a new announcement with more detail should be provided.

Proven or promising external resources or approaches

Unfortunately there is nothing comprehensive. I am heartened that the NIH has solicited this input and is taking the initiative for posdocs. This is a very important mission. Thank you.

Response 1083

Perspectives on the postdoc roles and responsibilities

James Baldwin famously wrote "Not everything that is faced can be changed, but nothing can be changed until it is faced" . The postdoc was initially intended to be a short-term training for researchers to gain experience and professional connections to prepare them as the next generation of researchers and professors. The faculty in turn would benefit from having experienced researchers who could train graduate students and who would require less hands-on mentorship to progress the lab's research agenda.

The NIH, other U.S. funding agencies, and American higher educational institutions continue to hold up rose-colored glasses to the postdoctoral system. It's time the NIH and the US science community as a whole faced that this model is no longer working. It's time that they faced that continued reliance on the postdoctoral model for doing science is structurally flawed, extremely inefficient, and has often led to injustice and the exploitation of an entire generation of researchers. It's not even a little bit controversial to point out that this disproportionately affects underrepresented researchers. Or that it is biasing the postdoc towards foreign researchers, who barter several years of their lives as indentured servants, to gain a green card or to garner publications by avoiding time-limits placed on postdoctoral experiences in their native countries.

It's time that we as a community faced that the postdoc has morphed into a years-long holding period, where researchers are extremely underpaid relative to their experience, and more often than not, pushed out of the field by the reality of economics and the lack of job opportunities. It's time to recognize that relying on postdocs, whose work forms the backbone of major research laboratories and the progression

of science, unilaterally benefits those at the top of hierarchy far more than it benefits the postdocs themselves.

Fundamental issues and challenges

1. The length of the postdoc. Stop pretending it's a two year long training period. Recognize that most researchers are required to be postdocs for far longer than 2 years if they wish to stay in their field (because of the reality of the job market), and pay them according to their experience, and to the reality that they are adults in their 30's and 40's who want to have job security, fair pay for their work, and benefits.
2. Cost of living. The fact that there is no cost of living adjustment in grants for high cost of living areas is ridiculous. A postdoc in NY or CA should not be making the same as a postdoc in Oklahoma or Iowa.
3. Require institutions that hire postdocs to treat them as employees rather than short term contract workers. My institution regularly doesn't pay postdocs for weeks or months (because they don't process appointments on time), they regularly treat postdocs as disposable employees and do not value their skills, and they regularly prioritize administrators over researchers with years of specialized training. Institutional overhead rates have gone up significantly, but none of that is translated into improving the quality of life or take how pay of the researchers who are actually doing the majority of the research.
4. Bullying and exploitation. Create a mechanism to report problematic PIs, labs, and institutions. Stop giving bad apples funding. Make postdoc placement and experience a requirement of grants and create a reporting mechanism to the funding agency. Have exit interviews or some time of reporting mechanism for postdocs as part of the grant cycle.

Existing NIH policies, programs, or resources

These all just appear to be putting bandaids on the major structural problems of the postdoctoral system. What really needs to happen is that science stops relying on the postdoctoral model and instead creates more senior research roles, and actually provides funding for these positions.

Proven or promising external resources or approaches

Stop treating people who have more than 2 years of experience beyond their Ph.D. as though they are being trained. Create more senior roles and prioritize funding these positions.

Try looking at how Tech companies treat them employees. Pay postdocs and researchers appropriately, provide them with a certain amount of time that they should be allowed to work on creative endeavors of their own, and prioritize their work life balance. Silicon Valley has known for a long time that long hours, poor pay, and indifferent retention strategies lead to the best talent going elsewhere, and does not lead to the types of creativity and innovation that actually makes major changes.

The US has been the world leader in science for many years. It can exhibit that leadership now, by moving science towards a model that is more human and more just. Moreover, it could do better science by actively progressing researchers to their next career stages, rather than pushing researchers out of the field into industry just as they have gained the experience to contribute significantly to their fields.

Response 1084

Perspectives on the postdoc roles and responsibilities

It meant a lot to me as this is a transition phase to being an independent researcher.

Fundamental issues and challenges

There are fundamental issues that are causing the decline and inhibiting recruitment, retention, and overall quality of life of postdoctoral trainees in academic research:

1) Low pay scale
2) Higher workload
3) Few chances of scholarships and fellowships for international postdocs
4) Overall low-quality and stressful life

Existing NIH policies, programs, or resources

1) Increase the payscale
2) Increase the number of fellowships and grants for international postdocs working in the USA.
3) Remove the cap of years being eligible to apply to grants and fellowships
4) Give training to early career faculties how to train postdocs

Proven or promising external resources or approaches

Please see my above suggestions.

Response 1085

Perspectives on the postdoc roles and responsibilities

Opportunity for protected research time and academic coursework to develop one's career from early stage investigator to independent investigator

Fundamental issues and challenges

As a clinician scientist, the challenge remains balancing one's clinical duties (greatly reduced on the training grant) with research and academic coursework.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1086

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is meant to be a training opportunity for individuals that have been trained to be independent investigators with the goal of practicing project development and learning new skills. A postdoc should only be a launch pad for academic faculty positions.

Fundamental issues and challenges

Issues stem from disconnects between expectations of trainees and principal investigators. Many trainees are not prepared or wise to the goals of the postdoc and are often misled by investigators who have their own interests in mind. This leads to postdoctoral experiences that are not fruitful and that persist longer than they should. All of this also happens while postdocs often have little institutional or financial support, making this career transitional difficult and often not rewarding.

Existing NIH policies, programs, or resources

Since many postdoctoral researches are international scientists, more training programs should be provided for resident and non-resident aliens aside from the K99 fellowship. Additionally, higher budgets for shorter periods of time could enhance quality of life for postdocs and encourage short and structured training windows. Lastly, workshops for postdocs and PIs could assist in establishing appropriate expectations for both parties.

Proven or promising external resources or approaches

No response

Response 1087

Perspectives on the postdoc roles and responsibilities

Learn new skills and enhance my current ones

Increase networking with fellow scientists

Do science that motivate me

Fundamental issues and challenges

1) Salary and benefits
2) Visa processing for international postdoc
3) Shortage of fellowship for non citizens or permanent residents
4) Imbalance between professional and personal life

Existing NIH policies, programs, or resources

1) Increase salary and benefits substantially and adjust according to living expenses based on geographical location and family members
2) Making visa processing more flexible so an international postdoc is not stuck
3) Create more networking opportunities
4) Care about mental health
5) Increase fellowship opportunities for international postdocs
6) Creating scope for transitioning from postdoc position to other permanent roles

Proven or promising external resources or approaches

https://www.nature.com/articles/s41587-023-01656-4

Response 1088

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The average age of investigators receiving a first R01 is 44 years old. Women's fertility declines rapidly after the mid 30s. Therefore retention of women investigators in academic medical research requires that it should be professionally and financially feasible for women to have and raise children during the years of their postdoctoral research. A large fraction of talented researchers could be driven out of academic research if they are effectively forced to choose between postdoctoral research or having a family life alongside their career.

While recognizing that salaries will differ between for-profit (industry) and non-profit (universities) sectors, postdoctoral positions could improve peripheral support for raising children such as childcare, maternity leave, and health insurance (without huge out of pocket expenses for pregnancy and dependent care that are inconsistent with postdoctoral salaries). Improvements on these fronts—making it possible to have a family while remaining in an academic career track—will go a long way to solving the 'leaky pipeline'.

These issues are especially important in an intersectional perspective, because the challenges of child-raising during postdoctoral research are lessened by being independently wealthy, but often exacerbated for researchers from less privileged backgrounds.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1089

Perspectives on the postdoc roles and responsibilities

I see three main angles to my roles as a postdoc:

1. gaining more training from academic mentors to deepen and expand my expertise,
2. helping train and mentor new graduate students and undergraduates interested in pursuing a career in research, and
3. beginning to set up more independent research projects that can take me toward the direction my future lab will take.

Fundamental issues and challenges

Parenthood seems incompatible with postdoc life. I had a child early in the pandemic; all daycares were closed and we could not afford in-home nannies; they were so in-demand with everything closed, that their hourly rates were above my pay as a postdoc. There was no official maternity leave nor any stipend to help with childcare. We paid for as much childcare as we could, but it came nowhere close to enough hours to allow me to be productive in my research or advance my career; it was not even enough to do the bare minimum. I was constantly exhausted. In the end I just gave up on the idea of being a PI. I did not feel I could be both a mom and a scientist. Had it not been for my PI, who was extremely supportive and patient, I likely would have quit academia.

Ultimately daycares opened again, which helped. But I am still dealing with the consequences of burnout, am far behind where I should be in my publications and projects, and there are still few external resources to enable me to be as productive as non-parent peers. Furthermore, rents have exploded in our area over the past 3 years and prices jumped up on food and child supplies, but our incomes (my husband and I are both in academia in similar positions) have barely increased. (eg, our monthly rent hiked up by $500 compared to 2019, but our salaries went up by about $100). I also lost all retirement benefits and other employee benefits when I got an NIH grant. Being a postdoc is mentally exhausting and financially a terrible choice, and I'm definitely encouraging my graduate students to not pursue this path.

Existing NIH policies, programs, or resources

Increase salaries. The average monthly rate for 2-BR in our area is about 75% of my postdoc income. Daycare costs are about 75% of my husband's postdoc income. We had to save for about two years to be able to afford a secondhand, 10-year old car.

Also, paying benefits to postdocs on grants. We are all literally losing money being on grants, when universities cut all our benefits. Retirement seems the biggest general concern, but things like emergency childcare costs were also critical to me personally.

The childcare stipend that kicked in in 2021 was a good initiative but it is not enough ($2500 per year? daycare is $400/week), and, critically, it doesn't cover emergency childcare due to daycare closures. Between June 2021—June of 2022, our daycare closed for 5-10 days several times due to do COVID cases. The stipend should be able to pay for babysitters in these emergency cases.

Supporting careers for postdoc parents. We are exhausted, burned out, have no money and have no time to publish enough to be competitive. Half the women I know in academia quit academia (usually postdocs) after having kids. This is a reflection of a terrible lack of support for working moms in postdoc positions.

Proven or promising external resources or approaches

Finland has a great policy for parental leave, which includes parental leave of better length for both parents, fully paid, as well as much more flexibility in when and how the leave is taken. Some workplaces have in-house childcare centers to enable employees to be both parents and workers. Setting up policies for universities to guarantee access to childcare for postdoc parents would be a great first step.

Response 1090

Perspectives on the postdoc roles and responsibilities

I had hoped when I started my postdoc at [redacted for anonymity] that I would be trained on how to be an independent researcher. Instead of promoting independence, I found the position irrevocably yoked me to a self-aggrandizing and arrogant person who dismissed my input and coerced me to work on a project I had little interest in pursuing. My view of the postdoc position, informed by my personal experience as well as those of my friends and colleagues, is that it is exploitative. PIs, especially at leading Universities, hire driven and talented people because they hope to exploit their passion as a way of enhancing the PI's own prestige and ability to gain grants. If the postdoc is productive, the PI is happy and supportive. If the

postdoc encounters challenges, as is common in science, the PI is dismissive and castigates the postdoc for what the PI perceives to be a personal failure. The fact that success or failure of postdocs is tied to the personal relationship between PI and postdoc (a fact my PI constantly belabored) makes this particular position rife for exploitation. Additionally, the fact that foreign nationals, the bulk of whom are from despotic nations like China, are dependent on the good graces of solitary individuals to stay in a free and prosperous country, makes this position the most exploitative position in academia. Graduate students can appeal to their committee. Technicians can migrate to other labs. Postdocs find themselves in a position where their entire career can be stymied by a single person. If that person is supportive, lucky you! If that person acts like a tyrant, there is no institutional support for the postdoc. They are stuck. That's what it means to be a postdoc: being stuck.

Fundamental issues and challenges

Compensation is a joke. The lack of institutional support to help navigate or mitigate deteriorating working relationships between postdoc and PI means that when problems do arise, they will dominate the postdoc experience. The very nature of the position: a medieval master-apprentice relationship, is itself a deterrent for entry. Additionally, the political monoculture in most academic contexts is a severe barrier for entry for those who do not conform to that monoculture. There is a major bias against religious faith and practice. Adding to this the increasing use of ideological litmus tests and fealty oaths in the form of DEI initiatives makes academia an off-putting work environment for people who think critically about simplistic explanations for social disparities. This synergizes with the master-apprentice nature of the postdoc position. If your PI is the type of jerk who frowns upon you taking time off for religious observance, who starts group meetings with highly charged political discourse, and who directs their employees to contribute to their pet ideological causes, it creates a hostile work environment that is difficult to overcome. And now you're stuck with them, because everyone knows that leaving a postdoc without a paper looks bad, and your PI can keep you from getting an academic position elsewhere. Ultimately, the only reason people pursue postdocs is for career advancement. You "pay your dues" in a terrible work environment until you get your own lab or leave academia. I'm not surprised fewer and fewer people are interested in doing this, especially when industry is paying twice as much. Academia literally lies to trainees about the nature of industry work (its boring, its routine, there is less academic freedom) to retain postdoc trainees. Consider that for a moment—the entire appeal of academia is based on a lie about industry.

Existing NIH policies, programs, or resources

Give up. Its over. Academia is dying. For academia to retain relevance, it needs to shift to formalized training for scientists and ditch the medieval master-apprentice nature of postdoc work. The primary goal of academic institutions should be on training PhD scientists. Additional training for postdocs needs to become much more formalized. Instead of being hired by individual PIs, postdocs should be hired by academic intuitions and given the freedom to sever toxic PI-postdoc relationships while retaining the ability to continue their training at that institution. This is especially true for foreign nationals. Ultimately though, any improvements are rearranging deck chairs on the Titanic. Academia breeds conformity—say the right things about politics (especially the DEI stuff), tailor your research focus to the most hyped and sexiest topic, network with the right people because they're the ones reading your grant submissions and your manuscripts. This is stifling. And there is no way that academia can provide competitive compensation, especially considering the never ending supply of cheap labor from abroad. There is no way PIs are going to give up their power over the most productive people in their workforce. Perhaps the ideological monoculture can be broken, but this seems so deeply ingrained in academic culture—it is central to the identity of many academic intuitions.

Proven or promising external resources or approaches

No response

Response 1091

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The number one issue hampering the recruitment and retention is wages. Postdocs do not make enough money to live let alone live comfortably. The prospects of academic freedom in your research is not nearly as appealing if it means dealing with housing and food insecurity. The pay doesn't need to match industry but it should be at least comparable. As it stands now the average postdoc pay is less than half what a PhD can expect to make in even the most basic industry role.

Existing NIH policies, programs, or resources

The NIH should reevaluate their salary structure from the bottom up. Fundamentally the first step in retaining more postdocs is to increase their pay.

Proven or promising external resources or approaches

No response

Response 1092

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral position as a training position necessary for me to build a career as an independent investigator. My responsibility within the lab I work is to lead multiple NIH-funded research projects with my PI, manage and train graduate and undergraduate researchers, and prepare our findings for presentation and publication.

That said, as a skilled researcher I also realize that by pursuing my postdoctoral training, I have sacrificed the increased salary and retirement benefits I would have if I took a job in industry following graduate school.

Fundamental issues and challenges

In my opinion, the main issue facing postdoctoral trainees are the low salaries (compared to our market value in industry), lack of retirement benefits, and the strong possibility that our work will not culminate in the tenure-track PI position for which our training is designed. There is of course nothing that can be done about the possibility/likelihood of not obtaining a tenure-track position, but I do think that salaries should be increased and retirement benefits granted to maintain a strong postdoctoral work force.

Existing NIH policies, programs, or resources

The NIH's existing programs and resources are quite good, in my opinion. I think this is really only a question of financial compensation--current salary levels and retirement benefits fall well below postdoc's market value. As cost of living continues to increase, it will become harder for individuals to justify continuing their postdoctoral training.

Proven or promising external resources or approaches

I find the NIH's current recruitment and training to be quite good, as indicated above. I think the concerns are more narrowly financial.

Response 1093

Perspectives on the postdoc roles and responsibilities

I view postdoc as an opportunity to develop scientific independence and prepare to transition to group leader position in academia or industry

Fundamental issues and challenges

Less pay, especially in expensive cities, long working hours, limited opportunity to be assistant professor, high stress to publish as quickly as possible

Existing NIH policies, programs, or resources

NIH pay minimum should be adjusted to reflect cost of living in local areas, more funding for transitioning into assistant professor jobs, more oversight on work hours

Proven or promising external resources or approaches

https://www.nature.com/articles/s41587-023-01656-4

Response 1094

Perspectives on the postdoc roles and responsibilities

The role of an academic postdoc is to be provided training to supplement/augment the training that they had received in their PhD. I believe the position should be short in duration (three years or less), and it should provide a solid, promising platform to launch a career in academia or industry. Unfortunately, many people spend upwards of 6-7 years in a postdoc (or multiple postdocs), belying the "trainee" status, and waste years of a critical time in their lives to build careers, families, and savings for retirement and a home.

Fundamental issues and challenges

The number one issue, in my opinion, is the lack of viable academic jobs for postdocs after training. Postdocs are spending more and more years in a supposedly "trainee" position with low pay, few benefits, and few prospects. Tenure-track assistant professor positions are so competitive that many talented scientists drop out. The bottleneck is funding. There is an urgent need to raise the amount of fellowships available for NRSAs and (especially) K99's, which makes one competitive for a faculty position. There is research showing that the top 20% of grant applications are equivalent in scientific merit and likelihood of success, and therefore who gets awarded above that point is basically a lottery. Furthermore, the timeline to hearing back about fellowships after application is much too long —this wait is exacerbated by continuing resolutions where exact funding levels are unknown (and therefore people on the edge of the funding score line are kept waiting), due to Congress failing to pass a budget. Postdocs are often at a point in their lives where they have started or think about starting families —they cannot afford to wait months and months to hear back about their future.

Existing NIH policies, programs, or resources

First, the NIH minimum salary must be raised. Many universities' compensation for postdocs are pegged to the NIH minimum, and even though it's called a "minimum", it in reality presents a maximum of what universities are willing to compensate postdocs. At my former institution, postdocs who tried to negotiate a higher salary upon receipt of an NIH fellowship (which is allowed by the NIH fellowship rules) were denied by the department, on grounds that it would be "unfair" to the rest of the postdocs. This shows that the NIH minimum is really a maximum ceiling for many institutions, and therefore must be raised.

Secondly, retirement benefits should be provided to fellowship awardees. That this is not the case is truly astonishing and discounts the consideration of postdocs as adult human beings who need to plan for their future.

Finally, the funding line for NIH fellowships and transition grants like the K99 should be raised, and the timeline from application to NOA must be shortened considerably to respect applicants' time.

Proven or promising external resources or approaches

Some external resources that could be considered is more partnerships with industry to establish postdoctoral fellowships that provide a transition to industry/non-profits. It is a reality that most postdocs will not become professors. However, they should not have wasted years of training and prime years of their lives. Academic programs often do not provide any sort of internship/training opportunities for non-academic organizations, but a postdoc would be a good platform to do so. After 4 years in an academic postdoc at a university, I am now completing a 1-year postdoctoral fellowship at a nonprofit. My current postdoc provides MUCH higher compensation than my academic postdoc did, and it's providing me with so many more relevant skills/knowledge for a future career. Positions like my current postdoc should be more broadly available and advertised to trainees.

Response 1095

Perspectives on the postdoc roles and responsibilities

Execution of independent research at all levels.

Fundamental issues and challenges

Time commitment and pay.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1096

Perspectives on the postdoc roles and responsibilities

It's an opportunity for more training, either to learn new technical skills or more translational skills such as proposal development/writing and management/mentorship.

Fundamental issues and challenges

The biggest fundamental issue is the compensation, especially for an academic postdoc. The required long hours and increased responsibility is not reflected in someone with a higher degree, earning barely over minimum wage in some states. The poor job prospect is also a major issue, the limited number of principal investigator openings, and the highly competitive funding opportunities, creates an environment that is not desirable for a lot of PhD graduates.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1097

Perspectives on the postdoc roles and responsibilities

Additional training focused on becoming more independent and growing as a leader in preparation for leading a lab in the near future. Generating data to support the lab they work for as well as their future career.

Fundamental issues and challenges

The pay is abysmal and hours are irregular, many PIs have very high expectations that do not match the salary. A lot of people may want to start a family at that age, requiring better pay and more regular hours and can make more money on a better schedule in industry or other fields.

Existing NIH policies, programs, or resources

Raise grant amounts, they are not adjusting to inflation.

Proven or promising external resources or approaches

No response

Response 1098

Perspectives on the postdoc roles and responsibilities

I think of a postdoctoral position as a period where researchers are transitioning to becoming fully independent investigators. The opportunity is unique in that it allows scientists to develop a research program that can be further developed when the postdoc starts their own lab.

Fundamental issues and challenges

Scientific research that is needed to develop a research program demands long hours in the laboratory and postdocs are not financially compensated for the hours that they spend in the lab. Often, we hear that

being a scientist is a hobby and not a job if you are truly passionate about science. Postdocs often have families and if they can financially support and sustain a family, there is little room for maintaining the passion for science in an academic environment.

Existing NIH policies, programs, or resources

1) Increasing the NIH postdoc pay line is critical in improving postdocs' quality of life.
2) Another important aspect that is being neglected is the limited eligibility period for transition to independence awards (e.g. K99/R00). Under the current scheme, postdocs are eligible to apply only if they are under 4 years from the start of the postdoctoral period. Given that current postdocs are living through an unprecedented global pandemic which has caused immense emotional and financial burden, it'd be great if NIH increases the eligibility period to 6 years. Even if this is for a limited period or if it is applied to postdocs who have started their postdoc in 2020-2023.

Proven or promising external resources or approaches

No response

Response 1099

Perspectives on the postdoc roles and responsibilities

Postdoctoral scholars are skilled researchers who spearhead the majority of published research in the biosciences at any given time. Like academics of any career stage, they continue to learn, innovate, and add to their skill sets throughout their work. At the same time, they are fully realized scientists in their own right, capable of executing a research study from start to finish and training undergraduate/graduate mentees. Notably, postdocs have attained a terminal degree and are not trainees.

Fundamental issues and challenges

Postdoctoral researchers are chronically underpaid for the work that they do. Moreover, the fact that postdoctoral scientists are often referred to as "trainees" (as in this very questionnaire), despite the fact that they hold a terminal degree, is *demeaning* and contributes to their continued exploitation as skilled academic researchers. As a PhD candidate who is currently exploring career paths, I cannot consider postdoctoral positions given the current academic job market. Despite the fact that I enjoy performing research and the academic enterprise, there are too few jobs that pay far too little for me to continue. And, as a woman, I cannot afford to sacrifice my personal life (children, etc.) in order to continue in the current hyper-competitive environment. Most graduate students in my program feel similarly. The academic biosciences will soon see a massive exodus of skilled researchers moving on to non-academic industries that simply offer better job and lifestyle prospects.

Existing NIH policies, programs, or resources

NIH guidance on postdoctoral salaries needs to be updated so that standard salary rates continue to increase commensurately with inflation. Additionally, the current hyper-competition for postdoctoral jobs is, in large part, derived from the fact that the R01 grant mechanism is also in dire need of an update. The standard R01 grant amount has not changed in over twenty years, despite massive increases in inflation in that same time frame. With less money to go around with each passing year, PIs are unable to hire as many staff as in the past. Everyone who relies on the R01 mechanism is feeling the financial hurt.

Additionally, postdoctoral researchers are not trainees. The word "trainee" appears eleven times in this RFI alone, where the word "researcher", "scientist", "fellow", or "scholar" would be far more appropriate. The NIH must discontinue the word "trainee" when referring to postdoctoral researchers.

Proven or promising external resources or approaches

As described above, increases in the standard award amounts for existing NIH grant mechanisms are long overdue and would greatly improve the state of postdoctoral jobs.

Response 1100

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Despite increases in NIH postdoc salary scales, the pay is still too low and the benefits at most institutions are minimal (less than both graduate students and permanent staff). The major constraints I see are

1. research grants for basic research have budgets that are both too low, and don't increase year-to-year to accommodate cost-of-living raises and
2. institutions may have low minimum salaries (campus-wide) that create inequities if biomedical postdocs are paid more than they are now.

NIH could fund most postdocs directly through fellowship instead of having most postdocs be paid from limited grant funds.

Existing NIH policies, programs, or resources

expand eligibility for fellowships to international postdocs as they have for the K99s

create funded senior scientist positions in academia (NCI does this with R50s) so it's possible to remain in academic science without needing an independent faculty position.

Proven or promising external resources or approaches

No response

Response 1101

Perspectives on the postdoc roles and responsibilities

In my experience, the post doc is supposed to provide you with the ability to do independent research that can launch your career.

Fundamental issues and challenges

Non-competitive pay and to competitive faculty positions that require applicants to have secured highly competitive funding. Typically have to do multiple post docs before getting a chance to land a competitive faculty position.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase pay. Higher pay = higher applicant pool = higher quality of applicants. Dedicate more funding sources and awards to early career scientists. This is not new information. This is how many recent phd grads think and this is what would have kept many in academic research.

Response 1102

Perspectives on the postdoc roles and responsibilities

Advanced research skill acquisition and sharing.

Fundamental issues and challenges

J1 visa should not be given for 1 yr but rather for any postdoc position a minimum retainment of 3 yrs default.

Existing NIH policies, programs, or resources

Add the postdoc experience to reduce tenure time

Proven or promising external resources or approaches

Have multiple PIs

Response 1103

Perspectives on the postdoc roles and responsibilities

I am really glad to get a chance to work on human genomics during my post-doc although my previous research was on plant genomics. It is indeed a great learning stage of my life and career. I was not only introduced to state-of-art research in human genomics but also got a chance to know and meet the people in my research community.

Fundamental issues and challenges

There are several issues that sometimes make me think that I should have done something else than a post-doc.

I think the post-doc salary is now a well-known issue. I now have a family with a kid and the salary is very low to live a quality life with minimum standards. I was alright for some initial months as my spouse was working, but she lost her job due to the current lay-off process and it was hard for her to get a job with the H1B visa status. I would like to continue my post-doc work for a few more years but with this salary, I am thinking to switch to a job where I can get a standard salary.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1104

Perspectives on the postdoc roles and responsibilities

Post-doc for me was an opportunity to gain additional research training, develop research interests & learn how to start & manage a research lab. I was expecting more clear, concrete guidance on how time should be spent.

Fundamental issues and challenges

Compensation, didactics, career development & guidance on setting fees (e.g., invited speaking engagements) & collaborations. Structural support for neurodiverse postdocs (coaching/planning support for the dramatic change in schedule from

Pre-doc to post-doc), support for postdocs with young children, better guidance on taxes, more programs which encourage postdoc peer support & communication. Also more frequent evaluations/feedback & mechanism for providing feedback on mentorship.

Existing NIH policies, programs, or resources

The NIH websites are a visual nightmare for someone with ADHD. Especially someone like me, who comes from a disadvantaged background (growing up) & does not have the familiarity with how to navigate the websites and/or identify opportunities for postdocs. The huge blocks of text, the buried links to even more text, lack of audio options & unclear guidance on a contact for more info. The non-research application requirements are also excessive & burdensome (e.g., rec letters).

Proven or promising external resources or approaches

Provide financial relocation support, increase wages, improve clarity of funding opportunities, structural & organizational support for neurodiverse applicants. There is guidance on neuroinclusive workplace environments. More visuals and less text pls

Response 1105

Perspectives on the postdoc roles and responsibilities

For one thing, it's not a training position; trying to act like it's a training position is disingenuous. We do most of the actual scientific work.

Fundamental issues and challenges

We're not paid enough. Industry pays more.

Existing NIH policies, programs, or resources

Really, just pay us more. I'm an AI researcher. I want to stay in academia because that's where I can do the most good. But MGH pays under $60k and Google pays about $150k.

Proven or promising external resources or approaches

Postdocs are treated as though we're expendable. There's almost zero oversight on how PI's treat us. And—I cannot emphasize this enough—we're paid very little. Academia doesn't respond appropriately to the demands of the economy, which is why it's kind of suffering right now.

Response 1106

Perspectives on the postdoc roles and responsibilities

Academic postdoc is a key for the development of academic institutions. However, in most cases the way they are managed makes postdocs feel that they are abused in terms of ownership of their work, management of their time and the amount they are paid.

Fundamental issues and challenges

Ownership/leadership is very important since every thing is dependent on the PI.

While the amount of time academic postdocs work is higher, they get less and have uncertain future compared to industrial postdocs and people who are outside of science. This forces them to leave their jobs whenever they get little chance.

Existing NIH policies, programs, or resources

NIH sets the salary of post docs in [redacted for anonymity] which is far less than other universities in the USA like in California and New Jersey. And it is difficult to appeal this given the NIH's power for the decision.

Proven or promising external resources or approaches

No response

Response 1107

Perspectives on the postdoc roles and responsibilities

I had a 4 year postdoc position. I knew I likely was not going to be staying in academia but was willing to take a Postdoc if it would provide me learning in the area I wanted to take my career next. For instance, my graduate work was in Human Genetics but involved bench work and computational interpretation of the lab work. I knew I wanted to move into clinical genetics and took a computational biology postdoc in clinical pediatric oncology genetics. Mostly, because I wasn't abtle to get an industry position in clinical genetics without some kind of formal training. To me the postdoc is another route of formal training.

Fundamental issues and challenges

Pay! Hours! No Human Resources Department to file complaints to! No ability to speak up. There is a fundamental issue in academia that PIs can continue to get away with poor mentoring skills and there is no retribution in doing so. PIs need formal training in mentoring, managing, and communication! Provide opportunities for PIs to get formal training in management. In industry if you are a poor manager you lose that position, but in academia if you are already tenured it doesn't matter how you manage even if it's awful! The only draw to academia right now is job security.

Existing NIH policies, programs, or resources

The NIH has spent lots of time on trying to improve the communication between PIs and mentees with the online portal system involving the mentees career goals etc. However, I have never ever discussed this with my mentor. My mentors don't care. Stop focusing on the mentor and instead focus on the mentees and provide them with resources for the opportunity to get training on mentoring, managing, etc to succeed in the next steps of academia. The grant system for trainees sucks. I got a low grant score because my MENTOR HAD POOR Mentee history! HOW IS THAT MY FAULT?!! I wasn't even given a chance!! Rate trainees grants on their science!! Not on who is or isn't on their mentoring committee! Mentoring is a joke! I got more mentoring from my peers than actual PIs during my postdoc.

Proven or promising external resources or approaches

Pay raise will help with retention. Let trainees be part of the grant review process. Honestly, I'm not sure how you fix this when the bigger academic system is just broken. A real human resources program is absolutely needed! If I could give real feedback on my postdoc mentor to my previous institution I would! There needs to be a system where institutions receive feedback on how PIs mentoring/managing is and whether those PIs need more formal training. If I could provide feedback so that others wouldn't make the same mistake I did, I would! There's no process for me to provide feedback!

Response 1108

Perspectives on the postdoc roles and responsibilities

Postdocs are the life-blood of academic research. We run the labs, write grants, give talks, etc, etc. And yet, we are compensated very poorly. Without drastic changes, the mass exodus from academia will continue, the United States' dominance in STEM will disappear, and humanity will suffer.

Fundamental issues and challenges

more. money. for. postdoc salaries. stop calling us trainees. stop treating us like trainees. We are highly skilled employees doing highly skilled work and should be compensated accordingly. Call us and compensate us for the role that we actually fill (senior scientists). Nobody wants to shoulder the responsibility for paying postdocs what they deserve. PI's blame the institutions. Institutions blame the government. Nothing changes.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Minimum salaries need to be raised at least 40%. The universities and PIs won't budge without this mandate or heavy unionization. The union movement seems to be gaining steam. Not ideal for the government. I'd imagine it would be easier to get ahead of this now.

big city universities offer heavily subsidized housing options (some of them, and not all for the duration of the postdoc). It's not enough, but it's enough to go from completely untenable to barely living paycheck to paycheck. Maybe a housing credit of some sort could be applied nationally. Or a tax break?

Response 1109

Perspectives on the postdoc roles and responsibilities

A postdoc position is supposed to provide additional training and time for a recent PhD to develop their own career. This could mean a line of research that could lead to a faculty position down the line, or training that could provide a stepping stone into an industry career.

Fundamental issues and challenges

1) These are short-term, soft money positions that are usually dependent on short grants or awards that prevent postdocs from having a source of stability. This makes it hard to plan for the future at an age (typically 27-35 or so) when you would usually be considering getting married, buying a house and having children.
2) The lack of tenure-track faculty positions for postdocs to move into has made recent PhDs less interested in pursing additional training or staying in the academic lane. Relatedly, those jobs that are available are preferentially given to people who are well connected with labs and mentors that look out for each other. This kind of career nepotism has made the scientific community more cliquish and is slowly undermining the quality of work.
3) Salaries are low compared to jobs for PhDs in industry.
4) The additional years of postdoctoral experience can actually be a disadvantage in the job market: Many employers prefer recent graduates or non-PhDs who have industry experience. By spending more time in the academic circle, one can impede their likelihood of getting hired into an industry job.

Existing NIH policies, programs, or resources

Currently fellowships do not provide for benefits outside of health insurance. As a F32 awardee, I became a contractor within my university and lost my retirement benefits. Because my health insurance was technically part of my salary, I was also taxed on the amount that the university would normally have provided. Thus, I was financially worse off for having received a fellowship than had I been paid directly off of my supervisor's grant. Changing the fellowship program to include benefits, or preventing universities from turning fellows into contractors (and thus allowing them to remove benefits), would be a substantial improvement in the postdoc fellowship program.

When I applied for a K99/R00 I was also prevented from asking for a higher salary because of university policy. I would then have been fixed to the NIH minimum salary. The NIH should encourage higher salaries for awardees to provide real financial incentive to apply for these awards. As it is, we are currently financially disadvantaged for receiving awards. This is a very retrograde policy that helps keep people from less financially well off backgrounds from entering the sciences and applying for awards.

Proven or promising external resources or approaches

We are producing a lot of highly trained scientists in the US who have an interest in working on solving fundamental problems and improving the quality of human life. Unfortunately, we are losing many of them end up using their skills and expertise for developing marketing tools and recommendation algorithms, or writing propaganda for pharmaceutical companies. This is a net loss for the NIH and the country, as money that is meant to be used to train the next generation of scientists to carry on the NIH mission is wasted as a slim few stay in the sciences. NIH needs to consider what this training is meant for and ensure that the future roles that these fellowships and awards are meant to provide for actually exist.

Response 1110

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

We need to have NIH research grants, when awarded, linked to the cost of living in different parts of the USA. This would help tremendously. In Kansas, for example, a postdoc can rent a house with a salary of $60,000/year. In Boston, New York City, and San Francisco, a postdoc can't even rent a studio on such a salary, so postdocs must have roommates even when they are in their late 20s and 30s and want better living conditions. Or they just give up on a postdoc and move directly to industry. This has been happening more and more in the past decade.

Existing NIH policies, programs, or resources

Are the states eligible for NIH Idea grants picked on the basis of total NIH funding/per population of the state, or just on total NIH funding per state without adjusting for the population of the state? If it is the latter, you are really disadvantaging the states that have taxed their residents to build a biomedical

infrastructure and educational systems. You are rewarding states for not funding education by giving extra resources to those states that don't have as much NIH money. This is unfair and discriminatory against states like California and New York. IDeA-eligible states include: Alaska, Arkansas, Delaware, Hawaii, Idaho, Kansas, Kentucky, Louisiana, Maine, Mississippi, Montana, Nebraska, Nevada, New Hampshire, New Mexico, North Dakota, Oklahoma, Rhode Island, South Carolina, South Dakota, Vermont, West Virginia, Wyoming, and Puerto Rico. We now need a similar program for NIH grant awardees in states with high costs of living-more money per grant! NIH postdoctoral stipends should NOT be the same throughout the country.

Proven or promising external resources or approaches

No response

Response 1111

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I am a PhD student who is not considering a postdoc. Although I enjoy research and would have liked to continue along this career path, the fact of the matter is that our current system does not provide a stable career path for researchers. I do not want to spend 5 years working long hours for mediocre pay, just for the slim chance of obtaining a faculty position. My skills are simply more valued in other industries.

NIH needs to stop pretending that postdocs are trainees and pay accordingly. NIH also needs to greatly expand the number of staff scientist positions so that more talented scientists can be retained. It is simply not realistic for every postdoc to become a PI. More people would be willing to do a postdoc if they had a strong chance of obtaining a staff scientist position.

Existing NIH policies, programs, or resources

Greatly expand the amount of available funding for staff scientists.

Proven or promising external resources or approaches

No response

Response 1112

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a valuable means to acquire specialized skills and gain more competence in addressing key problems

Fundamental issues and challenges

1) Remuneration: It is commendable that NIH has stipulated a minimum salary for a postdoc. PIs are compelled to keep to that minimum but it is barely adequate given the present economic realities and family responsibilities (e.g childcare).
2) Workload: Most quarters often use postdocs as cheap labor. Working over time seems to be the norm. The pressure to generate data and publish does not consider the health of the personnel. Adequate remuneration may compensate for this.
3) Competitive industry packages: the recruitment and retention of postdocs is dwindling because there are increasing number of attractive positions outside of academia and the slim possibility of securing faculty positions make many look away from taking a postdoctoral position.

Existing NIH policies, programs, or resources

Career Development Awards should be increased

The minimum salary should be adjusted to reflect current economic realities, which can be addressed directly by removing modular budgets for R01 upwards

Proven or promising external resources or approaches

Enhancing postdoctoral welfare enhances science quality and postdocs satisfaction

Response 1113

Perspectives on the postdoc roles and responsibilities

Kate Saylor's comment on the RFI announcement reflects my feelings identically in response to this question.

Fundamental issues and challenges

I've already made up my mind to leave my post-doc position before the end of my first year because I know that my skills, expertise, and overall work ethic will be better valued and compensated elsewhere--not to mention the guarantee of better health care, paid parental leave, greater job security, and more opportunities to work from home.

Moving through the U.S. educational system without generational wealth as a safety net is brutally difficult. Students are forced to accrue massive amounts of debt all the while being faced every day with homophobia, sexism, and racism (and more) because the people who succeeded in this system before are untouchable and, simultaneously, the ones deciding our futures. An anonymous commenter on the RFI announcement put it well: ".many graduate students do not receive a stipend, and even for those who do, it is hard to save money. Therefore, there is added pressure on post-docs to begin to start saving as soon as we leave graduate schools.We made the decision to trade years of earning salary for years of education when we went to graduate school."

The current system functions by baiting PhDs into working insane hours for too low of pay and poor job security with the flimsy promise of something better in the future. People used to stick it out because they were passionate about changing the world. But industry and non-profits get evidence-based practices to the people who need them the most far quicker, and that work is respected and appreciated. With more PhDs leaving academia, there is excellent research being done elsewhere, and a post-doc position is no longer needed to develop one's skills enough to be capable of a successful career.

We are already valuable, but we are treated as though we are not.

Existing NIH policies, programs, or resources

NIH-funded academia is falling woefully behind all other sectors not only in pay, but in recognizing and correcting for the ways it reproduces inequality (see Alan Attie and Aina Pruce's comments on the RFI announcement regarding the treatment of non-U.S.-citizens by NIH policy as just SOME examples of the ways in which NIH reproduces inequity and hinders the creation of a diverse science.

The questions to be asked here are —Why were we not set up to detect this issue before it arrived? Who has a seat at the table, and who have we silenced or ignored? Why was incremental change made when sweeping changes were called for? Why were we not a space that felt inviting to diverse voices or to individuals hurt by this system and willing to share their experiences?

Proven or promising external resources or approaches

Increasing pay for employees is proven to improve work climate. Providing health insurance (so many post-docs fall through the cracks, not quite students and not quite employees) is also likely to reduce turnover. The NIH has received EXCELLENT recommendations already in the comment section of the RFI announcement. I recommend using a qualitative analysis to identify common themes in the suggestions made by individuals with lived experience in the system you're seeking to change. Yes, you can look elsewhere. But the answers have been placed at your feet with many of the same answers stated over and over again.

Response 1114

Perspectives on the postdoc roles and responsibilities

The role of my postdoctoral position is to carry out the general vision of my lab. I collaborate with colleagues to execute cutting-edge experiments and develop new technology and software that aid the research community. My responsibilities include managing day-to-day experimental workflows by doing

the experiments, delineating general experiments to staff, and interpreting results to ensure the research direction is progressing. In addition, I'm deeply involved in my lab's grant development (e.g., RO1, etc.) while developing my own independent grant (K99).

Fundamental issues and challenges

I'm optimistic about academic research. I genuinely believe it to be the best platform for scientific creativity. However, the majority of my postdoc colleagues are growing increasingly concerned about their long-term job potential while managing short-term financial shortcomings. Some colleagues, who are the primary caregivers of their family, understandably opt for more lucrative financial positions outside academia. As a postdoc myself, I'm constantly approached by industrial recruiters who offer me two-times my current salary. I turn them down because I consider academia the only way I can fully carry out my scientific goals.

Existing NIH policies, programs, or resources

The general academic environment appears to be, at times, overwhelmingly concerned with financial stability. The pursuit of stability influences the science, and the science eventually becomes risk averse. Inevitably, lab morale becomes unbearable for many lab members. Who wants to be work in a low-morale environment? Especially ones that inherently don't offer comparably lower incentives?

I don't confidently believe that I have answers to improving research career pathways. I tend to believe, though, that increasing the modular budgets per R01 has potential—or rather, more money per grant. I was surprised when I found out that the $250,000 modular budget has not increased in nearly 25 years, despite inflation and the need to integrate greater resources to address a scientific question (e.g., computational power, omics, etc.).

The majority of PI's and colleagues with whom I collaborate are consistently writing R01's despite having already secured funding. "It's not enough," I'm told.

Proven or promising external resources or approaches

I believe the NIH has a more indirect rather than direct influence over the training and working environment of the lab. Rather than spreading out its funding in multiple RFAs, tighten funding by investing more on a per-grant basis. This might mean sacrificing certain RFAs.

I understand this isn't an easy or even practical solution. Simply increasing RO1 modular budgets would create problems: it could decrease overall RFAs, increase competition for what would be fewer grants, and disparage some labs. I'm hoping that those closely involved in this process consider ways to stabilize the long-term picture of some labs, so that the environment morale increases and more money can be dispersed to the employees themselves rather than equipment and resources.

Overall, the NIH can enhance postdoctoral training by doubling-down on what it's so close to offering: near full-autonomous creativity and control on long-term projects with enormous societal impact. Constantly writing five-year grants for modular budgets that haven't increased for a quarter century gets in the way. Rather than focusing on long-term projects, postdocs (and PIs) are focused on short-term funding that ultimately affects the quality of their research, quality of their lives, and quality of their colleague's lives. Industrial positions offer greater long-term security by paying more up-front. In its current form, academia can't financially compete with the boom of industrial health research.

Response 1115

Perspectives on the postdoc roles and responsibilities

My opinion is that the role of the postdoc is to carry out their own projects under the guidance of a principal investigator (PI) and also contribute to research projects developed and funded by the PI's grants. This can and should also involve the supervision of graduate and undergraduate students. The overarching goal of a postdoctoral researcher should be to develop their own research program, gain practice and experience in mentorship, and to develop the necessary skills to become an independent investigator.

Fundamental issues and challenges

Recruitment of postdocs is inhibited by several factors. Newly-minted Ph.D.s who want to become University professors are discouraged by the low probability of actually attaining that goal. Many of them

have seen highly skilled and very successful postdocs spend countless hours on applications that ultimately go nowhere. Postdocs on the job market see that there is often a select group of candidates that receive multiple offers, sometimes leading to failed searches. There are many postdocs who would be great and succeed in the position where the search failed, but there are few options for offering these positions to candidates that did not make it to the initial interview list. They also see that existing assistant professors also apply for and are interviewed for these jobs and many open positions are filled by existing assistant professors that want to change institutions. This makes the actually supply of assistant professor jobs even lower for candidates at the postdoctoral level. Other newly-minted Ph.D.s see the life of a professor and decide it's not for them, due to the high demands and lack of work-life balance. Options outside of academia are seen as more desirable for their overall life goals and a postdoctoral position is not required for these jobs. For these new Ph.Ds, it doesn't make sense to spend a few years in a postdoctoral position at a lower salary. If a postdoc is not needed, then it makes more sense to directly start a job that is on their career path.

Existing NIH policies, programs, or resources

I think that the NIH could offer programs that provide a fellowship for a joint industry—academic postdoc. Current postdoctoral fellowship programs could be improved by offering better support for university job applications. Or perhaps, a program where a current or former NIH postdoctoral fellow could send the NIH the research statement that they are using for job applications as a type of grant application where the NIH would promise to award the candidate a specified sum of money to support the candidate's research program if they end up securing an assistant professor position. Ideally, this would happen in advance of the actual job applications and the Universities would know that these candidates would have additional funds from the NIH and that would provide the candidate a better chance of getting hired.

Proven or promising external resources or approaches

Ultimately, I think that the solution might be to offer better incentives for doing a postdoc in the first place. This might involve a shift away from viewing postdocs solely as trainees and offering real career-level positions for them within academia. This would mean real pay and real benefits and some degree of job security. I am not sure that there is much that the NIH can do about this other than to increase the pay scale and that would also have to require increasing the budget. I understand that it is incredibly hard to get Congress to increase the NIH budget, but perhaps the NIH could invest more effort into engaging with our congressional representatives to show them the value of basic research and request the funds necessary to keep the US a powerhouse of science and innovation.

Response 1116

Perspectives on the postdoc roles and responsibilities

Mentored but semi independent research to improve skills and experience to one day lead a research group

Fundamental issues and challenges

Salary and benefits are really low. The lack of retirement matching or other common employment benefits is very worrisome. Mentorship access is very unequal, and mostly doesn't make up for poor payment. Specially compared to industry. We are treated like employees without proper and clear guidelines for vacation time, time off and sick leave, but paid as trainees? And that is not even in cases with abusive dynamics from labs especially for international students that depend on visa sponsorship

Existing NIH policies, programs, or resources

If postdoc is a training stage, then make sure training is given. If postdoc is employment as researcher, adjust salary, benefits and expectations/working hours and goals to a job like position. Also, make international postdocs eligible for Grant's or other sources of funding to reduce our vulnerability to PIs due to Visa and funding issues

Proven or promising external resources or approaches

Harvard medical school postdoc surveys and suggestions recently published

Response 1117

Perspectives on the postdoc roles and responsibilities

Lead research and build skills to land a permanent professor/research job.

Fundamental issues and challenges

Pay sucks! Hours are long. Having to move around every 3 years when trying to start a family is terrible. Impossible to save to buy a home

Existing NIH policies, programs, or resources

Raise the salaries to $100k+

Proven or promising external resources or approaches

No response

Response 1118

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs are not paid enough to live. When you live paycheck to paycheck, as so many do at my institution ([redacted for anonymity]), life is not secure and quality of life is poor. Accidents or events that may be considered "small issues" to those with financial security, can be severely damaging to those without financial security. When qualify of life is poor, this leads to difficulty in retaining postdocs and in recruiting new ones. All three of these issues could be substantially improved by paying postdocs a living wage.

Existing NIH policies, programs, or resources

No singular training or policy can fix systemic issues in recruiting and retaining postdocs. The solution must be an increase in pay for postdocs. With greater financial stability, graduate students may be more willing to take a chance on a postdoc than settle for the comfort of industry. Postdocs are highly skilled doctors —they should be paid a living wage.

Proven or promising external resources or approaches

No response

Response 1119

Perspectives on the postdoc roles and responsibilities

The postdoctoral researcher job is, currently, both

1. a necessary step in the current academic system, needed as a buffer between the large pool of PhD students wanting to work in public research and the small number of permanent academic positions that open every year and
2. the only position in the academic system of many countries, including the USA, where one can fully devote their time to research without wasting time on distractions like teaching, going to classes, learning how to do research, doing paperwork or admin, etc.

Fundamental issues and challenges

This question is poorly worded, the problem is not how to recruit more people as postdoctoral researchers but how to *instead* recruit more people in permanent positions of interest without spending unnecessary time in unstable, short-term positions where the individual is at the mercy of the PI.

Existing NIH policies, programs, or resources

Fund positions of "permanent scientists" (no admin, no teaching).

Proven or promising external resources or approaches

No response

Response 1120

Perspectives on the postdoc roles and responsibilities

Aside from my own scientific research, I oversee/train graduate students, write grants, and come up with new project ideas.

Fundamental issues and challenges

There is no salary adjustment for universities in a high cost of living city. With inflation, it is not feasible to do a postdoc after a PhD student salary. Additionally, the postdoc appointment timing is during prime child bearing years. The pay does not support having a child and the 8 week maternity leave is too short. Recovery after having a child is challenging and some people are just starting to walk after 8 weeks let alone conduct rigorous scientific research. The $2,500 child care supplement is only one month of daycare in high cost of living cities. Thus, unfortunately, you will see less and less women participate in postdocs.

Existing NIH policies, programs, or resources

Increasing the child care stipend to at least $5,000. Increasing maternity leave to at least 16 weeks. Increasing salary. Providing child care and cost of living adjustments.

Proven or promising external resources or approaches

Honestly, it's about the money and benefits. That is the only way.

Response 1121

Perspectives on the postdoc roles and responsibilities

- Completing research projects and publishing under short time constraints due to career expectations.
- Taking on administrative responsibilities in the lab, in many cases serving as a proxy principal investigator in the lab.
- Mentoring students and technicians.
- Serving as an overflow labor resource for other projects in the lab that are understaffed due to turnover or poor project management. This may include experiments, grant-writing, and last-minute presentation preparation.

Fundamental issues and challenges

After receiving my PhD I was dissuaded from postdoctoral research for a number of reasons:

- Postdoctoral "trainees" are under-compensated for their role, which has been traditionally justified by categorizing them as trainees instead of professionals with years of expertise. Pursuing this path can cost individuals tens to hundreds of thousands of dollars over their lifetime when compared to nonacademic career choices (https://www.science.org/content/article/price-doing-postdoc).
- Postdoctoral positions are part of a bottleneck to scarce, highly coveted positions as professors or principal investigators. During my PhD, post-doctoral candidates were under constant pressure to complete their projects quickly, sacrificing their own work-life balance with little promise of job security.
- Postdoctoral professionals are often expected to build and develop novel projects, but they may or may not be able to take those projects to subsequent positions, further restricting their career progression.
- Many principal investigators lack formal mentorship training, forcing postdoctoral professionals to manage-up or serve as managers for their lab.
- Postdoctoral professionals may be held back from publishing by their principal investigator who want more, or more impactful, experiments. I have seen postdoctoral professionals held back for months or years, which has substantial impact on their career path (and lifetime income).
- Career support and mental health resources are often lacking for postdoctoral professionals. They often have little protection from unhealthy power dynamics at their institution.
- High pressure work environments and lack of support contribute to poor mental health, including high rates of anxiety, in postdoctoral professionals (https://www.semanticscholar.org/paper/Flourishing%2C-Languishing%2C-and-Depressed-Fellows%3A-in-Gloria-Steinhardt/8108007d751855d62077a1a15d8ab25c9bb86323).

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1122

Perspectives on the postdoc roles and responsibilities

A training position primarily for a later faculty position

Fundamental issues and challenges

while the salary is sufficient for postdocs without children, it is insufficient for those with young children

Existing NIH policies, programs, or resources

NIH resources, policies, and programs should not be biased in favor of postdocs from certain backgrounds. The current system to support underprivileged postdocs is unfair to the other groups and will in fact hurt those groups that NIH intends to support.

Proven or promising external resources or approaches

Please reduce such bureaucracy

Response 1123

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Industry was booming and postdoc positions in academia are exploitative. At least for a HCOL area like Boston, postdocs are paid 25% under the living wage for one person living as part of a 2 person family. That cost goes up for singles living alone and up A LOT for people with any kids. The salary is "insulting" for the level of skill and even societal contribution; it's not just that the pay is a bit low. It's completely scandalous. Genentech pays their post docs $86K plus bonus, 401K match and stock options.

Existing NIH policies, programs, or resources

42 U.S. Code Â§ 288(b)(5). More money for post docs

Proven or promising external resources or approaches

10.1038/s41587-023-01656-4 A Nature biotechnology article about retaining post docs

Response 1124

Perspectives on the postdoc roles and responsibilities

I viewed postdoc positions as additional time working with faculty in my field that was needed to publish in an effort to land a tenure track job. However, in my field I kept seeing people spend 6+ years in a PhD program followed by two or three postdoc positions in order to potentially be hired as TT faculty. That's too many years at such a small salary.

Fundamental issues and challenges

Salary. In my first year of an industry position I was paid triple the salary of a postdoc. Plus, my industry position is 40 hours a week.

Existing NIH policies, programs, or resources

Postdoc salaries need to increase. Faculty need treat postdocs as professionals and not glorified research assistants.

Proven or promising external resources or approaches

Again, salary. Can academia compete with industry in terms of salary. Of course not. However, the salary gap has widened. The chances of obtaining a TT job is too small.

Response 1125

Perspectives on the postdoc roles and responsibilities

Postdocs are highly unprotected, unregulated and seen as cheap labor

Fundamental issues and challenges

Switching labs from toxic bosses means unsupported labor and going without pay for possible months. In addition, it also means a loss of health and dental insurance. Because of this, I have to work outside jobs to make ends meet, which distracts me from the science itself. In addition, because my postdoc research is tied with my loan repayment funding, in between this switch, my LRP did not pay for my loans. As result I received a deliquency mark on my credit score which made it dropped 56 points. Working a postdoc has not only mean I have to still struggle financially but it negatively affects my mental and emotional health to the point where I regret applying for the award and dong a postdoc. I can't even go to the doctor for counseling or for any other reason (in a pandemic) because of this. I am literally in hell.

Existing NIH policies, programs, or resources

Higher pay, guaranteed gap funding and health and dental insurance in the case of potentially switching labs. Not having the process of transferring grants take months. Not using the reimbursement model and allowing postdocs to have access to discounted child care

Proven or promising external resources or approaches

Higher pay, guaranteed gap funding and health and dental insurance in the case of potentially switching labs. Not having the process of transferring grants take months. Not using the reimbursement model and allowing postdocs to have access to discounted child care

Response 1126

Perspectives on the postdoc roles and responsibilities

- I view the post-doc position as one that is too narrowly focused without sufficient breadth to allow for the pursuit of individual research initiatives and not just conform or fit in with current initiatives. I may be wrong, however.
- I view research studies, including those of NIH, at risk of not considering/testing implicit bias as a confounding variable in trials. It could account for disparate outcomes between/among races. We won't "know" unless it is tested. It won't be tested unless included in the research design. It won't be included in the design unless NIH directs its inclusion.
- The study of racial bias among research investigators, staff, post-docs, research personal needs to be studied by each Institute as any other confounding variable and not simply delegated to the Institute on Minority Health and Disparities.

Existing NIH policies, programs, or resourcesthat could be modified, expanded, or improved to enhance the postdoctoral training ecosystem and academic research career pathways.

- See above suggestions. If I, a White, can identify problems within NIH research, just think how much more POC could identify, if they were included as post-doc investigators and encouraged to critically analyze research designs.
- Proven or promising external resources or approaches that could inform NIH's efforts to enhance the postdoctoral training ecosystem (e.g., improving postdoctoral recruitment, training, working environment, mentoring, job satisfaction).
- Include NIH's commitment to decrease implicit bias as a confounding variable in research design. This alone will
- increase recruitment (I bet on it).

Fundamental issues and challenges

See the above. It is not just the post-doc program that needs improvement, nor is it just NIH, but all research institutions. But, NIH can again lead the way. DEI are not just concepts, goals, etc. DEI are the lifeblood of institutions that claim to study objectively, scientifically asthma, infections, HTN, diabetes, nursing, mental health, arthritis, clinical services, scientific review and more.

Existing NIH policies, programs, or resources

See above —Thank you for this opportunity. It is a great start. [redacted for anonymity]

Proven or promising external resources or approaches

See the above.

Response 1127

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral stage as the period where a scientist transitions between the training-focused position as PhD Student and the position as an independent scientist. THus, this stage should focus on the skills required for becoming an independent scientist, for example leadership and independence skills. It should include training of younger scientists, managing projects from a more senior position, establishing collaborations and other leadership activities.

Fundamental issues and challenges

For me a clear issue is the salary. The average age for a postdoc is around 30 years old and a long trajectory of high-level education and usually more than 5 years of employment in science (research assistant, PhD student.). However, the salary is not clear in accordance with these qualifications. Why has the academic postdoc job has to be paid much worse than any other job that you can get with that education/CV? Solving that will really help with recruitment and quality of life. It is really difficult to think for example of forming a family (which usually starts at that age) with that low salary.

Salary will help retention too but there are other pressing issues here regarding retention, and that is the low number of senior positions in academia. We all know it is so difficult and competitive to start into the tenure track, but there are no real alternatives to continue after postdoc in academia. There should be a focus on that.

In my view, there is also no accountability for the role of the supervisors/mentors in the progression of academic career of their trainees, thus leading to so many cases of abuse that I am sure cause many people to quit and find some less-stressing job that does not break your mental health.

Existing NIH policies, programs, or resources

K99 is a great program but the success rate is so low that an increase in funding would really help to enhance the postdoctoral training ecosystem.

Proven or promising external resources or approaches

In Denmark there is a compulsory annual meeting about career development that leads to an official document in which both mentor and mentee commit to different objectives.

In some fellowship programs, it is also included a full workshop on career development, which is really helpful.

Response 1128

Perspectives on the postdoc roles and responsibilities

What the post doc SHOULD be is training to be academic faculty. This means that the number of positions should be proportional to the number of likely academic roles, so we have too many PostDocs.

What the post doc WINDS UP being is cheap PhD level labor for NIH grants. This is not a hard problem, it’s about money. PostDocs are woefully underpaid for what they bring to the table. The NIH and universities together need to identify how to have compelling jobs for Associate Research Scientists and then structure grant funding so these people can be paid appropriately.

If the NIH intends to raise PostDoc salaries, which to me seems like a necessary first step, there needs to be mechanisms developed to help support increase in pay.

Fundamental issues and challenges

Low Pay

Moving for a short term contract

Low prospects for continued academic success

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1129

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

1) NRSA Stipend levels are too low and fail to factor in cost-of-living considerations. In regions with high cost-of-living, NRSA stipends are half of what an entry level scientist is offered in salary in the biotech sector and benefits pale in comparison. The observation that NIH intramural post-doc stipends are higher than NSRA-set levels are evidence that the NIH is well aware that NSRA stipends are uncompetitive in some regions. The NRSA stipend levels are used by many extramural institutions as a benchmark for stipend levels for all postdoctoral trainees in order to have parity, regardless of source of stipend/salary, so this has a broad effect on compensation of all postdoctoral trainees. Although some institutions allow investigators to supplement the stipend beyond the NRSA level, these additional funds can only come from non-federal sources, which are very limited in most circumstances. If laboratories in high cost-of-living regions or regions with a robust biotech presence are to successfully compete for trainees, the current system of a single NRSA scale across the nation must be changed and NRSA stipend levels must be increased with a sound plan for funding these positions.
2) The NRSA requirements of citizenship or permanent residency substantially limits the pool of potential trainees. Most US investigators receive many more applications for training from individuals not eligible for NSRA mechanisms because they are foreign nationals. We should have mechanisms for supporting training of highly educated, motivated, productive young scientists who are foreign nationals, because this will expand the pool of potential post-doctoral fellows. Moreover, these are precisely the types of highly skilled, high performing individuals whom we should want to ultimately become permanent members of the US scientific enterprise.

Proven or promising external resources or approaches

No response

Response 1130

Perspectives on the postdoc roles and responsibilities

Postdocs generally look like more opportunities to pump out papers and acquire skills different from the phd. Ideally it’s an opportunity to receive mentorship and training to lead towards independence and establishing a new lab but I don’t think that is always the case.

Fundamental issues and challenges

There needs to be much much higher pay. As a biomedical engineering PhD, I can earn salaries commensurate with our skills and expertise. Benefits such as retirement funds, health insurance are also important. Relocation costs and bonuses will be more attractive overall. There is a lot of work to be done in my research, why would I opt to do more of that, earn less pay than industry with the empty hope of acquiring a faculty position or establishing my own lab when there are way too many PhD graduates than there are open faculty positions? One could argue, these positions should be only for the best of the best and weed out those who truly aren't "passionate" about the work. I do agree with this in some way but this tends to favor those from more economically privileged backgrounds. Do we really want socioeconomic background to be a determinant for staying in research and academia?

Existing NIH policies, programs, or resources

Admittedly, I did not know about some of these resources. One area of improvement could be in the dissemination of information about these resources/programs. Fewer acronyms in announcements and more graphical announcements through social media (if not used already) will help.

Proven or promising external resources or approaches

In my opinion, there need to be permanent scientist positions (staff scientist, etc). A position for PhD graduates who are not necessarily interested in opening a lab themselves but prefers to just perform the research labor and what comes with it.

Response 1131

Perspectives on the postdoc roles and responsibilities

The role of an academic postdoc is to expand upon PhD training to set a scientist up to start their own lab. This manifests by allowing them an environment and the resources to start their own independent research program under the guidance of their PI.

Fundamental issues and challenges

Biomedical postdocs have become prohibitively long and, coupled to the expectations for poor work-life balance and financial struggles, mean that postdocs often put off life events (having children, buying a home) until very late in their 30s. Many postdocs thinking about starting families have to make tough decisions between having "successful/productive" postdocs and having families. This is in part because it is challenging to publish (process takes a year or more), you spend much of the first year of your postdoc applying for funding, and often spend more time commuting in high COL areas. Additionally, the expectations for what postdocs have accomplished (in terms of research, outreach activities, and publications) have become higher and higher in recent years and are frankly unachievable for all but a small number of (often privileged) individuals. This creates a large mental health burden on postdocs and can be a large reason why many leave academia for other careers.

Existing NIH policies, programs, or resources

NIH could do a lot more to help postdocs, including:

1. increasing minimum stipends across the board, and calculating mandatory COL salary increases;
2. provide childcare subsidies and emergency grants or now-interest loans that struggling postdocs can apply for;
3. in high cost-of-living areas, mandate that universities with a certain amount of their research income coming from NIH provide housing to postdocs or subsidies to allow postdocs to live close to their place of work;
4. increase grant eligibility extensions for postdoc parents or those with disruptive life events, and make it easier to apply for such extensions;
5. put pressures on journals to change publishing practices such that papers don't spend months to years in the review process;
6. more evenly spread NIH grant funding out such that postdocs in less well-funded labs don't spend valuable research time applying for grants.

Proven or promising external resources or approaches

No response

Response 1132

Perspectives on the postdoc roles and responsibilities

It means I am climbing stairs to find myself in academic pressure or leave and get into industry which may have equal pressure but earn my bread without worrying my pocket.

Fundamental issues and challenges

If NIH can't improve the pay scale. Make the PostDoc job with fix timing frame, so that we gets an extra hour salary, then no PI will exploit their PostDoc employees

Existing NIH policies, programs, or resources

Fix time frame for PostDoc + salary hike of minimum 5-10% atleast after 2-3 year experience in same lab. When PostDoc works in same lab, he becomes standing pillar without her/him no PI can get Data for grant or papers

Proven or promising external resources or approaches

Please Fix working hours. After or during Ph.D. Most of the PostDoc who joins has a family, kid etc. Wihout fix working hour no one gets best work life and mental well being balance.

Response 1133

Perspectives on the postdoc roles and responsibilities

Viewed as a stepping stone towards becoming a PI. The role involves being mostly independent in your research, along with doing significant mentorship within the lab.

Fundamental issues and challenges

1) Pay is too low. Doing a postdoc becomes a trade off between getting to stay in academic research and being able to afford a home/family/middle class quality of life in areas like the Bay Area or Boston.
2) Fertility clock. As a woman, I worry significantly about the overlap between when it would be ideal to start a family (early 30s) and when I would be doing my postdoc (early 30s). I have seen having children significantly affect the progress of postdocs, even when they have full PI support. In addition, without adequate salary to pay for childcare, it puts a lot of pressure for one spouse to always be home with the child instead.
3) Job prospects. Becoming a PI is seen as very difficult, and cynically, seems to be most likely if you come from a few top famous labs. However, beyond being a PI, it doesn't seem like many jobs (industry, consulting, law, biotech, science writing or policy), really benefit or need a postdoc. So then it becomes a question of: should I spend 5 years doing a postdoc for a job that I'm unlikely to get?
4) Hierarchy. Doing a postdoc seems lowly valued. It's not a job people necessarily aspire to in itself—it's simply a stepping stone people seem to want to move through as quick as possible

Existing NIH policies, programs, or resources

I think simply raising the minimum postdoc pay

Proven or promising external resources or approaches

No response

Response 1134

Perspectives on the postdoc roles and responsibilities

An academic post doc is a waste of time. Given how few faculty positions are open.

Fundamental issues and challenges

Post docs get paid very little money for how much work they do. Can any of you at the NIH tell me with a straight face that you would do a PhD then move into to post doc to make 50,000 in places like th bay area or Boston.

Existing NIH policies, programs, or resources

Yes, post docs should make at least 90,000.

Proven or promising external resources or approaches

No response

Response 1135

Perspectives on the postdoc roles and responsibilities

I view the postdoc as primarily a stepping stone to increasingly rare opportunities to become an independent researcher in academia. It's an opportunity to develop your own research ideas and improve your track record.

Fundamental issues and challenges

It comes down to money. I have two young children and I cannot afford enough childcare to cover the time I need to work. In addition, to afford rent I have we now live far from work with a 2h total commute. In sum, I am not paid enough to work. This is aggravated by living far from family and friends that could help out with child raring.

The lack of funds and the need to scrape by (Eg literally planning which bills to pay and in what order because we do not have enough money in the bank account) drains a lot of energy that could have gone towards producing exciting research. It's really a disgrace.

Existing NIH policies, programs, or resources

Funding should be substantially increased (50% over current minimum). At a minimum it should be adjusted to local living expenses.

Extra funding on the range of 20k/year per child should be given automatically. This would probably make the biggest difference for most people.

Other form that, many foreigners deal with other expenses and things like green card applications could be supported both economically and practically by access to free legal help.

I realize funding is not endless BUT if this would lead to fewer postdocs being funded overall it's probably not a bad thing as the success rate would increase downstream for the postdocs.

In addition, more PhD programs should focus on "alternative" career paths.

Proven or promising external resources or approaches

Salary increase would solve pretty much all problems it would allow people with fewer means to stay in academia without sacrificing health and sanity.

Less postdocs overall would increase the need to fund new PIs better maybe by shifting funding from larger labs.

Response 1136

Perspectives on the postdoc roles and responsibilities

Cheap labor that usually now must also find its own grants to be granted the "opportunity" to postdoc in someone's lab. Who is then "trained" by managing students and equipment while writing grants and papers for the PI and being paid a fraction of the pay of counter parts in industry.

Fundamental issues and challenges

Crappy pay, crappy bosses, crappy workload—no time off, no maternity/paternity, no respect, and general exploitation.

Existing NIH policies, programs, or resources

Standard salary comparable to industry. Standard hours comparable to industry. Standard rights to time-off. MOST IMOPORTANTLY—the NIH should be reviewing all of these universities and PI's that are using millions of take payer dollars, making salaries of hundreds of thousands of dollars while paying postdoc and graduate student peanuts, and these trainees have no voice and no protection from these "mentors"

Proven or promising external resources or approaches

Anonymous website to submit complaints about professors and universities. Enforcement of far and regulated employment policies—wages, salaries, time-off

Response 1137

Perspectives on the postdoc roles and responsibilities

Training, full time job

Fundamental issues and challenges

Salary, ill-defined role

Existing NIH policies, programs, or resources

Increase stipend, more support, better definition of role

Proven or promising external resources or approaches

No response

Response 1138

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

My PI has tenure. He doesn't care about publishing. So I'm stuck 8 ears because he doesn't have time to look at my paper. He is teaching and has a company. This has to change.

Many of my postdoc friends left for same reasons. Pi not interested in sending out their papers. They send out papers of graduate students because there is a commette and they have to.

Postdoc need paper for faculty position. No papers, no faculty position.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

If multiple postdoc leave a lab there should be an investigations.

There is no protection for postdoc this has too change.

When I complained to the department head the answer was: PI know better.

Beside low salary that is a big issue I believe the other big issue is to be completely in the hands of one person : PI. If it's a training position this makes no sense. Some protection or checking on PI is required

Response 1139

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral research position as an opportunity to apply the expertise I developed as a graduate student while gaining new skills in an adjacent field of study. Ideally, postdocs have a symbiotic relationship with their lab, by bringing in specific skills and techniques to share with other lab members while expanding their technical and conceptual toolkit with assistance from their host lab. Postdocs also serve an important role in training graduate students in both technical skills and the "softer" skills of scientific practice, such as data management, experimental design, and interpretation. I also consider the academic postdoc position as a launch pad for future career opportunities in both industry and academia. For better or for worse, as the duration of postdocs has expanded over the years from a quick ~3-year position to something closer to a second PhD (~5-8 years), this position now looks much more like a long-term job than a temporary training position. Longer postdocs certainly offer a benefit to labs by providing a more stable supply of subject-matter experts to retain institutional knowledge, conduct difficult experiments, and train new lab members. Unfortunately, the pay and benefits afforded to postdocs have not kept up with this change in the duration and expectations of postdoctoral researchers, and I often see both funding agencies and out-of-touch PIs dismiss postdocs as simple trainees, not as experts that contribute crucial services to their laboratories and institutions who could easily make 2-4x their pay outside of academia.

Fundamental issues and challenges

In my view, the single biggest and most important barrier to postdoctoral retention and recruitment is salary. Postdoctoral researchers are experts in their fields who are nonetheless expected to work long hours for 5-8 years for less than half the pay they would earn in other sectors. Especially in high cost-of-living areas, this pay is frequently too low to allow postdoctoral researchers to rent a one-bedroom apartment, let alone to support child-care costs. (When child-care supplements do exist, they are often laughably low, or tied to specific funding mechanisms, or only available to women [and not new fathers or couples adopting a child, etc.] which renders them only minimally useful.) The economic difficulty inherent to doing an academic postdoc reinforces other disparities in science, as this route can be prohibitive to scholars from lower-income backgrounds, especially given the prevalence of student loan debt, lengthy duration of postdoctoral periods, and the poor prospects for landing a well-paying faculty position on the other side. These issues are further complicated by the fact that many postdoctoral fellowships, while ostensibly good for postdocs' CVs, remove employee status and thus take away access to employer-

sponsored retirement plans, the best health insurance options, etc. Finally, it should be mentioned that international postdocs are in a particularly precarious position, and rampant abuse (maintained by threats of not renewing visas) has been well documented.

Existing NIH policies, programs, or resources

Postdoctoral funding mechanisms such as the F32 should be modified to allow postdocs to retain employee status. Taking away key benefits during what are often peak earning years (late twenties—mid thirties) places an undue financial burden on postdoctoral researchers, and further discourages researchers from lower socioeconomic backgrounds from pursuing postdoctoral training. Similarly, the payback obligation incurred by F32 funding is antiquated, unfairly ties postdocs to specific employment situations that are often abusive, and limits the mobility (economic, geographic, etc.) of postdocs funded by these mechanisms. Finally, the NIH should encourage institutions to establish uniform and transparent guidelines about postdoc pay scales based on local cost of living assessments (and to allow those guidelines to factor into budget descriptions in R01s, etc. if they don't already). I know faculty who claim that the NIH "doesn't allow" postdocs to be paid off NIH grants at rates higher than the NIH minimum, and use this as a justification to pay postdocs in their lab far below the rate that postdocs in neighboring institutions make.

Proven or promising external resources or approaches

No response

Response 1140

Perspectives on the postdoc roles and responsibilities

For me, I see the postdoc position in two lights from the experiences I have had. One, I see this position as an opportunity to gain expertise in a new field and to establish one's identity and independence in the scientific community. On the other hand, I see this position as a potential cyclic trap where one can linger and go from postdoc to postdoc.

Fundamental issues and challenges

Honestly, the pay is not sufficient when you look at trying to do a postdoc in California or east coast with the price of rent. It's very discouraging.

Existing NIH policies, programs, or resources

Programs to show post docs how to establish their own identity in their lab and outside mentoring apart from your postdoc advisor.

Proven or promising external resources or approaches

No response

Response 1141

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is for a trained and skilled researcher, and is on par with senior research scientist positions in both academia and industry.

Fundamental issues and challenges

Inadequate pay. A postdoctoral researcher is highly skilled and trained. A barrier to recruitment and retention is a lack fo both a cost of living salary, and salary that accounts for their skill and contribution to the reputation, standing, and income of academic institutions.

Existing NIH policies, programs, or resources

Pay them their worth.

Proven or promising external resources or approaches

Pay them their worth.

Response 1142

Perspectives on the postdoc roles and responsibilities

Postdocs bear the responsibilities of faculty members (and then some!). Postdocs are expected to generate their own unique research direction that synergizes with the lab of their faculty 'mentor', obtain funding (which often results in loss of some or all benefits), mentor undergraduate and graduate students as well as junior postdocs, guest lecture in classes and labs, write primary manuscripts, reviews, commentaries, and abstracts, apply to conferences and obtain funding to attend said conferences, present at conferences, bring new techniques to the lab, review manuscripts, and (often) perform lab management tasks such as: repair/coordinating repair of equipment, order reagents, develop/maintain lab organization, safety, and cleanliness standards, perform routine checks on lab reagent/equipment status, and ensure continuity of research methods. Additionally, they are expected to generate enough data to publish at least one (usually more than one to be competitive) first author manuscript in a short period of time.

Fundamental issues and challenges

Postdocs are taken advantage of. Postdoc experience/publications are needed to gain faculty positions, but only the independently wealthy can realistically afford to do a postdoc. The number one challenge to postdoctoral researchers (I vehemently disagree with the term "trainee" being applied here, few postdoc programs offer any kind of training—postdocs are self-taught or "mentored" by their PI, who has zero mentoring training) is financial. Consider this most basic recommendation for financial stability—at age 30, you should have the equivalent of 1 year of full salary in a 401K or similar retirement plan. Postdocs, who are often 30+ years old, are often not even provided access to a retirement account. They are also rarely

Existing NIH policies, programs, or resources

- Funding of staff scientists. Postdocs should not bear every burden of a PI and lab manager. Further, there need to be options in academic research other than Faculty or Fail. Funding staff scientist positions would allow people who love academic research to stay with financial stability. It would also greatly improve scientific rigor. How often do labs 'lose' techniques/things stop working after big turnover because the senior grad students moved on and the postdocs left? What does that say about your science if even your own lab can't reproduce its own finding? Staff scientists would provide continuity and expertise when training new members.
- Required mentorship. The F32/K99 grants are meant to serve as "training" plans, but they are made up. I know many F32 recipients (10+) and not a single one of them spoke to their mentoring "committee" after receiving their award. If the NIH wants postdocs to receive mentoring, then F32/K99 awards should have required mentoring or training checkins that are solicited from NIH DIRECTLY to the mentoring committee. This would ensure that the postdoc isn't just asked to write up their own summary/letter of support/etc. as often happens. They could require a visiting scientist position to learn a new technique or regular conferences put on by NIH to address how to apply for faculty awards etc. These things need to be MANDATORY. Postdocs are overburdened, and their personal and professional development is the first thing to go when they need more time.

Making these mandatory would ensure

- only people who are committed to academia apply and
- postdocs actually receive the training that they pretend to get now. The NIH should also make sure that any PI who has an NIH-funded postdoc in their lab receives mandatory formal training in mentoring, bias, career support, etc.

Proven or promising external resources or approaches

The best programs I have seen so far (I wish they had existed when I was looking!) are the postdoc-faculty positions. They provide a stricter timeline, better financial stability, real benefits, and personal stability, as you are not expected to leave and find a job elsewhere after a few years. Plus, you are actually learning how to be a PI in the very place that you will become a PI! By the time your lab "opens", you will already have collaborators, you will know how graduate student recruitment works, you'll know the grants management teams, you'll know the institutional and department benefits, and you'll already have animal protocols/space set up so that you are ready to hit the ground running, and you don't waste a year "setting up" a million+ dollar lab while you spend a month figuring out how to order pipette tips. NIH

should absolutely fund more of these positions, and not put the onus on wealthy institutions to decide to do them. Call it a 'postdoc in place' or something. In all honesty, I think graduate programs should consider these positions too. Once you're in your last year of grad school if you love where you are and you want to stay, you should be able to apply. Having to move 2+ times just to get a faculty position is a huge financial and personal barrier.

Response 1143

Perspectives on the postdoc roles and responsibilities

A postdoc is meant to be additional training to prepare for a career. If I already had all the training I needed after my PhD, I would have gone directly to employment. In my case, I wanted to switch fields. It shouldn't feel exploitative or like a major sacrifice. We are adults just trying to make the world a better place.

Fundamental issues and challenges

Postdocs do the vast majority of biomedical research in this country and we are not paid nearly enough. This is in terms of our level of education, what we contribute, what we could get paid in a non-academic position, and relative to cost of living. This is a major problem for competitiveness and ability to attract postdocs, but it is also a diversity, equity, and inclusion problem. As chair of my postdoc association, I heard of and witnessed many postdocs leave academia for industry positions because they could not afford to raise children on the low postdoc salary. It is easy to get an industry position after just a couple of years of a postdoc, but academic positions require a more extensive CV and much more time. By keeping postdoc salaries low, the NIH is forcing postdocs from low SES backgrounds, costly health issues, and caregiver responsibilities out of the academic track, and those with elite backgrounds and parents who still partially support them are able to continue on to academic careers. Additionally, by not changing R01 funding levels, the NIH is pitting postdocs against their PIs. PIs cannot afford to pay postdocs more, even if they recognize the problem, and unfunded mandates from institutions or the NIH for higher postdoc salaries does nothing to fix the underlying problem. The US needs to value scientific research appropriately, both through direct spending of taxpayer dollars and by recovering funds from the pharmaceutical industry that profits off of work performed in academia. Until this is fixed, everything else will be a bandaid. But in the short term, if postdocs don't get paid more the system is going to collapse.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

I am paid by HHMI and my salary is so much better than the NIH scale. They also give bonuses occasionally and I have great healthcare. This makes me feel valued and like I can make choices about my postdoc and career on the basis of variables beyond whether I can afford to live. They also are on the cutting edge in terms of DEI.

Response 1144

Perspectives on the postdoc roles and responsibilities

Temporary position that allows me to have greater influence and ownership of my research relative to my PhD. The primary value of a postdoc is the ability to be eligible (in practice) for an academic position. For some, it is about getting exposure to a more well-connected biotech network to non-academia and this primarily means Boston, Bay Area, San Diego, or Seattle. For instance, while there are great schools in the midwest, they are generally less connected to biotech private sector, meaning moving to one of the above locations is incredibly important to have an easier shift to the private sector.

From a lab-perspective, postdocs are generally hired to perform versus learn. There are pros—and cons—to this. It makes it less of a "traineeship" position and I don't think many labs treat it as such.

Fundamental issues and challenges

There are two huge challenges.

The first is pay—while the NIH minimum payscales are potentially appropriate for lower cost of living areas in the country, this is not true for the areas of the country where having a postdoc position is most useful (see above).

The second is life-planning—this is related to pay. It is difficult to consider planning a family if you're barely able to save money while you're in your late 20s, early 30s and do not where you will be able to live in the long run. I'm not sure how the NIH could change this.

Existing NIH policies, programs, or resources

Increased minimum pay for postdocs and increased cost of living adjustment. The NIH payscales are far too low for how much

1. academic research is dependent on postdocs and
2. moreso for where it's best suited (careerwise) to do a postdoc (ie high cost of living areas).

There are a lot of general problems like the over-competitiveness and lack of job stability that are generally needed as well, but I don't see how the NIH could solve those issues. These seem cultural more than something policy can change.

Proven or promising external resources or approaches

I think the data generally show that people are far happier and willing to take positions that are paid for in exposure or training if they are paid enough in USD.

Response 1145

Perspectives on the postdoc roles and responsibilities

In my opinion, postdoctoral position provides additional research experience which can help to implement the earlier experience to another field. During postdoctoral studies, researcher can expand her/his skills in another field while providing different skillset. In addition to exploring new field of research, during the period, reseracher should enhance the experience of writing grants, mentoring skills, and administrative skills. Overall, postdoctoral position means the period of time that the researcher can learn different skillset, writing grants, improve mentoring and administrative skills.

Fundamental issues and challenges

There are a couple challenge I would like to address to improve the quality of postdoctoral studies as an international women researchers. Firstly, postdoctoral reserach trainees paid very low in the current economic condition in the U.S. Especially in metropole cities most of the postdocs are living either in unsafe places or shared houses. Secondly, most of the reserach laboratories have very toxic environment due to the lack of control mechanisms of principle investigators. Except very few of PIs have the mindset of providing the supportive environment for postdocs to improve themselves. Based on my understanding, the main focus of PIs is meeting the progress report deadline and continue the grant which results an very abusive culture in academia. Finally, due to the lack of leadership and other soft skillsets, traniees expose to different kind of harrasment and abuse. It is more common in international reseracher due to the visa restrictions. Some of the PIs preffered to hire internationals on purpose to force them work extensive hours and weekends.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1146

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1147

Perspectives on the postdoc roles and responsibilities

A chance to develop leadership skills in an academic lab and work towards an independent research program. A stepping stone to an established academic or government career. Unfortunately though the PI I chose to do a postdoc with, though a well-respected scientist and mentor, treats the position like a cheap lab technician/research scientist furthering their own research program. I have found my path to independence stifled.

Fundamental issues and challenges

Money. As a postdoctoral fellow not only is my pay not competitive and barely enough to live on, I also don't receive any benefits other than student health insurance. I am unable to save appreciably for retirement and am intelligible for benefits from the university. I also do not qualify for any government benefits such as FMLA or disability. Though postdocs have terminal degrees they are viewed and treated like temporary workers and often have student status rather than respect as highly trained scientists.

Existing NIH policies, programs, or resources

Family leave policies need to be updated to reflect a more human treatment of families and especially mothers. This cannot be left up to the universities because they are not providing adequate leave. The sexism and antagonism I experienced as a postdoc during my pregnancy and meager maternity leave broke me and is partially responsible for my leaving my postdoc and academia. There is little to no support infrastructure for parents for people in a position that they are taking during their childbearing years.

Requiring postdoc appointments to not be categorized as trainees/students in the university system to allow for real benefits and employment status both through the university and federal government

Proven or promising external resources or approaches

Required training for mentors. Oversight of mentoring. Real, appreciable ways to report gender based discrimination in mentorship or a system of reporting/warning others of bad experiences with mentors.

Response 1148

Perspectives on the postdoc roles and responsibilities

As I see it there are two "types" of postdocs. One is a postdoc focused exclusively on additional training and a second is a postdoc focused on assisting in conducting the work of a PIs externally funded studies. Both postdocs focus on transitioning the individual to the position of an independent investigator and often include crafting early career training awards (e.g., K01, K99/R00). Both types of postdocs have their pros and cons.

Fundamental issues and challenges

The major issue with training-focused postdocs (e.g., T mechanisms, F mechanisms) is the salaries which are just too low. They are also somewhat constrained particularly when a trainee is ready for independent work and doesn't necessary need additional extensive training. Instead, I write postdoctoral research associates into my grants. I can pay them more than they would make in a training mechanism, they have tremendous opportunity to learn about running large grant-funded projects and writing grants, and they can still do their own independent work and get assistance writing their own K.

Existing NIH policies, programs, or resources

Increase salaries and research funds for T and F mechanisms.

Proven or promising external resources or approaches

No response

Response 1149

Perspectives on the postdoc roles and responsibilities

Can mean many things, depending on the career goals of the postdoc. Usually involves additional training, often includes doing studies that were initiated by the PI (ie work for the PI), sometimes involves independent research initiated by the postdoc. Postdocs often serve as mentors to more junior members of the lab.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1150

Perspectives on the postdoc roles and responsibilities

A semi independent scientist that is able to work autonomously on projects that contribute to the overall lab direction. For those hoping to advance in academics, nearing the end of the postdoctoral fellowship the trainee should be committing a significant amount of time for an independent project that they would take onto their own lab. Tor those aiming to remain as high-level research scientists, their work should be a high level but focused on lab goals. For those post docs hoping to work in a career trajectory outside of academia, the last part of their term should be focus on developing the skills that would make them successful in that career tract, i.e. patent lawyer, consultant, etc.

Fundamental issues and challenges

Number one issue: SALARY. There are so many students do you want to leave immediately after getting their PhD and work in biotech making six figure salaries. This perspective comes from serving on three different admissions committees in one of the top medical schools in the country. I interview more students I can count each year. From the beginning, a growing number of students are focused on alternative tracks that don’t require a postdoc. In large part a significant motivator for moving outside of academia and postdoctoral fellowships is the amount of money that can be made in the private sector. Second, our grants do not support being competitive in this hiring environment. Lastly, the increasing difficulties faced by faculty in maintaining grant support and the decreasing purchasing power of our grants certainly demoralizes the students and discourages them from attempting to go into academia and thus doing a post doc. While NIH/NRSA salary lines continue each year to improve, there is no concurrent improvement in the modular R01 and any adjustments in my budgets to accommodate increasing pay for my postdoctoral fellows or to adjust for inflation are removed at the IC.

Existing NIH policies, programs, or resources

Increase overall salaries for PDs as well as the monies given out in grants to support postdocs. The modular R01 budget is a joke. We are being squeezed from all sides. How can I honestly tell my post-docs that academia is a good choice. My purchasing power keeps getting cut back by inflation and increasingly restrictive funding policies at each IC. That means I can only pay for a few or post docs and I can’t pay them what they are worth. Postdocs and senior students see these consequences first hand and many are happy to jump ship to the private sector ASAP.

Proven or promising external resources or approaches

Money.

Response 1151

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is the training period where a trainee advances from learning how to be a scientist (graduate school training) and begins to learn how to actually run a laboratory enterprise as a primary investigator. The training should cover all aspects of skillsets needed to be a PI but most especially: grant writing (by securing your own extramural funding), mentorship by mentoring students in the lab or teaching courses, concrete laboratory and research management skills.

Fundamental issues and challenges

Postdoc salaries are the biggest issue. As an American citizen who did all of my education at public institutions in the USA the postdoc salary does not address the crippling amount of student debt American postdocs are suddenly hit with when we lose student status. I think this is often in sharp contrast to international postdocs, especially those who were students in Asian and Europe and then only came to the USA for postdoctoral training. Really though all the things that are major issues for domestic and international postdocs could either be bandaged with handouts or subsidies targeting a specific issue from the institution where the postdoc is training; or the postdocs could just simply be paid more, with a COLA (cost of living adjustment) factored in, and just be given more control over their situation which would give postdocs the power to just make the best choices for their own life as they advance through postdoctoral training.

Existing NIH policies, programs, or resources

I would like NIH to do more to help SGM (sexual and gender minority) postdocs. There is a need for SOGI (sexual orientation and gender identity) data to support SGM postdocs being included in opportunities for under-represented/under-privileged folks. I also think that the NIH should do more to promote having domestic postdocs over international postdocs (perhaps by even by augmenting how R, T, K, and U grants are structured). I am currently a postdoc at one of the 3 major medical centers in [redacted for anonymity]. My institution is >75% international postdocs because most domestic postdocs are put off by how unmanageable the finances are here. This also represents a huge brain drain as most of these postdocs at my institution just go back to their home countries taking all that training and talent back out of the USA.

Proven or promising external resources or approaches

I have really benefited from doing two postdocs at institutions that had an official office of postdoctoral affairs and a postdoc association. To the extent that i almost always advise grad students to NOT do a postdoc at an institution that does not have an official office of postdoctoral affairs. I have also noticed that postdocs at institutions with unionized postdocs fair much better than postdocs at institutions, such as mine, without unions. The NIH would do a great service to postdocs by providing more postdoc specific training modules to supplement what is not available at institutions that lack an official office of postdoctoral affairs. If the NIH had a public database of postdoc salaries by institution I think this would provide a great source of leverage for postdocs to have better pay equity.

Response 1152

Perspectives on the postdoc roles and responsibilities

I was a postdoc at a national lab for 1 year. I pursued a postdoc because industry was not hiring when I graduated and I needed to "park" myself somewhere until more jobs were available. I also wanted to use the postdoc to re-evaluate my choice to pursue industry after being in a different environment from my PhD. I chose where I did a postdoc because there were very specific skills that I wanted to gain in an area of science I wanted more experience in. I also selected my postdoc due to the prestige and large number of collaborations of the PI. In many cases, postdoc positions are good ways to get the "blessing" of a big name PI to help get academic interviews/job offers and many friends picked postdocs for that reason more than the skills that they would gain. In my field (chemistry), postdocs are a de facto requirements for applying for faculty positions, regardless of how competitive the applicant is.

As a postdoc, I expected that I would be able to apply the skills I gained in graduate school to problems in a new field while learning techniques in that field. I also thought I would be responsible to be a role model for and help train the grad students (i.e. bring in outside knowledge to the group). However, since being a postdoc is not a sustainable position, there is no incentive to train younger students when you could be spending that time on completing projects and applying for jobs. I also felt that my role was to learn the key skillset of the lab quickly to either complete a project or start one that could be handed off to students to continue to build out after I left.

Fundamental issues and challenges

A huge problem about being a postdoc is that it is not designed to be a good experience. Postdocs are underpaid, over-worked, and stressed about whether there will be a job at the end because it feels as though there are far less jobs than people competing for them in both industry and academia. A career path at a national lab seems to operate by "work for someone and hope they like you enough to suggest hiring you on full time." Given this, if a permanent job was available at the end of a PhD, there is little reason to pursue a postdoc short of it is a requirement for academia.

The start of a postdoc is stressful—you are expected to be an expert but since it is new area, you aren't an expert yet. You also need to learn how to function at a new place so it is hard to be productive. That causes stress due to a growing expectation of what you should have accomplished within the time you have been a postdoc. That is: if you have been in a postdoc for 3 years with nothing to show for it (i.e. bad projects, etc) you will be viewed as unproductive so it will become increasingly hard to leave. Therefore it is incentivized to get out quick on the strengths of grad school work or achieve something fast and get out or stay until a high-impact accomplishment can be achieved then leave immediately.

The temporary nature of a postdoc prevents settling down since you could be moving across the country in a year or so.

Also, having a fellowship seems to be expected but having one makes doing taxes painful or changes your status at your institute which can change if you get healthcare, etc.

Existing NIH policies, programs, or resources

NIH grants could pay more to make postdoc salaries more competitive with industrial jobs. If the salary difference between a postdoc and start-up was only 5-10k, the choice of pursuing a postdoc might be more tenable, particularly for those with children. Alternatively, the NIH could tie salary to cost of living in a given area. My NIH fellowship would have been super easy to live off of in many places but, where I was, the cost of living was high enough that to have a reasonable quality of life, I ended up saving very little.

In addition, an NIH-sponsored conference where postdocs on the job market could present to faculty from departments which are hiring would be extremely useful. AIChE (the professional society for chemical engineers) has a poster session explicitly for this purpose every year and it is very helpful for giving candidates greater exposure on the academic job market. There should be support for candidates to attend so it does not just turn into another forum for only people from wealthy/prestige labs to get jobs.

One reason I did not pursue an academic career is that getting funding for research appears challenging (especially for young PIs) and many of the prestige grants can barely support 1-2 students. It felt that unless I could be at the top schools where there is lots of internal money to support research, it would be exceptionally hard to support a research group, especially because costs for everything have increased dramatically and the amounts awarded remain flat.

Proven or promising external resources or approaches

No response

Response 1153

Perspectives on the postdoc roles and responsibilities

Cheap expert labor for another scientist with the hopes of opportunities for career advancement and placing into a tenure track position.

Fundamental issues and challenges

As an MD-PhD going into research, I should not be "enticed" into a postdoc at [redacted for anonymity] by being told my NIH minimum salary will allow me to "qualify for low income housing and food stamps" in [redacted for anonymity]. If the US values its scientific dominance as it should and wishes to maintain it, we can't be making life as an academic scientist untenable, especially when other more lucrative opportunities are abundant in industry, where the work we do may or may not be in the public or nation's interest.

Existing NIH policies, programs, or resources

Labs cannot afford to pay postdocs what they need to raise a family, especially female scientists in their 30s whose maternity clock is at its end. NIH must increase its funding for postdocs and investigators to be able to support a reasonable minimum in cities where most high impact science is happening—salary in the 90k+ range plus benefits (health insurance, dental, vision) is essential

Proven or promising external resources or approaches

It's 100% money, man. Pay us.

Response 1154

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is an important level of our career where we develop our expertise in our fields of interest. We get further training that helps us establish ourselves in our chosen career path.

Fundamental issues and challenges

Promoting basic research is very important which is declining because of lack of funding. Challenges that postdocs are facing is losing jobs due to lack of funding in the lab that they want to continue.Moreover this is again taking away all the time that they had given to that lab. This effects the cumulative time that a postdoc has to apply for K-grants in their career specially for internationals or non-citizens who wants to be an independent investigator. These unpredictability and a feeling of insecurity also is effecting mental health of postdocs. A lot of early career investigators are also moving towards industry due to funding crisis.

Existing NIH policies, programs, or resources

The most important suggestions that I have for NIH is to

1) Increase funding not only give multi PI grants but also single PI grants
2) If possible relax the time-line for K99 deadlines from 4 years of cumulative postdoctoral experience to 5 years.
3) Introduce postdoctoral fellowships for internationals and non-citizens
4) Make sure if the postdocs are paid the amount they deserve according to their year of experience. This also includes increasing funding so that the PI can pay the postdoc and support the lab

Proven or promising external resources or approaches

If possible organizing a training program for postdocs so that they know if they can reach out to write to NIH if there is any issue in the working environment or introduce a yearly survey system from the trainees on the mentor. This is an easy way to find out about the mentoring skills of the mentor, lab environment, and job satisfaction

Response 1155

Perspectives on the postdoc roles and responsibilities

It's a transitionary training period where I pick up skills/expertise to complement those learned during my PhD prior to achieving a permanent, full time position.

Fundamental issues and challenges

Currently, it seems postdoc programs are trying to simultaneously

1. provide additional training to recent PhDs and
2. support the backbone of highly skilled labor.

These are two fundamentally different goals and should be treated as different programs by the NIH — much of the dissatisfaction with postdoc life is being given professional obligations, while only receiving trainee benefits and salary.

Retention in the sciences appears high. Retention in academic research is gated by the number of permanent positions available (i.e. tenure-track, staff scientist, or other permanent roles). The scarcity of these careers, combined with how a postdoc is unnecessary for many transitions to industry, appears to be driving the scarcity of postdocs and to be a major source of dissatisfaction.

Frustratingly, the trainee benefits are often insufficient. For example, individuals who receive an F32 NRSA often take a pay cut because they switch from employees (who receive health care and retirement benefits) to fellows (who receive neither). Salary is also lacking relative to industry, which contributes to the shortage and disincentivizes individual's from continuing their training, especially if they have dependents to support. Personally, I believe that postdocs should be paired like the highly trained professionals we are, and that should be enough to live in any location in the country. I do not believe in a regional cost of living adjustment as I think there should be some financial cost to living in a highly desirable location and, conversely, some financial benefit to living somewhere with cheaper cost of living (this would also incentivize spreading excellent academics around the country rather than increasing the density in Boston and the Bay Area).

Existing NIH policies, programs, or resources

Change the F32 from a "fellowship/stipend" system, to a system where fellows remain university employees and that also pays benefits/fringe.

Clearly differentiate two classes of postdoc scientists —trainees who may be supported yearly and are capped at 3-5 years experience, and staff scientists. Provide funding mechanisms to support long-term scientists, such as an extension of the MIRA or other awards. I think it's particularly important that these jobs be able to guarantee long-term support rather than annual contracts —maybe make it a 5 or 10 year award for salary that is jointed applied for by the individual and a tenured sponsor. Research funds would not need to be included. I think this long-term stability is necessary to make staff scientist positions a viable alternative to tenure-track life.

Proven or promising external resources or approaches

No response

Response 1156

Perspectives on the postdoc roles and responsibilities

To me, it's a time to gain more independence and try on different hats so to speak—in a guided fashion gaining experience in teaching, mentoring, university service, setting up lab space, etc while learning more about the general university structure and diversifying your skillsets

Fundamental issues and challenges

As you'll see below, the continued financial sacrifices faced by postdocs (especially those on fellowships who lose staff/employee status) significantly impacts quality of life. Overall low pay and especially lack of raises (though faculty typically do receive them and in many places graduate students as well as they gain more experience) drives many to look for alternative, higher-paying positions. This is exacerbated when considering many postdocs are in stages of life where they might like to marry, begin or expand families, or procure more stable housing. There in an invisibility that comes along with being a postdoc both generally and more specifically on some of these tantamount issues that affects recruitment, retention, progression, and quality of life.

Existing NIH policies, programs, or resources

The F32 is, unfortunately, in need of massive overhaul. To be successful in grant writing only to lose out—loss of benefits (medical, dental, death benefits, retirement, etc), university support, the added stresses and red tape that receiving the grant adds—and then to feel completely trapped in that situation by the

payback agreement is simply wrong. Unfortunately my specific university had no publicly listed policies about these changes taking place upon becoming a fellow, leaving me blindsided amidst the pandemic with no insurance (had been eliminated months before they alerted me but was still paying premiums), no more retirement, and was no longer able to access many of the support systems granted to staff. Had I known the changes, I never would have accepted the award and I now actively discourage others from applying for the F32, as do many people (postdocs and faculty) in my department. We have already made choices with significant consequences regarding finances and security in order to become PhDs, and it seems unjust that we are still placed in situations where in order to be successful long term we must make more financial sacrifices. We are heavily encouraged to apply for and receive this grant mechanism (sometimes our jobs are contingent upon doing so) but the price is unreasonably high—in some cases the stipend is lower than the original salary and supplementation can be difficult or impossible, it often results in being reclassified as not a staff or employee, which jeopardizes several benefits we have worked so long and hard to achieve after delaying them to get a PhD in the first place. The system as it stands now is disincentivizing and completely antithetical to the aims of a fellowship.

Proven or promising external resources or approaches

I strongly suggest that the NIH find ways to adjust their policies on fellowships to ensure that it does not cause postdocs to lose out on finances and institutional support.

Response 1157

Perspectives on the postdoc roles and responsibilities

When I started undergraduate research I had ambitions of at least working my way up through a post-doc, then pivoting toward academia or industry based on my life circumstances. I thought that research was a great way to spend my time and make a living. I have a love of asking questions, designing experiments, and doing lab work. I had a great PI, was accepted as a Fulbright fellow, worked as a lab manager, and started on my PhD. A path with good potential to continue doing research for the rest of my career.

However, my attitude completely changed in 2018, prior to the COVID-19 pandemic. For me it was a personal reason, I was getting married. After doing the math, there was little possibility I could support my family on a post-doc salary. Not having parental support and even with combined incomes it would be challenging, although not impossible. Fast Forward to 2022 and the economic fallout from the pandemic and a post-doc position became a financial impossibility for me.

Fundamental issues and challenges

Hopefully you understand that the problem is money. You have to pay people more. Plain and simple. It is insulting seeing such low salaries and low benefits for what is a grueling, high-pressure position with an very uncertain outcome. You are asking people to postpone their lives for 2-6 years after already spending 8-12 years in undergrad and grad school. It is especially offensive when graduate students see positions in industry or in government’s GS tier that typically pay 80-100% more and are appropriately adjusted for cost-of-living.

Existing NIH policies, programs, or resources

If there was anything that existed here already, I don’t think the “post-doc-pocalypse” would be at our gates.

Proven or promising external resources or approaches

I am only going to make recommendations based on pay. If you cannot fulfill those recommendations, let’s be frank, you will not see an increase in post-docs unless the economic environment changes drastically for industry or government roles, forcing graduate students to accept low paying post-docs.

Hopefully you understand that the problem is money. You have to pay people more. Plain and simple. It is insulting seeing such low salaries and low benefits for what is a grueling, high-pressure position with an very uncertain outcome. You are asking people to postpone their lives for 2-6 years after already spending 8-12 years in undergrad and grad school. It is especially offensive when graduate students see positions in industry or in government’s GS tier that typically pay 80-100% more and are appropriately adjusted for cost-of-living.

Response 1158

Perspectives on the postdoc roles and responsibilities

In theory, a postdoc is an opportunity to develop a unique line of research branching off of an established PI. It is like a second shot at a PhD but with the training wheels removed and allowing a greater emphasis focused towards purely the research record —what a PhD might have been if all the lessons the scientist had gained were there from the start.

Fundamental issues and challenges

The single biggest issue is pay.

I went to undergrad, taking out $40k in loans despite having state, federal, university, and private aid that most people would not even be eligible for (uniquely low income/background of homelessness).

I did a PhD, being paid less than what a fast food job pays while being treated fairly poorly by the academic system.

I have a uniquely advanced understanding of molecular biology (by training), statistics/bioinformatics/machine learning (self taught + elective graduate coursework). Why would I ever accept being paid less than my friends made right out of undergrad with non-STEM degrees?

The funding for personnel on grants is far, far too low to retain me.

The idea of dealing with the utter toxicity of academia for pennies. Having to move every 5 years to "enrich my breadth of experience." to fight for an almost non-existent pool of faculty jobs is ridiculous.

I doubt that the NIH will ever have the funding it would need to both pay for the research materials needed to do work and also increase the paylines enough to make academia even remotely compelling.

Existing NIH policies, programs, or resources

Minimally, doing a 1-2 year postdoc should at least offer full student loan forgiveness (no hurdles involving competitive grant apps) 5o offset the tremendous time put into our education if it is a strategic goal for the US.

Even better would be a pay bump foreveryone (grad students included).

Proven or promising external resources or approaches

None of these things address pay.

Though the NIH could do better to address toxic, publish-or-perish attitudes.

Instead of having virtually daily reminders about how even a small mistake could technically be research misconduct, or how you are doomed if you don't have endless awards based on research outcomes that relied partly on luck.

You could implement ideas that involve positive feedback for everyone.

See this article https://hbr.org/2019/01/are-your-high-expectations-hurting-your-team

Response 1159

Perspectives on the postdoc roles and responsibilities

Postdoctoral research for me should be a training where I will learn how to be a good leader, a caring and dedicated mentor and an independent scientist. It is where I shouldn't be treated as a student or as a fancy technician. It is where I should have time not only to work on my lab project, but where I should have time to think about next projects, who to collaborate with, and where to go next.

Fundamental issues and challenges

Currently, I work an average of 16h/ day, my health has decreased exponentially, I haven't seen my family and friends in a normal frequency and I am paid so little, I can't afford paying my credit cards. There's always so much in my plate that I cannot even see the end of my todo list. I don't have a social life and nobody above me seems to care. I only hear that this is how it is to be a postdoc and if I do not do this I won't have enough publications to get a job. My boss is also overwhelmed and consequently they

delegate their tasks to Postdocs, making us work as a PI, as a postdoc, as technician and as a trainee in a constant basis. All those are things that make me want to quit in a daily basis and I can see that many of my graduate and undergraduate student peers recognize that, which makes them not consider an academic career.

Existing NIH policies, programs, or resources

We need to increase the value of all grants. The R01, for instance, is the exact same value since the 90's, so it is definitely outdated. The increase in the value of the grant would make everyone's lives easier. Also, NIH needs to make the possibility of getting a grant a bit more feasible. The competition to get a grant, publications and other prizes has become life consuming to a point where it obligates people to overwork their Postdocs and puts Postdocs in a position where they don't have many choices but to accept such treatment. In addition, the NIH should make a policy encouraging universities to give their Postdocs a raise when they are awarded grants. I was made aware this fall that this is not the case and my university would not give me a raise if I got a grant because there's no law/ rule that forced them to do this.

Proven or promising external resources or approaches

The NIH should enforce confidential lab reviews to evaluate lab managers and PIs, with real consequences for those who are evaluated poorly. There should be a limitation on work hours for Postdocs, with well established rules for extra work hours, maternity/paternity leave, weekends and off-hours contact. Lastly, mentoring should be a top priority of NIH, and real mentors or PIs that dedicate their time for mentoring should be more praised and recognized.

Response 1160

Perspectives on the postdoc roles and responsibilities

Opportunity to express freely my ideas and approaches to tackle challenging scientific questions in my field. Opportunity to have guidance for an experienced researcher and not be guided by a manager.

Fundamental issues and challenges

Decent salary (starting minimum at 80k) and administrative inclusion within the society. Remove the non sense J1 visa which gives no career projection but instead produces stress. Should give H1 visa with the possibility of green card.

Existing NIH policies, programs, or resources

H1b visa and Easy access to green card if postdoc is near the end of it's program. It will give the possibility to apply for faculty positions. Remove J1, it's rules are absolute none sense.

Proven or promising external resources or approaches

Postdocs must be suggested by their mentor as reviewer for a minimum of 2 journals, must be trained and submit a minimum of 1 internal grand and one national grand applications.

Response 1161

Perspectives on the postdoc roles and responsibilities

Post training is an integral step towards becoming an independent scientist, must do step if circumstances allows!

Fundamental issues and challenges

1) Low income even when inflation is at it's peak. Your mind debates between family or research and in the end, deviates you from the research oriented mindset to highly paid industrial jobs.
2) Immigrants did Ph.D from USA face difficult visa situations specially Indian Origin people because of visa back logs. J1 visa is not a dual intent visa if researcher wants to settle down in USA after post doc it takes years to get green card even when you have contributed so much in science.
3) In order to attract the talent, perks should be higher than industrial counterparts.

Existing NIH policies, programs, or resources

J1 vida for foreigners

Low income

Proven or promising external resources or approaches

No response

Response 1162

Perspectives on the postdoc roles and responsibilities

Postdocs need more pay.

Fundamental issues and challenges

Postdocs need more pay.

Existing NIH policies, programs, or resources

Postdocs need more pay.

Proven or promising external resources or approaches

Postdocs need more pay.

Response 1163

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

One of the most important things is salary. Most graduate students have substantial debt and while postdoc is an increase, most people have to uproot their lives again and are still not paid a living wage.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1164

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Being totally beholden to a single research mentor is the single worst part of being a postdoc. It makes our careers precarious. No matter the value or quality of our work, it can be discarded in an instant due to conflict with a mentor, a mentor relocating to a new institution, or health challenges faced by that mentor. I have seen so many of my fellow postdocs leave their positions without publishing their valuable and important work, all because of the absolute dependency that is forced upon us by current funding structures.

Another reason that I see my fellow postdocs leaving their positions early: postdoc salaries and benefits. I could literally double my salary today by moving to industry. And get dental insurance to boot. It is only because I don’t have dependents that remaining in academia as a postdoc is financially viable for me.

Existing NIH policies, programs, or resources

Cohort-model programs such as IRACDAs should be expanded to provide postdocs (especially URM postdocs) with community and training in skills other than research (communication, pedagogy, finance, etc.) that they will need in their future careers.

Proven or promising external resources or approaches

Postdocs, like grad students, need multiple mentors. There should be formal systems in place to ensure that every postdoc finds multiple mentors at their home institution, perhaps something analogous to a grad student's thesis committee. Every post-doc should have a back-up mentor, a PI at their institution who is formally committed to helping that postdoc finish their training if—God forbid—the postdoc's primary mentor should die, move institutions, disgrace themselves, prove abusive, etc. All of these things happen. Frequently. And postdocs suffer the collateral damage of their PI's misfortune or misbehavior. There should be grants and/or department funds allocated specifically for postdocs (and grad students) whose work is interrupted by something their PI does or suffers. A safety net so that good science and good scientists are not discarded, as happens so often under the current system.

Response 1165

Perspectives on the postdoc roles and responsibilities

Background: I was a postdoc from 2013-2019 and am now an Assistant Professor at an R1 research university doing basic neuroscience research. My lab has two postdocs, one international and one a US citizen. I view the academic postdoc as a time where a highly trained scientist can focus on interesting and productive science. I view postdocs as leading independent projects and being able to focus on their interests without the distractions of teaching, grant writing, taking classes, etc. In practice, a postdoc is a temporary stopover where the majority of scientists aim build their CV to be competitive for a limited pool of independent faculty positions. But I think everyone doing a postdoc knows that these jobs are limited, and these days all postdocs have a "plan B" if the PI route is indeed their "plan A". Common plan B's include taking an industry role after a short postdoc, or becoming a staff scientist or non-tenure track faculty, or teaching at a primarily undergraduate institution.

Fundamental issues and challenges

Of course the top issue is salary. The median postdoc is an adult in their late 20s/early 30s with a personal life, perhaps thinking about having kids or already has kids. Low salaries especially drive women out of science at this career stage. Recruitment, retention, and quality of life all come down to salary and anything else is just tangential. Make salaries and benefits competitive, and these problems will improve. My gut says that the market rate for a starting postdoc should be ~80K, and this even represents a steep discount from what many PhDs would earn in industry. But the challenge here is that NIH cannot simply expect labs/institutions to support 80K+ postdoc salaries (what they deserve) without a major change to the typical R01 budget. The amount of $ in a modular R01 has not changed in years. But without a major increase in NIH funding overall, increasing R01 budgets would decrease the number of grants awarded. I think that increasing direct funding mechanisms to postdocs (e.g. by expanding the F99/K00 mechanism, below) could be one way around this difficult problem.

Existing NIH policies, programs, or resources

I think expanding the number of F99/K00 awards would be a great way to increase postdoc salaries without putting as much of this burden onto individual lab budgets. A crop of funded K00 postdocs would be highly sought after. Labs would compete over these postdocs. Even if NIH salary support is in the ~60K range, investigators would be able to compete by supplementing support from 75% to 100%. This would get postdocs from 60K to 80K without costing PIs a fortune and without requiring dramatic changes to R01 funding rates or budgets.

I also think that F32 and T32 eligibility should be expanded to include international postdocs. Really, any effort that enables NIH to provide direct grant support to postdocs will indirectly increase postdoc salaries by lowering the salary burden on individual labs and allowing labs to supplement funded postdoc salaries.

Proven or promising external resources or approaches

No response

Response 1166

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

low pay, poor insurance benefits, long work hours (>40 hours/week)

Existing NIH policies, programs, or resources

INCREASE PAY, encourage postdoctoral worker's unions

Proven or promising external resources or approaches

No response

Response 1167

Perspectives on the postdoc roles and responsibilities

I view the academic postdoctoral position as the 'next step' after getting a PhD. It is only a useful step if you are working towards a tenure track professor job. It is useful for expanding your academic training. It is a nice segue between the structured, more supervised research of graduate school to larger, more self-determined research paths. As it is now, I would recommend it only towards those interested in pursuing a tenure track position, therefore there should be significantly fewer postdocs.

Fundamental issues and challenges

The postdoctoral position as it exists now only serves to advance academic careers towards tenure track positions. However many (if not most) labs rely on postdoctoral scientists to function, in many cases multiple postdocs. It is a temporary position by nature, with low pay and no internal advancement possible, yet most postdocs stay over 3 years because its simply not feasible to develop the CV necessary to advance to a tenure track role. Furthermore, since there are simply too few tenure track positions relative to the number of PhDs trained, those who go on the market early are often competing with other postdocs who have many years of experience (the three most recent hires in our department spent 7-9 years as postdocs). The fundamental issue is the system relies on a pool of highly trained, underpaid, yet dedicated academics who are vying for an incredibly limited number of jobs and their career network is composed of academics who likely have a good deal of confirmation bias. Furthermore, the work is mentally taxing, especially if you don't have the financial stability to afford things that can make challenging jobs easier (i.e. long commutes, strict budgeting, small apartments).

Existing NIH policies, programs, or resources

Decrease the size of PhD programs. If you do not have the money to support highly trained scientists, reduce training for these roles. If you do have money, increase the wages and access to affordable healthcare and childcare for postdocs. At least so that postdocs (who are generally ~30 years old) are capable of building their life (i.e. starting families, buying a house). Create money and positions that allow for advancement of postdoctoral associates within academic labs outside of tenure-track PI positions. Many labs would DEEPLY benefit from the expertise, continuation of knowledge, and training skills of a permanent scientist. There simply need to be more grants and resources for departments to begin to adopt such positions. Furthermore, allow more avenues for more departments themselves to hire scientific staff. Big data is a growing field and complication in neuroscience that few departments are equipped to manage. Many postdocs have the expertise and content knowledge to potential serve as a huge asset as a staff data scientist, data engineer, or statistical consult.

Proven or promising external resources or approaches

One approach that industry takes is paying a reasonable wage. Create avenues for internal advancement. Open up the flexibility of academic positions as a whole. There is very much an impression (if not a stark reality) that once you leave an academic position, you will likely not be able to return. This unnecessarily cuts academic science off from the research done in pharmaceutical companies, biotech companies, and startups. Encourage PhD students to pursue internships. Recruit postdocs and tenure-track positions from industry. But mostly just pay us a reasonable wage.

Response 1168

Perspectives on the postdoc roles and responsibilities

The postdoctoral position, in my view, is one that allows for additional training and experience in the desired field. I view it as a way to enhance my already specialized technical and professional skills.

Fundamental issues and challenges

I believe the most Fundamental issues and challenges are related to being underpayed and over-worked regarding hours put in and general expectations. Most pay for postdoctoral trainees does not cover cost of living for the area and does not keep pace with rise of inflation. I think there is also a tendency to view postdocs as cheap labor and this leads to exploitation. When there are environments that discourage the use of annual and sick leave due to the demands placed on the postdoc—this is inherently inequitable and leads to burnout and premature exits from the field.

Existing NIH policies, programs, or resources

Creating direct routes from postdoctoral to faculty positions for more than just research-focused positions.

Proven or promising external resources or approaches

Yalcin, Martinez-Corral, & Chugh (2023). Retaining postdocs by recognizing their worth, Nature Biotechnology, 41, 296-298

Response 1169

Perspectives on the postdoc roles and responsibilities

As a current postdoc, the postdoctoral position is an opportunity to gain additional skills that will be essential in my future career as an independent researcher at an academic institution. This time is also essential for obtaining publications and grant-writing skills.

Fundamental issues and challenges

The number 1 issue and challenge that inhibits recruitment, retention, and quality of life of postdoctoral trainees in academic research is compensation. The NIH salary range for starting postdocs is not nearly enough. As someone who recently started a postdoc position, I was the only person in my predoctoral cohort (group of 7) who went into a postdoc position. The others went straight into jobs (industry and academia)—and the reason for this was salary. The cost of living has exponentially increased over the past several years while the NIH postdoc salary ranges have remained stagnant. If you are wanting to recruit (and retain) more individuals into postdoc positions, the salary needs to be competitive.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Again, a salary increase for postdocs in academia would address almost all of components (recruitment, environment, job satisfaction). It is time to change the atmosphere of continuing education and training and provide those who choose to go into it with adequate compensation.

Response 1170

Perspectives on the postdoc roles and responsibilities

These are not trainees. Postdocs are the driving force of experimental progress but have been shackled by the term trainee for too long

Fundamental issues and challenges

Salary salary salary! NIH has shown no understanding of the cost of living. Industry has capitalized on this extremely effectively

Existing NIH policies, programs, or resources

Stop limiting salary by through your antiquated salary standards. Postdocs don't need a "training ecosystem" as much as they need the ability to live and grow as a human being

Proven or promising external resources or approaches

Look at every industry salary standard and act accordingly

Response 1171

Perspectives on the postdoc roles and responsibilities

Important stepping stone for networking, learning additional research skills, more publishing experience

Fundamental issues and challenges

Same workload/caseload as full time employees for 1/3 the pay

Existing NIH policies, programs, or resources

Increased pay to mimic true organizational value

Proven or promising external resources or approaches

No response

Response 1172

Perspectives on the postdoc roles and responsibilities

Postdoctoral Fellowship to me is a stepping stone to doing impactful research and science. It is an unofficial full-time job to get an actual full-time job (faculty).

Fundamental issues and challenges

In light of the current postdoc environment, postdocs are overworked with little or no compensation. Training of postdocs aren't well executed and mainly depends on which Postdoctoral training programs they are in as well as their respective lab.

Postdocs are becoming extinct due to poor payscales compared to industry jobs. Industry jobs offer better working conditions and pay. With the amount of work I do as a postdoc in the biomedical research area, payment is absolutely garbage. This extends further for postdocs who have families to feed and who are non-citizens.

Existing NIH policies, programs, or resources

There should be a structure for all postdocs to follow, as well as their respective PIs. A training system where postdocs must attend courses and workshops for career development and this should already be paid for by the institution, not the PI themselves. PIs are already struggling to get funding.

Create a funding pool for Postdoctoral Associations. Current Postdoc Associations struggle to get proper financial compensation to conduct postdoc related events. This shouldn't be the case. The main driving force of Postdoc Associations are volunteer postdocs—quality of events depends on their time and well being. Postdod volunteers would have finished their program by the time they receive notifications and approval of funding for their events.This issue leads to Postdoc Associations being neglected with very low postdoc participation. Postdoc associations being the only bridge to connect our postdocs to the executives of the institution, is broken.

Proven or promising external resources or approaches

Postdoc/research strikes across the US is a promising approach to getting NIH to fully understand what the postdocs are going through. Science will die without postdocs.

Response 1173

Perspectives on the postdoc roles and responsibilities

Supposed to be more independent than during a PhD. Should theoretically be a pathway towards academia.

Fundamental issues and challenges

Money and time.

Post docs work an inordinate amount of hours, yet the pay does not reflect that. It simply baffles me how I continuously hear about a 'postdoc shortage' yet the thought of increasing postdoc pay is somehow blasphemy. Or PIs start making excuses about why they cant do it, or how expensive postdocs already are because 'I have to pay others benefits, so *really* they cost twice as much".

No. For the amount of hours postdocs work, and the implicit assumption that they should also be working evenings and weekends, the pay does not come close to making it enticing. Why should I choose to pursue a postdoc, work 60-80 hours per week, for little money, in a toxic environment, with few job prospects? There is nothing enticing about it.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Look to industry—that is your main competition .What does industry pay its PhDs? What is the lifestyle in industry that attracts people to it? This isn't complicated, you just refuse to do it and make excuses about why you can't

Response 1174

Perspectives on the postdoc roles and responsibilities

Postdoc training is required for only foreign nationals who needs exposure to new technology, skills and culture

Fundamental issues and challenges

Immigration is a major issue in USA for postdocs. When they have PhD, they are eligible to apply for EB1. But EB1 standards were increased by USCIS. Even for H1B visa processing times are horrible by USCIS. Postdocs get very low salaries throughout USA, they cannot live with their families. Some supervisors are not willing to support their postdocs for their immigration. Most of the postdocs are working at least 8-12 h daily without break. After considering all these factors, people are moving to other countries where immigration is not a big hurdle for them. Many Asians are struggling with immigration compared to rest of the world, due to specials quotas for them. For example a person from Pakistan will get his green card in 6 months, because he will apply for EB2 where the standards are very low. For Asians EB2 VISA dates are in 2012 as of 2023. So they need to wait for 10 years with their low income. They have only one choice that is EB1. They have to hire an attorney and pay them around 10K for filing the petition, which is not 100% success guaranteed. In conclusion a person from Asia with 500 citations and 100s of publication is not given priority when compare with a person from rest of the world with 50 citations and 5 publications. I am sure there will be no postdoc from Asian countries soon in USA.

Existing NIH policies, programs, or resources

Postdocs are not aware of the salaries allocated to them in NIH grants. Some supervisors are misusing this, and appointing 2 people by dividing one salary from NIH. We are not sure how they manage.

Proven or promising external resources or approaches

NIH should ask salary statements from postdocs to avoid misuse of funds. Also USCIS need to give same priority to all foreign nationals based on their profile not based on their birth country.

Response 1175

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should provide the scientist with the liberty to explore the topics that will constitute her/his future field of research. Should provide TRAINING and RESOURCES to pursue that independent career.

In my institution (Moffittt Cancer Center), the training is inexistent and the opportunities for growing, scarce. In the real academic world, a postdoc have the role of project manager, grant writer, manuscript writer, mentor (for PhD students and undergrad students), sometimes lab technician (depending on the resources of the laboratory), community manager of the lab.etc.

If, as me, you are foreign, you have the additional handicap of not being able to easily change your position within the institution or between institutions. That means that if you have any personal or professional issue the probability to foster your career is dramatically impaired.

Fundamental issues and challenges

Salary. How can a Postdoc, with such a education level, earn only 50k as an entry level? Specially when jobs with less qualification have entry level salaries much higher. Economics impact us as well. If cost of live rises 30% and our salary remain the same.well.you can do the math.

Benefits. That changes between centers, but the benefits are highly different comparing the Staff members and postdocs at the same institution, even with a higher level of education we still have poorer benefits. That is exacerbated if you are foreign.

Working hours. I wonder why a Staff Scientist at an institution have a cap in the 40 hours of work/week but a Postdoc have no control in the working hours. Nobody have a control of the hours we work, neither cares if we work on weekends, National Holidays, etc. Just to say it plain, some Postdocs are consider as slaves for some PIs. Furthermore, if you come from India or China, what it is expected from you is to endlessly produce with no control or relief.

Lack of progression. Because the scientific system is a funnel in which we loose professionals as we progress through the system, many Postdocs will never reach a Faculty position, which is supposed to be the primary goal of the Postdoc. Because of that, many Postdoc just find a way outside academia, and that is increased when we add the high salary, better benefits and more flexible working schedule outside academia.

Immigration status. Why can I work in the US as a Postdoc under a J-1 VISA and still not be considered a Resident? How can I remain attached to academia in a system that treat and see me as a foreigner even if I constantly make great contributions to the wellness of the country?

Existing NIH policies, programs, or resources

Equity programs that pursue the equal rights between Postdocs from any nationality.

Ease of transition from foreign researcher to U.S Resident.

Funding resources for Postdocs.

Guidance during the transition from Postdoc to Principal Investigator.

NIH should obligate any institution having Postdocs to provide them with QUALITY TRAINING.

Rise the NIH Standards for Payrates so Postdocs positions can be more attractive to people, that way preventing their leaving for industry.

Create more programs and policies for mental health and wellness in the Postdoctoral communities.

COME AND TALK WITH US. I am not meaning doing just a survey. COME TO THE CENTER AND TALK WITH POSTDOCS. Do you know that, in Moffitt Cancer Center, we have no freedom of speech and cannot express our feelings about the conditions of the postdocs in a public forum, otherwise we will face professional consequences? Well, that is something the system may need to regulate at some point, and you can detect it if you talk with the people at the institutions.

Proven or promising external resources or approaches

I currently have no contracted information to answer this question.

Response 1176

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salary postdocs receive is below what they truly deserve and it is not justified in any ways to the amount of work (energy and time) they put in. Therefore, I believe less and less PhD graduate are motivated to pursue their career as postdocs and the one who are already postdocs, such as myself, are struggling with their everyday life.

Existing NIH policies, programs, or resources

Salary increase

Proven or promising external resources or approaches

No response

Response 1177

Perspectives on the postdoc roles and responsibilities

As a current postdoc I find the position interesting, motivating and cognitive challenging in a positive way. However, the pay is way too low. I live in the Boston area and earn $55,000/year. I have to pay $10,000-20,000/year out of my own pocket savings just to be here.

Fundamental issues and challenges

I live in the Boston area and earn $55,000/year. I have to pay $10,000-20,000/year out of my own pocket savings just to be here.

Existing NIH policies, programs, or resources

A salary of $80,000/year is not very high, but would be enough to sustain a normal living as a postdoc

Proven or promising external resources or approaches

Higher salary

Response 1178

Perspectives on the postdoc roles and responsibilities

A postdoc position is an opportunity for more training, usually in a different field than one’s graduate research. Emphasis is on publishing manuscripts and obtaining independent funding as a step towards becoming an independent investigator/faculty.

Fundamental issues and challenges

Pay!!! Many high-impact labs are in very expensive cities and postdoc (and grad student) stipends have not remotely kept up with inflation or the rising cost of living around the country. The NIH has to increase its minimums and increase R01 budgets so PIs can pay their people a livable wage. Postdocs are highly trained and skilled scientists but are not compensated as such. Many people are skipping the postdoc because you can make so much more money in industry without post doc experience than staying in academia. Work-life balance is also allegedly better in industry without constant grant writing/struggling for funding and publish-or-perish cultures. It is also taking longer and longer for postdocs to find faculty positions and stay in academia because current faculty don’t retire and there are few job openings and limited space for new faculty positions.

Existing NIH policies, programs, or resources

The NIH has to increase its minimums and increase R01 budgets so PIs can pay their people a livable wage.

Proven or promising external resources or approaches

Pay attention to graduate student and postdoc movements and strikes around the country. They are telling you what they need.

Response 1179

Perspectives on the postdoc roles and responsibilities

Enhance skills to transition to independent researcher in academics.

Fundamental issues and challenges

Lack of ability of PIs to compete with industry salary—we don't get enough funding from NIH for this.

Industry has become the golden egg for career choice and many feel an academic postdoc is not needed anymore—some of this is that postdocs see the academic life and don't know much about the industry life so it automatically seems better.

Existing NIH policies, programs, or resources

More salary support for postdocs.

Proven or promising external resources or approaches

No response

Response 1180

Perspectives on the postdoc roles and responsibilities

It is a gray area to prepare me for future career, I am neither a faculty nor a graduate student. I also have a chance to pursue specific field of study that I really like it.

Fundamental issues and challenges

Financial problem is the main issue. Regarding inflation, it is very hard to survive with postdoc salary. The second Issue is job security. It is very unstable position, and you cannot rely on as a job.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1181

Perspectives on the postdoc roles and responsibilities

A postdoctoral is equivalent to a residency for clinical training, during which a junior scientist is trained to be an independent scientist. A postdoc has to be given all tools (academic, research, and administration) to succeed and further promote the eagerness to become an accomplished and useful scientist. Established scientists and faculty at different levels must assume their responsibilities vis-Ã -vis postdocs to ensure adequate training and a healthy research succession

Fundamental issues and challenges

Limited funds to ensure good income for postdocs is a big hurdle toward recruiting US postdocs. Also, a lack of an adequate retirement program for established scientists prevents these postdocs from occupying positions in research centers (hospitals, universities, or private research centers), and this discourages students from pursuing a research career.

Existing NIH policies, programs, or resources

- The $500,000 cap
- The modular grant
- Low pay line range for every Study Section, are all among the big hurdles that indirectly negatively impact the disinterest of postdocs and graduate students in pursuing research career.

Proven or promising external resources or approaches

Establish a competitive funding program specific to recruiting US postdocs from US universities.

Increase the pay line for every study section, and eliminate modular grants. Federal and State officials have to increase substantially funds for research (science and medical)

Response 1182

Perspectives on the postdoc roles and responsibilities

I see the role of the postdoc as twofold. First, postdocs are hired to carry out the research programs of principal investigators. We are highly valuable workers because we have the depth of knowledge and skill to not only progress the research for which funding has been secured, but also to troubleshoot and come up with new experiments that will enhance the studies. Second, postdocs receive training from their mentors on how to become independent investigators. This means that our mentors should help us identify grant opportunities and ensure we get practice in how to write successful grants. We should also be encouraged to develop independent projects that are distinct from the PI's. Postdoc positions should be started with the goal of independence in mind, to avoid a protracted and ambiguous training period.

Fundamental issues and challenges

These days, postdoc salaries are extremely low and cannot compete with cost of living and inflation. The NIH minimum postdoc salaries are nationwide standards and universities in expensive areas need to supplement the salaries so that postdocs can make ends meet. Instead, many universities offer the NIH minimum in cities like New York and Boston, which means postdocs must live with near-poverty income levels. Salaries need to be high enough so that postdocs can live comfortably. There seems to be an attitude that postdocs don't need to be paid that much because they are "trainees," and should be doing research because they are passionate about it, not for the money. Even if they are still undergoing training, postdocs still deserve to live comfortably. Furthermore, the "training" postdocs are supposedly receiving is often ambiguous. Many principal investigators are not actually invested in helping them develop independent careers. This is especially the case with international postdocs, whom many PIs don't even know how to help. They end up just being cheap labor for them, which is very exploitative. Along those same lines, many mentors are abusive and promote work environments that are overly competitive and reward over-working, or they simply ignore issues of toxicity in the workplace.

Existing NIH policies, programs, or resources

Currently, postdocs are punished, rather than rewarded, for obtaining NIH fellowships. I secured an F32 last year and, as a result, became an "independent contractor" at my university, meaning I don't get taxes taken out of my paycheck and I have lost my retirement benefits, and the F32 does not include health insurance, so the money for that has to come from my PI. I am missing out on a total of $18,000 in my retirement account. I am clearly still an employee at my university and hardly "independent," since I am still accountable to my PI. Why can't these NIH fellowships include fringe benefits and be awarded in a way that doesn't make us lose our status as university employees? Additionally, R01 grants need to have higher budgets to accommodate higher postdoc salaries. The NIH minimum salary must be increased.

Proven or promising external resources or approaches

No response

Response 1183

Perspectives on the postdoc roles and responsibilities

My postdoc training has been a great period of my career to get prepared to the next step: becoming a group leader. During this time I could do exciting science at a much faster pace and with much more independence. But I also developed essential skills like grant writing, leadership and mentoring skills.

Fundamental issues and challenges

- I think the biggest challenge when being a postdoc is the uncertainty of how long this stage is going to be and if we would get the permanent position that we ambitioned. It is not clear what you will need or when you are ready to transition and everyone has a different opinion, mostly based on their own experience. I also find very discouraging the concept of "fit". I have seen people with bad CVs getting PI position while people with good CVs had to go back to their home country or left academia for lack of opportunity. The "excuse" of fit is the way to hire based on personal biases and allow much more room to discrimination.
- Another important probelms are related with family life. Lack of affordable daycare system makes almost impossible to have kids during postdoc while trying to build a career. Sometimes, even if universities have daycare system, postdocs are not considered full employees and they don't have priority to get a spot. They need to find somewhere else and pay more money. This problem also applies to attending conferences: attending conferences during your postdoc is critical to establish your network, but it becomes extremely challenging if you have a kid.
- The lack of dual career plans during postdoc. While the two-body problem has been widely discussed in many editorials and it is a known problem/topic, no one talks about the difficulties of finding two jobs in a new city/state/country when you only hold a temporary position. Most universities and research institutes do not offer official help to deal with this circumstance.
- Lack of good benefits. Many universities and research institutes have worse conditions for postdocs than for the rest of employees: no retirement plan, no opportunity to choose between different health insurances.

Existing NIH policies, programs, or resources

Allowing international postdocs to apply to F32 and other mechanisms (diversity supplements etc) would make the US a much more attractive place to do a postdoc. The requirement should not be residence or citizenship but if you paid your taxes in the US the previous year.

I also think that the real lenght of a postdoc is between 6 years (at least in my field, neuroscience), which has increased, and this is not reflected in the time of ESI status.

Another shameful move from the NIH was not adding the extension because of COVID to the extension because of childbirth for K99 eligibility (at least for NINDS). As a consequence, mothers were allowed to have only one more cycle than the rest of the people. When I complained about this, they told me that they didn't want us to extend our postdoc with no need. I wish they understood that my postdoc was already extended because of my personal circumstances and I only needed the NIH to acknowledge that.

Proven or promising external resources or approaches

No response

Response 1184

Perspectives on the postdoc roles and responsibilities

I am very passionate about my job and I absolutely love science.

Fundamental issues and challenges

Our salary is too low and does not allow us to even live on our own. Research is stressful but that's fine—we love the adrenaline! However constantly worrying about money adds too much stress on top of it, and that becomes unhealthy!

Existing NIH policies, programs, or resources

Increasing the number of accessible grants to international/non-US postdocs

Proven or promising external resources or approaches

No response

Response 1185

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1186

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The postdoc period is viewed as a period to gain skills to move into an independent research position. In my personal opinion, the NIH and other funding institutions do not value nor consider within its policies doing a training overseas. Building a global academic community and retaining scientists with leadership skills that integrate a respect for cultural perspectives should have a higher priority in the United States for its own citizens. Academic institutes value bringing in academics from overseas but not sending their own candidates overseas. Moreover, if a scientist performs a position overseas and takes standard parental leaves at those Institutions the NIH policies for adding time to extend grant eligibility period restricts child birth to six months while an investigator who took more than this overseas does not get the true needed extension. I personally have found many grant application reviews, after returning from a time overseas, commenting on productivity when these are not taken into consideration.

Existing NIH policies, programs, or resources

The NIH policies do allow for extensions due to health but reviewers themselves seem to not take these into account when reviewing the candidate themselves. I have gotten many comments on productivity and ability to manage a lab. As a cancer researcher, who was diagnosed with cancer which delayed productivity it felt difficult to prove my worth to review boards after such an illness. When the truth is that my cancer made me more motivated and passionate about my career. I once asked for the ability to submit a K22 application a few days late because I had to have a last minute cancer surgery a few days before and was denied by the Program manager.

Proven or promising external resources or approaches

In Norway there was a system to help recruit more women and diverse leaders by offering positions and grants which were aimed at a slightly lower position (ie junior faculty versus full faculty or late stage postdoc versus junior faculty) in order to get more female and diverse researchers to apply. This was based on the scientific findings that women are less to apply for positions they feel that they do not fit the recommended skillset.

Response 1187

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salary for postdocs is far too low.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1188

Perspectives on the postdoc roles and responsibilities

I personally view a post-doc as position to develop my skills as an independent scientist and gain the ability to run my own research group as an investigator. It is an opportunity to establish my own research program by having greater ownership over my projects, expand my scientific network by attending conferences, begin applying for my own grants, and learn in a different environment than my PhD. I believe the postdoc is ideally suited for those interested in pursuing academic research, but others may find it valuable to become a group leader in industry or government.

Fundamental issues and challenges

I am currently a senior PhD student applying to postdoctoral fellowships in academia and intramurally at the NIH. I will include issues that have impacted my career path, as well as ones I have frequently heard from those who have chosen not to pursue a postdoc.

- Salaries for postdocs are too low compared to industry.
- While a postdoc was once seen as necessary to enter into many industry positions, there is a greater realization that a PhD alone is sufficient to enter industry. Time spent doing a postdoc may be better spent being at a company, allowing one to rise through the ranks by gaining more relevant skills to working in industry or biotech.
- Postdocs have become longer
- Increasingly, I think trainees realize that in order to get a faculty position, you must do a postdoc in a "famous" or highly established lab. So while the most established PIs will continue to get new postdocs, less famous labs (and especially early stage investigators) struggle to recruit postdocs, since the likelihood of publishing highly or winning grants as a postdoc is lower, and this is key for career advancement. Maybe early stage investigators could be allowed to offer a higher salary to prospective postdocs? Or more favorable grant paylines could be offered to postdocs applying from these labs?

Existing NIH policies, programs, or resources

- Salaries for postdocs need to be increased. Raises that do not meet the CPI threshold for inflation are not raises, they are a functional decrease in pay. It is painfully obvious how the earning power of postdocs has been diminished as inflation has increased.
- Differences in postdoc pay between cities are rarely commensurate with cost-of-living differences. This creates problems for those in expensive areas. While this should be addressed, I actually think it's a benefit that a postdoc in a low cost-of-living area gets paid about the same as a postdoc in a high cost-of-living area. This offers a nice incentive for postdocs to go to institutions in more affordable areas. There are good labs in non-coastal elite cities that need to be able to lure postdocs with the promise of a better quality of life.
- Being awarded a fellowship (such as F32/K99) should not be a financial punishment to postdocs. I have heard of postdocs receiving a lower salary, losing health insurance, or losing other benefits (retirement, etc) because they have won a fellowship award and no longer get these from their institution. Postdocs should not have to sacrifice this to accept an award that advances their careers. My vague understanding is that individual institutions may have more power over this than the NIH, but perhaps the NIH can stipulate as part of the award that the institution is required to continue giving these benefits to the trainee.
- Some incentives perversely encourage one to stay in a PhD longer, rather than begin a postdoc. I have advised to delay my defense in order not to trigger the Early Stage Investigator clock too early. Some benefits such as insurance, childcare, subsidized housing are better for PhD students than for postdocs.
- More opportunities for retirement savings/benefits from NIH-funded postdoc positions.

Proven or promising external resources or approaches

No response

Response 1189

Perspectives on the postdoc roles and responsibilities

A postdoc is a necessary position for those wishing to develop independent research projects but is not required for those wanting to go into industry or serve as a scientist (academia or industry).

Fundamental issues and challenges

Postdocs are not official employees of universities = worse benefits. Postdocs salaries have increased tremendously but are still not comparable to industry. For those not wanting to pursue an independent PI position, there is little incentive or benefit.

Existing NIH policies, programs, or resources

Dedicate funding for graduate students wanting to transition. T32s are good but limited to 3 years (generally used during grad school). The F99/K00 looks like a good program. Will still lack benefits of being an official university employee though.

Proven or promising external resources or approaches

Academic culture beyond the postdoc position (i.e. scientist positions) are a strong incentive but postdocs have to committee to 5 years before reaching that level. Salary at both postdoc and scientist level in academia still below industry as well. Leveraging the culture of academia might be beneficial postdocs need more commitment early on.

Response 1190

Perspectives on the postdoc roles and responsibilities

Additional training to prepare the postdoc for a scientific position

Expect them to help train the grad students, to produce high quality data, to publish, and to write for fellowships and give talks at national/international meetings—these things all add to their training in order to prepare them for a career in science.

Fundamental issues and challenges

Students are now going directly into industry—which pays much better. One of the problems is the length of time graduate school and then postdoctoral fellowships now take—in part due to the high demands for publishing in high profile journals (which requires a significant amount of data that cannot be generated in just a couple of years). Postdocs have a hard time affording housing and a family—and they are at an age when they should be starting their families. Thus they often feel they have to choose between academic science and affording to start a family.

Existing NIH policies, programs, or resources

If we want to increase pay—we need to think about increasing the modular budget which has been stagnant since 1999. We also should raise stipends. Of course—we have to balance that with the risk of reducing the # of awards—but I think it needs to be done.

Proven or promising external resources or approaches

Postdoc offices that have training are helpful—creating a strong community of postdocs is helpful. Having child care (that is affordable) on site at academic institutions is a great help—as well as having subsidized housing. Helping young mothers to have places to nurse on campus—and to be able to take their children to academic meetings also will help.

Response 1191

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The annual salary is too low for a good quality of life. With a spouse and 2 young kids, I struggle to make ends meet. And the salary is absolutely not competitive with non-academic positions at equivalent level of expertise.

The financial status of postdoctoral fellows is unfair. The NIH needs to advocate to the government to change how fellows are taxed and how they pay their insurance premiums. And in the meantime, they should increase salaries to make the fellowship financially appealing. An award should not be so just based on CV prestige. Currently, it is very often NOT financially advantageous to accept an F32 fellowship because of the huge increases in health insurance premiums (from university employee status to self-employed) that also turn out to be not tax-deductible (in contrast to postdoctoral university employee or normal self-employed people). It’s an outrageous double-whammy. Postdoctoral fellows should not be considered self-employed and the NIH should incentivize universities to support them instead of the opposite.

Also, more advising should be provided to help postdocs navigate the financial changes and the rules attached to the grant. Currently, it’s a huge headache, and university administrators are not trained and generally don’t have the time to teach postdocs. A lot of time that could be used for research is lost to figure out financial issues.

Existing NIH policies, programs, or resources

The $2500 Childcare cost allowance: it’s good that it exists, it’s very appreciated but given the actual costs of childcare nowadays, it’s just a drop in the sea and should be increased significantly.

Relatedly, the authorized expenses from the $11,000 institutional allowance should be expended. It would make sense to allow childcare costs to be paid with this allowance because it is actually hard to use it all for what’s currently authorized (e.g. conferences, workshops, summer courses) when you have young kids to take care of. For instance, in my application I put in the idea to attend a 4-weeks MBL course on computational neuroscience and another one on microscopy, but in practice it’ll be hard or impossible as the MBL only offers childcare options for children aged 4 or older (which is already better than most conferences and professional development events). Moreover, family travel expenses should be allowed

expenses: preventing immediate family (spouse and kids) to come during professional development events limits what fellows can do for their training, and likely hinders women more than men. All the professional development ecosystem in academia is still built on the premise that you are a single person or that you can afford to leave your family behind. This needs to change, and the NIH is in a strong position to force that change and incentivize training institutions to be more family-friendly and provide free or low-cost childcare if they want to be inclusive.

Proven or promising external resources or approaches

No response

Response 1192

Perspectives on the postdoc roles and responsibilities

Post-doc time should be when a person can gain additional skills and figure out the direction of their program of research. Gaining teaching experience is helpful for those pursuing careers in academia.

Fundamental issues and challenges

1) Post-doc salary—Not adjustable for cost of living in high cost places. After trying to live on a doctoral stipend, it's hard for many prospective recruits to only see a 30% increase in salary to the $50K range. Schools of Medicine grossly subsidize their post-doc salaries because they can draw from GME training funds. This leaves the rest of the health professions lagging and makes it more difficult to recruit diverse students.
2) Cost of child care—For persons with children, they cannot afford to take a post-doc job because of childcare costs. The model of relying on one's spouse for the majority of income (which most will have done already for 4 years of PhD study at least), strains partnerships for an additional two years and is gender biased. I had a highly qualified post-doc candidate turn down a position because of childcare costs.
3) On-site requirement—I've had very good experiences with remote post-doc mentoring. For people with children, and especially women, this model can work really well. The person came onsite every other week for a few days and we had intensive working sessions and then other work was completed remotely. The cost of staying in a hotel for 2 night every other week and flying to where we are located was cheaper than renting an apartment.
4) Less mobility—We see less mobility in our PhD students as they tend to be in their late 20s, early 30s and more settled than someone straight out of university. That means they are limited to post-docs within the area since they cannot move due to personal reasons.

Existing NIH policies, programs, or resources

1) Have cost of living salary adjustments be allowed based on post-doc location.
2) Create a monthly childcare allowance that gets paid directly to a provider.

Proven or promising external resources or approaches

Create remote post-doc options with some onsite time requirements.

Response 1193

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a position in which the researcher begins to become independent and developing their own aims and abilities to transition into a leadership position. They should be involved in the mentoring culture of the lab and start to fulfill some of the duties a PI is allocated—e.g. reviewing papers—and establishing their name and science both domestically and abroad.

Fundamental issues and challenges

Fundamental to this issue is right in the posing of this prompt—how we reference postdoctoral researchers as "fellows," "researchers," or—as is phrased here—"trainees" is key. Seeing them as trainees after extensive training is why we lose good future leaders in the academic sphere to industry. Because they are

viewed as trainees, they are paid as such. Grad students generally sacrifice 5-7 years of income that is only barely sustainable to have fairly marginal bumps in pay upon advancement to the postdoctoral position where, again, they are not making what peers (and even those with less extensive training) are making. NIH guidelines that give the salaries postdoctoral fellows can receive are used as 'rules' at academic institutions to shift the blame to the NIH when low-balling the worth of the researcher. Capping the salaries that NIH grants can give also compounds this issue as even if PI's could/would give higher salaries, the NIH cuts them off at the knees.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1194

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

R mechanism grants should include a funded postdoctoral position, at the institutions mandated rate (if different than NIH), in addition to the existing budgetary limits. This would provide assurance of adequate funds for postdoctoral training are available, while reducing the currently ever increasing pressure on research budgets. For example, an R21 and R01 budget could include up to 6 months and 12 months supplemental annual postdoc effort, respectively. Additionally, allowing the investigator to determine whether the effort should be assigned to a single trainee or split between multiple trainees, to ensure best alignment with project needs.

Proven or promising external resources or approaches

No response

Response 1195

Perspectives on the postdoc roles and responsibilities

I view the role of postdoc as a junior investigator, someone who can plan and mange scientific research project as well as lower degree staff. The difference I see with senior investigators is that we are still gathering experience and potentially choosing our research field.

It is stunningly accepted for postdoc researchers to be underpaid, overworked and belittled; all of this with the NIH's duplicity. The research a postdoc does is just a valuable as the one done by a associate professor; as it is actually not the heads of the labs doing the research.

Fundamental issues and challenges

Salary

Belittlement ("trainees")

Work/life balance

Working conditions

Existing NIH policies, programs, or resources

I lost my previous postdoc position for reporting animal cruelty, fraud, scientific fraud, harassment, misconduct and dangerous behavior; the NIH refused to act and to this day still funds the said team and university.

Postdoctoral researchers should not be at risk of losing their job for abiding to the law and ethical behavior.

Proven or promising external resources or approaches

Stop being duplicit of crimes, start respecting people.

Response 1196

Perspectives on the postdoc roles and responsibilities

For me, postdoctorate is a transition between the end of my doctoral career and work, which means that I should try my best to find my research interests and improve my personal skills during this period.

Fundamental issues and challenges

Uncertainty about the future, research pressure and low income level

Existing NIH policies, programs, or resources

Expand post-doctoral jobs and improve post-doctoral treatment

Proven or promising external resources or approaches

Expand post-doctoral jobs and improve post-doctoral treatment

Response 1197

Perspectives on the postdoc roles and responsibilities

I see my postdoc position as training for independence. I should broaden my set of skills to be able to write a successful K99/R00 grant and open my own lab

Fundamental issues and challenges

I'm heavily underpaid. I understand a postdoc career followed by a PI position requires time and determination. I don't mind working many hours (I do way more than 40hrs per week, also working on weekends). I like the freedom and dynamics of my job. However, the plumber without a college degree in our building has a higher salary than I do. I work in a non-profit foundation—my grants bring all the money to support HR and maintenance crew, but at the same time I'm not paid relevant to my education! I can't afford my own apartment/house. I need to rent and I face rent termination and changing prices all the time. I don't have stability, I'm not able to create a family in this environment

Existing NIH policies, programs, or resources

1) We should work on higher salaries for the postdocs
2) The grant/funding options for immigrant/visa holders are limited. The lack of those opportunities impedes my training and progress

Proven or promising external resources or approaches

As a postdoc, I struggle with job satisfaction. I like my work, but at the same time, I feel guilty that I should move to the industry and start earning more money to support my family. Even small efforts proving I'm appreciated in my workplace could change my feelings, like covered medical insurance.

Response 1198

Perspectives on the postdoc roles and responsibilities

I view the academic postdoc as a job in scientific research. Perhaps the purest and most hands-on form of scientific research, but the key operative word here is "job."

Fundamental issues and challenges

This summarized my thoughts very well:

https://www.nature.com/articles/s41587-023-01656-4

Existing NIH policies, programs, or resources

Again: https://www.nature.com/articles/s41587-023-01656-4

For a PI, a postdoc should be expensive and rare. We have to phase out this whole system where postdocs are the main driver of the most important research that a lab does. This might mean lowering expectations a little bit in terms of preliminary data for grants and/or rewarding PIs who commit to actual training at the (slight) expense of their research.

Proven or promising external resources or approaches

No response

Response 1199

Perspectives on the postdoc roles and responsibilities

Postdoc Goals / Personal Growth Opportunities:

- Learn new research areas and technical skills
- Improve confidence and speed with academic writing
- Submit independent proposals. Build an academic brand and establish scientific independence.
- Build a diverse network of collaborators

Postdoc responsibilities and contributions:

- Diversify expertise of a research group, improving the group's capability and impact.
- Generating new research ideas, collaborations, and questions.
- Collecting data and preparing results for publication
- Mentoring junior researchers, particularly MS and PhD students.

Fundamental issues and challenges

Low salary, poor support for family and other needs (childcare, transportation, housing, etc.), frequent re-location, short-term contracts (1 year renewable) are not practical for someone with family responsibility, competition amongst postdocs for resources, lack of career coaching. Stress and mental health challenges associated with long-term career uncertainty.

Existing NIH policies, programs, or resources

Broadly, I would like to see greater consolidation of postdoc professional development resources and more funding that is given to the postdoc instead of the faculty mentor (to facilitate more rapid transition to independence). I would love to see an expansion of the F32 and K99 programs. I would like to see international scholars who intend to become US permanent residents to become F32 eligible. Would love to see more programs that give award to early stage postdocs (1st or 2nd year) that include bridge funds for independence. Expansion of MOSAIC and similar programs for DEI action. I would also like to see centralized career resources at the NIH level that can be provided virtually to all postdocs so that individual institutions do not have to generate them redundantly. I would also like to see mandatory FMLA availability / insurance for NIH funded postdocs.

Proven or promising external resources or approaches

N/A, this is a bit outside of my expertise.

Response 1200

Perspectives on the postdoc roles and responsibilities

The academic postdoctoral position, in my eyes, represents a phase of training wherein a scientist can exercise their ability to think and work independently on a project--to take their work from conception to the point of sharing it with the greater research community via publication--within the supportive environment of an established mentor's laboratory, as a means of demonstrating their readiness to start

their own academic laboratory, or to join an academic laboratory as a staff scientist, or to decide to leave academia for other reasons, depending on their own personal goals.

Fundamental issues and challenges

This issue is singular. Postdocs are underpaid for the staggering amount of training and expertise we have established. Research is a labor of love. Many stay the course because of this, but struggle financially as we struggle professionally. Some on this career path are fortunate to have a robust support system: dual-income or other financial support, a supportive family structure, or a supportive mentor. But consider the common alternative, such as my own experience: I earned an undergrad biochemistry degree in my mid-twenties on loans and credit cards, then worked as a technician to gain sufficient laboratory experience for graduate school while making minimum payments on these debts, started graduate school in [redacted for anonymity] --arguably the most expensive city in the world--where my stipend allowed me to survive literally down to the dollar each month sustaining these debts, and finally became an [redacted for anonymity] postdoc, where, considering the increased rent from losing my subsidized graduate school apartment, my salary hardly improved the situation at all. I have over a decade of training, and as a 37-year-old postdoc, I barely earn enough to pay the debts I've accrued. I have no savings, no safety net, no guarantee that my scientific success will even result in the establishment of my own laboratory. Starting a family would be impossible. For those who've endured this system, the appeal of leaving it to receive a fair wage and improved quality of life is obvious. I should note that this bleak perspective is not an underdog's. I'm a white man with an Ivy League PhD and accolades to go with it. I'm privileged. I cannot imagine the daunting endeavor this path represents to someone from a less privileged background. Postdocs are leaving academia because this system is broken and increasingly unappealing to anyone aware of what they're getting into.

Existing NIH policies, programs, or resources

Any modifications that enable higher salaries--more reasonable living wages--and greater benefits packages should be the focus. Postdocs will stay in academia if they can survive financially in academia. Since salaries across virtually all academic institutions are limited by NIH pay guidelines, even extremely well-funded labs are not allowed to pay postdocs a salary above these frankly insulting rates.

Proven or promising external resources or approaches

Our recruitment, training, working environments, mentors, and satisfaction with the job itself are not the problem. We are simply not paid enough to survive.

Response 1201

Perspectives on the postdoc roles and responsibilities

My post doctoral fellowship has been a time to lay a foundation in my research specialty, without the pressures and responsibilities of being faculty. I can completely immerse myself in the exploration of my topic.

Fundamental issues and challenges

I have felt extremely well supported in my post doctoral fellowship through my school and especially my mentor. Some of my post doctoral colleagues are less supported in that they are work horses for their mentors and do not have the time or resources to devote to their individual research interests, or they have mentors who are protective of their work and reluctant to share responsibilities.

Existing NIH policies, programs, or resources

More networking amongst post doctoral fellows would be helpful, thanks for asking!

Proven or promising external resources or approaches

No response

Response 1202

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Not enough pay.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1203

Perspectives on the postdoc roles and responsibilities

Postdocs are leading scientists in general, because they develop, run and manage their projects. We already have the expertise and many of us a few years of experience in a certain field, so we exactly know how to design an experiment, how to troubleshoot (which is 85% of times), present the data and write a publication at the end. Many of us apply for grants and get sponsored this way, so we're "self sufficient". I think that experienced postdocs are equal to research scientists and should be considered as such.

Fundamental issues and challenges

Compensation is the biggest and main issue. People with a PhD, several years of experience, great management and presentation skills are payed less than 60K a year. As a transition job for a short period of time after graduating or an adventure in a different country, it's nice, but as an actual job that should pay the bills, it's a disaster. That's why people, especially the very well skilled, prefer to get a job in the industry where their salaries will be significantly higher.

A big problem are also toxic PIs that try to almost enslave postdocs. There're some people struggling with mental health because of a bullying PI. It's a serious matter that the departments try to overlook because of the PI's reputation. I think that PIs should be evaluated more carefully and not be allowed to hire trainees if they're known to treat them poorly.

Existing NIH policies, programs, or resources

More "smaller" grants that people could apply for.

Evaluation of PIs.

Extended paid parental leave and financial aid for daycares/schools

Proven or promising external resources or approaches

No response

Response 1204

Perspectives on the postdoc roles and responsibilities

The view I have on my current, postdoc, position is bleak. While I am thrilled with the work that I do and the team/lab I do it with, the fact still stands that we are overqualified, undervalued and in a unique position which leads us to "compete" for roles (e.g. faculty) that are few and far between. The only "light" I see at the end of the tunnel is leaving academia, and I am fortunate to have a PI who understands this and supports my move into biotech/industry roles.

Fundamental issues and challenges

The quality of life that postdoctoral trainees have is pretty sad, which certainly leads to the challenge of retention—why would specialized scientist continue to contribute to a system that is both archaic and unappreciative of their work?

Existing NIH policies, programs, or resources

Increase pay significantly. For perspective, the NIH cap on salary for postdoctoral trainees is around 60,000, while many of the roles in industry or biotech start at 120,000 (and go up to 300,000). Keep in

mind, these roles require the same (sometimes less) amount of skill and hourly commitment as postdoc positions, thus making it a no-brainer that people should leave the system.

Proven or promising external resources or approaches

No response

Response 1205

Perspectives on the postdoc roles and responsibilities

- Postdocs remain the key for high quality science in the US academic system
- While lobbying for more salary and benefits for postdocs is absolutely the right thing to do, the establishment of "contracts" etc incresingly conveys the feeling that postdoc training is a "job", which is not.
- The fact that Institutions strictly limit the numbers of professional and PhD students that they can admit but not of postdocs (this is because Institutional -not PI-based—investment in postdocs is generally minimal) contributes to the fading awareness of the training nature of the postdoc position
- Institution branding remains the key attractor especially for foreign postdocs (everybody wants to have "famous place-trained" written on their CV). This leads to a few Institutions attracting all the postdocs in the absence of proven measures that the postdoc experience and quality of life is better at such Institutions.

Fundamental issues and challenges

- PhD graduates especially domestic ones do not find the traditional academic PI career attractive anymore so they often see their PI labs as just a stepping stone toward a career better than their PIs' one (industry, consultantship, entrepreneurship, etc).
- Postdoc salaries and benefits are ever increasing but still do not guarantee a decent lifestyle in many parts of the US to these people who are often in their 30s and have families to support
- T32 funding is competitive and Institutional support is factored (albeit in a non binding non cost sharing way) in the competition but funding of postdocs from grants is not subordinated to any specific level of Institutional support
- Further increases in salaries and benefits is limited by the fact that postdocs are 100% supported by PI grant budgets which are limited in size and duration
- Almost no mechanism from NIH exists to support the next steps for postdocs who do not want to become PIs but stay in academia. K awards are mostly only for residents or citizens. No Institutional commitment to a certain # of years of employment is required in order to post senior training positions.
- No mechanism exists to reward persistence in the postdoc position for a minimum amount of time rather than quickly transitioning into a more desirable non academic position
- IMPORTANT: no mechanism exists for the NIH to collect and publish surveys of postdoc quality of life at various Institutions despite the fact that most postdocs are entirely paid on NIH funds

Existing NIH policies, programs, or resources

- Requesting a cash buy-in from the Institution (not the PI) for every postdoc position that is budgeted on grants or in order to apply for T32 grants is the key step
- Requesting that Institutions cap the number of postdocs and provide specific benefits (housing, child care) to postdocs at their (not the PI) expense as a condition to get postdocs paid by grants or receiving T32 funding
- Requesting that Institutions with high postdoc numbers reserve a certain # of regular jobs to internally trained postdocs
- Creating funding mechanisms for Institutions to have senior scientists (similar to T32 but not for training, e.g. senior scientist pool grants)
- Requesting as a condition to employing postdocs that a survey is filled by every postdoc at fixed times of their employment, and PUBLISH THE RESULTS

Proven or promising external resources or approaches

No response

Response 1206

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is reserved for an individual who has proved themselves to be capable of performing independent research, but still needs additional training (scientific and professional), publications, and funding to be competitive for a tenure track position. The nature of the science to be completed is at the discretion of the primary investigator prior to arrival. In short, I view this position as a bottleneck/weeding out period to get a scarce tenure track position.

Fundamental issues and challenges

1) The unlikelihood of obtaining a tenure track position combined with a dwindling timeline creates a sense of dread
2) The expected value return (# and quality of publications) of a postdoc applies higher pressure and imposter syndrome
3) Less mentorship from PIs

Existing NIH policies, programs, or resources

Great pay (despite what many say), great health care, great paternity leave, many mental health resources

Proven or promising external resources or approaches

Improved protection from abusive PIs.

Response 1207

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I am a 5th yr PhD student looking for postdoc positions and most of the universities I want to apply to do not pay enough for me to afford a place to live. Salary alone is making me afraid I will not be able to survive while doing a postdoc, even though I will have a doctoral degree.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase the salary

Response 1208

Perspectives on the postdoc roles and responsibilities

The postdoctoral fellow is a fully-trained scientist who is engaged in a fellowship to advance their learning in a particular skill or set of skills. They also provide enormous value to the laboratory by acting in the roles of mentor to PhD trainees and other staff, leaders on multiple projects, and overall workhorses with regard to manuscript writing/preparation. These activities together with grant writing will provide the postdoctoral fellow with experiences valuable when they work as independent PIs.

Fundamental issues and challenges

A fundamental issue has been the compensation for these highly trained fellows. The current rates do not adequately compensate the fellow for their existing expertise, and without "cost of living" adjustments for different parts of the country, it's quite a challenge to find and maintain postdoctoral fellows, particularly when they can take faculty positions that pay double.

Existing NIH policies, programs, or resources

Many funding organizations, including foundations, look to NIH to provide the going rate for postdoctoral fellows. Without support for fellows starting here, it will be a challenge to recruit fellows moving forward.

Proven or promising external resources or approaches

Perhaps this increase in pay may come with mandatory postdoctoral training seminars sponsored by NIH to increase overall quality of trainees, but that's only a suggestion.

Response 1209

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is to prepare one for a career as an independent researcher. As a clinical psychologist, a postdoc is also an important time to gain clinical hours for licensure. It is an important time to gain mentorship about how to be successful as an independent researcher and grant writing experience. I also view this as a time to begin to develop an independent line of research

Fundamental issues and challenges

The pay for a postdoc is a significant barrier to recruitment and overall quality of life. After 6 years in graduate school obtaining a PhD on a very low salary, it is challenging to accept a postdoc in many parts of the country because the NIH postdoc salary guidelines are so low it makes it difficult to live, especially if you are also training to pay off student loans. Additionally, often postdoc benefits at universities or academic medical centers are very poor. This led me to turn down postdocs at desirable institutions because the cost of living was way too high for the salary, especially given the years of grad school I just completed to get my PhD.

Further, when I was looking for a postdoc research position in the field of clinical psychology/neuroscience, often the postdoc positions leave little time for independent research, manuscript writing, and grant writing, which were all key skills I was hoping to gain while on postdoc. Instead, the postdoc often runs participants for a PIs grant, serving more of the role of a graduate research assistant. I believe this type of postdoc makes it harder to move from the postdoc level to the a faculty position and results in many trainees completing multiple postdocs with very low salaries to make up for the lack of experience before they can successfully land a tenure track faculty position.

Existing NIH policies, programs, or resources

There are many institutions that do not have the funding or resources such as a T32 fellowship or Clinical and Translational Science Fellowships. Outside of programs like this, there is often no structure to a postdoc position and it can be challenging to know where or how to receive support. While there are often networking or training opportunities at various institutions/conferences, these often come with a fee and if the lab is unable to provide funding, the postdoc is left to pay for this out of pocket. Postdoc benefits often do not come with funding to attend trainings such as this. Additional resources at the university level to provide support regarding mentorship, the transition from postdoc to faculty, grant writing support, etc. would be beneficial.

Proven or promising external resources or approaches

Improved salary and benefits

Response 1210

Perspectives on the postdoc roles and responsibilities

A postdoc position is a training position for those highly skilled individuals that wish to pursue a career in academia.

Fundamental issues and challenges

Money. All postdoc positions that I have seen are underfunded. Why would a PhD want to make half as much as they could in industry? The old paradigm of "because I had to suffer through postdoc, so do you if you want to be a professor" is apparent in the salaries offered to postdocs. Top talent is funneled into industry and not academia because industry can pay more.

Existing NIH policies, programs, or resources

Either change the culture that dictates a professor must first do a postdoc, or pay postdocs as much as they could make in industry.

Proven or promising external resources or approaches

Job satisfaction would greatly improve commensurate with compensation and work-life balance. Pay them more, and allow flexible work schedules.

Response 1211

Perspectives on the postdoc roles and responsibilities

It is a structured and mentored training position with a training plan well-designed by both, the mentor and a postdoc. This plan should be reviewed periodically (6 months to a year) and revised per progress in research and professional development, including opportunities from the mentor and institute to foster training environment to meet competitive nature of academic faculty position instead of investing heavily on 'projects and not people' mentality. Postdoc should see themselves as in training phase while taking an (semi) independent position to lead the project with respect to experimental design, execution, and timely delivery of outcomes, including publication(s).

Fundamental issues and challenges

1) Base salary scale is significantly below standards, i.e., for the training and skills a trainee can bring to the lab, salary scale are subpar, even ignoring industry norms.
2) Mentors should have a liberty and budget to focus on their trainees' development and hopefully should have less stress dealing with their own career and project life or toxic culture of publish or perish, e.g., given archaic modular budget of R01 that has not changed since 1990s.
3) Focus on research impact over mere number of publications when scoring training grants.
4) COVID-19 was real and please account for impact on candidate productivity due to factors outside of their control to get reagents and get things done with changing work environment.

Existing NIH policies, programs, or resources

1) Fix the fractured K99/R00 mechanism. Makes no sense to let postdoc in their 4+ years wait for more than 1.5—2 years towards K99 effort given majority needs to apply for revision. Career development plan and K99 phase has a little value for an awardee in their sixth year of postdoc (after multiple attempts) who will (and should) apply for tenure-track by leveraging R00 level of funding. Instead, allow an option to remove K99 phase of award and use that budget to either make payline more flexible and/or add more budget to K22 or similar mechanism.
2) Support more independent positions at NIH intramural program. Stadtman program is great but overly competitive and should allow more applicants to at least get interviewed than merely selecting the same pool of outstanding candidates who sure are outstanding but they do—by nature of selection criteria per publications over fitness to the program—appear at all places, leaving the rest being deemed not worthy by majority of academic places.
3) Allow postdocs without citizenship/LPRs to apply for more grants than K99/R00.

Proven or promising external resources or approaches

1) Criticism aside, I certainly commend tireless efforts by NIH to provide such research funding and their inability to grant more trainees and PIs funding because of budgetary constraints. Similar to Cancer Grant Challenges (NCI—Wellcome trust partnership), partner with non-profit research foundations (Wellcome Trust, HHMI, etc.) or I would argue even with for-profit pharma and tech sectors to increase money pool for funding.

2) Please focus on research impact and fitness of candidate's proposed research and candidate's skills to grant's objectives over focusing on mundane criteria of number of publications and awards to support trainees who may not be worthy of scoring overall impact score of 1 or 2 but rather 3 or 4. Know that trainees—in today's biotech and inter-disciplinary age—have several options to quit academia and go to industry not for just better pay but for better (mental) health. They are not staying in academia for far too long at the expense of huge opportunity cost just because they do not have other options but rather they would love to do academic research and do high-risk, high-reward science only if you allow them a chance.

Response 1212

Perspectives on the postdoc roles and responsibilities

I don’t view post-docs as a positive experience. The amount of workload is extreme with minor pay increase. Additionally many companies are negating a need for it to get a job in industry.

Fundamental issues and challenges

Pay! The compensation is little with expecting sometimes double productivity compared to a graduate student. Extreme demands and minimal compensation make the position undesirable.

Existing NIH policies, programs, or resources

Pay more! I think there’s a start to enhance payment but also minimizing extreme expectations as well.

Proven or promising external resources or approaches

I think you could also host workshops for post-docs, (Mock interviews, certification courses and/or some subsidized childcare)

Response 1213

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral position as a transition to independence and a more permanent position in academia. That being said, the academic environment presents multiple challenges, so I am also considering other opportunities/possibilities for my future career.

Fundamental issues and challenges

I moved to the US in 2021 from Switzerland, where I did my PhD.

- First, finding a postdoctoral position in the US during the pandemic was particularly hard, and I had to take take my current position without visiting the lab. There was no organized way to apply for positions (no recruitment programs or similar) and I found my position circumstantially, via my mentor’s connections.
- Finding housing was particularly challenging. The waiting time for university housing was over a year, and housing outside the campus was more than half my net salary. The university housing was slightly cheaper and the place I got is very comfortable, but I would still have a very hard time affording it without my spouse.
- Doing research is hard but I actually enjoy problem-solving **and challenges** in science. What causes a lot of unnecessary frustration is the mental power I devote to arrange my finances. As a second year postdoc in the US with 3 degrees and more than 10 years experience in academic research, I feel I should not have to worry about paying my rent and my groceries. As a PhD student I felt that I can sacrifice some comfort for acquiring an academic degree, but now I just feel unappreciated.
- The publication system also feels very difficult to navigate. I have done a lot of work that has produced negative results, that I will probably not get any credit for.
- I also find the career dependency on individuals’ publications very problematic. It is very clear that I will not get grants or my next position without publishing well, but I do not want to compromise the quality of my work by publishing too early, or trying to cherry peak and “oversell” my results.

Existing NIH policies, programs, or resources

As an international scholar on a non-immigrant visa, my options for funding by NIH are extremelly limited. I do believe that funding schemes could be expanded to include international scholars, especially as labs in the US are actively recruiting postdocs from all over the world in their effort to built diverse & dynamic teams.

Proven or promising external resources or approaches

No response

Response 1214

Perspectives on the postdoc roles and responsibilities

My view on the role of a postdoc is to independently generate research questions and data. This also includes being able to independently form and successfully publish peer reviewed manuscripts.

In my mind the difference between a successful and unsuccessful postdoc is the degree to which the chosen experiments and data push the field forward. I think staff scientists are similar data generation specialists, but postdocs must also do the intellectual work of knowing the current state of the field and work to improve that either through new technologies or refined experimental design.

Fundamental issues and challenges

It is a huge pay cut to be a postdoc. I am fortunate in that my mentor supports a reasonable work-life balance, so I feel that the value lost in paychecks is gained in that flexibility. However in turning down industry offers I received at the end of graduate school I reduced my starting pay by nearly 200% (ie 58k vs 160k+).

Existing NIH policies, programs, or resources

More money specifically devoted to training staff bench workers. As it stands the K01 mechanism aims to fund researchers with an eventual goal of running an R01 driven research program. There are a potentially people who would like to stay at the academic bench but do not want to run their own research program. If the NIH values these people, either separate funding mechanisms or more flexibility in R01's to fund this type of position.

Proven or promising external resources or approaches

Most of this listed items will be lab/PI dependent, so I'm not sure a general fix exists. Better salary is the only clear option that would have across the board support and impact for postdocs at-large.

Response 1215

Perspectives on the postdoc roles and responsibilities

Exploitation role

Fundamental issues and challenges

Pay, expectations, hierarchy, poor benefits

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

RAISE WAGES

Response 1216

Perspectives on the postdoc roles and responsibilities

A postdoc position means an opportunity to advance and expand your skill set, so you are better prepared to assume the role of a PI in academia. Training related to teaching, mentorship, and leadership, are also very important for me during my postdoc training. The expectation is that you finish a period of several years working in a Lab with more know-how about how to operate in team work with different people, with a new research technique that are relevant to the field you want to advance later in your career, and to publish good quality papers participating intensely on the process of producing the data, writing the draft and taking care of the peer review process. The postdoc position is not a necessity to become a PI, but it is an important position to take when you feel you have more to learn in the field or you want to expand your skill set to other areas that are important to you.

Fundamental issues and challenges

For recruitment and retention, one of the main problems are salary and benefits. You need to receive a salary at least comparable to the industry for similar positions, otherwise a postdoc may feel more inclined to work in the industry if they want to start a family, for example. Good salaries and benefitis and other arrangements for the position that aim to provide a more stable life and financial condition to the postdoc will surely increase recruitment and retention.

For quality of life, it is crucial that supervisors and PIs receive training related to mentorship and leadership. The vast majority of PIs are ill prepared to handle conflict, organize teams and tutor people that want to enter or stay in Science, which leads to bad retention and bad work life balance. I believe that, just spending a few resources and time to make mentorship training mandatory to every PI would help a lot with the quality of life of not only postdocs but everybody involved in a lab team.

Existing NIH policies, programs, or resources

Personally I don't receive notice of many NIH resources and programs, so I'm not well aware of what is already provided. I did participate in some webinars about work life balance and grant writing, which I think are good in general. The problem with those resources is that they may not be locally available, where you can have more direct access to it.

NIH policies seem very good to me.

Proven or promising external resources or approaches

Providing a system or program that warrants the postdoc with research and financial support after his postdoc, without the requirement of achieving a professor position, may help with retention and recruitment.

Discussions about the expectations of the PI or supervisor are proven to be a solid strategy to improve quality of life and overall satisfaction with work. Even though many institutions have policies implemented regarding this, I believe it is necessary to make more efforts in that direction to ensure Lab heads are aware of their "style" affecting the quality of life and work of their lab members.

Creating a program that accepts "high risk" project specifically from postdocs, even with low budget, could also increase job satisfaction.

Response 1217

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdoc compensation in federally funded grants is grossly insufficient and is going to eventually kill our academic establishment by making postdoctoral work so undesirable that academic research will become impossible.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1218

Perspectives on the postdoc roles and responsibilities

In my mind, an academic postdoc position is meant to prepare an individual for a future in academia, so responsibilities include performing independent research, writing manuscripts, helping to manage the lab by training new staff and graduate students, and mentoring other lab members. I think academic postdocs would be more worthwhile to individuals not interested in staying in academia, if the pay was comparable to industry.

Fundamental issues and challenges

Salary and benefits, full stop. Postdocs are some of the most highly specialized workers in the country, usually with 10+ years of experience, and they deserve salaries and benefits commensurate with their experience and the value they contribute to the university and to the country. Science would not function without academic postdocs, they are our backbone, but we force talent out of academia because they can't afford to stay, especially after being underpaid and undervalued for 5-6 years during their graduate trainings. Postdocs need salaries adjusted for the cost of living in the expensive cities where top universities are. They need childcare and health insurance for dependents and partners. If we can provide these basic things that industry easily offers postdocs, we can retain so many more talented people and solve important biomedical problems. Additionally, I think all PIs accepting postdocs should be mandated to take a DEI training each time a new NIH-funded postdoc joins the lab. While I think cost of living is a wider spread issue overall, abuse by PIs, especially of postdocs from historically excluded backgrounds, also force talent out of academia, to industry with HRs and the ability to fire abusers. Biomedical problems affect diverse populations, and we NEED a diverse group of scientists to address these problems. The NIH must do better.

Existing NIH policies, programs, or resources

SALARY. Raise the graduate student and postdoc expenses CONSIDERABLY. We all deserve living wages to support ourselves and our families.

Proven or promising external resources or approaches

No response

Response 1219

Perspectives on the postdoc roles and responsibilities

Time to publish papers and work independently. Training to become a PI by an experienced PI

Fundamental issues and challenges

Long hours, low pay, and poor benefits.

Existing NIH policies, programs, or resources

Higher pay for post docs.

Proven or promising external resources or approaches

Increase the minimum postdoc salary set by NIH

Response 1220

Perspectives on the postdoc roles and responsibilities

Until recently I was a T32-supported postdoctoral fellow. I saw my postdoc fellowship as a time to establish my research expertise, learn new skills, and understand the available opportunities for me to pursue research in the next stage of my career. In particular, I used this time to develop and submit papers in my area of interest. Attend conferences I had never been to, but was always interested in, and I also began pilot research projects that had potential to expand into larger research studies. My postdoc was a time in which I was afforded protected space to build new skills that would make me competitive in the job market. I also viewed my postdoc as a time in which I could evaluate how I would like an academic career. To this end I wrote several grants and familiarized myself with different funding mechanisms, and I also was able to get clinically licensed. I explored a variety of settings in which I could apply my unique training (academic and industry). I saw part of my job as building my professional career in ways that mutually benefited the group where I was working. Part of my role as a postdoc was to analyze data and write papers related to projects our group was supporting. It was within scope of my role to support ongoing research in my place of employment by lending my unique expertise on projects as well as ensuring research operations were smooth (i.e., ensuring recruitment operated as expected, managing IRB submissions, setting up databases and analyses). Overall, postdoc was a unique opportunity to focus on getting skills I wanted for my career and assess where and how I wanted to build my career all in ways that benefited the setting I was working in.

Fundamental issues and challenges

The most significant challenge of postdoctoral training is the limited stipend. The NRSA stipend is and was below the cost of living in the area in which I completed my postdoc. Had I not been privileged enough to be able to take out loans in both undergrad and grad school, lived with my partner who had a job outside of academia, and lived in a home my partner owned, I would not have been able to pursue NIH postdoctoral training. In truth, the draw of industry salaries or faculty positions (all of which I was highly qualified for) made it a challenging decision to choose to pursue postdoctoral training. While I knew there were skills I wanted to gain as part of my postdoc, I was only afforded the space and time to pursue that training because of the privileges noted previously. Even so, without knowing if I could secure a job in the geographic location in which I completed my postdoc, it was extremely difficult to choose to pursue a postdoc. I was not sure if I would be uprooting my partner for 2 years during a critical period in our lives. Especially on the heels of having moved for a 1-year residency the previous year. To this end, delaying important life events was a significant challenge during my postdoc. Because of the lack of financial and occupational stability, my partner and I delayed getting married and having children. These are major factors trainees consider that contribute to quality of life and longevity in academia. Moreover, and this is a smaller aside, benefits for postdocs (i.e., insurance) are usually worse and more expensive than for faculty or staff. Therefore, in addition to forgoing a salary more than double (often) the postdoc stipend, postdocs must pay more for fewer benefits.

Existing NIH policies, programs, or resources

One of the most critical and life changing programs that I was able to participate in was the NIH loan repayment program. Being a recipient of this grant substantially reduced my debt and eased a significant financial burden. An expansion of this program would be a welcome change for trainees. Additionally, expanding allowable T32 costs to be used for moving expenses and other relocation requirements would be a substantial help. As an alternative, enabling postdocs (incoming and current) to apply for administrative supplements for life-related costs such as relocation and childcare would also be substantially useful. While childcare costs are addressed to some extent as part of NOT-OD-21-177, the $2,500/budget period is woefully insufficient to cover childcare costs that are over $2,000/month in many urban areas. In the event that building a family is a goal for some postdocs, having grants that can help postdoc researchers build a family during a critical period in their lives (often one that has age-related limitations) could do a great deal to improve postdocs quality of life.

Proven or promising external resources or approaches

Building more paths to full employment as faculty or in industry following postdoctoral work would be an important next step for NIH. There is a shortage of faculty positions open to support all postdoctoral trainees. Building pathways to full employment such as public-private industry partnerships, sponsored faculty lines, etc. would be a tremendous step towards making biomedical research a more sustainable endeavor for trainees. I see industry internships as a great example of these kinds of pathways. Having an internship that converts to a full employment position would be a revolutionary change to postdoctoral training in that it would increase stability and could afford researchers protected time to obtain funding for their salary and work. Programs like the K99/R00 could be expended to accomplish this, but this would need to be done in conjunction with academic institutions to ensure faculty lines were available. Another example of this is UC Santa Cruz's Presidential Postdoc which is a funded faculty line following a two-year postdoc.

Response 1221

Perspectives on the postdoc roles and responsibilities

Responsibility:

1) Independent research design
2) Secure funding
3) Execute research and mentorship of lab members
4) Present research to secure future positions
5) Move on to a future position
6) Acquiring new skills
7) Networking

The result is supposed to be a self-guided research project in a lab with similar goals. Most post-docs appear to be focused on a professors work similar to grad school, restricting the actual research that can be completed.

Fundamental issues and challenges

Cost and lack of systematic support. Most positions are highly related to "who you know" and there is an emphasis on doing research for a lab. The lack of flexibility to work is a big issue.

Maltreatment in academia itself, the incentives for research are poisonous in a general sense. Publish or perish is the only way to advance and that means sacrificing the fundamental things that matter to me as a research. So at that point, why should I care? Why should I be paid pennies to do work that I don't want to when i can do the same thing in industry and make a bunch more.

Mental health support is abysmal, even when programs are implemented they are token at best. My university was ahead of the curve by hiring a councilor but it's barely functional.

Frankly I've met barely a handful of other grad students who wanted to go into post docs because of the level of abuse. We are stuck dependent on a professor for 4-5 years and post doc is just an extension of this. The system feeds those who are good at grifting and leeching credit while harming those doing the fundamental research required to push science forwards.

Universities do not support one of their biggest form of funding to the university via intellectual property.

Existing NIH policies, programs, or resources

Frankly a restructure is required. Academia as a whole is toxic. This will probably be dismissed as dramatic or unhelpful by a group of reviewers already firmly entrenched. But it is the truth.

We feel tricked and abused by this system and are not comfortable continuing. We are tired and have not been supported through our whole career. Undergrads are sucked for money, grad students are exploited at a level that make McDonald's drive through compensation look good, and now post docs get to just perpetuate the suffering and exhaustion. We are tired and have the opportunity to take care of ourselves instead of being drained by this system for the aggrandizement of a group of enshrined professors.

Proven or promising external resources or approaches

Look at industry, there's a reason they are stealing all your candidates.

Response 1222

Perspectives on the postdoc roles and responsibilities

Postdoctoral position implies further training; however, the main role shifts to expanding individual leadership/thinking rather than simply absorbing new techniques. Mentoring should also be emphasized either for a shift to industry or further academic roles.

Fundamental issues and challenges

Postdoc pay is uncompetitive compared to industry and provides no advantages in terms of training. Why would a graduate student pursue a postdoc for a meager pay increase when similar training can be received in industry with a major pay increase? With postdoc pay, in many locations, it is impossible to start a family, own property, or otherwise pursue an independent life.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Academic post docs have demonstrated potential in balancing the training of individuals while still granting a sustainable level of pay.

Response 1223

Perspectives on the postdoc roles and responsibilities

I see a postdoc as a required step to becoming a PI, but I am not sure how much value it adds. You typically have to spend another 5-6 years in a poorly paid position working long hours. Personally, the combination of little pay and long hours is slightly insulting to someone that has already spent years in graduate education. It only seems worth it if you want to go into academia, otherwise industry will give you a job right out of your PhD with reasonable hours and 1.5 to 2 times the pay. To my view, the postdoc just makes you do another research project to show that you can succeed in more than one lab and therefore deserve to be a PI in industry or academia. However, a postdoc provides none of the critical training that PIs require: management, financials, social competency, etc.

Fundamental issues and challenges

Why would an individual that has already spent over a decade (undergrad + PhD) being poor and overworked want to continue being poor and overworked. This prevents people from getting settled in their lives and starting families. There are other career options to pursue that give both better work-life balance and better pay, so why not go there?

Existing NIH policies, programs, or resources

I don’t know about existing policies, but consider adding management training to the postdoc: financials, interpersonal conflict, leadership, communication, and other core components that make someone a successful manager because that’s what being a PI is about.

Proven or promising external resources or approaches

No response

Response 1224

Perspectives on the postdoc roles and responsibilities

The way I view a postdoc, it is a transitory position where you fine tune your bench skills and establish an independent project for a potential future research position. This can be either preparing your skillset for industry, academia, or other scientific fields.

Fundamental issues and challenges

The main issue with retention of postdocs is the balance between the stressful work environment and the salary provided. The constant pressure of publications coupled with the low salary in comparison with other Ph.D. positions (ex industry), makes it much more difficult for job retention, Additionally, it is much more difficult for those postdocs who are caring for children or family to maintain a balance between work and life responsibilities. Using myself as an example, I can survive with the currently salary (not married, no student loans, US citizen), but I fully understand how difficult it must be to rely on this job as a breadwinner for the family. Overall, the current salary and benefits just cannot compete with the current market.

Existing NIH policies, programs, or resources

Just to list a few, open NIH training grants to visa workers under the stipulation of them working in a US lab. The vast majority of postdoc are under a visa and encounter difficulties obtain additional grant opportunities to fund independent projects. Additionally, some form of assistance (either legal assistance or orientation on the process)so that these worker visas can transition into a permanent resident status. Establish a postdoc UNION to defend post doc interest and avoid work abuse.

Proven or promising external resources or approaches

No response

Response 1225

Perspectives on the postdoc roles and responsibilities

A Postdoc is a position that helps diversify a recent graduates fields. It is for branching out and collecting specializations for future use.

Fundamental issues and challenges

Postdocs are inherently on soft funding and have to produce a huge amount of productivity to be worth it.

Existing NIH policies, programs, or resources

Fellowship grants to be more broad and supportive for postdoctoral students.

Proven or promising external resources or approaches

Make postdoctoral positions competitive with industry jobs. Most students I work with are forsaking academia for industry.

Response 1226

Perspectives on the postdoc roles and responsibilities

First and foremost, postdocs should be valued as having an advanced degree, and be treated as such. They are highly skilled researchers, but are not often viewed that way in terms of university policy. Anything the NIH can do to support that view would be beneficial.

Fundamental issues and challenges

Quite simply, the pay of postdoctoral scholars must be increased to match cost of living increases and more directly compete with industry. There are numerous issues with this increase, however, including increased burdens on already tight R01 budgets. As a result, R01 modular budgets should increase to reflect current costs of living and provide a sufficient level of support for PI salary, postdoc salary and reagents. Alternatively/additionally, provide additional funding mechanisms to provide fiscal support for postdoctoral scholars, recognizing that they hold PhDs. Ideally, additional support for postdocs could come from universities, directly, although I see that as unlikely as many universities don't recognize the value of a postdoc in terms of research money brought to the university (either directly or through contribution to an R01).

Existing NIH policies, programs, or resources

1) Provide federal guidance to universities that postdoctoral fellows are to be considered staff and not students, and that this does not change as postdocs go onto/off of fellowships/grants. Often in academic institutes, postdocs are flexibly treated as staff or student depending on which is more convenient (i.e. less fiscal or other resources required). Postdoctoral fellows have an advanced degree, and therefore should no longer be considered as students.
2) Redefine postdoctoral NRSA positions relative to the above point, such that postdoctoral fellows aren't fiscally or otherwise punished by universities for securing federal funding. When I went on my F32, my pay ended up decreasing significantly because I could not be considered a staff member anymore, therefore my insurance benefits changed, resulting in an increase in out of pocket expenditures. Fortunately my PI at the time covered the pay loss, but this caused unnecessary stress.

Proven or promising external resources or approaches

No response

Response 1227

Perspectives on the postdoc roles and responsibilities

I got a PhD in biochemistry from 2008-13. I loved the work I did and consider myself a successful researcher. My lab was supported by multiple NIH and HHMI grants/programs. However, I decided to leave academia due to the near-poverty wages offered to postdocs. I moved to non-science industry where I

was paid a good wage with great benefits. I am sad that I wasn't able to stay in science, but as someone who wanted to start a family and buy a home, it was just not a reasonable option.

Fundamental issues and challenges

To me, the low pay for postdocs is by far the biggest issue. If you fix that, almost everything else will get better. The low pay also hurts diversity in science, because most people who are able to stay on as postdocs have families with money to support them, or at least they don't have large debts or families that need their financial support.

Existing NIH policies, programs, or resources

Dramatically improve pay and benefits.

Proven or promising external resources or approaches

No response

Response 1228

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is a mechanism that basically asks a person to redo a PhD after completing a PhD so that they can obtain a tenure track research position. The pay is not adequate to support a person who has a child unless there is a partner with a very high income.

Fundamental issues and challenges

It has now become necessary to complete a postdoctoral fellowship to obtain a tenure track position in any research institution. Postdoctoral work requires physical work in a lab for pay under the poverty level in most cities. It prolongs training by 4-8 years after the PhD has been completed. These days, it is hard to get into graduate school straight out of college (without research experience as a technician). A PhD takes about 5-7 years. If a person completes a postdoctoral fellowship, they start the academic job market in their mid thirties, which is too late for many women to start thinking about bearing children. The students I have mentored (and I) feel that the extent of time that it takes to now "train" for an academic position excludes women who want to have children from academic careers. Even the most talented students who wanted careers in academia are less enthusiastic because of the postdoctoral fellowship requirement makes it difficult if not impossible to have children without a partner with a lucrative career.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase funding for postdoctoral salaries and for PIs to fund postdocs so that they can afford childcare. Childcare for one child is about $25,000/ year in my area, and I do not live in the most expensive city.

Response 1229

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a transition to faculty. During this time one should learn about management, lab set-up, budgeting, obtaining funding while also increasing publishing record and acting as an independent scientist.

Fundamental issues and challenges

The pay is barely live-able and overlaps with a time in life that often includes marriage, family decisions, real estate purchases etc so the pay is very restrictive. This is an in-between where one is not considered faculty but not a trainee either, so they often miss out on resources and support but also social and university events, networking etc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1230

Perspectives on the postdoc roles and responsibilities

An opportunity to do much more independent and self-guided research after having acquired the skills to do so during the PhD.

Fundamental issues and challenges

Postdoc positions don't pay enough, especially since I'm an older and married graduate student.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Pay more and provide better benefits (like lunch).

Response 1231

Perspectives on the postdoc roles and responsibilities

From my perspective, it seems like postdocs are just graduate students with more experience. They get larger workloads and more responsibility, but otherwise perform tasks and research similar to what is expected of a graduate student.

The expectation is that this type of role will allow a person to transition into a professorship or other higher-level academic position. Though, from what I've observed, most people can't find an opening for such a leap, and end up stuck in various postdoc appointments for an extended time.

Fundamental issues and challenges

Being a graduate student is an unpleasant experience. Being a postdoc is worse, because they have greater obligations, minimally improved pay, and fewer opportunities following the completion of their appointment.

Many postdocs I've spoken to have compared their experience to 'failing to launch' into a good career, and ending up stuck. There are far too few professorship opportunities proportional to the demand for postdocs.

Existing NIH policies, programs, or resources

Either more positions to grow into in academia (professorship, or something similar that actually makes for a decent career), or better pay for postdocs themselves, so the job doesn't feel like such an overworked and unappreciated dead end.

It's worth noting that by the time someone finishes their PhD and can become a postdoc, they're likely around 30 years old. This is a time when people need to focus on their career and start saving money if they ever hope to retire. Some people will want to have kids at this time. and a postdoc simply is not a career, and does not pay enough to support a family or make meaningful savings. Especially not for the level of specialized skills and effort it entails.

I do not know automatically which NIH policies/programs/research relate to these issues, but I presume (hope) that some do.

Proven or promising external resources or approaches

None that I know of. Frankly, we all know why this postdoc shortage is occuring.

Response 1222

Perspectives on the postdoc roles and responsibilities

It means management, communication and leadership to me. A postdoc is not just a learning role, but also a connection role.

Fundamental issues and challenges

I heard the stress and the salary of postdocs can be intimidating for people who want to pursue this job.

Existing NIH policies, programs, or resources

More support (such as mental health, training opportunities, and organizations) for postdocs as they are usually neglected by the institutions when they don't fall under a formal employee or a student category

Proven or promising external resources or approaches

No response

Response 1233

Perspectives on the postdoc roles and responsibilities

A post-doc's primary purpose is to work to get more publications so that they can then pursue academia. The necessity of completing a post-doc for industry jobs seems to be quickly decreasing. Post-docs are expected to continuously produce data as their primary goal but are often given additional tasks such as mentoring permanent graduate students and rotating graduate students as well as lab techs and undergrads (depending on the lab and institution), and this time dedicated to training is not expected to impede on productivity. If there is not a research scientist or tech in the lab as well, many lab tasks end up falling on their shoulders since they would be considered more senior in the lab.

Fundamental issues and challenges

Money. Post-docs are disgustingly underpaid typically, and their salaries are not monitored since they are not part of an official training program (i.e. a graduate program). The average post-doc salary is below $50,000 which is not much of a step up with their doctoral degree. It seems difficult to impossible to support a single person, never mind a family, on a post-doc salary, especially if their institution is in a city. While graduate students usually have the institution they are in to support their salary increases with inflation, post-docs are completely dependent on their PI's grants if they are not individually funded already, and since grant awards have not increased significantly recently, post-doc salary therefore has not increased. There also is a lack of training programs and communities for post-docs compared to graduate students and other lab members. Overworking post-docs as well as underpaying post-docs are the two main deterrents, in my opinion, that graduate students are less likely to pursue post-doctoral training.

Existing NIH policies, programs, or resources

1) Funded post-docs should have a committee so their work does not get held
2) Salary increase
3) More workshops supporting post-doc transition into academia/other careers (for those you fund at the minimum)

Proven or promising external resources or approaches

No response

Response 1234

Perspectives on the postdoc roles and responsibilities

A postdoctoral scientist should not be considered a trainee or student after the highest level of education (i.e., PhD) has been obtained. As such, an academic postdoc should be entitled to a competitive pay rivaling industry, as well as benefits that reflect a job where a doctoral degree is required. The academic

postdoc, in turn, shall provide be held to PhD-level standards of research and thinking, as well as mentoring/training if agreed upon.

Fundamental issues and challenges

Insufficient pay and benefits (location adjusted), for the level of education required, lack of work-life balance in the field, lack of support for parents

Existing NIH policies, programs, or resources

It isn't postdoctoral training, it's a job. Competent baseline salary along with competent benefits

Proven or promising external resources or approaches

No response

Response 1235

Perspectives on the postdoc roles and responsibilities

The academic postdoc position is a stepping stone in training for those interested in careers in academic research. The goal of most postdocs is to complete a project independent from their PhD research, in a new lab, so that they can gain increased experience in project development and completion, publish additional papers under their name, and refine other aspects of their professional development (i.e. teaching experience, learning new techniques, networking) as needed.

Fundamental issues and challenges

The alternative to a postdoc position for many recent PhD graduates is to enter industry roles, which often promise higher pay, better benefits (healthcare, parental leave, childcare options), and more regular working hours.

Existing NIH policies, programs, or resources

The current NIH-recommended postdoctoral stipend could be increased to adjust for inflation from the past several years, and to make the postdoc role more competitive when compared to industry roles that are the alternative for most graduates. Additionally, the recommended stipend could vary depending on cost of living at the specific institution, rather than being the same number across the nation, which leads to increased differences in pay between postdoctoral and industry positions in high cost of living areas.

Proven or promising external resources or approaches

No response

Response 1236

Perspectives on the postdoc roles and responsibilities

I honestly don't know the purpose of a post-doc.

Post-docs are for PhD students that didn't do a good job during their PhD and couldn't get another job (e.g., as a professor or for a company).

Fundamental issues and challenges

The compensation given to a post-doc (salary, resources, respect) does not match the responsibilities (can be responsible for managing multiple people, securing their own funding, managing multiple projects). Ultimately I don't think most post-docs meet expectations and maybe don't deserve better compensation.

Existing NIH policies, programs, or resources

Not sure why a post-doc is needed before becoming a professor. People should be challenged more during undergrad and PhD training, and their ability to be a professor should be determined earlier on. No need to have a post-doc system. If a professor wants more qualified scientists that already have experience, then pay them appropriately.

Proven or promising external resources or approaches

I think the way companies operate could be a better approach. People's responsibilities are constantly increased as they gain experience and prove they are capable. And compensation increases along with responsibilities. No need to wait 5 years to 'promote' someone from a PhD to a post-doc. This should happen faster, and in a more continuous fashion.

Response 1237

Perspectives on the postdoc roles and responsibilities

The postdoctoral position means to me:

- The opportunity to do research (as I have no own lab/group, I couldn't do research anymore if I were not a postdoc)
- the responsibility to teach/guide/be an example for younger scientists, to support them with my experience
- the responsibility to do high-quality research and to move my research field forwards
- the responsibility for my projects
- the responsibility to develop my career/myself to be a better researcher/teacher
- the responsibility to communicate/talk about science and its positive impact outside of the scientific community/ to promote scientific thinking in the society
- bad/little chances for career development; my university offers a lot of career development programs for junior faculty members; there are no such programs for postdocs
- being excluded/discriminated/used by the system: as a foreigner, I work as hard (or, in my particular case, even much harder) than my US colleagues, yet I can not apply for F/T/K awards (apart from K99), which means much worse chances for an academic career. Since I noticed this discrimination, my motivation to work in US academia has decreased a lot.

Fundamental issues and challenges

Postdoctoral "training" is supposed to be a combination of job and training. However, it is not; it is a badly paid job with little chance to develop:

- there is no structured training, no curriculum, and no obligations for the faculty to train postdocs, the "training aspect" is not seldom reduced to an hour exchange about the project every few weeks
- this "training character" is used to justify the salary, which is lower than in industry; de facto, as there is no postdoctoral training, this salary is not just.
- the postdocs at a lot of universities have no right to apply for grants even if they are the main intellectual contributor to their project
- postdocs accommodate with low salary/no right to apply for grants because they hope to get themself a faculty position one day. Yet the chances for that, especially for international postdocs, are very low.

Altogether with almost non-existing training, low salary, and few chances for a faculty position, it is hard to understand that there are still people who want to be postdocs.

Existing NIH policies, programs, or resources

1) For the institutions that get NIH funding:
    a) introduce mandatory curricula for postdocs; postdoctoral research should be oversight by a committee similar to a PhD program
    b) introduce mandatory specification of training goals and plan how to achieve these goals
    c) introduce mandatory career development programs/mentoring programs, and other development opportunities for postdocs; support these programs by additional funding for institutions that offer them
    d) encourage the involvement of advanced postdocs (if they are the main intellectual contributor to a project) as (Co)PIs on grants
3. Allow international postdocs to apply for T/F/K grants (international postdocs are half of the postdocs in the US and they are an important pillar of US academia; there is no justification for discrimination of international postdocs, and this discrimination damages the science in the US and its reputation)

Proven or promising external resources or approaches

- A lot of universities have elaborated support/career development programs for (junior) faculty. Including postdocs in these programs, or offering similar programs for them would be a promising approach.
- Mentoring programs: postdocs are hired to do a particular job, and mentoring by the group leader/boss is commonly insufficient; external (within or outside the institution) mentoring programs would be very helpful for postdocs.

Response 1238

Perspectives on the postdoc roles and responsibilities

Basically the same responsibilities as being a PhD student, but with additional expectations like more grant writing and lab/personnel management.

Fundamental issues and challenges

Compared to industry positions, a postdoc position involves worse compensation, more expected hours worked, and worse training. There are pretty much no benefits to doing one if you can get an industry position instead, so from a career standpoint it only makes sense to do a postdoc if you want to be a professor.

Existing NIH policies, programs, or resources

Compensation competitive with industry would make a postdoc position more appealing and would help offset the poorer training and higher working hours expectations associated with a postdoc.

Proven or promising external resources or approaches

No response

Response 1239

Perspectives on the postdoc roles and responsibilities

As someone who will likely have several first-author publications and 10 years of continuous research experience at the end of my Ph.D., I view the postdoc as adding no more value to my career, as I would like to lead a scientific team directly out of my Ph.D. and increasingly think Ph.D. training is sufficient given that so many Ph.D.s in the biomedical sciences have several years of high-quality research experience prior to starting their Ph.D.

Fundamental issues and challenges

Inadequate pay —the NIH modular R01 budget has not changed in decades and yet inflation has raised both the price of research consumeables and cost-of-living regardless of geographic region, placing a burden on both lab budgets as well as postdoctoral salaries.

Existing NIH policies, programs, or resources

Double the modular R01 budget. Full stop. Require a minimum postdoc salary of $70k per year. Require grantee institutions to eliminate artificial tuition for Ph.D. students who have completed coursework requirements to free lab budgets for salary raises across the board.

Proven or promising external resources or approaches

Double the modular R01 budget. Full stop. Require a minimum postdoc salary of $70k per year. Require grantee institutions to eliminate artificial tuition for Ph.D. students who have completed coursework requirements to free lab budgets for salary raises across the board.

Response 1240

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Livable wage. There is no other way to put it. Institutions do not always pay the NIH suggested stipends and, like we saw with the [redacted for anonymity] strike, they rarely adjust for cost of living. It is a constant struggle. Even without student loans and in the cheapest studio I could find, I started my post doc in LA $100 in the hole every month when I got paid. This is a professional position that deserves to be treated as such. Postdocs are treated like glorified grad students who still have zero outside commitments from lab. We have partners and children. We deserve to make a living that can feed our families. This is the number one reason my colleagues are leaving their postdoc positions right now. Institutions laugh at us when we ask for more money and tell us they can’t afford it. We all know that is not true.

Existing NIH policies, programs, or resources

If PI’s get funding from NIH they should be REQUIRED to pay postdocs at least the NIH recommended stipends. There should also be a policy to account for cost of living.

I’m sure there are a lot of other things that could help me, but I can’t even worry about those things when I don’t even make a livable wage I can survive on.

Proven or promising external resources or approaches

No response

Response 1241

Perspectives on the postdoc roles and responsibilities

Applies skills obtained during PhD training to lead projects in their current lab; more involved in grant writing than graduate students; as a more senior member in the lab, is available to mentor more junior lab members, especially regarding research approaches, presentation and communication skills, and networking.

Fundamental issues and challenges

Salary when compared to industry, quality of life based on the lab and its location, possible mismatch in expectations between PI and postdoc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1242

Perspectives on the postdoc roles and responsibilities

A postdoc in the academy has shifted from a "training period" to a staff research scientist position. I came to learn a new technique, specifically, and was geographically bound.

Fundamental issues and challenges

Currently postdoctoral positions can leverage trainee status to facilitate visa, but also reduce wages and do not create worker protections. This creates a pool of highly trained employees that are implicitly expected to stay for future promise of the academy at the expense of current wages and familial support. However, our "goal" role of assistant professors have also changed. Administrative burdens, teaching expectations, and competition for funding all contribute to a set of severe pressures with few incentives for stability or protection as a career.

Existing NIH policies, programs, or resources

I was pleased to see parental leave as an addition to F32 training stipends. I believe this could be expanded upon or perhaps extended in high cost of living areas.

Extended R01 budgets would be a huge boon. Maybe a limitation on the # of trainees/PI could prevent an ever increasing number of trainees within the system?

Proven or promising external resources or approaches

Formal learning to lead/mentor programs (maybe akin to the Responsibility in Research) could be implemented to facilitate more efficient training systems to reduce the # years of postdoc is within the system.

Response 1243

Perspectives on the postdoc roles and responsibilities

The postdoc is a job created to allow researchers to learn more before moving on to a permanent position. However, this position has become required if you want to even entertain the idea of having an academic position. In some fields, it is common to do multiple postdocs. For many postdocs you are 30+ years old at a time when you want to start a family or are saving for retirement but are barely paid more than some first-year graduate students even though you have a PhD. I view the postdoc as a sacrifice I have to make in order to be in academia. I had to sacrifice a job where the initial offer was more than twice my current salary with amazing benefits. However, since I have a passion and desire for research and mentorship I took the postdoctoral position.

Fundamental issues and challenges

No one wants to do a postdoc because of the money. It is preventing qualified applicants from considering the positions because the sacrifices are too high. You have minimal to no benefits, bad insurance, no retirement benefits, and a low salary. It is extremely difficult to make ends meet as a single-income household and image if you have kids. Grad students have more support since they are students in the case of family emergencies and maternity leave. Postdocs have nothing because were not students or faculty/staff. Because we are in this middle category we do not qualify for other benefits both students and faculty get such as discounts on public transit. That is something so small that we have been told for YEARS is our of our reach. The cost of doing a postdoc does out way the benefits. There is not a week that goes by that I do not regret turning down industry since in the world we live in everything cost money and you need money to live. I went to grad school in a rural area so the cost of living was lower and although I make a bit more now, but my budget is much tighter because I spend more living in a city on commuting, rent, and food. My current mentor use to run the postdoc office at my institution and she said it has been the same battles for the past 20 years! The excuse is well that's how it was back then so we need to be fair and consistent. That is not a rational argument.

Existing NIH policies, programs, or resources

Make it clear the NIH minimums are minimums and those are meant for the lowest cost of living. Give a table for different cities that show the adjustment. Require appropriate benefits. Make us staff at our institutions. At least give us the same benefits and resources as students and research staff. We have no

advocates at our institutions and our numbers are small compared to the students so our voice is not heard and taken seriously.

Proven or promising external resources or approaches

Academia needs to be competitive. There is a postdoctoral shortage because industry and government are that enticing. I guarantee many of those researchers do not want to leave academia but feel they need to because they can not survive on a postdoc salary/lifestyle. Increase salary and standardize benefits.

Response 1244

Perspectives on the postdoc roles and responsibilities

An opportunity to grow into an independent scientist who can conduct their own research and run their own lab.

Fundamental issues and challenges

The NIH stipend levels are not keeping pace with inflation, or even with the pay for entry-level full-time employee positions such as RAs or lab managers. When a newly hired student who just finished their undergraduate education is making more money than a postdoctoral fellow in the same lab, it becomes very hard for anyone who has any money concerns whatsoever to remain happy with the postdoctoral training opportunity provided by the NIH.

Existing NIH policies, programs, or resources

Adjusting the minimum salary stipend to keep better pace with the salaries for folks outside of academia, or even within it (e.g. lab managers) but not in a training program.

Proven or promising external resources or approaches

No response

Response 1245

Perspectives on the postdoc roles and responsibilities

As a postdoc, I was expecting to find a lab in which I could build up my background in how to be a good PI and help me understand how to start my lab. Regarding the responsibilities of a postdoc, I was expecting to learn how to manage projects and mentor people in the lab beyond the lab work. I am also learning to design, organize and conduct highly specialized and advanced experiments using established scientific protocols and procedures and, in some cases developing new protocols.

Fundamental issues and challenges

I am fresh as a postdoc, and I do not have experience working in another lab. Still, talking with other postdocs, I have heard that the lack of sense on behalf of the PI about the human behind the postdoc and the needs beyond the lab makes harder postdoc retention. this issue makes the postdoc’s personal life unnecessarily more complicated.

Existing NIH policies, programs, or resources

In this issue, NIH has worked well. NIH provides many resources which help postdocs get the background in how to get the independence to start their lab.

Proven or promising external resources or approaches

The NIH could create a platform or environment where the postdocs can interact and start to build the network for future researchers.

Response 1246

Perspectives on the postdoc roles and responsibilities

Broke

Fundamental issues and challenges

Too little pay, not worth the work

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

No response

Perspectives on the postdoc roles and responsibilities

I see post-docs as something only for people who want to become professors. I am only a first year graduate student, but I think of post-docs as being low paid, and almost like an extension of being in graduate school, just with more responsibilities and freedom, and less academic work. I wish they were advertised more as a phd-level staff scientist role rather than a short term post-doc seemly only used to publish more papers and become a professor.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1247

Perspectives on the postdoc roles and responsibilities

It's supposed to be an apprenticeship leading to academic roles but essentially has become a way for the government (as grant funders) and academia to hire qualified scientists cheaply, often with little mentorship or advising.

Fundamental issues and challenges

Salary, poor working conditions, bullying and condescension.

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

Improving job satisfaction and salary.

Response 1248

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low pay, long hours, abuse by PIs, stress have to pay back salary if leave in first year. Can go to industry and earn a much higher salary, work a more regular schedule, and still obtain quality training experiences.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1249

Perspectives on the postdoc roles and responsibilities

I believe postdoctoral fellowships are extremely valuable experiences for the fellows to help prepare them for future careers, especially for careers in academia. Postdocs are also crucial to the success of most labs, including mine.

Fundamental issues and challenges

Pay is a major issue. When individuals are highly trained and can earn a salary that is at least 2-3 times higher in industry compared to what they would earn as a postdoc, they are far less likely to complete a postdoc.

Existing NIH policies, programs, or resources

The policy of not being able to supplement T32 recipients' salary with R01 or other federal funding is a major problem. It creates a situation in which either T32 funded fellows earn a lower salary than their full potential or they have to be supplemented by non-NIH funds. In my institution the latter is nearly always the case (and will become institutionalized as the case, since postdocs recently negotiated a higher salary scale than the NIH scale.). This creates an untenable situation for PIs who want to hire T32-funded postdocs but don't have a steady stream of non-NIH funding. I am currently co-PI of a T32 and there are several great faculty who are affiliated with the program who have outstanding NIH-funded programs but decline to take postdocs on the T32 because of the need to supplement salaries with non-NIH funds.

Also, the NIH needs to realize that pays scales may need to vary by geographic location. Living on an NIH postdoc year 1 scale is impossible in certain places such as New York, San Francisco, Los Angeles and similar locations.

Proven or promising external resources or approaches

As above: change the pay scale to pay people what they are worth.

Response 1250

Perspectives on the postdoc roles and responsibilities

To me, an academic postdoc is essentially a preview to life as a PI. You get the opportunity to be much more independent than you were in your PhD and can now devote yourself solely to science. You are expected to drive/lead at least a few projects during your time as a postdoc, which should lead to multiple first author publications.

Fundamental issues and challenges

First and foremost, I think the elephant in the room affecting retention/recruitment is how underpaid postdocs are. You have a doctorate degree in your field, and for some reason are still considered a "trainee". Therefore, you get paid as if you are in training, when in actuality you are a highly specialized employee and should be paid as such. Almost all jobs have some degree of "on the job training" so applying this mentality to postdocs to justify low wages doesn't make sense. Furthermore, many postdocs are at the point in their life where they may wish to start families. Given the trainee status, you are afforded little to no benefits (retirement, childcare, ect) which could help off set the cost of the low wages while trying to start a family. Additionally, it would be remiss to not address the work culture of academia—combining severely low salaries with work hours that extend far beyond the 9-6 work day leads to not only an overall lower salary/hr, but a massive opportunity cost in terms of work-life balance. Treating a postdoc position more like a staff position would be the best way to even the playing field in terms of what non-academic careers offer. Lastly, I think postdocs get almost no training when it comes to what it takes to actually run a lab. When you are a PI, you stop working at the bench, whereas the majority of the postdoc is at the bench. It's a massive shift from PI to postdoc, and while you get well trained on the science, you don't get trained on the realities of leading a lab (financial budgeting, hiring/recruiting, how to start a lab, ect)

Existing NIH policies, programs, or resources

I like that a lot of these helpful resources are available, however, I think to fully understand them it might benefit individual academic institutions to implement workshops to discuss these policies/programs/resources with postdocs.

Proven or promising external resources or approaches

I think the working environment must be addressed. There needs to be a better work life balance in terms of what you see in non academic scientists positions. Mentoring efforts, training, and recruitment seem to be on a positive trajectory. I think postdocs today are offered more there than previous generations.

Response 1251

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is considered the next step after graduate school on the path to becoming a professor. In the lab, a postdoc typically leads his/her own project while mentoring younger students. They serve an essential role in every lab and provide hands on mentoring because the PI is typically writing grants in his/her office.

Fundamental issues and challenges

It's very simple—they're not paid enough for the amount of work they have to do. More than 90% of graduate students in my department do not want to do a postdoc because the amount of time and effort simply isn't worth it. Industry positions allow us to pursue research without having to worry about being able to afford basic necessities like rent and food. It's embarrassing how little postdocs get paid for the amount of expertise and essential knowledge they provide.

Existing NIH policies, programs, or resources

Pay postdocs more. Increase number of grants and professor positions nationwide.

Proven or promising external resources or approaches

No response

Response 1252

Perspectives on the postdoc roles and responsibilities

I view a post-doc as additional training in project management, experiment design, analysis, writing, presenting, and navigating the publishing process. I also think post-doc positions can help you understand how academia works and what being a PI looks like. Post-docs seem to vary considerably. Some people have a never ending post-doc where they are really just doing research, but expected to do it faster and more smoothly than a graduate student. It also seems they are often expected to mentor grad and undergrad students whether or not they have training or interest in doing so. Some post-docs seem to act more independently, getting their own funding, driving a project and creating an opportunity to spin-off a mentor's work. There appears to be a lack of formal training. Certainly, some people take the opportunity to switch fields or join labs that use new-to-them techniques which certainly can make you more well rounded, but oftentimes, one seems to do something fairly similar and a substantial degree of know-how is expected when coming into the lab. I see post-docs as a means to secure cheap skilled labor to keep the biomedical research enterprise afloat. Labs that are post-doc heavy tend to be more active with high publication rates. I've seen post-docs really though who do not develop new skills, but just practice more of the same skills developed as a doctoral student (ie. carefully examining primary literature, developing protocols, statistics, manuscript writing, technical prowess). I see post-docs as a necessary evil for staying in academia or an academia-like setting (being a PI where you seek competitive funding). Some people use post-docs to boost their CV, publish, network, and get a better understanding of how to work the system in academia. Other people seem to just do research and straight research during a post-doc.

Fundamental issues and challenges

Academia is a highly toxic, competitive, abuse, trauma-causing system that rewards overworking, a lack of boundaries, and ego. Most people have a fairly negative graduate school experience and therefore graduates are leaving academia in droves. In my own PhD cohort of about 35, I know no one who wants

to stay in academia to be a PI. It doesn't help that the PIs we work for aren't raving about their jobs. Academia is also openly hostile towards minorities who are making up a greater and greater percentage of graduate trainees. But I can tell you as a queer, disabled woman, academia does not feel like a safe space. I will not pursue a post-doc. For a number of reasons.

1. I detest academia. It is run on exploitation, maintains a good-old boys club where misogyny, racism, able-ism and the like reign without scrutiny. There is no accountability for tenured staff regardless of how egregious their behavior. I have been consistently let down, made to feel inferior, and told implicitly and explicitly than I do not belong here (in academia) and will not succeed here.
2. I have to make money. I struggle to pay for groceries and healthcare. I have a dependent and cannot pay my monthly bills. I cannot continue to make insubstantial money. I want to be able to afford a car, a wedding, a dog. I can't post-pone making real money.
3. I value work/life balance. I am disabled and need breaks, rest, and time to decompress. It has been extremely difficult getting that in grad school and I know its harder as a post-doc. I cannot work 50hr+ weeks. I'm already burnt out. 4. The benefits do not outweigh the drawbacks. I want to work in industry. I can get a job without a post-doc

Existing NIH policies, programs, or resources

Increase pay and benefits. Shorten post-doc positions. There is a growing expectation that post-docs find their own funding. This is absurd given how competitive funding is. Encourage more organized post-doctoral training at universities (teach formal skills, support time for career development). Increase non-academic post-docs (co-op situation or academic/industry partnership). Reward institutions with shorter, more fulfilling (not productive) post-docs.

Proven or promising external resources or approaches

Treating post-docs like employees. Depending on the institution and funding source, post docs often are not employees. They are considered non-student trainees. As such, post-docs fall prey to the same vulnerabilities as grad students because they cannot come forward with issues, abuse, exploitation without fear of retaliation, career consequences, and being blacklisted. Post-docs often have less institutional support and resources specific to them. This makes them especially vulnerable to unrealistic demands from PIs. I know post-docs that work 80+ hour weeks and are here on weekends, holidays etc. It's not because they want to be here, its because their PI expects them to be there. If post-docs were treated as employees they would have legal protection from abuse, exploitation, and harassment. Currently, at many institutions, if a PI is unhappy with a post-doc for any reason they can make their life miserable, withhold letters of rec, or terminate their training. If they were employees they could use HR, they would have protections, they could point to specific rules for expected work hours, etc. Additionally, non-citizen post docs (international trainees and the like) are especially vulnerable since their ability to stay in the US legally is dependent on their post-doc status. Thus many international post-docs have no recourse or power in fighting abuse.

Response 1253

Perspectives on the postdoc roles and responsibilities

Further training to develop ideas and experimental approaches, to be a more independent researchers, to develop an additional sets of skills.

Fundamental issues and challenges

Wages, and ability to balance work and family life.

Existing NIH policies, programs, or resources

increased funding.

Proven or promising external resources or approaches

No response

Response 1254

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The F32 application process encourages applicants to conservatively select a small cadre of study-section-approved, very senior full professors--who are almost all white men--as mentors, and discourages even slightly "risky" selection of younger, more diverse faculty who are scientifically outstanding and have excellent track records for someone of their seniority, but simply don't have the same mentorship track record as a 65-year-old. (One of our F32 applicants received criticism in her reviews that one of our outstanding midcareer full prof URM faculty with multiple R01s and many successful trainees did not have the expected mentorship track record, so this is not a hypothetical.) This perpetuates systemic racism and disproportionately discourages our underrepresented postdocs from pursuing the mentorship that best supports their careers.

Existing NIH policies, programs, or resources

Designate some F32 awards for mentees of outstanding underrepresented mentors, or at minimum clarify guidelines for expected mentorship track records for mentors at mid and late career stages.

Proven or promising external resources or approaches

No response

Response 1255

Perspectives on the postdoc roles and responsibilities

I'm a professional scientist, with the goal to obtain new skills as I transition towards my ultimate goal of entering academic as a tenure track professor. As such, my role is to develop and expand new skill sets, conduct novel & innovative research, actively publish my finding, and demonstrate my capabilities to acquire funding.

Fundamental issues and challenges

Money, money, and money. Post-docs are mainly held as a way-station as we transition towards tenure track positions. However, academia seems to be constantly raising their standards to achieve this endeavor. Publishing in Cell/Nature/Science is appearing to be the standard for faculty positions, however this gate keeps many qualified individuals. Furthermore, this can take years to outline the research direction, conduct the work itself, and go through the publishing/review process. This is time where we, as young post-docs, are delaying the start of our own academic path as a faculty member. And if tenure-track positions aren't your goal, then why stick around as a post-doc? You can get an industry position for 1.5x—2x the salary of the NIH minimum, which can still make it difficult to afford a house, raise a child/childcare.etc. The NIH pay-scale is not set to the cost-of-living of the cities that many universities reside, and as long as universities are allowed, they will continue to pay their post-docs the bare minimum set by the NIH.

Existing NIH policies, programs, or resources

Tie the NIH payscale for post-doc positions more closely to the cost-of-living of the cities. There are amazing institution out there looking for post-docs and advisors that are willing to pay them more, but are unable duo to internal policies tied to the NIH pay-scales.

Proven or promising external resources or approaches

Pay people what their worth. As academia raises the bar for faculty positions, the lengths of postdoctoral training increases to meet the increasing publication demands. We can only delay our lives (family planning, home ownership, career progression) for long before we just abandon it outright and look for positions outside of tradition postdoctoral training, where we are more fairly compensated for our expertise and skill sets.

Response 1256

Perspectives on the postdoc roles and responsibilities

From my perspectives and the advice I have been given, postdoctoral positions are most useful to people who are seeking to continue a career in academia or learn a particular skill that will enable them to transition to a position in industry.

Fundamental issues and challenges

The biggest challenge for me as I consider pursuing a postdoc is the disparity in pay between academia and industry. That, coupled with the intensity of the academic job market at the professor level, make choosing to postdoc in academia a relatively risky decision. You're going to spend several years getting paid little more than a grad student, and the prospect of finding a job after a few years as a postdoc is still limited. So pursuing a postdoc is in many ways a poor financial decision.

Existing NIH policies, programs, or resources

Stipulate that institutions desiring to receive funding from the NIH need to pay postdocs a reasonable, competitive wage.

Proven or promising external resources or approaches

No response

Response 1257

Perspectives on the postdoc roles and responsibilities

A postdoc in its current form is cheap labor to get data for a PI's grant. There is rarely training (despite being referred to as a "trainee"). NIH is not a reliable partner for postdocs given that they have developed and supported a system where postdocs are underpaid and serve at the mercy of their PI (who often has no personnel management ability). If a postdoc does end up with a faculty position, the process of getting grants favors established investigators so heavily that relying on NIH funding is essentially staking one's career on a dice roll given current paylines.

Fundamental issues and challenges

One of the biggest is clearly pay and it's remarkable (but not surprising) that this has not been taken seriously by NIH. Pay postdocs competitive salaries reflective of local cost of living and force institutions that accept NIH funding to provide all benefits like they do for other employees and you will retain them. Stop pretending that 30+ year old professional scientists are "trainees". These are the same people that are called (and paid like) Senior Scientist in industry. As such, NIH and academic institutions now have to compete with other fields given how far apart pay, benefits, and respect for basic human dignity are between academics and industry.

Existing NIH policies, programs, or resources

I spent 5 years as a postdoc and was supported by an F32 for 3 years. Getting my F32 was a bureaucratic nightmare and didn't even increase my salary. Apparently I was lucky because there were others at a sister institution that ended up having their salary effectively reduced after getting individual fellowships. Asking for huge amounts of effort to get a grant for essentially no payoff (one cannot eat "prestige") is nothing less than farcical and shows a major lack of respect for postdocs and their time. This system is in dire need of change.

Proven or promising external resources or approaches

After abandoning the idea of getting a tenure track position after a very successful postdoc, I did a 2-year fellowship dedicated to certifying PhDs as clinical laboratory directors. This fellowship funnels recently graduated PhDs straight into a well-paid and in-demand career, with job with placement of essentially 100% before they finish the fellowship. After seeing this system, doing a traditional postdoc where a single faculty member trains 10's of postdocs over their career, all of whom must vie for a small number of poorly paid, insecure faculty positions seems like an irrational decision. If a postdoc were more reflective of this type of training (i.e. high likelihood of a job with good pay after the fellowship), then there would be no shortage of applicants. If that type of promise can't be delivered on, then the current model of

academic science is not sustainable and will not serve a new generation of people facing extraordinarily high costs of student loans, housing, and overall cost of living.

Response 1258

Perspectives on the postdoc roles and responsibilities

As a recent clinical psychology postdoctoral trainee at an academic medical center, I viewed my training as an opportunity to gain

1) Mentored project management experience on NIH-funded trials;
2) Mentorship in grant writing in support of a K application; and
3) Supervised clinical practice hours towards clinical licensure.

Fundamental issues and challenges

While I began my postdoc planning to pursue a K award as a path towards independent research funding, I have since determined that I desire a primary clinical role as a professional. My primary basis for this decision was poor quality of life in academic research stemming from long work hours and porous boundaries between work and personal time. Academia places trainees in a vulnerable position in which they may easily be exploited by mentors due to the need for references and instrumental support to advance a research career. In turn, it is very difficult for trainees to maintain appropriate boundaries or work-life balance.

Existing NIH policies, programs, or resources

Academic research demands a greater share of one's time than most careers and entails challenging work and a highly specialized skillset. Without better salary incentives in exchange for these demands, many will be unwilling to pursue or maintain a career in academic research, especially in relation to available alternatives. Failing this, creation of better norms concerning workload would make a meaningful difference in retaining more academic researchers.

Proven or promising external resources or approaches

A model such as the VA's that caps trainee time at work could help significantly in terms of improving retention.

Response 1259

Perspectives on the postdoc roles and responsibilities

It is a job in science.

Postdocs keep being called a training opportunity—as a way to underpay and undervalue them) and while there is truth to this, any job on the market has to train a new person into the culture, IT, and institutional knowledge and may even take new employees that need quite a bit of training (e.g. like a fresh PhD or postdoc seeking new skills). And the new employee will get new projects. The difference is anywhere other than academia this person is properly welcomed, greeted, trained, and importantly PAID in salary and benefits.

Fundamental issues and challenges

SALARY—it should not be beneath $80,000 USD, period. It should be higher in higher cost of living areas. All medical (including infertility, maternity, and related care), dental, vision, retirement benefits (with matching), and childcare should be available and accessible (not backlogged) in first month. Vibrant postdoctoral associations should provide as much supplemental training, workshops, and community as those being given to graduate students.

Existing NIH policies, programs, or resources

Pay scale MUST be adjusted. NIH sets the standard universities look to. And it unfairly gives higher salaries to MDs who may not have any research experience over some PhDs, this should be thought through again, especially in the context of a postdoc that may have working/industry/other published or relevant experience.

SALARY—it should not be beneath $80,000 USD, period. It should be higher in higher cost of living areas. All medical (including infertility, maternity, and related care), dental, vision, retirement benefits (with matching), and childcare should be available and accessible (not backlogged) in first month. Vibrant postdoctoral associations should provide as much supplemental training, workshops, and community as those being given to graduate students.

Proven or promising external resources or approaches

NRC has high paying postdocs, perhaps some elements of how this is arranged could be useful knowledge for NIH. NIH has very high paying data science fellowships as well, perhaps mechanisms in this program can be of use.

Response 1260

Perspectives on the postdoc roles and responsibilities

I view post-doc as a bridge between the academic degree program and next career move. So as a post-doc, you may need to perform tasks ranging from scientific experiments, writing manuscripts and grants, mentoring, science communication, and some official duties. Because this is not a completely professional setting, there is no defined regulation on how post-doc training might go. Therefore, what is important is that your vision should align with the interest and aspirations of your PI and how you value the demands of your lab.

Fundamental issues and challenges

In my opinion, there are a few Fundamental issues and challenges: A, the availability of quality students with relevant training in the field. The majority of the US postdoc pool are immigrants. The overall quality of education and Ph.D. training in other countries have not improved to the US standard. So finding a good fit for the lab is quite difficult. B, There is a serious lack of mentoring/lab management skills in the majority of the mentors. This is especially true with the newer PIs. As a result, working environments in a large number of labs are toxic. I see a large number of PIs are extremely impatient, micro-manager, and lack a serious amount of moral and ethical senses. I believe that there should be an annual mandatory training and stringent regulatory system at the institutional level to improve the lab management skills of PIs. C. Another important issue is that a postdoc salary is not at par with a decent living cost/market value. So, I believe that relieving financial stress in postdoc tenure is a great way to attract brighter minds. Above all, a lab has to create a nurturing, supportive, and inspirational niche to foster great scientific discoveries and inventions.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1261

Perspectives on the postdoc roles and responsibilities

The postdoctoral time should serve as a period to develop new skills or questions after obtaining a PhD. The position should be guided by a faculty mentor, but more independent and collaborative, than the strict mentor/mentee relationship of a graduate position.

Fundamental issues and challenges

There are many, but chief are: Lack of a clear career path with few academic positions, indefinite length contracts, assumption of mobility/support structures to move repeatedly, assumption of health and the ability to work long hours, unclear paths for medical/family leave if needed, poor wages in high cost of living areas, two-body problems, toxic mentorships and over-reliance on reference letters as a path to career changes

Existing NIH policies, programs, or resources

Clearer pathways and better mentorship on non-academic careers, limiting the number of trainees a single mentor can take on through grant restrictions, better wage guidelines based on average COL

Proven or promising external resources or approaches

We need to be honest with ourselves that the entire pipeline of science is based on cheap, highly productive labor. The current rate that PhDs are produced is unsustainable without better and clearer career options. PIs are motivated to take on more trainees because wages and productivity/publication concerns incentivize large labs. Many postdocs choose to leave academic tracks at this stage because the realities of not being able to save for retirement, flexibly deal with health and family, or purchase longterm housing begin feeling unsustainable. Smaller labs, slower science, and longer, better payed contracts would greatly improve quality of life.

Response 1262

Perspectives on the postdoc roles and responsibilities

Postdoc is necessary step for an academic research career. It should be a period of learning from experts, having increasing independence and say in research direction, and developing your own independent research program. My PhD supervisors also emphasized the networking aspect. I would not recommend it for those pursuing non-tenure career path, though I am sure the skills may useful also for research scientists in academia and industry.

For us international people wishing to work in US, finding employment is also easier within academia than industry (J-1 and uncapped H1B visas).

Fundamental issues and challenges

I have greatly enjoyed my two postdocs, although in hindsight I feel I was more cheap labor than a trusted expert. My junior PIs did not show much interest in helping me develop my professional network or discuss my future, which certainly affects thoughts about my chances for faculty. There have also been no opportunities to obtain teaching experience.

I have decided that I would not even want my own research group. Work-life balance seems difficult to maintain, responsibility of having funding for a whole group seems heavy, and I am not interested in teaching courses. I would need better compensation than I see junior faculty making. Due to family I am also not willing to relocate after a job.

We’re a family of two postdocs and two small children without any support network in US. Childcare costs in SF are ridiculous, and university-affiliated childcare is among the most expensive. I am offended by our family not being eligible for back-up childcare (listed in graduate student and faculty benefits), since postdocs are lab workhorses. I got no paid parental leave as a postdoc (since I won a personal grant, was swapped to a paid-direct postdoc, and the foundation did not have a policy). We were saved by the daycare closures due to the pandemic (saving the fees) and enrolling our kids 3 days/wk, but I am sure it has left its marked on my work, relationship, and mental health. I am also sick of looking for the cheapest after school classes and holiday camps.

Most postdocs will not find tenure, and academic postdocs appear in industry as slow workers with dated skills. There is not enough open discussion and training on alternative career paths. Also support in faculty job search varies between PIs and departments.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1263

Perspectives on the postdoc roles and responsibilities

To me, a postdoc is a position to acquire additional skills and mentoring in preparation for academic positions

Fundamental issues and challenges

Issues with postdoc recruitment include a small salary, a difficult time moving for a short term position, and lack of academic positions following the postdoc.

Existing NIH policies, programs, or resources

Additional salary incentives and moving reimbursement to allow trainees to move more freely to desired positions.

Proven or promising external resources or approaches

The postdoc experience varies so much from person to person. It would be helpful if there was some sort of effort to ensure that people and issues don't fall through the cracks.

Response 1264

Perspectives on the postdoc roles and responsibilities

1. Establish research niche that you want to carry with you as a PI / gain new skills to carry with you as a PI
2. Mentorship

Fundamental issues and challenges

1. The poor salary and benefits compared to industry especially after being grossly underpaid as a PhD student
2. Lack of job security (unknown duration of time)
3. Lack of moving bonus—causes people to go into debt to move after PhD
4. No mentoring committee like a PhD student—aka only mentored by PI (this can go well or poorly)

Existing NIH policies, programs, or resources

1. Raise NIH minimum postdoc salary, allow PI to pay postdoc from whatever NIH grants
2. Allow moving bonus from NIH grants for postdocs
3. Scale pay based on city that the person lives in—please check out paper by Sainburg et al on this topic

Proven or promising external resources or approaches

I think that postdoc fellowships like the Schmidt Science Fellowship et al do a great job at not only providing higher pay to postdocs (100k), but also providing ACTUAL support. This support and training is severely lacking from universities.

Response 1265

Perspectives on the postdoc roles and responsibilities

It is a chance to improve the skills and get prepared for the future career. It is a time to work on the leadership skills, and how to communicate with other members of the team. It is also an opportunity to explore how the academic life would look like.

Fundamental issues and challenges

The biggest challenge we encounter is the salary is very low compared to similar industrial research positions, therefore, we are experiencing more difficulty in life especially when comparing ourselved to our peers in industry.

Existing NIH policies, programs, or resources

More connection to real industrial projects and higher pay

Proven or promising external resources or approaches

No response

Response 1266

Perspectives on the postdoc roles and responsibilities

Mentoring, driving independent projects, learning how to handle people and how to run a lab, writing grants and publishing.

Fundamental issues and challenges

Not provided benefits (retirement, paternity/maternity leave, child benefits, etc) and appropriate salary as other full time employees even though postdocs work longer hours than any other post. Because of this post docs usually have to suffer family life and/or proper self-care, which makes post docs feel less valued and ultimately moving out to the industry.

Existing NIH policies, programs, or resources

Provide better salary

Provide child care support

Provide retirement and other benefits like other employees

Provide funding to more people for moving to an independent early investigator position at an academic institution

Proven or promising external resources or approaches

No response

Response 1267

Perspectives on the postdoc roles and responsibilities

My idea of a postdoc is a "next step" beyond the PhD in the preparation for a career in research. Postdoctoral research appointments should have a blend of experimental activity as well as exposure to aspects of lab management, proposal preparation, and supervision. These skills translate to careers in industry, academia, and in many ways to science-adjacent career paths. Postdoctoral scientists should have some flexibility in time and experimental design/implementation. They should also be given opportunities to present/disseminate their work at conferences, as well as teach (on a limited basis) if academia is their path.

Fundamental issues and challenges

Cost. Between the cost of increasing salaries, increasing cost of health benefits that are absorbed by the PI/grant rather than the institution, and increasing cost of living, the ability to fund a postdoctoral researcher is more difficult than ever. Academic institutions are less and less likely to contribute to the support of postdoctoral scientists due to continued cost-cutting and finance-first models gaining prevalence in higher ed. This reduces the number of opportunities for postdoctoral hires. Yet, academic departments are becoming LESS likely to hire candidates without academic postdoctoral experience.

Existing NIH policies, programs, or resources

Require institutions to cover aspects of postdoctoral support. In my opinion, any institution receiving NIH funds should pay for the health insurance for all postdocs. Thus, no IDC would be charged on postdocs during budgeting. Institutions should also be required to develop concrete, institutional mentoring/support structure for postdoctoral trainees. There should be concrete expectations that some percentage of a postdoctoral trainee's time is spent doing non-experimental work (supervision, lab management, etc)

Proven or promising external resources or approaches

NSF, ACS, and other organizations run workshops to support "new" faculty. Those skills should be translated and introduced to postdocs.

Response 1268

Perspectives on the postdoc roles and responsibilities

We are asked to take on the role of staff scientist without the pay scale. Hours are long. It feels inappropriate since I have a degree and am not in grad school anymore, yet we are treated as glorified grad students.

Fundamental issues and challenges

I make the NIH minimum in a HCOL city. I have two kids, and can't afford daycare anymore for my youngest. I adjunct to make ends meet. I cannot afford to be a postdoc at this pay rate.

Existing NIH policies, programs, or resources

Please increase the NIH minimum salary. It needs to scale with COL. Inflation alone means that I earn significantly less than when I started.

Proven or promising external resources or approaches

Increasing pay and time off will improve retention. Everyone wants to leave for industry because of the money and the work/life balance.

Response 1269

Perspectives on the postdoc roles and responsibilities

A postdoc is a position after one has defended their PhD in which they put their knowledge they've acquired about how to be a good scientist into use by individually driving and executing experiments, while being severely underpaid for it.

Fundamental issues and challenges

I think the main issue is pay. After going to school for 30 years, postdocs still don't make as much as they would starting salary going into industry doing comparable tasks and having a better work-life balance. So, funding and time commitment are the main drivers in my eyes.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Providing postdocs with the resources and support that comes along with a normal industry job, aka work-life balance respect, higher pay, retirement accounts, paid leave and family leave, health and dental insurance, etc.

Response 1270

Perspectives on the postdoc roles and responsibilities

Post doc is the last training position before looking for professorships or leaving academia and likely not being able to come back. It's also the last opportunity to dabble in something different and gain first-hand experience in something new yourself. Therefore, the postdoc position is very, very important in determining what kind of research one will continue to do for the rest of their life. Professors oversee things and learn things from a high level. They rarely do work themselves from my experience. Postdoc is the last time that one will work at a bench.

Fundamental issues and challenges

Recruitment & retention:

1. The pay, of course. Almost everyone will make more money if they go to industry instead of postdoc.
2. The high expectations of what must be accomplished during a postdoc to be competitive for a professorship somewhere (papers, papers, papers).

Quality of life: depends a lot on who the mentor is. A supportive mentor will make a huge difference.

Existing NIH policies, programs, or resources

The one thing that inhibited me a lot in academia is needing letters from people (reference, support, etc)! I get so much anxiety having to bother busy professors, having to keep reminding/harassing them to submit on time. I hate it and definitely skipped out on applying for funding opportunities because if it. And are these letters even useful? Everyone can find people who will write nice things about them. How does this set anyone apart? And if some reference does say something influential that seems to set an applicant apart, that could be a reflection on the reference, not who they are writing about. Lastly: did you know that more than half of the time, the professors ask us (applicants) to write the letters for them and they just sign off? Come on. Stop this nonsense requirement. It's inauthentic letters you all are reading.

Proven or promising external resources or approaches

1. Good pay and treating postdocs like a young faculty instead of like a more experienced grad student.
2. Starting in grad school, undergrad, or maybe even earlier, the academic path should be made less mysterious to people so that people who may otherwise not even know they would be interested—would have a fair chance to consider it. Do people on the street know what a professor does? They think professors teach at universities. Barely anyone knows that professors are scientists and their job primarily is to run a lab.
3. Workshops, classes, etc. that give practice with grant and paper writing, and also to teach us about how academia works in general. Examples: what can and can't grants be used for? What kind of funding is out there? What's a minimum publishable unit for a journal article? I know that there are website pages for some of this, but it's a lot of reading and no opportunity for questions this way. Also not everyone knows where to find all this info. In person is better.
4. Please please see my recommendation on getting rid of recommendation/reference letters. Industry does this better by not asking everyone to waste time upfront. Only at the end as a final "clear" for a candidate. Often on the phone instead of in letter form. Much less intimidating and less pressure on everyone. You can ask questions instead of hoping some letter addresses everything.

Response 1271

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

pay is very inadequate relative to responsibilities and other options with a PhD (eg. national labs, biotech industry). very little opportunity to make horizontal moves in case advisor relationship is not good, quite beholden to advisor for recommendation letter and networking in order to secure a more permanent academic job

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1272

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Intramural investigators can pay postdocs so much more than extramural investigators. Can NIH better cost share between intramural and extramural programs to reduce the disparity between compensation of NIH-funded extramural and intramural postdocs?

"The discrepancy becomes even more shocking as postdocs gain experience and are compensated unequally for their developing skills and professional training: extramural postdocs can expect $66,000 after seven years of experience, whereas intramural postdocs can expect $105,750—nearly 50% more than the extramural stipend for 20227,12. In fact, the highest salary for an intramural postdoc in 2020 was $108,932 (Gary McDowell, personal communication)."

https://www.nature.com/articles/s41587-023-01656-4

Response 1273

Perspectives on the postdoc roles and responsibilities

It's a way for academic and corporate labs to leech work out of promising young scientists who deserve better, under the guise of providing them more training. This "training" is unnecessary and is an impediment to their early career growth.

Fundamental issues and challenges

Pay them more, you [redacted]ing dickheads.

Existing NIH policies, programs, or resources

Pay them more. Stop whining that workers are realizing you're paying them a quarter of what they should be earning.

Proven or promising external resources or approaches

PAY THEM WAY MORE MONEY.

Response 1274

Perspectives on the postdoc roles and responsibilities

I would never touch a postdoctoral position. I refuse to perform innovative and field-advancing research at a doctoral level for approx 50k. I would love the workflow and day-to-day of a post doc, however the compensation is absolutely ridiculous and I refuse to suffer anymore. I have already suffered poverty despite extreme stress and a demanding career for a decade.

Fundamental issues and challenges

The pay is abysmal, the work-life balance is awful, you are treated as a student pay and benefits-wise when you're 30-40 years old with 10+ years of experience. You are probably trying to start a life, potentially a family, and a career. I literally had a working relationship with a post doc that was in one of the most well-funded labs at my prestigious university who was supporting his family on food stamps. This is egregious.

Existing NIH policies, programs, or resources

Pay us.

Proven or promising external resources or approaches

Pay us.

Response 1275

Perspectives on the postdoc roles and responsibilities

A postdoc is the chance to continue to perform cutting edge science and further ones education.

Fundamental issues and challenges

There is a complete lack of childcare help. As a father there is zero incentive to do a postdoc when I can go to industry and earn 5x more. If Universities gave childcare some thought they may be competitive. I would take a paycut to do amazing research as a postdoc but in the current environment it is a negative on my children.

Existing NIH policies, programs, or resources

Learn that postdocs have families and help them pay for basic necessities.

Proven or promising external resources or approaches

No response

Response 1276

Perspectives on the postdoc roles and responsibilities

Program to advance in research activities, network with experts, publish high impact journals from quality research, mentor undergraduates and M.Sc students, present conference and position papers, contribute to policies. Initiate innovative research that can lead to patentable products, prototype desine commercialization, income, and development. Host institution contributes to revenue generation and maintain royalties for inventions. It is also a sort of employment to earn a living while contributing to science.

Fundamental issues and challenges

For women in Africa, family: The challenges of living your families, The husband may not be interested in supporting the wife

Undergraduate tndergraduate training curriculum does not open up the student to see beyond their current program and aspire to be a Postdoc as his or her career progresses.

At Masters level in Nigeria, Research are supported by personal and family funding, such the topics are not designed inline with priority needs of the society, to obtain funding, nor is the outcome aimed to be presented to relevant stakeholder. Thus continuety and sustainability of personal ideas is not maintained.Similarly, research by doctoral trainees are not supported in grants. In addition, there are limited inductrial training interphase.

Morover, there are no adequate training on how to write proposals and apply for grants from local and international organisations. In Nigeria, only recently are grant application incorporating the need of an M.SC, PhD and Post Doc opportunity.

The career progression at academic setting in Nigeria, requiure evidence of publication irrespective of weather it was personally funded or not and not really on postdoc experience. The academic system is not designed to employ post doc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Institutionalise Postdoc in African Universities. Add priority research topics to focus primarily on biomedical reseach problems peculiar to Africa. This would encourage research into such problems and promote local content. In that case the postdoc trainee would not need to travel abroad to cunduct quality researcg

Establish more centre of excellence with the modern technology, equipment and innovations to support biomedical research

Train senior researchers to be mentors and not tormentors. To think as a team player and not as a boss. Identify gifted and talented individuals and encourage their progresstion upto the need to continue with Post Doc. Great awarness on the interelationship between earning a living while working as a postdoc trainee.

Extend network and provide opportunities for undergraduate or graduated to see available postdoc opportunites, available career opportunities,and prospect from conducting biomedical research.

Outcome of research should not only be for scientific communities in areas where people are not focused on academics, thus information desemination to grassroot and parents and guardiance that pay for majority of off pocket—family sponsored academic research. Thus, they can encourage undergraduate to ensure their trainings are result orienting, targeted at rendering services to address human needs while making a leaving. They should also be well informed such that they can encourage their family menmers to focus and conduct research that would be well supported pto Postdoctoral level.

Response 1277

Perspectives on the postdoc roles and responsibilities

Roles: To leverage their prior training and the resources and expertise of the institution where they are in a post-doctoral fellowship to develop a niche area of investigation which they can focus their laboratory on. To enhance professional training—grant writing, working in teams, new scientific skills, and strategic planning.

Fundamental issues and challenges

Salaries are very low especially in expensive cities, which negatively impacts quality of life. There is also a perception that the career pathway that follows will be difficult to establish with high barriers to securing federal funding. These factors combine to encourage trainees to avoid post-doctoral positions or to do very shorts post-docs before a jump to industry.

Existing NIH policies, programs, or resources

Salary stipends for the T32 should be increase and reflect geographical challenges

Proven or promising external resources or approaches

No response

Response 1278

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as an opportunity to gain additional training and mentorship to prepare me for a career in academia and to shape my independent research program. The responsibilities of a postdoc should include a combination of work on research projects run by the mentor as well as new projects that help facilitate the development of the postdoc's research agenda. In addition to training, the postdoc position should largely provide opportunities to publish and write grants with the postdoc as the PI. Given the brevity of most postdoctoral positions, an environment where the postdoc has protected time for research is ideal, with additional opportunities for professional development seminars, teaching, and mentoring depending on the goals of the postdoc.

Fundamental issues and challenges

Generally a postdoc position is designed to be fairly short and help move the postdoc to a full-time academic position. Because of the nature of the position, challenges related to moving, low-pay, low-benefits, and difficulty launching new projects can be barriers to a productive postdoc position. In my experience, poor mentorship, lack of data availability to carry out the research proposed, and low pay have been factors that have contributed to a postdoctoral position that has not been satisfying. I imagine that this would be similar for other postdocs and an issue when you are starting a position that you expect to last 2 years, but due to data delays and lack of mentorship support, the position can be longer or not as helpful for your career as expected.

Existing NIH policies, programs, or resources

I think pay, benefits, and community would help improve the postdoctoral experience.

Proven or promising external resources or approaches

No response

Response 1279

Perspectives on the postdoc roles and responsibilities

A job that allows you to publish more research to put on your CV prior to applying for faculty position.

Extremely demanding job that requires long hours.

Often requires mentoring and overseeing grad students and undergrads in lab.

Fundamental issues and challenges

Pay is far below industry standards, oftentimes below livable wages in areas with high cost of living.

In fact, might go so far as to say pay is insulting given the amount of training and experience a postdoc has, as well as hours put in.

Existing NIH policies, programs, or resources

Increase the salary to minimum 100k USD/year, at least in high cost of living areas.

Proven or promising external resources or approaches

Increase the salary to minimum 100k/year, at least in high cost of living areas.

Get over the ridiculous mindset that a postdoc is 'training'. These days, being a grad student is barely even 'training' anymore —undergrads and being an RA before being a grad student is the time when most people are trained.

Response 1280

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should vary from postdoc-to-postdoc depending on their individual goals. For me, it is an opportunity to learn a new field and new techniques while moving toward greater independence. Well-supported intellectual freedom is a must for me to be happy in a postdoc.

Fundamental issues and challenges

The postdoc gives limited money (I could just about double my salary in industry immediately) and benefits (retirement savings!) while offering little up-side at this point. It should offer me greater intellectual freedom and a path to a career in academia, but if the path to the career in academia is too limited or the intellectual freedom is insufficient (my lab treats me like a talented technician or research scientist), there is no point in accepting that limited money and benefits.

Existing NIH policies, programs, or resources

My idea is that there should be available larger fellowships for mid-late postdocs (years 2.5-5) that give

a) increased salary and

b) salary for a postdoc to hire a single technician or post-bac, while the postdoc stays in their current lab, essential creating a sub-PI role for that postdoc.

It will give the postdoc greater freedom and responsibility, increased salary, and mentorship experience that will benefit them when running their own lab. I'm not sure if any programs currently exist like this.

Alternative ideas just include creating ways to increase salary and increase retirement savings/benefits. Postdocs should be contributing to social security and/or a 401K at this point in their lives.

Proven or promising external resources or approaches

No response

Response 1281

Perspectives on the postdoc roles and responsibilities

The postdoc is an opportunity for me to learn new skills and publish papers, so I can get a faculty position.

Fundamental issues and challenges

The pay and benefits for postdocs are barely livable. Postdocs have extensive training and education, but we're expected to survive on a fraction of what we could be making in non-academic careers. For example, all of my close friends who completed their undergraduate education with me are making at least $100,000/year. I'm making just over half that as a doctor. This is a huge hurtle for postdocs to overcome and makes the career trajectory difficult for all, and impossible for some.

Existing NIH policies, programs, or resources

The postdoc pay scale has to be raised. Postdocs should also receive employee benefits from their institutions. As a "trainee" we are caught in limbo between graduate student and employee. Unfortunately, we don't get the protections of a student, or the benefits of an employee.

Proven or promising external resources or approaches

The only way to improve recruitment and retention of postdocs is to treat postdocs as actual employees of an institution. With pay and benefits that reflect our skill level and our value to the institutions we work for. Everything else would just be fluff to distract from the major issue.

Response 1282

Perspectives on the postdoc roles and responsibilities

Postdoc position is a job in which a postdoc contributes to the overarching goal of the lab, institute, and to the research niche of their field. They are workhorses of how science keeps evolving. They simply cannot just be trainees. They are workers.

Fundamental issues and challenges

Low payment, lack of employee rights, and visa-related hassles are the big ones.

Low-payment is quite straightforward. Payment is low relative to industries. Postdoc payment is relatively worse in a high cost-of-living area. Low payment kills the attraction of postdocs by big time.

Lack of employee rights: NIH treats postdocs are trainees, which itself is discriminatory as the expectation for postdocs are that they work full time, do research, write a paper, grants and so on. In some places the expectations are even participating in a journal club and taking classes or seminars. One of the biggest challenge is that postdocs are not seen as employees and that cuts them from having employee rights. Because of the lack of employee rights, a postdoc position is very insecure and PIs tend to use this insecurity as a bargaining tool and justify exploitation of a postdoc.

Visa-related issues: There is very little mental peace among international postdocs because of the visa related issue--as they are in the cusp of being kicked put of the country anytime. J1 and F1 OPT visas are very restrictive and inhumane and arguably inhuman. The spouse cannot work, (on top of that the postdoc salary is low on itself), cannot do any side hustles that make money such as blogging or doing photography in your free time.

Existing NIH policies, programs, or resources

1) Recognize postdoc as full time jobs and have employee rights secured.
2) Provide strong visa-related support. J1 visas are very restrictive and it is time to change visa policy. Some of the visa policies like, you cannot do a freelance / side hustle, your spouse cannot work, etc are quite discriminatory and needs to be modified, or abolished completely. Another option would be advocate creating a visa system that removes hassles related to visa and gives mental peace that they are not in the cusp of being kicked out.
3) Increase the payment. Consider the cost of living of the area where a postdoc is doing her/ his postdocs.

Proven or promising external resources or approaches

1) Recognize postdoc as full time jobs and have employee rights secured. Have clear (and assertive) policies regarding paid leaves, maternal / paternal leaves, provision for retirement plans, sick leaves etc.
2) Provide strong visa-related support. J1 visas are very restrictive and it is time to change visa policy. Some of the visa policies like, you cannot do a freelance / side hustle, your spouse cannot work, etc are quite discriminatory and needs to be modified, or abolished completely. Another option would be advocate creating a visa system that removes hassles related to visa and gives mental peace that they are not in the cusp of being kicked out.
3) Increase the payment. Consider the cost of living of the area where a postdoc is doing her/ his postdocs.

Response 1283

Perspectives on the postdoc roles and responsibilities

It means transitional training, where an individual is trained to conduct research projects and other aspects of academic life. This includes training in grant writing, reviewing scientific papers, acquiring skills in state of art technology, and getting an opportunity for networking and oral presentation of the scientific work. It also means a certain degree of independence in conducting research and preparing for the next phase of academic life.

Fundamental issues and challenges

The fundamental issue in recruiting a postdoc is a low pay scale. For a fresh Ph.D. graduate suffering to meet their ends, an industry pay scale is much more lucrative than academic jobs, even though one is passionate about science.

The fundamental issue in retaining a person in a postdoc field is PI/mentor bias. Micromanagement, lack of independence, being too rigid in ways an experiment needs to be conducted, and not perceptive are a few examples of mentors who might force a postdoc to leave the scientific field unknowingly.

The overall quality of life of postdoctoral training can be improved by increasing the salary to a respectable amount and training the mentors to guide a postdoc.

Existing NIH policies, programs, or resources

NIH should strictly monitor PIs or institutions that pay salaries even less than what is written in NIH pay scale. Institutions don't make salary adjustments yearly, and even a 2nd or a 3rd-year postdoc is seen working with an old NIH pay scale with postdoc 0 salaries.

Proven or promising external resources or approaches

No response

Response 1284

Perspectives on the postdoc roles and responsibilities

Postdocs should act as assistant PIs. They are responsible for conducting independent research with less guidance from the PI than graduate students. They should help mentor graduate students in the lab as

well to practice trainee management for when they become a PI. They should learn about how the PI manages their grant funding and lab budgets and submit grants of their own.

Fundamental issues and challenges

If you go straight from undergraduate school to graduate school to a postdoc, you would be starting a postdoc around age 28. The average age for having a first child is 26. Many people put off having children in graduate school due to lack of time and money, but a postdoc is a more stable job where couples begin having kids. Postdoc salaries are not high enough to pay for childcare. The postdoc in my lab wants desperately to have a baby, but her husband is still in graduate school, and they don't think they can afford it. If someone is leaving graduate school and wants to start a family, industry with a higher salary and better work hours is the obvious path.

Existing NIH policies, programs, or resources

A stipend for childcare per child.

Proven or promising external resources or approaches

A stipend for childcare per child.

Response 1285

Perspectives on the postdoc roles and responsibilities

Our School recognizes that postdoctoral research fellows are trainees working in an apprenticeship mode in preparation for a career as scientific professionals. The mentoring provided to the postdoctoral fellow by the faculty mentor is critical to the fellow's career development and advancement. In addition, postdoctoral fellows are generally expected to function responsibly and autonomously within the School's complex and decentralized environment. Independent thinking and action are in fact requisite to successful careers in research.

Responsibilities of postdoctoral fellows include the following:

- Assume primary responsibility for the development of their research and career.
- Play an active role in seeking career and research advice, both from the faculty supervisor and from other faculty members as appropriate.
- Perform the research required by the faculty supervisor to a high standard and in accordance with all institutional and federal regulations.
- Participate in the postdoc career development and annual review process.
- Work in a collegial and cooperative manner with the faculty supervisor and other co-workers.

Fundamental issues and challenges

The biggest issues that are currently inhibiting our postdocs:

- Child care
- Cost of living in Boston area
- Salaries
- Industry has the ability to pay higher for new PhDs
- External postdoc benefits—cost of health insurance for self and/or family, salaries are less likely to be comparable to internal, and cannot afford cost of living in Boston
- International postdocs—immigration status and language barriers

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1286

Perspectives on the postdoc roles and responsibilities

My experience as a post-doc has been running projects for principal investigators that don't themselves have time to run their own projects they have committed to.

Fundamental issues and challenges

Many institutions do not allow postdocs to apply for grant funding as a PI. This means they have no way of showing they can obtain independent funding, or earning more money for their salary.

Another significant issue lies with the academic institutions. They are not creating permanent positions—mostly are adjunct contracts renewed yearly. Despite the ever increasing enrollment numbers they do not invest in faculty and teaching. So even if the financial difficulties of being a postdoc are manageable for a few years, there is not a financially stable career to look towards.

Existing NIH policies, programs, or resources

The limits on post-doctoral salaries and percent effort are inappropriate, especially given that they are not adjusted for differences in cost of living between different cities. The opportunity cost due to salary differences between academics and industry is upwards of $50,000 in certain fields. With economic instability, inflation and housing prices, staying in academics is not a reasonable choice.

I think that funding being spent on paying faculty that already have permanent positions to conduct "professional training" workshops is not a good use of resources. Those resources should be used to fund positions for post-docs and pay them a living salary.

Proven or promising external resources or approaches

No response

Response 1287

Perspectives on the postdoc roles and responsibilities

A post-doc position should be set in two different ways: an academic track or an industry track regardless of whether the post-doc does their role in an academic institution or industrial organization. However, the current issue is that academic post-docs are severely underpaid for the amount of work that they do. Why do a post-doc when you can work in industry and make more for doing the same amount of work? Not all companies have post-doc opportunities and they are severely limited to post-docs who can start in the summer of each year. In my opinion, the roles are no different no matter where you work. At the end of the day, a post-doc is an opportunity for one to broaden their research domain, publish more if they were not able to publish that much during their PhD, and network/collaborate.

Fundamental issues and challenges

The funding for post-docs, the NIH does not properly scale the minimum salary to the cost of living at institutions where you need to attend to be a successful post-doc. Cities like Boston, Manhattan, Chicago, Austin, or schools in California have some of the best post-doc programs which would be the only places to do a good post-doc. However, the NIH says that $55000 is the minimum salary which most faculty will not contribute higher towards to higher a post-doc? That is unjust and very negligible to one's quality of life. Some post-docs have student loans, how are they supposed to pay them off if they need to do a competitive post-doc and can barely live in a three-bedroom apartment? Same goes for retention, I am only doing a post-doc for now till I can get into the industry since I graduated when companies were on a hiring freeze and I needed a higher salary to pay my loans. But as soon as I find a job I am jumping ship from the post-doc and that is how it will be. Pay us more and maybe we will stick around or want to be recruited.

Existing NIH policies, programs, or resources

Increase the salary minimum or at least scale it by city. $55000 is not proportional across the US.

Proven or promising external resources or approaches

Look at the cost of living in various cities at the current rate of inflation.

Response 1288

Perspectives on the postdoc roles and responsibilities

A postdoc is essentially equivalent to the Journeyman/Wandergeselle in the medieval guild system.

We do the bulk of the actual research and manage most of the day-to-day affairs of the lab. Typically we have moved not once, but twice to be further employed in a temporary position for low pay with functionally no future job security. The prospect of "training" is an outright fabrication. We're cheap labor required to keep the machine running.

Fundamental issues and challenges

The NIH knows what the problem is already. It's pay. It's job security. You've known this for decades at this point. Asking the question again isn't going to provide you with some new magic solution to a problem that hasn't been thought of before.

If anything, the structural factors that have led to this predicament have only gotten worse since the last time you solicited feedback for these problems. Are there more or less universities and tenure track positions since you last asked these questions? Has the value of the dollar increased or decreased? Has the cost of living increased or decreased? Has the debt burden of PhDs increased or decreased?

Existing NIH policies, programs, or resources

Pay industry rates for PhD-level work. Industry does all of the job training and professional development the NIH provides, and they do that without using said training as justification for lower pay. If you seriously want the best and brightest working on NIH projects and advancing the mission of the NIH, you have to provide the same degree of pay and opportunity that industry does.

Proven or promising external resources or approaches

Pay people what they're worth and provide more avenues for long-term stability in people's lives. Upending your entire life and moving across the country over and over again for marginal pay isn't worth it to most people. If you want the best scientists and innovators, you're going to have to pay them what they're worth. Otherwise why wouldn't people look to industry? Why wouldn't they try to leave the country and move to somewhere that has more social stability and better working conditions? Why wouldn't they move to a place that facilitates raising a family better than the United States? If a PhD is worth what we say it is, these are precisely the people with the skills and means needed to leave the country, and from my communications with people early in their scientific careers, that is rapidly becoming the default plan.

Response 1289

Perspectives on the postdoc roles and responsibilities

An academic postdoc primarily fills the niche of providing the highly skilled labor needed for PIs complete aims outlined in their research grants. In most cases, an academic postdoc progressively gains additional administrative, grant writing/reviewing, and teaching skills needed to pursue their own independent career (as a PI) in biological/biomedical academic research.

Fundamental issues and challenges

The two biggest issues facing postdoc trainees in academic research, in my opinion, is the very low salary levels (especially compared to industry salaries) and low amount of independent, tenure track faculty positions currently available.

Existing NIH policies, programs, or resources

Removing salary caps for postdocs would provide PI's the freedom and flexibility to recruit and retain highly skilled postdocs (i.e. allowing the PI to set a competitive salary needed for the rigor of their own research). As we know, the roles of postdocs vary even within the same lab and we should allow more of a market based approach when determining pay. As for the lack of academic positions, NIH should place a term limit (a very liberal one) on grant funding for tenured faculty, freeing funding for younger postdocs, which ultimately would lead to academic institutions having more academic positions available for postdocs to join the faculty workforce. EXPAND LOAN REPAYMENT PROGRAM TO POSTDOCS.

Proven or promising external resources or approaches

All academic postdocs who receive NIH funding should perform a required annual (or biannual) questionnaire that can provide continuous feedback to the NIH on our concerns in the workforce.

Response 1290

Perspectives on the postdoc roles and responsibilities

A transitional and training role. Leading multiple research projects while acquiring new skills and improving on existing ones. New skills include both professional (ie new methods and protocols), personal (mentoring, leadership, collaborative work), and academic (grant and fellowship writing).

Fundamental issues and challenges

The pay is low, I have a family to provide for. Benefits are terrible, paying a lot of health insurance for my dependents. Definition of responsibilities is vague and my mentor and I struggle around that.

Existing NIH policies, programs, or resources

Minimum pay should be higher, to match the increase in cost of living. Role should be better defined, with proper institutional supports required for postdocs. Currently I feel like I have no job security and no safe guards in case I need them.

Proven or promising external resources or approaches

No response

Response 1291

Perspectives on the postdoc roles and responsibilities

Postdoctoral training means that it's a training and it could lead to a potential transition to a stable job after 2-3 years of postdoc. I think, the maximum period for postdoc training should be 2-3 years. Then, the positions should be transitioned to Assistant Professor Research and it should be compensated fairly.

Fundamental issues and challenges

First, salaries and compensations are extremely low considering the level of expertise and efforts it requires. The people in IT, with less qualifications, have higher salary in the same institutions with relatively less qualifications, responsibilities, and risks involved. At the end of the day we also have to pay the bills and expect decent living. People with family and kids are struggling to survive. Most of the universities and institutions pay the minimum NIH scale irrespective of the cities we live in and they cite NIH pay scale as their criteria.

Second, there is not much independence in the kind of the work we do as postdocs.

Third, as an international postdoc, most can't apply for many of the grants.

In short, Postdocs serve as CHEAP LABOR to most of the PIs and institutions, instead of growing as individual researchers.

Existing NIH policies, programs, or resources

1) Salary and grants should be revised in accordance with the qualifications and expertise. Also, it should include the provision of housing allowances according to the cost of the living of different cities. Rents in big and small cities are not the same.
2) It can't be denied that international postdocs are a major contributor to the research work in the US. International postdocs, working in the US labs, should be considered at par with the US citizens for the NIH grants.

Proven or promising external resources or approaches

First, however we try to justify but in reality postdoc is not training. It's a job. It should be compensated at par with that job requirements.

Second, most of the postdoc salaries come from the PI grants. It creates a difficult situation for the postdocs and makes the international postdocs vulnerable to exploitation by the PIs like long working hours, threat to fire from the job, less intellectual freedom. There should be a way where PIs shouldn't

feel that they are doing favour by hiring a Postdoc or they are the direct employer. There should be mandatory 3-6 months of compensation in the case of early termination. The postdoc should be notified at least 6 months in advance in written, if PI is unwilling or unable to support a Postdoc because of lack of funding or any other reason. This will make PIs more careful in hiring who they want and give postdocs flexibility for their transition.

Third, most of the grants go to the some very well funded labs because of the grant criteria. It gives little scope to others to grow.

Response 1292

Perspectives on the postdoc roles and responsibilities

Academic postdoc is an advance training time where individuals learn new skills and apply to progress in their career paths. In addition to learning, it also helps in overall personality development, boost up confidence and passion for performing productive research.

Fundamental issues and challenges

Fundamental issue is the SALARY!! They don't get enough to sustain in most of the cities. Some of the places like St. Jude have increased the salary of their employees tremendously after seeing the downfall in quality of life of post doc trainees.

Next challenge is to find jobs in academic career after doing post doctoral research.

Other challenges for foreign nationals include visa restrictions. A more flexible visa system should be implemented.

Existing NIH policies, programs, or resources

NIH payscale needs to be improved and more benefits to be given to individuals especially those who come from other countries. Most foreign nationals suffer because of less grants in academia for them when compared to US citizens.

Proven or promising external resources or approaches

Job postings can be put on social media websites such as LinkedIn, twitter etc. Working system is hard to predict as it depends on Principal Investigator. A review based system can be started for ranking PI,s lab environment and working culture where ex-employees can give reviews anonymously.

Response 1293

Perspectives on the postdoc roles and responsibilities

As a postdoc I should have the freedoms to just do my science. I am past the trainee stage of a graduate student, but should not have all the administrative tasks of a PI. I feel the postdoc time is really the only stage in your career where you have the knowledge and the time to just explore scientific ideas.

Fundamental issues and challenges

As I mentioned in my previous response "I feel the postdoc time is really the only stage in your career where you have the knowledge and the time to just explore scientific ideas." However that is not my experience. I am often tasked with doing administrative things for my PI and filling the role of a lab manager. I am tasked with training graduate, undergraduate, and high schoolers at the cost of my own science. My PI often remarks "if you want to become a PI you will have to learn to manage your time". However, if I was free to manage my time I would not take on so many students that need their hands held the entire time. I am not paid enough to work 9-5 on training other people and keeping the laboratory running for my boss to then have to do my own science after 5pm all night long as my boss suggests. I deserve to have some amount of quality of life.

Existing NIH policies, programs, or resources

R01s, R35s, and other grants for PIs should increase in budget so that postdocs can be paid more AND PIs can hire more people. If PIs are forced to pay higher salaries without an increase in budget all it will do is

cause them to hire fewer people. Increasing the amount of other work postdocs are required to take on that take away from their research.

Proven or promising external resources or approaches

Recognize and respect the roles postdocs play in science.

Response 1294

Perspectives on the postdoc roles and responsibilities

A bridge between graduate school and pursuit of a position as a professor, a post-doc is set up to give recent graduates and opportunity to learn more independent project management and leadership skills. It is also an opportunity to gain new knowledge and skills in a different field, using the tools acquired during graduate training.

Fundamental issues and challenges

While there is freedom in choosing what you may work on, the pay is not competitive with other post-graduate school jobs. It seems the only real reason to go into a post-doc is if you want to be a professor. There are even more limited numbers of professor positions available, and on top of that research funding and salaries from grant funding are not keeping up with current inflation rates. On top of that, it is typical in most labs to have an unhealthy expectation for work hours, making a work life balance and prioritizing health very difficult. While some mentors may not fit the typical academic culture, the majority are not understanding.

Existing NIH policies, programs, or resources

I am not as familiar with the options in this space, so I cannot comment.

Proven or promising external resources or approaches

I think that working environment and mentoring perspectives that see a post-doc as a human, not a pay line on a grant are key.

Response 1295

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is an opportunity to become more independent, learn new and diverse skills, and develop ideas and possibly initial data for forming your own lab. To become more independent, you will propose new and original research ideas to your mentor, manage graduate students, and pursue a project that could be of your own design depending on the position. To learn new skills, you might broaden your expertise by accepting a position that isn't directly in your field. To work towards your professional development, you might begin to think of or acquire data that can support your desired faculty position, apply for grants, or network.

Fundamental issues and challenges

The biggest thing that would stop me seeking a postdoctoral fellowship is money. ~50% of postdocs in the US make less than $50,000, and this coincides with large life events like moving cities or states, starting a family, paying off student loans, and taking care of aging parents. There is essentially no way I could afford to take a postdoctoral fellowship for this amount.

Additionally, quality of life for postdoctoral scholars seems fairly abysmal, with no guaranteed time off, sick leave, etc., worse health care than a graduate student may have, and increased expectations with little increase in pay.

Existing NIH policies, programs, or resources

Minimum pay for postdocs >$60,000, standards for living including subsidized child care, sick leave, and PTO.

Proven or promising external resources or approaches

No response

Response 1296

Perspectives on the postdoc roles and responsibilities

A position in which a person prepares to be an independent research scientist. A postdoc should complete a project with more independence than one necessarily experienced in graduate school, learn widely from other disciplines, and apply to research funding for their future lab.

Fundamental issues and challenges

The NIH pays too little. That is it. At a time when people should build for their future (e.g., IRAs, buy a house, stocks), or be able to pay for normal events at that stage in their lives (e.g., mortgage, childcare, help elderly parents), they are not able. Those with wealthy families can better weather these finances than those without.

Existing NIH policies, programs, or resources

The major problem is that the NIH underpays postdocs. Though there are expected raises, the baseline is too low; it should increase to ~70k. My school—JHU—follows the NIH model, as do others I suspect, and will pay the minimum amount allowed by the NRSA.

One other concern is that I, as a fellow with an NIH grant, cannot get more money for my salary from my mentors' NIH grants. Since the NIH is a major funder, this limits my salary. However, even if this policy were lifted, there is no guarantee that my mentors would pay me more. Thus, the best solution is to increase the baseline NRSA salary. Perhaps, when PIs design a budget for R01s, U19s, or other grants, they should get a bonus to pay for the postdocs.

Proven or promising external resources or approaches

Industry pays ~twice as much.

Response 1297

Perspectives on the postdoc roles and responsibilities

I believe the postdoctoral role *should be* a brief (2-5 years), one-time training period where one gains additional skills and mentorship, particularly in grant-writing, project design and management, and mentorship of their own, before transitioning to an academic role. I also believe that it should be an opportunity to lay groundwork for one's own initial academic research program.

However, I think that in practice, postdocs are often longer and come in multiples, including roles that officially are not classified as postdocs but work as such in practice, and that trainees too often are locked in such roles or shunted to non-tenure track roles; and that many labs provide less mentorship to postdocs and more see it as an additional period of labor.

Fundamental issues and challenges

1) Low pay and benefits. This is a problem across academic training roles, but is particularly egregious at the postdoctoral level, when one has supposedly completed their main scientific training and often has additional family expenses, but is still being paid far less than comparable non-academic roles.
2) Only really a shuttle into academic careers. Academic postdocs seem generally to be viewed as a disadvantage for non-academic roles, so there is no reason to enter unless you want to go into academia—where everyone knows that tenure-track jobs are hard to get and only getting harder, and non-tenure track jobs are unsustainable and exploitative
3) Broader problems with the academic mentorship system; e.g. low pay + an "apprenticeship" style system that leaves trainees at the mercy of their mentor, who may be outstanding, but could also mediocre or outright problematic once you join the lab.
4) Increasing duration and number of postdocs. It's a much harder sell to swallow 2-5 years of low pay than it is 10 years with multiple moves, especially when you're still almost guaranteed *not* to get a tenure-track job, the only reason to take a postdoc, afterwards.

Existing NIH policies, programs, or resources

Increasing NIH minimum pay, since it is widely seen as the de facto actual rather than minimum.

Increasing the number of funding opportunities available to postdoctoral fellows, to allow more opportunities for individuals to show they can secure grant funding earlier in their training.

Stricter systems to ensure that professional ethics in mentorship and treatment of postdocs are followed, rather than an honor system implemented by those these guidelines are meant to protect postdocs and other trainees from.

Guidelines on how long a postdoc should be and what sort of roles are acceptable after, to prevent "research scientists" and other full-time research positions that are used as a way to extend postdocs to 7, 10 years or even longer with no appreciable outcomes for the postdoc themself.

Proven or promising external resources or approaches

Not a specific statement, but finding a way to transition the postdoc into a position that is appealing to both academia and industry would likely help retain people who might otherwise have left academia because the postdoc was "useless," which is beneficial not just in postdoc retention but in considering that very high barriers exist for trainees to return from industry and re-enter academia.

Response 1298

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a progression of scientific process through which individuals become independent investigators. The goal of the postdoc is to continue gaining laboratory skills in your field of interest, but training should focus mainly on how to develop testable hypotheses and curating independent projects. Whether the end-goal of the postdoc is academia, industry, or an alternative career this training is beneficial to the critical thinking process. Additional responsibilities for a postdoc include mentoring junior scientists (undergrads, graduate students etc.), writing manuscripts and participating in the peer review process, testing thought-provoking hypotheses, communicating scientific results, and writing funding applications.

Fundamental issues and challenges

Postdocs in academic positions are underpaid. Postdocs also have limited community in academic positions for several reasons:

1. postdoctoral stipends are a large percentage of a grant application budget, therefore labs are limited in their ability to hire postdocs, which hinders community among peers
2. there is a lack of structure within the academic system for postdocs—limited oversight beyond your direct supervisor, departments that spread across campus, few opportunities to interact with peers within your department, no dedicated administrative personnel for postdocs.

A lack of structure also leads to additional issues in training and mentoring whereby postdocs don't have avenues for correcting issues with their supervisor effectively stunting their training or forcing them to leave their position. An additional issue arises when mentor expectations exceeds what is reasonable for proper work-life balance. Mentors in academia have little opportunity and no requirement for training in mentoring. Some mentors have no desire but most have no recourse to better their mentoring styles to be more inclusive or accommodating to postdoc struggles with family life, stress management, mental health, or issues of diversity and equity. With the increased recruitment of newly graduated PhDs into industry where the pay is higher, the work-life balance is more appreciated, and the structure is well-implemented, there is little incentive to be an academic postdoc beyond a love of science and the postdoctoral requirement for academic positions.

Existing NIH policies, programs, or resources

Dedicated programs to training mentors that are readily available, are not cost-prohibitive, and are based in principles of equitable teaching and learning. Increased budgets for postdocs and additional trainee grants. Incentives to universities that prioritize postdoctoral training.

Proven or promising external resources or approaches

No response

Response 1299

Perspectives on the postdoc roles and responsibilities

Post doc is a time to gain confidence as an 'authority' in the field and learn new perspectives/fill gaps in knowledge left by graduate program.

Fundamental issues and challenges

Cost of living!!!!! I live frugally but still have to maintain a second job to cover my 'extra' expenses (i.e. clothing that I haven't purchased for 5+ years because my graduate stipend didn't cover enough, basic gym membership, date night out 1-2x a month). I plan to have a child in the next year and have no idea where the money for childcare is going to come from. With a PhD, I should not have to worry about covering these basics. A stipend that covers subsistence living (roof, basic food, vehicle) is simply not proper compensation for our skill level. If I didn't love my project and have a wealthy family I would have left academia as soon as I received my PhD. If we want to keep people in academia, we need to increase the stipends available.

Existing NIH policies, programs, or resources

Not sure because I am unaware of many of these programs. Perhaps better advertisement is currently more important than expanded programs.

Proven or promising external resources or approaches

pay your researchers!!! A fellow postdoc succeeded in receiving an F32.and his pay went DOWN. He could not continue supporting himself on that funding. Do better.

Response 1300

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Reasonable salaries.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1301

Perspectives on the postdoc roles and responsibilities

When I began my postdoc training 4 years ago I thought that this position was intended to provide me additional training to become an academic PI, or to continue developing skills transferable to careers in industry etc. I took the known hit to salary because I wanted to do science in an environment that was not profit-driven.

Fundamental issues and challenges

For me, money and the state of academia.

1) Money, because I can't afford the medical costs of family planning (no fertility benefits) on a postdoc salary. Then after that I wouldn't be able to afford childcare.
2) Why do folks want to be in academia? Some—to do science. To be in control of their research direction. Some people will take a hit to salary, etc in order to do that. Those that can—ie do not have families to support, don't have debt, etc. It is easier to justify the hit to salary and benefits if the system is one that supports academics in the honest pursuit of knowledge. Instead, there are pressures that impact quality of life in that system: a publish or perish culture, top-down hoops to jump through to have research proposals accepted, work life balance deprioritized, policies that protect the university and not the researchers, questionable scientific integrity and minimal evidence of efforts to improve. That isn't tempting. I can work for an industry corporation doing science like this and get compensated appropriately for it.

Existing NIH policies, programs, or resources

Grant "awards". It is extremely frustrating to put in the work of writing a grant like an F32, receiving that award with applause, and then finding oneself no longer technically considered a university employee with significant negative consequences. Not only does this affect health insurance, workers compensation, access to university services and administration that understands my position, I also lost my retirement account—the first that I've ever had (beginning at the age of 31), having been in the academic system the majority of my adult life. Why are we punishing graduate students and postdocs who receive these awards by removing support?

Proven or promising external resources or approaches

Complete overhaul. Let's have an honest discussion about what postdocs are/should be. If it is a short (under 2-3 year) training position intended to lead to a senior scientist position in academia (one that is worth the short-ish term hit), during which the person knows they will be underpaid and unsupported but at least the trajectory is clear, then lets say that. If its a researcher position in an academic lab led by a PI, with some but low chance of leading to also becoming a PI, then make it an attractive position. Pay your workers. Give them rights. Otherwise of course they are going to leave and get paid in industry.

Response 1302

Perspectives on the postdoc roles and responsibilities

By the end of my postdoc I was able to develop my own independent research projects and my postdoctoral mentors switched role from mentors to collaborators.

Fundamental issues and challenges

Salary. As more and more graduate student unions are lobbying to increase pay for graduate students, the same needs to happen for postdocs. The NIH annual postdoc salary is only a $10,000 more than the (union negotiated) graduate student salary at the institution where I now teach—in fact it is well known in my department that hiring a graduate student is more expensive than a postdoc once benefits are factored in. This does not make any sense, especially when postdocs with biomedical backgrounds can earn 4X these salaries in industry. While a postdoc position is a training position, we also need to reward the skills postdocs have developed from their prior training.

Existing NIH policies, programs, or resources

Increase NIH salary for postdocs—my academic department pays postdocs on the NIH scale and it is hard to lobby from within to increase salaries. Provide paid support for postdocs on maternity/paternity leave—and let this support last closer to 6 months as opposed to 6 weeks.

Proven or promising external resources or approaches

Salary increases.

Response 1303

Perspectives on the postdoc roles and responsibilities

I am curious by nature and have a passion for mentoring, which is why I recently started a postdoctoral position to try my hand at a career in academia. I chose a position that will challenge me intellectually and help me grow scientifically, while also allowing me to learn the ropes of being in this environment under the mentorship of an excellent PI. That being said, I know there is no guarantee of my plans working out. I want to inspire young immigrants like myself to chase after hard problems, but I refuse to do so if it is financially unwise and emotionally taxing. I have given myself a 2 year deadline to see if I have a chance to become an assistant professor. After this deadline I will choose a job that will compensate me commensurate with my skill levels—skills that I have picked up in my PhD and during my postdoc.

Fundamental issues and challenges

After many conversations with friends and colleagues, I believe that postdoctoral positions by virtue of being defined as "trainee" positions, pay a lot less than a regular job. For most individuals living in a capitalist society, having a terrible-paying job with limited support from advisors, long hours, and simply the intangible ideal of making an impact are not alluring benefits. The rhetoric of "doing science in dingy laboratories no matter the cost to personal lives" is one akin to that of "the starving artist". It is completely impractical, and was perpetuated by a long-standing history of men in white coats before women were allowed in the workforce in any real capacity, and by individuals with family wealth to rely on.

If recruitment and retention of postdoctoral scientists is truly the goal, then a pay at least attempting to compete with industry standards, support from individual PIs as well as institutions towards the physical and mental well-being of their employees, actual rights as employees (paid time off, sick leave, etc.) along with the respecting of these boundaries would be the bare minimum as coming from the government. Finally, I hear that postdoc experience does not really count towards work experience in industry—a way to mitigate that would either be to encourage postdocs to pick up skills relevant to industry, or the government to create jobs within the academic framework that allow postdocs to transition to if the role of tenure track professorship is out of the question.

Existing NIH policies, programs, or resources

I have limited experience with the NIH policies and programs. However, I do believe that a more transparent grant review structure would greatly benefit many postdocs who want to stay on the academic track, especially the ones transitioning into PI roles.

Proven or promising external resources or approaches

Once again, limited experience with these. Possibly the dissemination of these resources to new postdocs as well as PIs.

Response 1304

Perspectives on the postdoc roles and responsibilities

opportunity to do more independent research that i am interested in and have the ability to navigate mostly independently. chance to go into a new line of research of interest

Fundamental issues and challenges

not enough money. as well as length of time required for a successful postdoc. limited faculty positions and how competitive it is. the "trainee" aspect: a grad student is a trainee, a post doc less so.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1305

Perspectives on the postdoc roles and responsibilities

I see postdoctoral training as a crucial step towards a mentorship/leadership role in conducting research, where one transitions from conducting research independently to sharing experience with young researchers. At the same time, this is a transitory period where collaboration increases among a wider breadth of knowledge. Finally, I see this period as the end of the decision-making process, where it still allows for pivot in your desired field (and choosing between academia/industry).

Fundamental issues and challenges

Especially in the states, academic burnout (and medical-field related burnout) are very prevalent. Securing funding into the postdoctoral position and maintaining it moving forward to either a senior researcher position or tenure-track faculty position adds to this. In addition, the timing frequently overlaps with other priorities (starting a family, settling down, etc.), and the majority of postdocs I interact with socially voice reasons for leaving as either financial or emotional reasons. In the biomedical field, there are so many startups that are more appealing financially than academia, where I see many swap over as adversity arises.

Existing NIH policies, programs, or resources

I think mental health and development of a strong academic support system is very important during postdoctoral training. Perhaps more resources or opportunities to interact with peers outside of direct lab space would be beneficial for growth during this period. With this, I think also having some template of different paths or speeds that you can work through your program with would be beneficial. In essence, being transparent on how the process has been tackled previously, either at a slow 'take-your-own-speed' pace, or accelerated 'accomplish a lot in a short amount of time' pace.

Proven or promising external resources or approaches

In all, I think increasing the frequency of meetings or get-togethers throughout the academic year would be beneficial. Many of the intersecting fields that make up biomedical research have unique timelines, and by having more opportunities to unplug, there can be accommodations for everyone.

Response 1306

Perspectives on the postdoc roles and responsibilities

I view a post doc position as basically trying to re-complete graduate education on a compressed timeline because there's no rotations, classes, etc. that grad students have to deal with and the post doc should be independent from the start and need minimal training from the investigator to do the project

Fundamental issues and challenges

THE PAY! For someone with the highest educational attainment possible, the pay is awful. Bachelors degree graduates can get jobs that pay more than a post doc with 5-10 years LESS experience and training. Why would someone, particularly in a struggling economy, go to work as a slightly higher paid graduate student for 2-5 years for half the pay of someone in industry or government position?

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Improving postdoc recruiting would help! I think it's hard for graduating students to have the pressures of finishing along with trying to find a post doc and how to do it and when to do it.

Response 1307

Perspectives on the postdoc roles and responsibilities

An academic postdoc should be able to handle multiple projects and oversee training of younger members within a lab. They should be able to independently write papers and submit grants to fund their research. Generally, a postdoc should be able to do everything a PI can but to a lesser expectation of quality.

Fundamental issues and challenges

Postdoctoral trainees are grossly underpaid. Keeping in mind that a postdoc is seemingly an extension of a PI (expected to be independent on multiple projects, train younger lab members, submit funding, etc.), postdocs should be compensated more for their expected performance and usually longer working hours. Additionally, since postdocs are expected to work so much, and are under-paid, a career change to industry is often valued. By leaving academia, postdocs can now make much more money and work reasonable hours all while getting do do the science they are passionate about. To retain and recruit more postdocs, salary must be competitive with that of industry positions.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1308

Perspectives on the postdoc roles and responsibilities

I think of a postdoctoral position as a necessary step towards professorship. It is an opportunity to gain leadership as well as even more research experience. However, postdocs should already be able to independently conduct research work, with general oversight of a PI but without day to day supervision.

Fundamental issues and challenges

One issue could be thinking about postdoctoral position as a chance of last resort for graduates who did not manage to secure a higher paying jobs for example in the industry. I think that in many cases this can result in retention of less motivated researchers in academic labs. Unfortunately, one of the most fundamental issues in postdoctoral training is the unreasonably low compensation. Postdocs should be treated more as trained and competent scientists who only need to perfect some of their skills and not as students in an extended PhD training program. This should be reflected in higher financial compensation as well as more clear and regulated rules for work time. I think that unlimited work time policy leads to exploitation of postdocs by their supervisors/mentors at least in some cases.

Existing NIH policies, programs, or resources

NIH guidlines regarding minimal postdoc stipend/salary per year dependent on years of experience should be updated. In my opinion the amounts should be at least 50% higher than they are currently. It also would be a good idea to adjust them to the cost of living in the area where the postdoc would be places—Boston, New York, San Francisco areas with major research institutions have much higher cost of living than most other places in the country. I would also suggest considering regulation of the postdoc work time in order to protect postdocs from exploitation.

Proven or promising external resources or approaches

No response

Response 1309

Perspectives on the postdoc roles and responsibilities

Highly skilled individual that works semi—or completely independently to carry a research project from start to finish.

Fundamental issues and challenges

Post docs are not paid enough money. The age range of post docs falls within a particularly vulnerable time, where many, especially women, are also building their lives at home. Salary, more than anything else, can help promote a stability, and ultimately retention. For example, initiatives like the NIH childcare supplement, were instrumental to finding relief from the constant financial pressures in this role.

Existing NIH policies, programs, or resources

Support for individuals financially is the biggest issue that I can identify. It goes without saying that a post doc is a very motivated passionate person. They have to be to get this far. Pay them for these skills. An entry level job in almost any industry profession likely doubles pay.

Proven or promising external resources or approaches

It would be nice to not only have academic hierarchy as the final outcome as a postdoc. Can there be grants or training for developing research scientists? Many post docs would not mind staying as supporting role, but typically the only option is to level up to an assistant professor. At that point you need to run a small artisanal business. If there could be a stable alternative recognized by the NIH, that would probably retain many highly skilled, elder post docs that enjoy their job and don't really want to go onto the endless academic ladder.

Response 1310

Perspectives on the postdoc roles and responsibilities

Continued training toward independence. honing,as well as acquiring new, skill and traits. Working with candidate (frequently) to meet their career aspirations.

Fundamental issues and challenges

Costs of living; Feeling of disconnectedness (unless the local program, department, division, institute, explicitly addresses this); Imposter syndrome, especially if we advisors do not convey all that we like, value and benefit from in academia.

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

Many Professional Societies provide webinars, panels, career counseling, advising (SFN, ASCB, GSA., etc, etc). Society dues could be paid by NIH.

Response 1311

Perspectives on the postdoc roles and responsibilities

A postdoc position should be a training position that enables a scientist to transition onwards to a tenure track position.

Fundamental issues and challenges

Poor pay and precarious positions. I know multiple people who have been in high pressure scenarios to fund their own position lest they be forced to quit or work without pay.

There are not enough faculty positions for the number of postdocs seeking them.

Too long of training times, the post doc is ever expanding in time. It asks people to put off parts of their lives that their non-academic peers are able to enjoy.

Existing NIH policies, programs, or resources

Moving away from post-doc positions into more staff scientist positions for people who want stability and fair compensation but also want to contribute to academic science.

Proven or promising external resources or approaches

No response

Response 1312

Perspectives on the postdoc roles and responsibilities

Postdocs have PhDs and are still referred to as trainees by the NIH. They are a few years away from taking a faculty position and underpaid, overworked, and undervalued. The role of a postdoc is to be a

mentor to graduate students and do all of the things a faculty member does with significantly less money. It means spending more of your life in a difficult position.

Fundamental issues and challenges

The main issue is that postdocs (and graduate students) are underpaid. The NIH starts postdoc salaries at $56k. Postdocs have ~10 years of education and ~5-6 years of experiences and are being paid a paltry entry-level salary. Postdocs are at least entering their 30s, and many have or are planning to have children, yet are paid little and given substandard benefits. Further, postdocs are vulnerable to exploitation by PIs who are motivated to keep highly skilled personnel in their lab. Any other position would pay more. It makes no financial sense to pursue an academic postdoc unless family or a spouse is able to support the postdoc.

Existing NIH policies, programs, or resources

Graduate students and postdocs must be paid more.

Proven or promising external resources or approaches

Pay people more.

Response 1313

Perspectives on the postdoc roles and responsibilities

I was a postdoc for 2 years before leaving for industry. To me a postdoc felt like a continuation of graduate school. There were really no new opportunities presented to me that weren't also presented in grad school.

Fundamental issues and challenges

I chose to leave my postdoc because I felt undervalued. I was only making $10k more per year than the graduate students in my department, and was making less than many of my peers working in other fields who only had bachelor's degrees. After being a poor graduate student for 6 years, I don't think many people want to continue to struggle financially, especially if they feel like the postdoc isn't adding any value to their lives. If you don't want to be a professor, there is little value to a postdoctoral fellowship. Furthermore, the professors in my department didn't treat postdocs as any different than grad students. I felt like my degree and years of work/experience in research meant absolutely nothing in my postdoc.

Existing NIH policies, programs, or resources

Better pay for postdocs. More training opportunities that don't just rely on your advisor. Advisors sometimes seem dedicated to training, but once youre in their lab that's not the case. It would be nice to have external opportunities as well, especially ones that don't require money.

Proven or promising external resources or approaches

No response

Response 1314

Perspectives on the postdoc roles and responsibilities

The academic post doc is independently driving a research question and is training to become an independent researcher who leads other researchers in furthering a scientific field.Their responsibilities include conducting experiments, leading meetings, making collaborations and connections, managing projects and people.

Fundamental issues and challenges

The lack of funding for postdocs and the perpetuation of toxic PIs which drastically reduce retention of postdoctoral talent is a real issue. The postdoc doesn't get paid enough for the cost of living in cities especially compared to their peers in private sector.

Existing NIH policies, programs, or resources

Expand resources for funding postdoctoral researchers. Expand programs which support new PIs and Postdocs

Proven or promising external resources or approaches

No response

Response 1315

Perspectives on the postdoc roles and responsibilities

It is meant as a launch pad for a career in biomedical sciences. It is a labor-intensive phase of one's career and filled with ups and downs, both in professional and personal events.

Fundamental issues and challenges

No training in people management, soft skills, communication, budget management, public speaking, writing, non-traditional careers. Low pay. Resources are concentrated in the NIH intramural program, which is too elitist and bureaucratic as a career choice.

Existing NIH policies, programs, or resources

Higher pay, more training opportunities, regular and formal progress evaluations.

Proven or promising external resources or approaches

Programs with FDA, training fellowships that allow them to work in places other than NIH. Expanded access to NIH resources and career pathways.

Response 1316

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should enable an individual to continue with their training as a researcher and gain skills and experience to prepare them for their research career in academia. While functioning independently, a postdoc should design, organize and conduct specialized experiments using stablished scientific protocols, or in some cases design/standardize new protocols; summarize findings and publish results in research journals. In addition, a postdoc can have mentorship initiatives and have students or technicians under his/her tutelage.

Fundamental issues and challenges

There are several points that are currently affecting the quality of life of postdocs, starting with the salary. I am starting my fifth year and they are paying me the minimum according to the NIH. I believe, this is because I am an international postdoc and I have limitations in terms of grants to which I can apply. Because of this, my colleagues who can and have obtained grants have had their salaries increased, but since I cannot apply for any grant, I continue with the minimum. This not only affects my salary but also my CV and the possibility of me pursuing a career in academia. Also, as an international, I am limited to a certain number of years with a visa and therefore my contract is tied to it, generating even more anxiety/uncertainty than what is already generated by research in academia.

Existing NIH policies, programs, or resources

Open NIH grants to internationals, not just K99/R00, so that we have opportunities to "compete" with other postdocs. Due to the pandemic, most private grants were not available for a couple of years and by the time the resources were back on for internationals to apply, I was not eligible anymore for most grants.

Proven or promising external resources or approaches

No response

Response 1317

Perspectives on the postdoc roles and responsibilities

Training for faculty position: responsible for own research idea, plan, and execution, to be used as a jumping off point for future research as a professor on the tenure track.

Fundamental issues and challenges

Pay is terrible, no work life balance, expectation that you will have to move (dragging your partner or spouse along repeatedly) to wherever you have the opportunity. Prospect of doing multiple postdocs is terrifying. Lack of benefits (e.g m/paternal leave)

Existing NIH policies, programs, or resources

Unsure

Proven or promising external resources or approaches

Unsure

Response 1318

Perspectives on the postdoc roles and responsibilities

Opportunity to learn a transition fields, or gain a completely new skill, compared to the work done as a graduate student.

Fundamental issues and challenges

Tough to generalize, but lack of proper listings of available positions. Many graduate students can feel limited in which labs to pursue because they're only familiar with those that they follow on Twitter/post post-doc opportunities on twitter. Overall, poor pay is a contributing factor to poor retention and quality of life. Also, many recent graduates are ~30 years old and aren't particularly interested in moving across the country again for a couple years' position, and want to buy house/have family/settle down.

Existing NIH policies, programs, or resources

I think a proper job posting/website and salary increase would help make recruit more prospective postdocs.

Proven or promising external resources or approaches

No response

Response 1319

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a stepping stone in my career. It is an opportunity to grow my skills, gain experience and publications, practice research at the academic level, and better understand myself so that I can decide which job I would like to pursue long-term. I am not sure if I want to stay in academia and think that a post-doc position will help me decide, while also filling gaps in the knowledge gained over my PhD. Once in the position, I hope to be mentored while also producing original research.

Fundamental issues and challenges

As a prospective post-doc, I mostly worry about pay, finding the right mentor, and if the position will be worth it. I know I could find a higher-paying job with my degree and worry that a post-doc position will pay much less while also expecting much more (additional time in the lab, a move, or demanding mentors). For me and from what I hear from my peers, pay is the largest issue that discourages the pursuit of a post-doc position.

Existing NIH policies, programs, or resources

I don't know anything about NIH **policies, programs, or resources**for prospective or current post-docs, so I think the first step would be expanding exposure and clearly communicating what is available for people looking at this role.

Proven or promising external resources or approaches

Clarity of resources and higher pay, as described in previous questions.

Response 1320

Perspectives on the postdoc roles and responsibilities

The postdoc is traditionally a transition period to academic faculty positions, enabling new graduates to obtain skills not available in their thesis labs, and letting them develop their own projects as PI. However this transition has been up-ended since more than a decade ago by availability of more competitive positions in industry or other, such that as soon as a skilled postdoc ascends to the position, they are offered more lucrative jobs elsewhere.

Fundamental issues and challenges

Pay equity is the most fundamental issue barring retention of postdocs. Also the lack of assurance from their mentors or home institutions that they will move forward in their careers in the academic ladder, or institutional barriers such as lack of strong support from the institution demonstrated by availability of tenure-track positions, competitive salaries or retention even if the PI loses funding.

Existing NIH policies, programs, or resources

Increase NRSA levels for postdoc stipends. There should also be a concerted effort across institutes to teach postdocs the nuances of professional progression to a more stable academic position as future lab PI. However if even the established PIs feel insecure about their jobs due to lack of assurance of funding from ever lowering NIH paylines, the postdocs will see a bleak future for themselves. Essentially as new or early-stage investigators they can get great support in getting the first R grant, but then they are left on their own with low chances of getting funded afterwards unless they are at the very top percentile of all biomedical investigators. Postdocs see the lack of stability of this situation in their PIs and realize early on that they do not want to keep chasing multiple R01s in order to just get a semblance of (or never get) equitable salary, whether it's salary comparable to peers in well-funded institutions or in industry or other.

Proven or promising external resources or approaches

All of the above

Response 1321

Perspectives on the postdoc roles and responsibilities

Honing skillset as a scientist in the field that the PhD was done. Potentially serving as a mentor for graduate students and learning how to write grant proposals for potential role as a professional investigator.

Fundamental issues and challenges

Most postdocs positions are only open to people who have done mostly the same work as a PhD. This excludes students looking to develop a new skillset from being competitive and also may not be exciting for someone who did the same work as a PhD student. Also many postdocs are looking to become professors but since the demand for those positions is a lot more than the supply, the post doc then becomes a pseudo terminal role in academia for many. A PhD may see this in advance and choose to get a head start on their life and earning potential by not considering the postdoc in the first place and choosing to enter industry. Maybe if PIs advertise the development of new skills, for example someone who did a PhD purely on the bench looking to develop computational skills or other types of bench techniques from what they learned, maybe that could help with the issue. In the current setup, a scientist's entire future career trajectory is mostly decided by the barely informed decision they made as a first year choosing their lab. If they decide midway through their PhD that they might actually enjoy other types of science more, it's often too late for them and they become unqualified for a postdoc in that new field as well.

There should be the opportunity to reroute trajectory as a postdoc if needed. Also, if the postdoc is going to be a terminal academic position for the ones interested in staying in academia then it should probably be reflected in postdoc pay considering their industry alternatives.

Existing NIH policies, programs, or resources

I'm not too familiar with NIH capabilities. Maybe rewarding PIs with extra funding that actually value the "training" aspect of "postdoctoral training" and are not just looking for someone who has already mastered the techniques needed during their PhD.

Proven or promising external resources or approaches

I'm not sure.

Response 1322

Perspectives on the postdoc roles and responsibilities

Opportunity to receive additional training important for career development , publish major papers & prepare for next career step

Fundamental issues and challenges

recruitment has become a huge problem. Morale/motivation seems to be very low for pursuing academic careers. I also agree with the UC academic researchers and postdocs that their salaries should be higher, but now there is a huge gap between NIH postdoc salary level and UC levels, compounding the problem (faculty will now hire long term staff rather than postdocs—even if postdocs are available, which is rare—because the budget model isn't sustainable) . NIH needs to increase postdoc salaries , or the whole model is going to fail.

Existing NIH policies, programs, or resources

Increase the postdoc salary levels. it's that simple .

Proven or promising external resources or approaches

Increase the postdoc salary levels. i'l just keep repeating it.

Response 1323

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Insufficient pay seems like the massive elephant in the room.

Existing NIH policies, programs, or resources

I don't know what policy or program this falls under, but pay people what they're worth?

Proven or promising external resources or approaches

No response

Response 1324

Perspectives on the postdoc roles and responsibilities

Contributes expertise/knowledge to the lab, able to provide a novel perspective or ideas to a research group. Someone who could spearhead their own project in the lab or perform experiments within another ongoing project in the lab (depending on group, expertise, etc.). Mentor for graduate/undergraduate students int he lab.

Fundamental issues and challenges

Salary is often quite low, especially because many are at the age where they might be looking to start a family. There is definitely a history of and ongoing toxic culture in many labs, so other job prospects

(especially ones that pay more) are often more appealing. Unless the trainee is interested in pursuing an academic career, I don't really know why a graduate student would choose a postdoc. If there was management training for PIs (the NIH Becoming a Resilient Scientists series was very helpful for me as a graduate trainee and an equivalent training for PIs might be useful) and more funding opportunities that rewarded the trainee rather than the PI, I think that would greatly increase retention.

Existing NIH policies, programs, or resources

Funding programs are great, would emphasize increased salary that goes directly to the trainee rather than takes financial burden from the PI. Application materials for NIH training grants/fellowships are confusing and not that informative.

Proven or promising external resources or approaches

Programs for senior graduate students to apply to that would provide postdoctoral funding (similar NSF GRFP for undergraduate students) that fund the trainee in addition to the PI (increased salary for the trainee but still provides some support for the PI). Mentoring networks with PI participants who have demonstrated a commitment to mentoring and opportunities for trainees to meet each other.

Response 1325

Perspectives on the postdoc roles and responsibilities

To me, the purpose of an academic postdoc is a temporary training position meant as a stepping stone to a tenure-track faculty position. Ideally, postdocs should be supported by their PIs to gain specific skills that they didn't receive during their PhD, develop their independent research program, and be guided through the academic job market (or any alternative job market the postdoc is interested in).

Fundamental issues and challenges

One of the most challenging aspects of supporting postdocs is the issue of security and stability. This has to be a delicate balance, because on the one hand, postdocs deserve financial stability, healthcare, and a good quality of life. On the other hand, postdoctoral positions are not meant to be permanent, which can sometimes inhibit some of these resources. The biggest challenges I have faced in my own postdoc is stability, which has hindered my research productivity greatly. For example, I have spent the majority of my time in my postdoc position applying for funding just to keep my position for the following year. This put me behind in getting research up and running, which then puts me behind on the job market and requires more grant writing. It is a vicious cycle. Now, as a more "senior" postdoc, I am ineligible for many grants and fellowships, which means I will either have to spend my remaining time as a postdoc writing multiple risky grants, or transition out of academia. My PhD is from a very competitive program and I have a number of publications from prestigious journals, so I really cannot imagine what this situation is like for postdocs at less competitive institutions.

Existing NIH policies, programs, or resources

The NIH could consider providing more training grants (like the K99, F32) and/or expanding the funding duration and eligibility years for these programs. More and more, postdoctoral positions are lasting longer than a year or two due to dwindling and highly-competitive academic job prospects. If PIs wish to be able to recruit postdocs, they will have to be able to offer higher salaries and increased job security so that postdocs have sufficient time to become competitive for the academic job market.

Proven or promising external resources or approaches

No response

Response 1326

Perspectives on the postdoc roles and responsibilities

I think for postdocs, especially in the sciences, it is unfair to keep thinking of them as temporary and to limit the term of them to only 6 years. While of course no postdoc wants to stay a postdoc forever, it is clear with the decrease in funding and open faculty positions that many are going to have to stay postdocs for longer than expected.

Fundamental issues and challenges

Personally I think the reason academic institutions are being about to obtain and retain postdocs and why academic postdocs do not have a great quality of life comes down to one simple thing. Pay. We do not get paid what we are worth. We are considered "still in training" while running experiments, labs and managing people. It is absolutely disrespectful to all that we have put in time wise, education wise and the knowledge we have when a tech with no undergrad degree is making $6 less an hour than us. Its basically as slap in the face. In industry you are paid for your knowledge and skill and in academia you simply are not. In industry you are also compensated in some way or form for overtime and treated as an employee. Most postdocs receive none of this treatment in academia including the given the same benefits as normal employees (who they normally work more hours than). Simply the government needs to step in and make a mandate that postdocs be MANDATED to be FULL EMPLOYEES of their university. NOT SECOND CLASS. Otherwise academia will continue to lose good scientists to other avenues every year.

Existing NIH policies, programs, or resources

If we are still considered "in training" and are not going to be paid to our full potential I don't think it is fair for postdocs to be required to pay their student loans back. We are just starting to make money after YEARS of struggling to get by. If a person chooses to take a lower paying job to stay in academia they should not have to pay back student loans. Unless those years count towards a 10 year public service forgiveness program at a public institution. But they should get that choice.

Proven or promising external resources or approaches

[redacted for anonymity] is one of the few universities that treat their postdocs as FULL EMPLOYEES with complete benefits. Parental leave, sick leave, holiday leave, personal leave, health, dental, vision, etc. Their model is great. With a PAY INCREASE [redacted for anonymity] would be the best university in the US to postdoc at in academia.

Response 1327

Perspectives on the postdoc roles and responsibilities

I view it as an opportunity to fully develop into an independent researcher that will take on a leadership role (PI in industry or academia). As such, it means having the opportunity to develop your own research program and ideas, and to learn how to manage a lab and other mentorship activities such as teaching, training PhD students etc. Although this could be considered training, I see it as a full-time job for someone who is extremely qualified, having earned their PhD. Thus, they should be compensated as an extremely well trained researcher.

Fundamental issues and challenges

The first challenge is the salary. You do not make much more than you made as a graduate student, despite being much better trained and having a doctoral degree. Industry jobs pay so much more with an arguably lighter workload, better benefits, and better work-life balance.

Second, many "successful" PIs are not well trained to be mentors (and may not care about mentorship at all), and they go on to send many postdocs on to faculty positions based purely on their name. These postdocs continue the cycle of not being good mentors, so many postdocs positions in successful labs suffer from poor mentorship and will perpetuate the excess of poor leaders in academia.

Third, the difficulty of obtaining a faculty position. Many of the criteria and requirements to obtaining a faculty position are unclear, and it's not guaranteed that as a postdoc you will be guided on how to best navigate the process.

Existing NIH policies, programs, or resources

More accessible funding, and raising the pay scale for postdocs. Specifically funding that requires postdocs to make an active effort to obtain leadership skills, rather than focus solely on research

Proven or promising external resources or approaches

No response

Response 1328

Perspectives on the postdoc roles and responsibilities

I'm a NIH-funded postdoctoral fellow and chose to this training year(s) to be a transition time between graduate school and an academic faculty position (fingers crossed). I felt that I needed more mentorship and training within academia in order to become a successful externally funded research scientist. During my clinical psychology PhD program, I focused much of my efforts on my clinical training and was not part of a large externally funded lab. My research experiences in graduate school were varied (I took research opportunities when available with multiple investigators both at my home institution and remotely). Thus, my "research program" was not cohesive, I did not have grant writing experience, and I did not understand the culture of an academic medical institution. I chose my postdoc based on strong and high quality mentorship (even above the perfect research "fit") because I needed guidance with this transition. Before my postdoc, I felt extremely ill-equipped for academia and would likely have chosen a full-time clinical position if postdoc wasn't an option.

Fundamental issues and challenges

Postdoctoral trainees are underpaid, which is challenging after being in debt following graduate school. As part of the clinical psychology PhD, we have the clinical internship year as our final year of graduate school. During this year (the year before my postdoc), I worked 60 hours/week (doing research after my clinical days—most nights and weekends) and did not make a living wage. After rent, I barely had enough money to buy my groceries and was unable to take out federal student loans to supplement my income (we are not allowed to during this year). As a single woman with no partner to supplement my income, I felt privileged to have my parents to help me pay for things extremely meaningful to my mental health (e.g., gym membership, travel money to visit friends for social support). Six years of graduate school, providing clinical services throughout a pandemic, having a massive amount of student loans, and never making a living wage, have culminated into feeling "burnt out". It is stressful to now be writing a K23 because I will be unable to remain at my academic medical center without this funding. As an example of financial stress as a postdoc—during my first few months I had research accepted at a national conference. My NIH-funded postdoc paid up front for the flight and registration, but I was expected to pay for my hotel and food out of pocket and then be reimbursed. My bank account went to $0 by the end of the trip (my credit card has been maxed out since internship year). Waiting for reimbursement for several weeks, I was eating stale food out of my pantry, which was depressing and dehumanizing to be doing with a PhD. I also regretted submitting to this conference.

Existing NIH policies, programs, or resources

Higher pay and security of two (or even three) year contracts would help people feel more stable and have a less stressful time applying for externally funded positions as they transition to faculty. If I had a partner or children, I would not have taken this postdoc because of the instability. It's a one year contract that can be "renewed" possibly for a second year. It seems relatively unlikely that it won't be renewed, yet still not guaranteed. My academic medical institution is purely "soft money", so I will need to secure a K23 or move again (which is expensive). Also, as an NIH-funded postdoc I pay the maximum amount of taxes because I am technically an "independent contractor" at my institution. Taxes are not taken out of my payroll and I was given no education or heads up about this. Figuring out how to pay/how much to pay for my taxes has been just another mental burden. I also pay more taxes than my friends who have postdocs with PI's. So, I somehow feel punished for securing a NIH-funded postdoc. Although the difference might seem insignificant to some, I cannot emphasize the impact of several hundred dollars to my bank account.

Proven or promising external resources or approaches

In my opinion, to retain more diverse researchers into postdoctoral positions, the simple answer is higher pay and better job stability. Having a position in academia that relies on external grant funding is unstable in nature, but I think it is most a threat to mental health and quality of life when this instability follows so soon to being a graduate student. The only reason I am staying in this postdoctoral position is because I am receiving excellent mentorship and I am privileged to handle the instability and financial stress (no children, financial help from parents). However, I am still considering all my options (industry included) because the stress of paying off student loans (I applied for the NIH LRP—waiting to hear), paying off my credit card, and applying for external funding is not sustainable.

Response 1329

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary is way too low

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1330

Perspectives on the postdoc roles and responsibilities

I have always been told that a postdoctoral fellowship is meant to fill in gaps from your graduate school. It is there to add skills or experience in a field that may have been lacking in your grad work that will help you further your career as a scientist. It also allows opportunity for mentorship, both under a new PI and to mentor underlings.

Fundamental issues and challenges

1) The pay is a joke. The current entry level pay for a postdoc put out by the NIH is $54,835. There is a KFC I drive by on my way to work that is offering that much for managers for what I imagine is a lot less work. Prospective post docs have spent the last 5 years scraping by on grad student stipends that barely cover living expenses going through emotional and professional turmoil. The salary that is being offered in most post-doctoral positions does not reflect the level of training and specialized skill set that we spent years developing. Not all institutes will match the NIH payscale either and are offering less. I will say outright, the only reason I chose to post-doc is that my partner is financially stable enough that money is not an issue. To add to the pay issue, the level of benefits offered to postdocs may not be matching what industry is offering. Some people may put off having kids until their postdoc and if there is not parental leave that is a non-starter. The quality of health insurance and annual leave may also impact the choice to go to industry instead of academia.
2) Toxic Environment. There is no such thing as work-life balance in academia. We pretend there is, but there isn't. All the editorials are griping about how we don't want to work anymore. We do, just not in the same toxic environment that all the PIs who are clearly still scarred from that toxic environment and projecting it onto the future generations. Shouldn't we want things better for people because we suffered, not want it bad for everyone because that's the way it was for us??

I have more thoughts, but I am out of words

Existing NIH policies, programs, or resources

The fact that I had no idea the resources existed says a lot. I am vaguely aware of some of the grants, but perhaps an officer at every institute or per region that could explain what these are to people who aren't in the know could be helpful.

The policies website is unreadable/unapproachable. So there is that.

Proven or promising external resources or approaches

My institute offered a moving stipend. My institute realized that moving is expensive and difficult and offered me a tax free stipend to help my move. I could see how a move could be prohibitory for a lot of people.

Offering more money. Industry is offering 2-3x the NIH starting post doc salary. After 5 years of scrimping and starving, I could see why people would take that over pursuing a post doc.

Eliminating the toxic PIs.

Response 1331

Perspectives on the postdoc roles and responsibilities

My view of a postdoc was to achieve scientific independence, learn grant writing, attend conferences, publish, lead a project, obtain a job, etc. What happened during my postdoc was that I basically was a research assistant the entire time.

Fundamental issues and challenges

1) Low Salary. My salary does not cover the cost of living (medications, groceries, etc.) in a safe apartment in a major US city.
2) Loneliness. I had to move across the country due to the limited number of postdoc opportunities that matched my area of scientific interest. I had no friends or family to support me with this transition.
3) Lack of Support to Reach Scientific Independence. PIs should be evaluated based on the number of K99/R00 applications they submit vs. what is funded to encourage PIs to promote scientific independence for their postdocs.
4) Publication. Postdoc positions are short. The idea of "intellectual" contribution should be very clear to PIs vs. 10 years of physical presence in a lab to be included on a publication.
5) support to find a tenure-track job.
6) travel reimbursement. I was not given adequate funds to travel to conferences, which held me back from disseminating my science.
7) Lack of mentorship training. The mentee should hold a key to their own success not their mentor. We should encourage mentors to make a change (i.e., mentorship courses, etc.).
8) Lack of Voice. Postdocs have no one to express their frustrations/concerns with. The NIH should create a safe place for postdocs to gather and discuss strategies to overcome barriers.
9) Quick response to change. The NIH needs to do something now. If this postdoc dilemma does not end soon, current postdocs may discourage future students from pursuing a postdoc and the dilemma will only get worse.

Ultimately, if the NIH makes a change, I am confident universities will follow—and if enforced on grant applications—universities will have no choice.

Existing NIH policies, programs, or resources

Increase the salary and remove restrictions with giving bonuses to individuals who work incredibly hard. Provide moving stipends that count as a reimbursement and not taxable income that go up to $5,000 (or $10,000 if possible). Provide yearly travel funds that go up to $5,000. Provide additional mentor support networks and workshops. Require PIs to give postdocs authorship & include postdoc positions on R01 applications. Require PIs with postdocs on R01s (or equivalent grants) to take mentorship courses. Require R01 (or equivalence) PIs to report postdoc development plans and quarterly follow up reports to the NIH if a postdoc is on an NIH grant (other than the typical T32).

Proven or promising external resources or approaches

NIH Resilient Scientist Training Course was great.

The postdoc education office was a great resource at my university.

Response 1332

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Lack of adequate salary and benefits are by far the biggest challenges inhibiting recruitment, retention, and quality of life. As a postdoc, I make significantly less than I could if I left academia for full time clinical work or industry. My earning potential has already taken a huge hit from many years in graduate school.

This is only exacerbated by the inflated expectations for admissions into graduate school today—I needed to obtain additional experience prior to being accepted to a doctoral program, and so completed a two-year masters program, followed by five years in my doctoral program, a ridiculously underpaid clinical internship year where I had to take on debt to live, and now postdoc. In my institution, I am not given any benefits as a postdoc other than extremely limited student health insurance that is paid out of my institutional allowance on a T32, also limiting my ability to conduct research and receive additional training. If I am lucky enough to only complete one year of postdoc before transitioning to faculty, that adds up to essentially a lost decade—a decade accumulating debt rather than savings, zero retirement benefits, minimal health benefits, etc.

Existing NIH policies, programs, or resources

Salary and benefits MUST be increased, and health coverage should not be taken from institutional allowances. Postdocs also need retirement benefits, paid family leave, larger childcare subsidies, and reproductive health benefits like egg freezing.

Proven or promising external resources or approaches

Salary and benefits must be comparable to industry.

Create postdoctoral fellowship opportunities that are bridge or transition programs to faculty slots. Institutions need to create more faculty lines if they want to keep attracting postdocs.

Response 1333

Perspectives on the postdoc roles and responsibilities

The primary role of the academic postdoc is to prepare graduate students to become principal investigators. Side roles would be to give recent PhD graduates additional experience in their chosen field or to allow them time to decide on a career path.

Fundamental issues and challenges

Graduate school delays achievement of a permanent position, and postdoctoral fellowships further delay this during a time in life where people would like to settle down. Many postdocs have young families and would like a secure job with benefits, good pay, and in a long-term location. For postdocs who do not have young families, there's the concern of delayed retirement contributions (no 401k, etc.; low wages don't allow for IRA contributions). The culture around science is also disheartening (delaying stability, permanence, and family life for the pursuit of research; bias and discrimination against women and minorities, especially those who took a break for pregnancy, mental health reasons, etc.)

Existing NIH policies, programs, or resources

At my agency, it's common for a postdoc to stay 4-8 years (up to the limit), but at universities, the postdoc can be as short as 1-2 years. Delaying a permanent position for 1-2 years is much more manageable than for 8 years. Although a postdoc can stay here shorter than 4 years, it's not the common refrain we hear—longer is the norm. Additionally, postdocs basically get 'kicked out' of my agency after 8 years, even if they want to try to stay in a permanent position. There is no good process for a postdoc to transition to a staff scientist, or even a contractor. This is even worse for visiting postdoctoral fellows who are up against visa requirements and clocks.

My agency has made good progress on postdoc leave (vacation time and parental leave), but I feel there needs to be more support for trainees with small children and young families. Paid childcare on campus? Also, housing is a huge issue—it's so expensive in this area and the postdoc stipends are lacking. A young family would NEED two working parents if one were a postdoc to pay both rent and childcare. Lastly, there are no ways for postdocs to get retirement matching from their employers since they are not considered "employees."

Proven or promising external resources or approaches

benefits like free gym memberships, paid childcare, other wellness subsidies; expanded telework and remote work options

Response 1334

Perspectives on the postdoc roles and responsibilities

A semiprofessional position in which the researcher is highly trained and adds expertise to the laboratory, but financial independence and mentoring skills are still building.

Fundamental issues and challenges

Financial stability, especially within major cities with high cost-of-living. It is standard for universities/departments/labs to compensate postdocs the minimum salary based on the NIH recommendations—please raise these and consider language that takes into account the financial landscape of major cities. Similarly, employee benefits such as retirement matching or parental leave should be mandatory. Postdocs are spending 5+ years, usually throughout their 30s when many would like to start families. Without these basic securities and support, it is a difficult choice to stay in academic research knowing better benefits are available elsewhere.

Existing NIH policies, programs, or resources

Please include language protecting F32 awardees from a non-employee title/status change. Accepting my F32 resulted in a loss of W2, certain benefits including pretax FSA/HSAs, and taxation of my health benefits, all equating to ~$3000 in lost benefits and costs to me. This is financially harmful, and the lack of tax form has made it difficult to apply for a home loan.

Proven or promising external resources or approaches

No response

Response 1335

Perspectives on the postdoc roles and responsibilities

I absolutely love my postdoc position great projects great mentorship. Flexible timings help me as a new mom too. Without the flexible timings I would have quit.

Fundamental issues and challenges

I'm a postdoc in [redacted for anonymity], salary is a huge issue. 85K is necessary to survive with a family in a city like [redacted for anonymity],rents and daycare are unbelievably crazy here. For Indian postdocs H1-B visa processing delays are a huge issue too, option to renew it in the US, will prevent postdocs from getting stuck at a US Consulate in India. If I got a competitive offer from Switzerland and US, as an Indian postdoc I would pick Switzerland coz I can visit my family once a year without stress. Ability to visit family makes one more productive and NIH must pay heed to this, especially postdocs from India that are plagued by this.

Existing NIH policies, programs, or resources

More training programs to reskill in industry in demand skills. Programs must be offered remotely so more postdocs can participate. Example Seq data processing. Less than 5 percent of Biology Postdocs can be PIs, reskilling options for the rest is definitely not a fools pursuit.

Proven or promising external resources or approaches

1. Ability to renew H1-B academic and J-1 visas in the US for postdocs. NIH must approach USCIS regarding this
2. Increase in salary for [redacted for anonymity] and other metropolitan area postdocs, factoring in rent and daycare.
3. Reskilling courses along with funds to reskill postdocs in industry relevant skill sets.

Response 1336

Perspectives on the postdoc roles and responsibilities

In the best sense, post-doctoral scholars are highly trained scientists who are in the prime of their scientific career. They are masters of methods and close to the data but also have experience writing

manuscripts and grants. Together this can mean a very productive period in their career. Post-docs should be encouraged to publish high-impact work and then move on to a non-trainee position quickly, if possible.

Fundamental issues and challenges

For many people the post-doctoral training years coincide with a time where big life changes are happening including getting married, having kids, being more interested in one's financial future, buying a home, and having older parents in need of financial or medical assistance. For women especially, there is a sink or swim mentality when it comes to "making it work" being a full-time post-doc and raising babies and small children. This time, when children are under 5, is intense and unlike any other era of childrearing. For many, it is untenable to remain in academia as a trainee as kids require round the clock childcare (from a parent or paid provider) and costs quickly begin to rival the post-doctoral scholar income. Post-docs need real childcare subsidies and help with buying homes. Otherwise they will leave for jobs that pay better and that allow them to achieve balance between their personal and professional lives. If that means fewer post-doc positions because they are more expensive, then so be it. Post-doc positions should be well-paid (or at least provide benefits needed to traverse this time in life) and competitive to get. Graduate students should not default to post-doctoral positions only to realize later that the financial model makes it impossible for them to grow personally.

Existing NIH policies, programs, or resources

Childcare cost benefits that actually cover the cost of childcare when kids are under 5 years old.

Proven or promising external resources or approaches

No response

Response 1337

Perspectives on the postdoc roles and responsibilities

The postdoctoral position, as far as I can tell, is a way for academic universities and PIs to have a steady source of underpaid labor under the guise of "training". In industry, people who have a PhD and drive science forward are called "scientists" and are paid appropriately for their contributions. In academia, by calling postdocs "trainees", institutions and PIs can underpay them. I basically view it as a period of making no money with no promise of any payoff, where the only theoretical payoff (of a faculty position) depends on publishing in high impact factor journals and is no guarantee. For the majority of people (those who do not end up getting a faculty position), it is inferior in every possible way to industry. Furthermore, for a large fraction of labs, a high number of postdoctoral positions are held by PhDs from other countries. I think this is because academic institutions have essentially identified that by holding the ability of people to stay in America over their head, they can underpay and overwork PhDs from other countries to form the backbone of American biomedical research. Suffice it to say, I think this is a bad and exploitative system and would be less bad and exploitative if we offered international PhDs permanent residency for their contributions as well as paid them a living wage.

Fundamental issues and challenges

The number one issue by far is the lack of fair pay for postdoctoral scientists. I can make at least 2.5 times as much money in industry doing the exact same type of experiments, with better hours. That is the exact reason why this year I will be leaving my postdoctoral position for industry, in order to make enough money to live.

Existing NIH policies, programs, or resources

Increase the NIH pay scale for postdocs. The NIH pay scale for postdocs, which essentially sets the salary at most institutions in America, is abysmally low. The pay scale should be equivalent to industry. Why should an academic postdoc make less money for doing essentially the same job as industry scientists?

Proven or promising external resources or approaches

The NIH should learn from the one and only current place that is actually able to recruit top level PhD level scientists: industry. The reason industry can recruit postdocs is not complicated at all: it is that they pay postdocs fairly. It has absolutely nothing to do with any of the things mentioned above (e.g. more recruitment efforts, more training, working environment, mentoring, or job satisfaction). The last thing I

as a postdoc would want is more responsibilities or required session that take away from time to do science. I don't want more required mentoring or training responsibilities. I want to be paid at the level of a scientist in industry.

Response 1338

Perspectives on the postdoc roles and responsibilities

My understanding is that the postdoc position exists to allow trainees to expand upon their technical research skillset, grant application skills, resume/CV/publications list, and professional network. It also seems like a makeshift, stopgap measure to provide graduate students a kind of purgatory to work in until they succeed in getting a faculty position or are forced to apply to jobs outside of academia.

Fundamental issues and challenges

As a MD-PhD student who plans to pursue both clinical practice and basic science research, I worry about the potential length or utility of a postdoc position after at least 7-8 years of graduate training and 4 years of residency.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1339

Perspectives on the postdoc roles and responsibilities

The postdoctoral position has become a necessary sacrifice that an early career researcher has to make if they hope to have a small chance at attaining a research intensive faculty position. After graduate students have become experts in their field they often are asked to switch fields of study, as well as move to new institutions, often located across the country or world from their current location just to prove they can be successful in another environment. While the postdoctoral position is considered a "training" position, in my experience most postdocs serve as the most technically skilled and productive members of their labs, functioning as the main workforce for academic research labs while also providing training to researchers earlier in their careers. Often postdocs also become de facto lab managers as their PIs tend to spend less and less time in the actual lab environment as their own careers progress. Additionally it is often expected that postdocs can and will apply for and secure funding for their own salary, as well as conceptualize, plan and execute their own original research in order to carve out their own niche in their fields. None of this is inherently bad, in fact much of it was the reason that a postdoc seemed like the perfect position for me after I finished my graduate work. However, it has become an issue as compensation is simply not commensurate with the plethora of duties required of a postdoc today. Stated plainly, in many institutions and academic research labs the postdoc has become essential to the progress of many scientific fields and yet the compensation for that role has become a chance at a faculty position in a highly competitive job market where they will slowly no longer use their much of their technical expertise.

Fundamental issues and challenges

The most obvious fundamental issue is poor compensation. Salaries have not kept up with inflation rates and dramatic increases to cost of living in general. A postdoc is often asked to create an original research plan, obtain funding for their own salary to work on that research plan, and then to complete that research in a timely fashion, and publish it in a "high impact" journals. After they've successfully done so they can consider applying for the more properly compensated faculty positions, but they must often do so at new institutions again across the country or world. The academic research community is telling graduate students that they will be trained to do this work, and in fact must prove they can do so before being allowed to graduate. But then, upon graduating, they are asking those same students to prove it all over again and do so while being underpaid when compared to similar level jobs in industry settings. I've long been assured that once you obtain the highly sought after faculty position, the last decade you've spent working towards that goal now feels worth it. But at the same time I've watched early career PIs

struggle to obtain funding and ultimately lose their faculty positions because they are suddenly seen as a much riskier lab to fund compared to their more established former mentors, now colleagues. How can we expect to effectively recruit and retain the best postdoctoral "trainees" if we've watched them undergo a literal decade of training in the system and yet don't fairly compensate them for that research and then also don't trust that their training was actually adequate when it comes to actually awarding them grant dollars to continue their work?

Existing NIH policies, programs, or resources

I strongly believe that any postdoc being paid by NIH dollars, either "directly" through F, T, or K grants, or more indirectly through R grants or other mechanisms should have their salaries directly determined by the NIH. And that compensation should undergo a significant increase. Additionally the NIH needs to raise the funds granted by R mechanisms as many PIs will say that they would be willing to pay postdocs more, and yet say they are unable to because despite inflation the still get the same amount of money each time they successfully renew their R01. Finally the NIH should mandate that all institutions must pay their postdocs in the same manor. At my institution the university treats all postdocs who receive F or T funding as independent contractors and therefore is not required to give us W2s or 1099s, resulting in much more complicated tax filings. This also makes it much more difficult to verify your own income when applying for loans such as for housing, making it (for me personally) impossible to invest in the housing market as lender didn't understand what the postdoc position was and why I was being paid in the way I was. My institution also doesn't allow postdocs to apply for the maximum salary offered by the NIH for K awards. I know this is not true for all institutions, but the NIH certainly has the power to tell all institutions receiving these funds how they must use them, in order to fix this issue. Instead, as it stands now, the postdoc position at my current institution seems to be the one the university cares the least about, and the only way I foresee that changing is by the NIH forcing them to change it through their own policy implementation. Good Luck

Proven or promising external resources or approaches

The only "external resource or approach" I know of that relates to this is the fact that most industry postdoctoral positions pay higher salaries and have actual roles within those same companies that they are providing real training for these postdocs to fill. If higher paying research scientist roles (a role between a PI and postdoc existed), then the postdoc could potentially truly be a training position that could lead to either a faculty position or a similar research scientist role. Unfortunately the current NIH funding system doesn't offer much incentive to hire well paid highly qualified research scientists, when PIs know they can get the same work done for less by hiring a new postdoc as a "trainee". Perhaps the NIH should considering providing funding mechanisms that would better support such roles.

Response 1340

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an opportunity to grow, develop, and hone scientific skills needed to better lead and address scientific questions. This position is intended to take the pre-doctoral training to the next level by providing independence, mentorship opportunities, and the space to investigate sceintific questions creatively.

Fundamental issues and challenges

I think the pay is a big challenge in recruiting post-docs. It is much easier and more enticing to enter into other scientific careers where one can be paid much more money, receive benefits, and set themselves up for a secure future. Another issue inhibiting recruitment is the length of a postdoctoral position. Over the past few years, postdoctoral training has gotten longer and longer. Another five to six years (which is very common recently) is not appealing to doctoral students. I think having shorter postdoctoral positions would result in more students pursuing a postdoctoral position. Another problem that I see with postdocs is the lack of incorporation. When in academia, there are plentiful resources for students and professors have their niche, but this same supportive environment is lacking for postdocs. It looks like a very lonely and isolating position that most people take into account when they are deciding to pursue academia or not.

Existing NIH policies, programs, or resources

I am unsure about the current policies, programs, or resources, so I cannot speak to what specifically could be changed.

Proven or promising external resources or approaches

Altering the working environment to be more like a position in the scientific field (i.e. better pay, supportive environment, etc.) would increase interest in postdoctoral positions.

Response 1341

Perspectives on the postdoc roles and responsibilities

In general, I view the academic postdoc as the only realistic transition into an academic faculty position. You gain more research experience and publications and become more independent.

Fundamental issues and challenges

Postdoctoral positions are highly underpaid relative to industry jobs. Even more discouraging is that a postdoc salary is comparable to the average starting salary of a college grad with only a Bachelor's. It simply makes no financial sense, so only people who are already financially well-off and deeply invested in science will consider a postdoctoral position. Academic culture can also be quite toxic, and the work-life balance is poor.

Existing NIH policies, programs, or resources

Imposter syndrome is real--I think open and honest discussions about it are always helpful. NIH workshops on the topic are helpful and should possibly be mandatory for those supported by NIH funding.

Proven or promising external resources or approaches

Improve stipends, offer financial planning resources (retirement planning), skill workshops for postdocs hoping to gain expertise outside of their lab's expertise, better communication of grant opportunities (for those whose mentors are not necessarily describing different grant types and benefits)

Response 1342

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1343

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral position as a training period. I am using it to gain new skills (technical and intellectual) so that I can be well-equipped to ask unique research questions as an independent academic researcher. To achieve this goal, I went to a lab where I could learn new skills by applying them to my PI's research goals. I also have the benefit of being in a well-established lab. This allows me to develop my own research aims. The net effect of this training + exploratory phase means that my postdoc will probably be a long one.

Fundamental issues and challenges

Academic research has its perks: flexibility in schedules, freedom in research. But people need more concrete benefits in order to flourish. I think that basic benefits are especially lacking for postdocs and is reflected in the exodus of people from academia into industry and other positions.

Postdocs tend to be at ages where they are starting families, moving all over the country (and probably away from extended family and childcare support), and at an ideal age to make investments into retirement accounts. None of the needs associated with these pivotal life stages are systematically managed, uniformly distributed, or institutionally protected for postdocs.

Existing NIH policies, programs, or resources

Childcare funds: regardless of individual funding, all trainee parents should have pay adjusted for children and childcare expenses

Administrative supplements: regardless of career stage or funding, all trainee and early career researchers should be allowed to apply for administrative supplements

Proven or promising external resources or approaches

Trainee infrastructure: Consider giving more advanced postdocs (+2yrs experience) funding support for undergraduate trainees or technicians. This would grow the scientific workforce, shift less technically advanced tasks from postdocs while still advancing the mentor/PI's research, and build in managing experience for postdocs as future PIs.

Basic benefits for postdocs: this seems silly to need to say, but many postdocs are not unionized and do not have basic benefits like paid family/medical leave or retirement benefits.

Bonuses are used by many fields, but not typically given for academic research. Academic research can be very thankless, so it is important to acknowledge people for things like method development, publications, and grant submissions (funded or not).

Response 1344

Perspectives on the postdoc roles and responsibilities

I view the academic postdoc as a method of gaining the skills needed to become an independent scientist or to prepare for a career that requires a postdoctoral training element (even a lot of teaching focused positions now require a postdoc for example due to increased competition for positions). This is also an opportunity to expand your scientific knowledge and technical skills beyond that of your graduate education. While many would argue that this is only training for gaining an academic PI position, the truth is that there are not enough positions open for all postdocs to become academic PIs (nor are all postdocs cut out to be academic PIs for various reasons), and therefore I believe that this training period also needs to make sure that postdocs are prepared for other positions outside academia as well. Many skills, including technical and leadership skills, are relevant to many scientific positions and can be developed during the postdoc with the right training environment.

Fundamental issues and challenges

I think that two of the biggest issues are pay and expected working hours. When postdocs look at industry colleagues, they see that their compensation is not close to what their colleagues with similar education/skills make in industry positions. This is also reflected in the lack of retirement benefits accrued as a postdoc. Additionally, work-life balance can be challenging as a postdoc when competition for faculty positions is really high, making industry work-life balance also look more attractive (more 9-5 hours expected). Lastly, postdocs often feel like an afterthought at many academic research institutions, with the available resources much more focused on student/faculty productivity, training, and satisfaction (for example—career development offices, administrative contacts, research highlights, etc). This seems to be slowly getting better, but we aren't there yet.

Existing NIH policies, programs, or resources

Pay/compensation could be better for postdocs (though I realize that grant money awarded would likely need to be higher as well so that PIs can afford postdocs from grants). Resources that help postdocs with career development are also necessary as not all postdocs will ultimately end up in academia and if they

do, they need education on the non-bench related aspects of being a PI. Without the right mentor, it can be difficult to learn the world of grants, managing personnel, committee responsibilities, and finances that come with running a lab, etc. While the goal is to keep people in academia, we also need to have positions available for these people in academia without keeping people as postdocs forever or as poorly paid non-tenure track faculty who live on one year renewable contracts that don't ensure any kind of job security. Postdocs that do not stay in academia also need to be able to have the skills and knowledge to find an industry positions if they do not find a PI position. It may be comforting to people to have the safety net of knowing that they feel prepared to make that transition if applications for PI positions do not yield desired results.

Proven or promising external resources or approaches

No response

Response 1345

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Life science/biology perspective: Pay is dramatically lagging compared to any other professional opportunities I could pursue after getting my PhD. No pay negotiating capacity either. Most people are entering their PhD with already a few years of research, and PhDs take 5.5-7 years (and are in themselves already a significant opportunity cost for life sciences where I've estimated just doing the PhD cost me 150-200k in potential lost wages). Doing a post-doc would probably equate to another 200-300k of lost wages.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1346

Perspectives on the postdoc roles and responsibilities

-Perceived role = a subject-matter expert whose job is to expand scientific exploration per the scope defined by their PI/their PI's grants

-Perceived purpose = generally career advancement, as an intermediate stage between graduate school and lectureship/professorship; also a skill-development period for learning a particular tool/method/approach

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1347

Perspectives on the postdoc roles and responsibilities

A postdoc is fundamentally a training position, so while it involves training in and performance of technical skills that benefit my lab, it is also a time that I can develop my career resources. A postdoc is a good time to learn industry-facing skills that can both drive my project and benefit my long-term career

development. Considering a postdoc is lower paid with few benefits compared to industry, the pay-cut comes with the understanding that I can spend time on career development, especially since the likelihood of getting an academic position is so poor compared to the options in industry.

Fundamental issues and challenges

Having children during the postdoc is difficult because there's no support and no benefits. If my husband didn't leave academia for industry we wouldn't have been able to afford me working because of daycare costs. He gets paid parental leave and I get unpaid FMLA and, honestly, I'm not sure that anyone in academia would actually protect me from getting fired for getting pregnant. Because I want a family, I don't want to try to be a PI, because the careers don't seem very compatible, compared to the benefits available in industry.

Existing NIH policies, programs, or resources

I honestly don't know what benefits are available? Perhaps it would be helpful to better communicate what the existing policies, programs, and resources are?

Proven or promising external resources or approaches

Having actual parental benefits for postdocs would be a huge step forward.

Response 1348

Perspectives on the postdoc roles and responsibilities

A postdoc is a stepping stone for an academic career or a stopgap for a recent graduate as they finish the last parts of their thesis work before going on to industry. If you do not aim to become a PI there is little reason to pursue a postdoc, outside of needing immediate employment.

Fundamental issues and challenges

Compensation. Postdocs are severely underpaid just based on their contributions to society alone (ie the benefit research provides to the greater community). Once you factor in the time it takes to complete doctoral work in order to apply to be a postdoc and the hours a postdoc works the compensation is even less appealing. Academia as seemingly decided that someone who has proven they have the intellectual acumen to be considered at the top of a scientific field (arguably the most difficult field to understand and excel in) is valued at the same level as a recent business bachelors degree recipient, which is insulting. If the compensation improved then even the long hours and poor treatment by some superiors would be ameliorated.

Existing NIH policies, programs, or resources

Outside of mandating a substantial pay increase there is little policy can do to improve the postdoc conditions. Policies will always be ignored and avoided by those they are meant to reign in and reporting those that break policy can have negative repercussions for the whistleblower.

Proven or promising external resources or approaches

N/A I have no knowledge of any such resources

Response 1349

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1350

Perspectives on the postdoc roles and responsibilities

I did my postdoc training at [redacted for anonymity]. I was lucky to be in a well funded lab, and I had my freedom to design the experiments and perform the experiments without worry about the cost. However, my advisor, like many professors, did not help me to achieve my next career goal by guiding and giving me supports. Although I had several good publications at the end of postdoc, I did not have a seed grant to find a position in a university. My postdoc salary was even less than the one I had as a lab scientist after I graduated from college with a BS. The postdoc training is long and fruitless to me. I did not go on to do the research that I was interested. I know some postdoc stuck a this position for years and finally just become a tech in an academic lab. Many people went to graduate school with a dream to contribute to science, and just to realize it is a nightmare to be a scientist. Some of them became a professor but once they run out the grant, they are kicked out the universities.

Fundamental issues and challenges

The advisors do not care about postdoc or their graduate students. Postdocs and graduate students are often treated as cheap labors for the professors. Not enough NIH funding or any funding to help postdoc advance in their career. Basic scientific research is not respected. Only research with practical values like treating human diseases, advance human life will get funded. I think most of people choose science not for the money but lack of career path, making the years of training as a waste. It is also hard for life science scientists to transition into non-research related career.

Existing NIH policies, programs, or resources

Currently, universities will only hire people with grants, and if the assistant professor does not have NIH funding within certain time period, he/she will be out. Getting funded often time depending the ability of person to networking, and I think many scientists are introvert and they lack the skills of social networking. To improve the ecosystem, USA needs changes at NIH and universities. Universities used to be places for thinking, debating and investigating, but now universities are running like for-profit business. Professors, graduate students and postdocs are just the money making machines for the universities.

Proven or promising external resources or approaches

There is no cure for the next 20 years since the whole system is corrupted.

Response 1351

Perspectives on the postdoc roles and responsibilities

A postdoc should be a training position to develop the skills needed to run your own research lab. It should be spent developing a project/topic that can be used to start their own research group as well as developing skills in grant writing, manuscript preparation and mentoring.

Fundamental issues and challenges

Two fundamental issues exist: low pay and the length of postdoctoral training. The pay is too low, especially in high cost of living areas, and therefore it is hard to compete with biotech where beginning salaries are 2x higher than postdoctoral salaries. Postdocs are often stuck for several years (often more than 5 years) before they are able to be competitive for faculty positions.

Existing NIH policies, programs, or resources

Increase the minimum salary for postdocs, or adjust for cost of living to make it more affordable to complete a postdoctoral position.

Proven or promising external resources or approaches

No response

Response 1352

Perspectives on the postdoc roles and responsibilities

Training position as stepping stone to true career goals

Fundamental issues and challenges

Paid like trainees but expected to produce expert work with minimal guidance/mentorship; pressure to publish in clearly broken system; lack of job opportunities after postdoc; pyramid scheme nature of academia

Existing NIH policies, programs, or resources

Formulaic writing style required for scientific publishing / grantwriting; unnecessary hoops to jump through / incredibly opaque multi-step process regarding submitting NIH grants

Proven or promising external resources or approaches

Higher pay (comparable to tech where other people with similar skillsets work)

Response 1353

Perspectives on the postdoc roles and responsibilities

I see a postdoc as a way to mature as a scientist. A PhD teaches you how to identify problems and carry out a project, and a postdoc is for repeating that process several times over a shorter period of time. In doing so, one is ideally able to carve out their own scientific niche wherein their skill set, knowledge, and current research direction is unique.

Fundamental issues and challenges

It is an entirely unstructured position. There is no mechanism to motivate PIs to hire postdocs with the intent of managing their postdocs well. It is also a poorly paying position. After a PhD, many trainees can get a job in industry immediately, sometimes doing high quality, academic-like research within a company. The lack of reliable stipend and training makes a postdoc a riskier position to pursue.

Existing NIH policies, programs, or resources

The standardized stipend rate should be increased in general, and should be revised to account for increased cost of living at different institutions.

Proven or promising external resources or approaches

No response

Response 1354

Perspectives on the postdoc roles and responsibilities

A short-term training for the faculty position.

Fundamental issues and challenges

Lack of clarity on the purpose of training. I don’t think someone going into industry, consulting or entering a non-academic workforce need postdoctoral training.

Lack of awareness that postdocs are most likely in their 30s and 40s and are sandwiched between raising their families and taking care of parents on a meager stipend.

The insistent that postdoc should treat their position as though it’s their life or a do-or-die affair. It’s not. It’s a job and should have clear boundaries.

Existing NIH policies, programs, or resources

OITE. This has been a great resource for career development, exploration, job search etc.

Expand the K grant requirement beyond the current 4 years eligibility

Proven or promising external resources or approaches

Increased salary support. A lot of institutions will not willingly increase postdoc salaries citing NIH standards, so NIH needs to provide substantial increases yearly or utilize a locality pay adjustment. $50,000 in Idaho is very different from $50,000 in Boston or San Fran.

Creating policies that help postdocs from a predatory mentor. Policies that protect the postdoc or reward the postdoc for excessive overtime in lab.

Response 1355

Perspectives on the postdoc roles and responsibilities

[redacted] pay for [redacted] hours and no guaranteed upward mobility, even if you have the ideal academic pedigree, things might not work out. Not enough money to save for life events or for the expensive activities and education of children—I didn't pay a dime for my Ivy League education or associated expenses because my dad was in finance. Would I be able to do the same for my kids while supporting a spouse like my dad did? And live in a nice upper middle class area with access to excellent schools to let me work at the NIH during summers in HS and college and then do the postbac IRTA after graduating while living at home to save money? I'm at a very established MSTP right now and have no interest in pursuing a postdoc at the expense of my clinical years/salary. I would rather be connected to industry and rake in money if that opportunity was available.

Fundamental issues and challenges

No long-term financial or career stability

Existing NIH policies, programs, or resources

More $$$$$$$

Proven or promising external resources or approaches

Literally look at industry

Response 1356

Perspectives on the postdoc roles and responsibilities

It seems a postdoc is required if one wants to be a research focused college professor. Because of this unofficial requirement, I believe individuals get taken advantage of. Postdocs are cheap, overworked scientists. Making $45-50k annually is terrible pay, especially if being asked to work over 40 hours a week. I think many people in science are realizing this in today's world and don't want to get taken advantage of anymore. Additionally, becoming a grant chasing faculty member with no guarantee of tenure (or available faculty positions) at a research intense university doesn't offer work-life balance and I think covid reminded people that life is more important than work. We work to live, not live to work.

Fundamental issues and challenges

See above. Unions, benefits, better pay (by a lot), and appreciation are warranted. Not a mindset that postdocs are cheap scientists that can be milked for all that they are worth.

Existing NIH policies, programs, or resources

see above

Proven or promising external resources or approaches

see above

Response 1357

Perspectives on the postdoc roles and responsibilities

The KL2 program was invaluable to providing me time, mentorship, resources, and education to prepare for an independent research career.

Fundamental issues and challenges

The impact of virtual or hybrid education and conferences reduced the quality of my experience, although it improved safety and convenience.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1358

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Some of the best research opportunities are in the highest cost of living cities and the NIH minimum salaries do nothing to reflect this. Private academic institutes rarely pay above this minimum and if they do, it's not nearly enough or competitive with industry standards. It is increasingly difficult to support yourself, let alone any dependents with the extremely low compensation provided for arguably the most important/productive pool of scientists in the country.

Existing NIH policies, programs, or resources

Wages need to increase otherwise all the talent will leave for industry. This is actively happening, we see it everyday. The problem is compensation. Not only do postdocs take extreme salary cuts relative to industry, but they also miss out on extremely important years for retirement investment with employer matched 401ks etc.

Proven or promising external resources or approaches

No response

Response 1359

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

One hundred times over—pay. My first year as a postdoc in 2018 paid 54k in Washington DC. I was "lucky" to be still young, meaning no mortgage, no kids, and thankfully minimal health expenses. Absolutely cannot imagine surviving on that salary in areas as expensive as DC with a family and/or a chronic disease that required regular care. Don't underestimate pay. People have to live and whereas we don't do science for the money necessarily, it's what the landlord and bank and utility companies ask for at the end of the month. I can't buy groceries by showing my PhD diploma and the noble scientific work I'm doing. Indeed, a postdoc is still a training program, however, with significant less oversight + we are engaged in important research. Those two at the very least should justify being paid more than a PwC auditing intern recently out of undergrad (I wish I was making this up, but I'm not. They get paid more). I am happy I pursued a postdoc and found it to be a valuable experience, but I struggled. These experiences shouldn't only be appealing or feasible for folks who benefit from a well-paid spouse or parents who can support them.

Existing NIH policies, programs, or resources

Any payment related policies. Start there and I think you will see changes. Don't do it, and the recruitment pool will get thinner and thinner.

Proven or promising external resources or approaches

No response

Response 1360

Perspectives on the postdoc roles and responsibilities

It's a glorified placeholder to continue underpaying productive scientists as they stagnate amidst attempting to secure the fewer and fewer tenure-track faculty positions they are trained for and expected to pursue.

Fundamental issues and challenges

1. Competetive Pay. The graduate school process is 6-8 years long and underpaid, making productively saving for the future nearly impossible. Upon finally earning one's Ph.D., usually between the ages of 26-36, new doctorates are offered a $40k-$60k post-doc position—a salary that is competitive with laboratory technicians whose job does not require a doctorate. After postponing or struggling to plan for the future and/or start a family it is no wonder that more and more PhDs choose to leave the standard post-doc=to=academia route in favor of more financially sound and rewarding careers outside of academia.
2. Job Opportunities. A growing number of studies have shown the limited availability of tenure-track positions for Ph.D. graduates, particularly within the life sciences. Reports have estimated as few as 1 in 4 to 1 in 8 Ph.D. graduates will attain a tenure-track academic position, the touted golden standard outcome of Ph.D. training. With so few opportunities, this makes the idea of sitting in the underpaid queue of post-docdom even less enticing given there is no promise this incubation time will lead to a tenured faculty position. Many see and are concerned by the vast over-production of PhD graduates to the limited number of tenured faculty postitions we are told to aspire to. This is in stark contrast to our medical doctorate counterparts who boast greater than 80% placement into residencies which typically transition directly into an outlined career.
3. Academic Detattchment. Lastly, many new PhD trainees are interested in using their talents to more directly engage with the society they serve. Partly, in response to the lack of academic positions resulting in more PhD graduates sharing their stories of finding fullfilling jobs outside of academia, and partly in response to witnessing the importance of scientists' role amongst the public during the recent pandemic.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

One place to start from (although admittedly not a full solution or a silver bullet) might be to start with requiring NIH-funded academic institutions to track and make transparent career outcomes of their graduates and post-docs. This type of transparent system could both help recruit more post-docs who see certain institutions as more successful in helping their trainees as more attractive and help elaborate the picture of if more post-docs are needed or if a new research faculty pipeline should be considered to meet this need.

Another idea to consider is expanding financial and family benefits/accommodations for post-docs. Presenting the position of post-doc as an academically valued position for an accomplished Ph.D. graduate to pursue rather than as a temporary, unmeaningful placeholder position as the name "post-doctorate" implies may attract more graduates to these positions. Two ways of making this position seem more valuable and meaningful, are to pay it competitively (both across industry salaries and comparatively within technician and primary investigator salaries) and/or provide enticing supplemental job benefits as mentioned previously; or to restructure Ph.D. training programs to include post-docs as pipelines directly into specified positions, similar to medical residencies.

The problem is not that Ph.D. graduates do not want to do post-docs. The problem is that post-docs are becoming increasingly obsolete as their main perceived function is to funnel researchers toward ever-non-existent faculty positions. Since a minority of Ph.D. graduates go on to tenured faculty positions, those who take the post-doc route and don't make it, end up leaving academia for non-academic positions which never required a post-doc to begin with. This feedback loop filters into current graduate students who pivot away from wasting their time with a post-doc, toward the non-academic jobs most graduates are getting anyway. The post-doc problem is a functionality and narrative problem.

Response 1361

Perspectives on the postdoc roles and responsibilities

I view postdoc as continued student training with no degree. In some cases, for successful postdocs who are granted the independence to develop lead their own projects and manage a small team within a lab, it can help pave the path forward towards becoming a professor. In other cases, it can provide additional skill training for industry. In many cases, it is simply another student who reports to the PI and works on their projects, with some more senior authority in a group hierarchy than an entering graduate student.

Fundamental issues and challenges

I see a postdoc training as significantly worse than a graduate student training.

1. there is no degree awarded at the end
2. the stipend is not significantly better—and may be worse if you consider loss of student benefits (such as health insurance)
3. job security is lower and other student protections are lost
4. many student benefits are lost (ex: freedom to take and teach classes at will, student support networks, etc)
5. in a well positioned/funded lab, a senior graduate student could have the same intellectual freedom as a postdoc. Such a graduate student may prefer to stay in that lab, rather than join another lab where those freedoms may not be guaranteed.
6. Conversely to (5), a graduate student in a not-well positioned or funded lab may not have the resume to get a position in a very well-positioned postdoc lab, and as such may end up in a more subserviant/workerbee situation to the PI in a prospective postdoc, leaving them with the same decision metric as in (5).

(1)-(6), in my view the incentives for a postdoctoral training are aligned when a graduate student is required to move on but is not ready for a faculty position, but *desires* an academic faculty position, and thus must continue academic training as a postdoc. With less faculty jobs and more postdocs on the market, as the academic job market further intensifies in competition, there is even less incentive.

Existing NIH policies, programs, or resources

NIH grant support for taking / teaching classes while a postdoc? Resources for this?

Proven or promising external resources or approaches

No response

Response 1362

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches
No response

Response 1363

Perspectives on the postdoc roles and responsibilities
I see the academic postdoc as an opportunity to publish dissertation research and to apply for tenure track positions within academia. I also see it as an opportunity to join another lab, see how another lab approaches science, and an opportunity to get more or more intense training in a domain or methodology that you were unable to get during your doctorate.

Fundamental issues and challenges
LOW PAY!!

Postdocs literally have doctorates but are not getting paid like they have doctorates. This still boggles my mind. Additionally, not only are they not getting paid at the level of their degree (as evidenced by the industry jobs which pay so so much more), they are also often not paid enough to live in the city in which they live.

Aside from the fundamental issue of low pay, I also see issues of having to move for only 2-3 years, especially if the postdoc has a family to move with.

I want nothing more to be a tenure track professor, but I can’t ask my partner, who makes significantly more money than me, to move to another state (forcing him to get a new job) so I can do a very low paying postdoc for a few years (before we then move again for a tenure track job). Unless I can find a remote postdoc, this relocation issue will probably force me out of academia. I am fortunate enough to have a partner who makes a lot of money so I don’t have to worry too much about the pay, but if I did not have him, I would be panicking about the low pay.

Existing NIH policies, programs, or resources
Increase the postdoc salary cap by a lot, set up something to provide or help with child care, encourage remote postdoc opportunities, cover relocation expenses if the postdoc is really forced to move.

Proven or promising external resources or approaches
Please take a good close look at academic twitter. It is constantly abuzz about this specific issue. There are a lot of good ideas about this on there from researchers smarter and more creative than me.

Response 1364

Perspectives on the postdoc roles and responsibilities
Doing research, managing experiments and becoming an expert in your field while also preparing for the next stage of your career (usually academic/tenure track professorships in which you keep the postdoc topic as your future research)

Fundamental issues and challenges
Low funding and salary; people spend 5+ years earning PhDs and becoming experts in their field and should be paid as such. Lack of inclusive environments and support for postdocs from underrepresented communities and the uphill battle they face in academia.

Existing NIH policies, programs, or resources
Further increase in the minimum postdoc salary at the ver least

Proven or promising external resources or approaches
No response

Response 1365

Perspectives on the postdoc roles and responsibilities

I view my position as my last chance to focus 100% in science done with my bare hands.

While PhD research involves much training and faculty position involves much teaching, bureaucracy and working on getting funding.

I see this time as directed to scientific discovery.

Fundamental issues and challenges

I think the main issue causing the brain drain is pay.

While here in CA we saw significant improvement after the last strike, still today there are lot of biomedical research carried outside academia that offer pay that is 2-3 times higher—some companies are doing interesting work. So it seems that most postdoc must be extremely privileged, non-american, or very reluctant about industry research in order to stick with basic science.

Most leading R1 campuses are located in the most expensive areas in the US.

Existing NIH policies, programs, or resources

Allow J1 visa holders same access to NSF and NIH grants.

Increase pay substantially

Make NIH funding more daring. I think that many postdocs the projects NIH selects too conservative. We are young and seek risk, otherwise we would switch to a well paying industry job. It should be easier to win grants on pilot projects. Also the median age of grant winners gone much higher—we need more funding for ECR that want do break things than older folks who might be very experienced in grant writing.

Proven or promising external resources or approaches

Allow in passport entry visa to be extended from within the US—currently after DS2019 was extended but entry visa expired the postdoc and his family cannot leave the US and go back without going through the US embassy in the country origin. This interfere with international travel, e,g for conferences while in postdoc.

Response 1366

Perspectives on the postdoc roles and responsibilities

Academic workhorses—while training to move on to the next position, post-docs are the lifeblood of whatever institution they are working for. In the current academic environment of "publish or perish," the grand majority of those publications come from post-docs. This means that the grand majority of grants are written on the back of research and publications from post-docs.

Fundamental issues and challenges

Pay. Post-doc pay is embarrassingly low when compared to alternate career trajectories with the same, or even lesser, credentials. Why should someone go into an institution as a post-doc when their pay is capped at below $60k a year? For the level of expertise and training a post-doc brings to their work, this number is a slap in the face, especially when industry jobs are able to pay more than twice that at an entry level, with benefits AND a more healthy work-life balance. Post-docs are often expected to work hours that are well above and beyond the 40-hour work week, and due to the nature of being salaried, any time above and beyond 40-hours is work done for free, on top of the already ridiculously under-valued work they already did for 40-hours. I personally have been to multiple scientific conferences, including AAI, where focus groups have been held, and this very question has come up multiple times—"how do we get more post-docs and keep them?" The answer that is repeated over and over again, from post-docs, lab managers, and PIs, is more pay. The people at every level doing the actual academic work understand this and have been championing this cause for a long time. It's hard to recruit post-docs when fresh PhD graduates see that they could, instead, enter into a job that appropriately compensates them for their work. In the current economic climate, $60k a year is far from a sensible amount to pay post-docs. Sure,

$60k a year may sound impressive to a PhD student who is also criminally underpaid, but any positive feelings about that number fade instantly when industry offers, at a baseline, almost quadruple that. Pay is the number one issue preventing post-doc recruitment and retention.

Existing NIH policies, programs, or resources

Pay post-docs more.

Proven or promising external resources or approaches

Pay post-docs more.

Response 1367

Perspectives on the postdoc roles and responsibilities

To me, there are two sides to postdoctoral positions. The positive side is that it is an opportunity to hone my skills with further training and mentorship as well as protected time to apply for a K level grant. However, it also feels like a necessary sacrifice for those of us who want to eventually have an independent research program within academia. This sacrifice is mainly financial and personal. Postdoctoral positions pay far less than industry roles and faculty positions, additionally postdoctoral positions do not offer the same job security as other roles. I will be entering this role knowing that I will need to go through an additional application and interview process to obtain a secure position. This lack of adequate pay and job security in conjunction with a lack of paid parental leave result in great personal sacrifice especially in the case of female scientists who are have committed most of their childbearing years to their training.

Fundamental issues and challenges

As described above, the fundamental issue in my review is a lack of adequate financial support which reflects the level of training and earning potential in other positions that postdocs have. Postdocs sacrifice their quality of life and delay majorly important life events including home buying, starting a family, and investing for retirement because of the lack of pay and security in these positions. Again, this personal sacrifice amplified in those trainees who come from disadvantaged backgrounds and who are female.

Existing NIH policies, programs, or resources

The NIH's loan repayment program is a great program but should be expanded. If every NIH funded (intra—and extramural) trainee was automatically accepting into this program that would greatly improve the well being of trainees. Furthermore expansion of paid maternal and paternal leave as well as funding for childcare is needed.

Proven or promising external resources or approaches

The negative impact of stress on creativity and productivity are well known. The private sector recognizes this and companies often offer flexible work schedules, paid leave, childcare, IVF and other family benefits, fitness and wellness benefits, etc. to support employees as whole beings. The NIH needs to see postdoctoral trainees whole beings with personal, social, family, and financial needs rather than as just scientists. Doing so would greatly impact recruitment, training, and job satisfaction.

Response 1368

Perspectives on the postdoc roles and responsibilities

Performing independent research. Supervising undergraduate/graduate projects. Collaborating with other groups. Starting to apply for research grants, with or without PI.

Fundamental issues and challenges

Poor salary.

Visa issues.

Lack of control by NIH/institutions to enforce NIH policies.

Existing NIH policies, programs, or resources

Poor salary. Often departments/PIs do not follow NIH policies and when they do they may only do it partially (i.e. just adapting the minimum salary without considering year of experience).

Visa issues, especially J1 holders: impossibility to apply for small grants, especially indipendently from the PI; insurance requirement for the visa are old and not updated with the current insurance policies (e.g. deductibles); lack of reimbursement for visa-related expenses; pressure on the government to streamline the visa application/renewal process for academics.

Lack of control by NIH/institutions to enforce NIH policies.

Proven or promising external resources or approaches

Look at the EU fellowships from the Horizon program. A model similar to that would create a more balanced, vibrant and diverse research environment.

Response 1369

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are a chance to expand and hone skillsets aimed at advancing your career to a desired level. You are responsible for project conception and management, much like a PI, but within a structured environment that offers mentorship as needed.

Fundamental issues and challenges

Salaries need to be competitive with industrial positions. That’s it.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1370

Perspectives on the postdoc roles and responsibilities

The point of a post doc should be to train individuals to manage a lab, write independent grants, and develop a research plan that the individual will continue for their career. It seems over the last several decades that post docs have become more like second PhDs, where researchers spend a lot more time at the bench and developing a project and gaining further scientific training,

Fundamental issues and challenges

Pay! In [redacted for anonymity] many lab technicians and managers make more than post docs. It’s really discouraging to have worked so many years and then get paid under 60k. Further, many institutions provide affordable housing for graduate students but not postdocs so almost all of the increased earnings from PhD to post doc go toward finding suitable housing. It’s understandable that a post doc is still a training position but many industry post docs pay much higher (think 70-80k) which would be a noticeable quality of life improvement over the PhD beyond just paying for in subsidized rent.

Existing NIH policies, programs, or resources

Increased number of transition awards with better pay for post doc years

Incentives for reducing postdoc training time

Proven or promising external resources or approaches

No response

Response 1371

Perspectives on the postdoc roles and responsibilities

I am on my second postdoc and both have been very different experiences. Ultimately, the postdoctoral position to me means a time to gain further training needed to run your own research program. In my first postdoc this was a time filled by mostly technical learning, writing and presenting work. In my second postdoc I've had a chance to also teach, mentor, and take on leadership roles. Altogether, I feel like these experiences and roles are important for preparing a postdoc for the next steps but not everyone is able to find environments where they can have access to all of these training opportunities.

Fundamental issues and challenges

There has been strong progress in salary levels and time to advance from postdoc positions in the past 5-10 years, however, many of the trainees that came slightly before these programs, such as myself, are still struggling with the old system opportunities since I am too far along in my career to qualify for transitional fellowships (6th + year postdoc). Offering special career development support to aspiring scientists who were left behind would be helpful as they have many years of valuable training and experience to offer. Additionally, despite the recent progress, we still need increases to salaries and benefits due to inflation and the skyrocketing cost of living in big cities.

Existing NIH policies, programs, or resources

- More programs for advanced postdoc candidates to transition would be helpful. As a 6th year postdoc, I am not eligible for many training or transitional grants so I recently applied to a new diversity R01 program. I was thrilled to see that a component of the application focused on diversity efforts which I have a strong record of. Unfortunately, the application went to a traditional study section for review and I fear that the panelists, while experts in their scientific field, did not find value and importance for the DEI work that was a big part of the application. I understand that ultimately, I will be competing for grants based on my science and that needs to be accepted and supported by the community, but if NIH truly wants to place value on DEI work, then proposals should be reviewed by scientists who fully understand and value this work.
- There is a strong need for additional family friendly/support policies.
- Subsidized housing in cities with high cost of living.
- External career development training and opportunities (coming from NIH instead of individual institution).

More funding support for PIs that take trainees. Even though trainees often find additional funding sources for their salary, costs of experiments are high and in order for labs to adequately support trainees and provide excellent training environments and career development opportunities, additional funds are needed.

Proven or promising external resources or approaches

No response

Response 1372

Perspectives on the postdoc roles and responsibilities

With greater experience a PostDoc provides more of the innovative thinking or brainstorming. They often come in with other skills and are well-prepared to learn new skills and bring them to the lab. Educate and lead by example up and coming graduate students.

Fundamental issues and challenges

Bottom line. It is a lot of work to spend hours, days, and nights working and thinking about science. There are a lot of pitfalls before there are successes, and the pay is not enough for the 16-hour days I have seen some postdocs commit themselves to in an effort to complete science in a more timely manner.

Existing NIH policies, programs, or resources

Funding. We spend more on tools than the people working the magic with said tools.

Proven or promising external resources or approaches

Work environment could also improve, especially atmospheres that advocate for a work-life balance.

Response 1373

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs need much higher wages, to be paid a wage and not a stipend so that postdocs can contribute to their retirement, postdocs should also get their retirement contributions matched by the institution (aka benefits that a non-academic job would provide).

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

MORE MONEY

Response 1374

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is the dream job. In theory, we have the freedom and are supported to pursue research topics we are passionate about. In theory we get the resources to immerse ourselves in the science like no other time in our career.

Fundamental issues and challenges

In practice it's a nightmare. In institutions like Princeton where there isn't a problem recruiting postdocs, PIs can get away with being abusive, not providing any kind of meaningful mentoring, and transferring the pressures of their jobs to the weakest link, the postdocs. We work ridiculous hours and weekends, in projects that might not give publications that will advance our careers. It's publish or perish, but even perishing takes everything from us. We don't have a life apart from work, we have to postpone or forgo plans to have families, because even if we had the time we wouldn't have the money. We sacrifice everything because we are passionate about what we do. Many of us live paycheck to paycheck, hoping there won't be any unexpected expenses. Having children is not affordable, but being single is not affordable either. Renting an apartment as a single person takes more than half the salary. We avoid going to the doctor for regular checkups because we can't afford it as, at least for international postdocs, this is not included in the medical plan. It's a matter of time some issue won't be detected on time and people die. Nobody cares about our conditions but we feel we have to be grateful for having this amazing opportunity to work in something we love and make a difference. If any of the problems affects our motivation or productivity we risk losing our job. It's supposed to be a training position, but all the guidance and mentorship goes to the graduate students. In the case of international postdocs all these issues add to the isolation and lack of social support. We know we need to work as efficient machines or will be discarded, but even a successful postdoc doesn't provide any job stability.

Existing NIH policies, programs, or resources

We need more programs open for international postdocs.

Proven or promising external resources or approaches

No response

Response 1375

Perspectives on the postdoc roles and responsibilities

I see the postdoctoral appointment as a 2-3 year position where a recently graduated PhD scientist can learn new techniques in a different or related field to their PhD research that will either equip them for a

successful industry career, or position them to create a niche as an academic tenure-track researcher. If the postdoc wants to pursue an academic career, this time is critical for them to investigate and publish on a new area that they can take with them for their independent research program.

Fundamental issues and challenges

The biggest issues inhibiting recruitment, retention, and quality of life is the low pay and sacrificed earning potential. It is insulting to be paid this little after having >10 years experience in an academic research setting. The low pay coupled with the moving goalposts of attaining a tenure track faculty position seem dismal. Additionally, the money allocated from different NIH institutes towards transitional awards (i.e. K99, K22, etc.) is low, making attaining these awards incredibly difficult and favors institutes and investigators with a wealth of resources (i.e. Stanford, Ivy leagues, MIT, HHMI investigators, etc.). Together, these challenges make budding researchers not want to spend their time on an academic postdoc if they can go right into industry and start their careers. It makes doing a postdoc a luxury afforded only to individuals who are independently wealthy and can afford 2-6 years of missing out on a much higher earning potential offered in industry.

Existing NIH policies, programs, or resources

Increase baseline salaries for postdocs starting at $75,000. Increase the overall budget for each R01 to allow for this increase in salary. Increase the allocated funding towards postdoc training and career development awards such as the F32, K99, K22, etc. Increase the budget for MOSAIC awards to increase the number of researchers from historically marginalized groups going into tenure track faculty positions. Write policies that can ensure that new mothers receive ample paid maternity leave and that fathers get paternity leave. Increase additional funds for cost of living expenses such as daycare stipends and inflation adjustments.

Proven or promising external resources or approaches

Pay us more money. This will fix pretty much all of these problems. Even if the salary is not as competitive as industry (e.g. postdoc making $75k a year vs. industry postdoc/entry level scientist making $100k per year), individuals who want to pursue academic careers but cannot afford to live in urban areas with the current stipend will be more likely to seek out a postdoc. In my own opinion, if I didn't have to worry about making ends meet, I would be much happier and feel much more satisfied with my working environment and job satisfaction. I am a postdoc and currently am living paycheck to paycheck and seeking out "side hustles" in order to save up for "regular life things" including a car, a wedding, and a future down payment on a house.

Response 1376

Perspectives on the postdoc roles and responsibilities

The ideal academic postdoc would be a bridge position to train aspiring researchers to become faculty at a research institution. However, the current role seems to be that the academic postdoc is the workhorse of the lab—expected to produce data for PIs with little attention paid to development of their own career. Prior to entering graduate school I had viewed a postdoc as a logical next career step, however, my impression of it has changed substantially to the point that I now view it as a last resort. I view the lack of compensation, long hours and poor training as something to be avoided and there are very few labs in which I would consider a position.

Fundamental issues and challenges

Academic postdoc pay has never been reflective of the highly educated, trained personnel in the role. Hours worked seem to be based on work expected rather than a rational work-life balance, regardless of whether that work load is reasonable. The emphasis on training seems to be dependent on the PI of the lab rather a standard set by the NIH, which seems absurd given that the limits on pay are tied to NIH policy. Despite postdocs being of the age where they must choose whether to start a family, there is typically little or no consideration given to time off or work/life balance. I've encountered many postdocs who have said they have not had a vacation in more than a year and some who had not take one in 5 or more. Moreover, there is an incentive for PIs to exploit these issues in their favor—the less they spend and the more they work their postdocs the more successful the PI is.

Existing NIH policies, programs, or resources

While the NIH is not the perpetrator of these problems, it is the poorly designed rules established for grants that drive this behavior. F-32s are one mechanism that the NIH could expand to ensure appropriate training standards, but I think it likely that this approach would be insufficient. Any grant that includes a postdoc position should include a training plan that is reviewed by the grant review panel, and every progress report should have a private portion sent to each postdoc asking their input on whether the training is going to plan. By necessity this data could be kept private and an aggregate used as a modifier to future grant scores given to the PI, providing them an incentive to train the personnel they committed to.

Proven or promising external resources or approaches

The failure of the current system reflects that the standards set by the NIH do have a driving effect on the quality of life, and therefore retention of postdoctoral researchers. It is critical that improvements to pay, mentoring, training and working environment be standardized as a condition of NIH award money. Only with funding in jeopardy will we achieve the kind of systematic change that will help retain, train and grow our postdoctoral workforce.

Response 1377

Perspectives on the postdoc roles and responsibilities

It is a training process for graduate students or post-graduate students to gain more knowledge or skills for the future career development. It’s also a great opportunity for phd students who would like to do a transition to a new research area. The main roles of academic postdocs would be conducting research aiming to solve scientific questions and contribute to science development.

Fundamental issues and challenges

The low payment barely covers the living cost. Only a small percentage of postdocs would end up in academia.

Existing NIH policies, programs, or resources

Adjust the salary arrangement for postdocs.

Proven or promising external resources or approaches

No response

Response 1378

Perspectives on the postdoc roles and responsibilities

The postdoc role ideally serves two main functions,

1. to further the scientific and professional development of an individual, and
2. to supply research labs with competent staff. Within a lab, a postdoc should be the lead investigator and driver of several projects capable of producing high quality publications.

These projects should support the needs of the PI, but there should also be room for projects that the postdoc is interested in as long as there are somewhat relevant to the overall focus of the lab. A postdoc should mentor other lab members, ideally creating a team. A postdoc should be the primary author of papers and grants, and should present at scientific meetings. Postdocs should also get involved with outreach.

Fundamental issues and challenges

1) Pay is not competitive. It will cost me roughly $500,000.00 in lost potential earnings to complete a postdoc. I chose this because I love what I do, but the other 5 members of my PhD cohort are all in industry now for this reason. The pay doesn't need to exactly match industry, but it needs to be better than half.
2) Geographical/life stability. 2-5 more years of living somewhere temporary. I moved across the country to start my postdoc, and every time I had a chance to make friends, find a dentist, when I though about buying a house or a car, I never did because of the constant refrain in my head that this is temporary. This is for both geographical and financial reasons. "I'll save more money when I am making a real salary" for example.
3) Burnout/Work Life Balance
4) Publication rates. Publications are the currency we are building as postdocs. Slow publication rates make postdoc fellowships drag on and on, and after a while people give up and get a job in industry. This is due to inattentive or reluctant PIs and the general length of the publishing process.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1379

Perspectives on the postdoc roles and responsibilities

A postdoc is a person in charge on its own project (scientific, budget—finding a grant and/or fellowship if possible, people—internship or technicians) under the supervision of a PI. They also have to develop out of the lab skills such as networking, scientific communication, lab origination.

Fundamental issues and challenges

Low pay

Very limited PTO

Variable benefits

No mandatory paid parental leave

Low or non existent dependents care

Existing NIH policies, programs, or resources

Open NIH funding to internationals individuals.

Proven or promising external resources or approaches

Postdoctoral unions in multiple university have met and talked with a lot of postdoc with different backgrounds, they are the one who knows best postdocs challenges and have worked on how to change that.

Response 1380

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

SALARY SALARY SALARY.

I do not mind working as many hours a week as we scientists tend to do. But the fact of the matter is that this is unsustainable when stipends are so low. Although I would love to do a postdoc after graduating, the

bottom line of finances means that I am 100% focused on transitioning to industry instead of remaining in academia for a postdoc position like I would prefer.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1381

Perspectives on the postdoc roles and responsibilities

A postdoc is a career stage after the PhD is finished in which a scholar can finish publishing their dissertation papers, develop new areas of expertise, and begin building their unique research program. Some of their time is directed towards PI initiated projects, but there should be time for the postdoc to develop their own ideas and apply for their own external funding.

Fundamental issues and challenges

Pay and benefits is the biggest challenge for postdoc recruitment and retention. This is especially an issue in places where the cost of living is high (San Francisco, Los Angeles, New York, etc). The NIH minimums are not sufficient for postdocs, and cost of living adjustments are necessary to fix this issue. Earning $57,000/year in [redacted for anonymity] is just not the same as earning that amount in San Francisco or New York City. Many postdocs have families and the current system requires having a partner who subsidizes the family budget, which is an issue for equity.

Existing NIH policies, programs, or resources

Please implement a cost of living adjustment for postdoc pay.

Proven or promising external resources or approaches

No response

Response 1382

Perspectives on the postdoc roles and responsibilities

Fundamental issues and challenges

1) Compensation: the base salary cannot cover the cost of living and the annual increase fails to match inflation.
2) Visa struggles: visa renewal often take weeks if not longer. For international trainees, the long visa processing time means a choice between pausing work for weeks or not visiting family until the completion of postdoctoral training.
3) Poorly-structured training: postdoctoral trainees often fill many roles at once: researchers, mentors, lab managers, etc. Without a clearly-defined training plan, a postdoctoral trainee relies on the good nature of a PI for mentorship and support.

Existing NIH policies, programs, or resources

Two ideas to ease the financial stress:

1) Implement a cost-of-living-adjusted salary; trainees in expensive places need higher salaries.
2) Permit postdoctoral trainees to receive compensation on the unused vacation days.

Proven or promising external resources or approaches

No response

Response 1383

Perspectives on the postdoc roles and responsibilities

Postdoc is an academic job with the nature of transitioning to academia or industry.

Fundamental issues and challenges

1) For international postdocs without a green card, there are very limited funding resources from NIH and other agencies.
2) Current salary for the postdoc in academia is much lower than the similar position in industry.
3) Postdocs commonly experience substantial pressure and poor work-life balance. For some university, they do not provide retirement benefit (401k) to postdocs.

Existing NIH policies, programs, or resources

Increase funding opportunities for international postdocs who work in the US without green card. Also substantially improve current standards for postdoc salary.

Proven or promising external resources or approaches

No response

Response 1384

Perspectives on the postdoc roles and responsibilities

If I were to do an academic postdoc, I would consider my chief responsibility to be to carry one or more scientific projects to completion (insofar as anything can ever be completed) over a relatively small period of time (2-3 years). During that time I would help train and mentor newer trainees as any senior lab member is obligated to, and I would focus on gaining skills and knowledge about the more arcane academic arts (getting funding, managing technicians and students, wrangling facilities, etc etc). I genuinely do not think it makes sense to consider it a traineeship. It is a job.

Fundamental issues and challenges

I am 28 years old and looking at graduating within the next 6-9 months. My parents are aging and beginning to encounter health difficulties that they may not be able to pay for on their own. I have my own health problems and need good health insurance. The concept of being in my 30s and earning $60k, being unable to help my parents, still having to scrape and never go on vacation and and cook dinner even if I'm exhausted and getting home late, and having to work so hard just to keep my career afloat, is an absolute nonstarter. I have an academic postdoc offer from a PI I get along with, whose work I think is important and interesting, and whose lab I think would benefit from the techniques I learned in grad school. But I'm not going to take him up on that when I can earn six figures with great benefits doing work that more directly benefits people. It just does not make economic sense.

Frankly, postdocs need to be valued and not paid a pittance. They are people in the middle of their lives, at a time when many decide to start families and when parents begin to need support. They're highly trained workers who could earn more doing essentially anything else. With the pay scale how it is, you need to be independently wealthy or marry rich to make it work.

Existing NIH policies, programs, or resources

Pay $100k, mandate plat level health insurance coverage and pension plans. Do a better job communicating what on earth it is postdocs are being trained to do, because as is it seems like calling postdocs trainees is mostly a scheme to justify low wages.

Proven or promising external resources or approaches

No response

Response 1385

Perspectives on the postdoc roles and responsibilities

Required step between graduate school and getting a biomedical science professor job. It is supposed to be a chance to learn new skills and expand on the analytical skills learned in grad school to become independent in ability to conceive of ideas, implement solutions, train/mentor students, write papers/grants.

Fundamental issues and challenges

The postdoc system in the US as it exists now is toxic and full of abuse. It is built to be survived by those that the system already values. It is inherently biased. Your success as a postdoc is tied to your boss so directly that if they do not believe in you, mentor you, train you. you will not become a PI. You will not even be able to apply to become a PI. If your boss is BAD AT THEIR JOB, you will not be trained, mentored or supported. You will be left on your own to survive and maybe succeed. Now do that while being URM or historically excluded.

This also depends on you being HIRED in the first place. Most US Postdoc positions are not advertised. They are applied for privately, through PRIVATE email conversations. No records. At public institutions or paid for by public (NIH) funding. No accountability at all for who is getting interviews or jobs. Imagine how this shapes the URM postdoc population.

Ok, retention. As I mentioned there is a gauntlet to survive if you do not have an excellent mentor. Most mentors are not excellent. Most mentors are bad. How are you going to retain people that are overworked, undervalued, existing in toxic environments who have already survived the less toxic but still NOT GOOD graduate school environment? We burn out. We "leak out" of the pipeline. We carry loads of responsibilities. We do service to our departments.

None of it matters if you boss is bad and doesn't give a [redacted]. You will not apply for PI jobs. You will not interview. You will not get a PI job. And if you do, you are coming in burned out and departments don't support junior faculty appropriately. It's a nightmare.

Existing NIH policies, programs, or resources

Departments should need to be accredited for the postdoctoral training abilities. You require information from departments/"schools" on their graduate training, but you do not require any such scrutiny on the postdocs. We are ALSO TRAINEES. Give a [redacted] about us and our progress and who's getting in, who's not being retained and why. IE 4.1.25 of Part II of Terms and Conditions of NIH Grant Awards—subpart A. Stop making me do your job.

Require that we make more money. We DO NOT receive enough non-monetary training/support/whatever to justify (anymore?) how little we make for highly skilled labor. Figure out how to make it make sense for those of us on the coasts and those of us in the middle.

I will give you credit for the the NIH BECOMING A RESILIENT SCIENTIST SERIES. This is great.

Proven or promising external resources or approaches

Postdocs are hired privately. NIH grant awardees/departments should need to report Postdoc applications. Without this there will never be equity in postdoc positions and, therefore, no equity at the faculty level.

Awardees/departments should be required to report postdoc retention.

Awardees/departments should be required to report postdoc separations. AND WHY. You do it for grad students!!! Why not us? PIs need to be held accountable for postdoctoral outcomes of their trainees. No amount of links to IDPs or the NPA will solve this problem. This puts the onus on the Trainee instead of where it belongs.

here's a great program being run by Chicago institutes/universities: https://chicagolanddiversepostdocrecruitment.org/

UIC is doing great stuff with a Postdoc programming office run by a person with a PhD WHO DID A POSTDOC. Instead if some person who never even been a grad student designing programming for a person they have never been (a postdoc). https://research.uic.edu/opa/career-and-professional-development/

Maybe require PIs to go to therapy, also. A lot of us are out here having to hear and process some toxic stuff from some mentally unhealthy PIs. They should be unloading on a therapist and not their Trainees. They should be learning how to deal with themselves and their emotions from a therapist. They should be learning how to communicate and empathize with a therapist. We are going to therapy to deal with their [redacted].

Again, the fixing is at the top. Stop trying to fix postdocs. Fix the PIs.

Response 1386

Perspectives on the postdoc roles and responsibilities

I find the postdoctoral position a desirable one, especially as quality postdocs are the only way to obtain high achieving professors for graduate and undergraduate research programs alike. I feel as if the position has been undersold in importance to my generation of scientists by way of the pay disparity of going to industry over a postdoctoral position.

Fundamental issues and challenges

The primary reason I do not want to be a postdoctoral trainee is because I will take a large pay cut in comparison to working for industry. This is quite a hard revelation for me, especially as professors also do not get paid competitively compared to industry professionals, as I find great joy in teaching and would be very fulfilled being a professor and continuing in academia. For me, I know the position exists and is doable, but the preventing factor is coming out of debt from undergraduate studies which has only grown in recent years to not make a salary which aligns with the investment that has been made.

Existing NIH policies, programs, or resources

Postdoctoral trainees could be included in grant funding with a minimum allowed salary or hourly wage, along with maximum allowed working hours. I find that one of the fears many students have when investigating a postdoctoral program is to be underpaid and overworked, which prevents students from having a work-life balance comparable to an industry position.

Proven or promising external resources or approaches

No response

Response 1387

Perspectives on the postdoc roles and responsibilities

Honestly, its a lot of work with very little scientific or professional development that has my own interests in mind. I was promised one thing, but now that I am here, my work is only supported if it aligns with what others want me to do, which was not what was agreed upon before I came. I wouldn’t say busy work, but its busy work adjacent, like its adjacent to the goals I wanted to pursue

Fundamental issues and challenges

I have a terminal degree and I get paid less than many people with a Bachlors degree and a couple years experience. Not to mention I moved across the country for this and did not get paid nearly enough to cover moving expenses for myself. I work excessive hours, in part because there is so little guidance or support from any one here—people check in every once in a while and the tell me things are wrong, but with out any useful feedback. This limits my social life, this limits the amount of time I have for family; taking time for those things is perceived as not being dedicated to work or being lazy. There is very ltitle reward for this work. Certainly, it is not celebrated or appreciated. What’s worse, is there is no garuntee this will get me anywhere except for behind in life. Even if I make it to be an independent investigator, the time and money that was given up to be here is not recoverable with the any potential increase in pay in future positions, though likely research will only take away pay compared to my clinical roles.

Existing NIH policies, programs, or resources

In part, the system is so big its hard to navigate. For example, this question, you’re going to give me three links to these endless pages of information and ask for specific feedback? I also have no reason to believe there will be follow up. The whole system is so disjointed, even my mentors offer conflicting advice

that is the result of not knowing how the machine works. Then once in a while, you can stumble on someone who does know something and its like, [redacted], I wish I knew that before I wasted all my time doing this other thing. Massive inefficiencies and no real structure. Even our leadership is just learning as they go.

Proven or promising external resources or approaches

better pay is promising, protected time off for health. maternal/paternal leave; actually, i would just really like to get a full set of benefits rather than have my program find ways to side step them. When it benefits them, I am clinical, when it benefits them I am not clinical, same goes with student status, or employee status. Being clinical and in a post doc position, I basically get [redacted]ed at every angle.

Response 1388

Perspectives on the postdoc roles and responsibilities

This is supposed to be a period where trainees learn the skills of getting into academia, doing research, getting grants. There has been a big shift in mentality and current postdocs are not motivated to do this. They are simply coming to do a 9-5 job knowing that they will look for another job, which often affects the collaborative lab research. perhaps different branches of postdoc training, depending on where the person wishes to go should be created with different opportunities and incentives.

Fundamental issues and challenges

In many institutions, the pressure is upon PIs to accommodate all the availability and increases in salaries, educational curriculum etc. There is no support from academic institutions in this and as a result we are forced to cut research of existing programs to accommodate the changes. But this is a serious threat to productive research that would be needed to ensure continuous fundings. We receive grants, which are seriously cut by funders and in the midst of the program we also have to further cut to accommodate salaries etc. This is not correct. We will either reduce productivity or simply cut postdoctoral positions or replace them with technicians etc. Institutions and funders need to responsibly look at mandatory regulations that impact funded research. At least provide supplements or financial support to cover these unanticipated expenses without jeopardizing research.

Beyond this it os important to consider that research is not an optional luxury. Some thinking needs to be done towards also stabilizing retention of investigators in academia. A major risk of postdocs not coming to academia is because they look at the unstable situation of being at risk of loosing a job of they do not get funded. As a result they come unmotivated as a transitional period before getting a stable job elsewhere. The whole academic system needs to be rethought and whatever policies are made you need to look at the whole hierarchy, PIs included. We are not the enemies of postdocs. We nurture them,, support them, train them but we also bear the grunt of every regulation that is sporadically made to show support towards postdocs.

Existing NIH policies, programs, or resources

provide more support to PIs to improve the postdoctoral experience. Faculty are responsible for training and sustaining postdocs but we are viewed as the reason for their fallout. Provide supplements and incentives to faculty to improve the postdoctoral experience, rather than cut down such opportunities.

Proven or promising external resources or approaches

Include faculty in your working groups with sufficient diversity to inform you. They will inform you of the gaps in academic institutional support, environment, perceptions, and postdoctoral performance. The decisions taken should not just be salary increases!!! Especially if there is no supplementary support to provide this to the PIs who offer postdoctoral position.

Response 1389

Perspectives on the postdoc roles and responsibilities

We need to move on from referring to postdocs as trainees—they are not trainees—they are trained scientists and researchers with an advanced degree and the ability to develop, manage and advance important projects. They are a critical part of the scientific ecosystem that can

a) quickly pick up new skills and techniques and

b) contribute to the scientific advancements of student/technicians/trainees and the lab itself.

With the increasing length of the PHD and the postdoc—it is unreasonable to refer to these highly trained and responsible individuals as trainees—THEY ARE A LOT MORE VALUABLE THAN "TRAINEES". Every job requires training and learning—a postdoc is no different.

Fundamental issues and challenges

With an increasing length of the PHD and the postdoc—referring to postdocs as trainees so as to not pay them what they deserve is the number one reason that there are fewer postdocs overall. With their level of skill and training and ability to grasp concepts rapidly—this is unacceptable.

The second reason is the awful work-life balance expected of these individuals—it shows that the system does not respect their skills, their time or their personal lives.

Existing NIH policies, programs, or resources

limit the length of the postdoc. And increase the pay.

Proven or promising external resources or approaches

A phd student can be hired into non-postdoc positions with better pay and better work-life balance—bring that into the postdoc ecosystem—and stop referring to them as trainees—they are highly trained and skilled—learning on the job is not unique to a postdoc position!

Response 1390

Perspectives on the postdoc roles and responsibilities

A transitory period of training designed to guide you into a career in academia

Fundamental issues and challenges

The main problem I think most postdoc face is the salary. Industry offers highly competitive salaries to do science so academia is no longer than only option for many scientists

Existing NIH policies, programs, or resources

I do not feel confident answering this question as my PhD training was done in Canada and have little experience with the NIH thus far

Proven or promising external resources or approaches

Perhaps the NIH should look into why industry is recruiting and retaining top talents and their approach can be hijacked by the NIH to do the same

Response 1391

Perspectives on the postdoc roles and responsibilities

postdoc is a training position toward an independent path. However, most of the time postdoc are not ready to be a PI at the end. There is no training in how writing a grant, how writing a manuscript. PI are expecting you to do benchwork and writing together. impossible!

Fundamental issues and challenges

Salary.

Young PI are not ready to training a postdoc. Old PIs do not have time to training.

Existing NIH policies, programs, or resources

PI who train a postdoc should be obligated to some training as well. PI often does not follow policies. For example annual evaluations of the postdoc progression, future prospection and carreer development. PI are often interested only in benchwork.

Proven or promising external resources or approaches

No response

Response 1392

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

I believe that a major factor that inhibits recruitment and retention of postdoctoral trainees and early career investigators in biomedical research is the often complete lack of job/salary security associated with faculty positions, particularly in schools of medicine. The schools usually do not provide any 'hard' salary support to research investigators. If the investigator is a clinician he/she might obtain salary support to perform clinical duties that take away from time spent on research. If the investigator is not a clinician or does not want to perform clinical duties, he/she is often fully dependent on grant funding to support themselves. This is a challenging, very competitive, and stressful employment scenario; one can work countless hours on grant proposals, the funding of which is not within the investigator's control. On many occasions I have pondered why anyone would accept this type of employment scenario. I suppose it is a fantastical proposition, but I believe more extremely competent individuals would consider and be retained in biomedical research careers if NIH/funders funded researcher's salaries separate from (or instead of via) the competitive grant proposal submission and peer review process. Obviously, this would be a radical change from a long-standing tradition and would require much thought about how research proposals are conceived and how funding decisions are made while still supporting novel, researcher-initiated ideas. But, if anyone is genuinely interested in improving the quality of life of biomedical and other researchers, providing some degree of job/salary security (e.g., in exchange for a certain level of expected scientific productivity) would go a long way towards achieving that goal.

Proven or promising external resources or approaches

No response

Response 1393

Perspectives on the postdoc roles and responsibilities

It is an essential training and enable dedicated support to develop my own research expertise. It is necessary for an academic career in research.

Fundamental issues and challenges

The biggest challenge is finding the right fit for my postdoctoral training. Often postdoctoral training opportunities are not marketed and often are limited to a local pool. I wished for a national "database" accessible easily so that I can search to do a best-match. Second, postdoc salaries are low and relocation to the best fit training opportunity is an out-of-pocket expense.

Existing NIH policies, programs, or resources

Administrative Supplements to Promote Research Continuity and Retention of NIH Mentored Career Development (K) Award Recipients and Scholars could be expanded to include time taken off for mental health care, meaning it is not just time off to take care other people but take care of themselves. Academic research is very intensive and raising a family the same thing is very stressful. I am undergoing divorce. I wish divorce could count for critical life event.

Proven or promising external resources or approaches

Mentoring is the most important aspect of my postdoctoral training. CTSI resources are also essential. For an example, peer review program, https://ctsi.utah.edu/cores-and-services/about-us/peergr

Response 1394

Perspectives on the postdoc roles and responsibilities

It mainly means the transitional stage to a more permanent academic position for me.

Fundamental issues and challenges

I cannot stress enough the the need for NIH postdoc pay scales to be adjusted to market in each city rather than being seen as a national standard applicable to each university in the country. In the name of this NIH scale, many universities, including some Ivy League schools, underpays its postdocs. We must immediately set the NIH minimum postdoc salary at 65,000 USD.

Existing NIH policies, programs, or resources

Equitable pay and a friendly visa regime for international postdocs are the two key issues. Those foreign students with an US PhD should be sponsored for H1b visas by their institutions and the NIH should include this in their policy recommendations.

Proven or promising external resources or approaches

MIT postdocs have won some benefits and salary increase recently, as did Princeton postdocs. both might be good models for changes in the postdoc policies.

Response 1395

Perspectives on the postdoc roles and responsibilities

The primary role of a postdoc is to prepare for their next career stage. This involves comprehensive training in managing people, mentoring, grant writing, paper writing, adherence to advisory councils (IRB, IACUC etc.), and many more skills that would apply to someone interested in an industry position (which I am not).

Fundamental issues and challenges

The fundamental challenges for postdocs are compensation, academic culture, and high expectations leading to burn out. Established faculty that follow the dogma of "I endured it so you shall, too" are shooting themselves in the foot. PhD graduates are recognizing that the inherent stress of academia (competition for funding and publications, need to "self support" salary with grant money, low salaries relative to market) is not worth enduring if there is no indication for a cultural shift in how postdocs are trained and compensated. For example, my institution does not have: standardized contracts for postdocs (they are different across every department), clear expectations for the way faculty will mentor postdocs (if postdocs are going to be compensated as "trainees" they deserve comprehensive scientific and career mentoring), formalized methods for requesting time off, or a centralized system for postdocs to raise concerns to leadership. The lack of formal support creates an environment that exploits the most vulnerable (financially strained, systemically marginalized, international).

Existing NIH policies, programs, or resources

Expand support for child-care expenses as part of training awards, offer specific awards aimed at covering child-care expenses for academic professionals. Open all training grants to domestic and international individuals. Increase the rate of review for postdoc grants, as it stands right now a K99 application will be funded about a year out from submission. This system might work okay for a faculty member, but the time delay significantly impairs the number of grants a postdoc can apply to during their limited position. Also open more funding opportunities like the NCI early-stage K99 that promotes a swift transition to independence. Increase the NIH-mandated postdoc minimum salary (which we all know acts more like a maximum salary for many).

Proven or promising external resources or approaches

Require CIMER training and annual recertification for all faculty that hire postdocs on NIH grants.

Response 1396

Perspectives on the postdoc roles and responsibilities

Postdoc means working incredibly long hours, sacrificing time with family and friends, for very little compensation with little encouragement about future career prospects.

The idea of having to compete brutally for increasingly limited funding is a serious consideration when I consider future plans.

As a female postdoc, to me it means working 2X as hard as male colleagues for the same—or often for much less—credit and recognition.

I love science. I'm very interested in my field. I love working with students and mentoring them. I want to be academic faculty. A postdoc should be a time to prepare me for that.

But it's so stressful and uncertain.

It is also INCREDIBLY difficult to be a pregnant postdoc.

Fundamental issues and challenges

We aren't paid enough and we don't have maternity (parental) leave. We are critically undervalued. As a female postdoc I feel that I have to work 2X as hard to be recognized or heard. My contributions are often sidelined. And I'm in a good lab, at a good institution with funding. Sometimes I think that I'd rather go to industry, because at least I'd be paid more to deal with what I have to deal with everyday.

Adding to that—for the last 5 years, at every conference I've been to (large ones, like BPS) people are actively discouraging graduate students from doing postdocs, saying that there's no faculty positions and that it's hopeless. This is done in large career focused sessions.

I think people have figured out that a postdoc is overworked, critically underpaid and undervalued. And they don't want to do it.

The outlook for me as a postdoc is daunting.

Existing NIH policies, programs, or resources

F32 needs to provide better benefits for parental leave. Leave absolutely must be paid, at a minimum of 12 weeks. We need support and resources for pregnant and new parent postdocs. Issue guidelines for the aforementioned that universities need to follow.

We need to be paid more.

Anything at all to help with the following—I do not want to feel shut out from science because I am pregnant. I feel that there is almost no support for me. It has been so, so difficult.

Any increases in postdoc fellowships would be welcome. Sustained focus on efforts for mental health and outreach.

Proven or promising external resources or approaches

Improve our pay, benefits, and PAID parental leave. Improve mentoring of female and underrepresented trainees. Require bias training. My mentor is a really good person. I don't think they truly realize that they treat me so unfairly compared to male colleagues.

Additional support for pregnant and new-parent postdocs. It is our right to have a family. There is almost no support.

I wish I could say that I was aware of more current efforts to improve things but I'm not. I'm encouraged that NIH is doing this survey. I would love to see things improve for us in academic science.

Increase available funding for postdoc fellowships and for faculty level research. It's difficult to keep going when faculty futures seem so bleak.

I have heard trainees say that the NIH (OITE) mental health awareness-focused sessions are good. Thanks for those!

Response 1397

Perspectives on the postdoc roles and responsibilities

The idealized goal of the role of a postdoc is that it is an opportunity to receive advanced training, often relating to learning new skills, and to have time and space to develop a more independent research program. This typically would involve directing their own research projects while receiving support from the PI, as well as potentially assisting in mentoring trainees, such as graduate students. The typical postdoc experience is of course rarely anything like this. PIs treat the role as cheap labor to fulfill their own research goals, and rarely provide any meaningful amount of training or mentoring. What should in theory be a short term contract for an amount of time useful to learn new skills can instead often trap people in indefinite timeframes of underpaid and abusive work.

Fundamental issues and challenges

Postdoc positions are drastically underpaid, related to our training, skillsets, **and responsibilities**. The National Institute of Health bears a direct responsibility for this—it's granting schemes have been reducing in real-dollar values for decades, squeezing lab budgets. It's pay scale recommendations are insulting. The stipend for the F32 is too low. The NIH has been asleep at the wheel for ensuring that scientific research staff are trained, supported, and have opportunities for adequate employment. Academia also has rampant issues relating to power-based harassment, bullying, and sexual-harassment, which the NIH has also done next to nothing to meaningfully address. Given the range of problems that are so deeply ingrained in academic research, I find it difficult to recommend to others that they should pursue this path.

Existing NIH policies, programs, or resources

Fix the pay scale, make clear how it is expected to be used, and make clear that there needs to be cost of living adjustments. Tie all pay-scale guidance to cost-of-living, and make it clear that adjustments should be made based on local cost of living. Increase the amount of funding available in a modular R01 such that lab budgets can adapt to paying researchers and students appropriate to their skills. When reviewing grants, enforce that a budget line item for postdoctoral researchers whereby the total compensation is below adequate cost of living is considered unacceptable and will be rejected. Institutions and individual PIs who are found to be involved in illegal harassment, including sexual harassment and bullying at the level of individuals, and workplace violations including retaliation to whistle-blowers and illegal retaliation against union activity should be strongly condemned and face consequences, including having funding removed and being restricted in applying for new funding calls.

Proven or promising external resources or approaches

As a research institute, I assume you should be fully capable of finding and reviewing the existing evidence on the benefits of paying people a living wage, and the benefits of keeping working hours under control, and removing abuse from the workplace.

Response 1398

Perspectives on the postdoc roles and responsibilities

For me, the academic postdoc was critical for obtaining a faculty position. It provided me with an opportunity to gain new skills, refine my interests, and build my professional network.

Fundamental issues and challenges

The biggest issue with the current postdoc model is low pay. I was a postdoc at [redacted for anonymity], and the NIH minimum for postdoc salaries there puts postdocs under the poverty line. This is further worsened by those with caregiving and childcare responsibilities. The low postdoc pay is acting as a gatekeeper, as those who can afford to stay in postdocs are those who likely have family money or are otherwise well off.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1399

Perspectives on the postdoc roles and responsibilities

A postdoctoral fellowship is an opportunity to acquire and develop skills necessary to career goals, to gain a new depth/breadth of knowledge in a given field, to expand ones scientific network.

Fundamental issues and challenges

Financial. Work-life balance. Abuse from PI—this is one career where our career success is tied ever so closely to our PI (recommendation letters, opportunities, attention), so that creates an environment conducive to abuse. Career stability in future academic positions. International postdoctoral fellows need more protection since the lack of stability in VISAs can make them vulnerable to abuse. I know of many postdocs that are stuck in their lab and cannot leave the country because of poor VISA management—both on the institutions behalf and the postdocs.

Existing NIH policies, programs, or resources

Establish a program that ties the PI more closely to a postdoctoral students success. Something that shifts the responsibility of a postdoctoral success to the PI, so that they are more invested. For instance, if a postdoctoral fellow is working science funded by an NIH grant, make it NIH policy that the PI must reach/achieve certain career milestones for a given postdoctoral fellow to demonstrate the PIs investment in the postdocs career (manuscripts, conferences, networking opportunities, letters of recommendation). This should be something that is demonstrated on a continual basis, but not too taxing for PIs.

Increase pay. Increase maternal/paternal leave. Increase rights around VISAs/VISA renewal—institutions should be more involved in educating and maintenance of VISA status of international postdocs. If not, postdocs will eventually unionise.

Proven or promising external resources or approaches

No response

Response 1400

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are critical to establish a stratified hierarchy of each individual laboratory. This model allows each member of the team to learn about the collaborations, critical thinking, learning process, troubleshooting, academic ladder and alternate options. The teamwork is today more critical than ever; however, it is important to assure autonomy of each individual team member towards their goals, i.e. to meet and exceed the expectations for first author papers and contribute to other projects, including both internal and external collaborations. For principal investigators, the long-term measure of their success is what their postdocs learned within their team and how their subsequent careers were positively influenced by 3-6 years of their trainings. Positive feedback is the increasing reputation of the principal investigators. In life sciences, it is inevitable that some projects require weekend efforts and commitments that remain under appreciated. The postdocs are expected to work independently and flexible arrangements between them and their PIs should be available. The range of intense daily dialogues over a couple of weeks at one side and independent creative progress with just informal statements "everything is moving well—just started to draft my paper—have exciting data for the next lab meeting, just one more control experiment" over a period of 6-8 weeks.

Fundamental issues and challenges

The overall quality of life of postdoctoral trainees remains unresolved. There are at least three areas that need attention.

1. The stipend levels are below salaries of undergraduates requiring less skills. In addition, no retirement benefits are included. Thus, following 5+ years as graduate students and another 3-6 years of postdoctoral training without this critical benefit is a major inhibitor for this professional career.
2. The gap between "top" 25 research universities/institutes and the representative "median" college/university has significantly increased during last 15 years. While the accomplishments of the leading institutions are applauded it is necessary to help other universities and their postdocs with comparable opportunities in synergistic training involving bench experiments, multi-omics, and computational biology & bioinformatics. The current pace of newest and improved technologies is very positive but a project near completion using state-of-art methods defined for this purpose 2-3 years earlier is often challenged by a set of newest, more expensive technologies, only available to a limited number of labs who ultimately outperform others given the total collection of their primary resources.
3. A major portion of postdocs is represented by international graduate students who received their PhD in the US-based institutions together with PhDs from a range of countries with main contributions from mainland China and India. As they pursue their professional dreams in the US, they are willing to sacrifice their inadequate financial support for once-per-life opportunity to work at the best institutions with our leading scientists solving the mechanisms of human diseases and finding new therapies that benefit patients in need. This is not sustainable in the future.

Existing NIH policies, programs, or resources

The current policies regarding postdoctoral training are efficient; however, bottom line is the total NIH budget. An average R01 budget needs an increase to accommodate sufficient staffing, overlaps between senior postdocs and junior graduate students and adequate support of the PIs, especially those on soft money budgets.

Proven or promising external resources or approaches

The NIH may consider to establish a new "support center" on its Bethesda campus. This center will organize 2-4 day long diverse classes to teach postdocs certain skills such us job hunting, preparing the K99/R00 and R01 awards, hear talks from inspirational academy and industry leaders, learn how to negotiate the job, and etc. Poster session showing their research should be included in the program. In parallel, meeting 50-100 fellows will promote mutual networking and sharing experience. If there are +50,000 postdocs in the biological and biomedical sciences, health, and clinical medicine in the US, with 60% depending on grants, this looks like a good long-term investment.

Response 1401

Perspectives on the postdoc roles and responsibilities

It's supposed to be a time of further training and independence as a new researcher. For me, it ended up being mostly babysitting with limited academic freedom.

Fundamental issues and challenges

Payback clauses are terrible—no one should be forced to stay in a position they hate. Overall there's a view that the postdoc can take care of all the younger people in the lab, but that takes away from what the postdoc is supposed to be doing. Recruitment of poorly qualified postdocs who just want to get into the US and will apply to anything further takes away from a good postdoc's experience. Compound that with the fact that a postdoc can work for a university for years without ever getting retirement benefits, and you have a situation where good people just feel like they're being used.

Existing NIH policies, programs, or resources

I can't take the time to read all of that, but if universities in places that don't normally get a lot of postdoc interest want to recruit better people, they need to up the benefits. Retirement (+ match) and free parking would be a start.

Proven or promising external resources or approaches

No response

Response 1402

Perspectives on the postdoc roles and responsibilities

investigation of different hypothesis, finding significant relation between new variables, publishing their achievements.

Fundamental issues and challenges

1) Professor's psychological issues. if you ask from the postdocs that have M.D degree, they will report to you that lots of professors have psychological problems. and its ok till it doesn't hurt others but sometimes it w.
2) Economical problems
3) Insufficient or inadequate scientific achievement in a period of time.
4) Not seeing the postdoc's effort.
5) Adding lots of stranger's names on their articles.

Existing NIH policies, programs, or resources

More support against sexual abuse. Some professors have power, money and relations. some postdocs cant report their problems.

Proven or promising external resources or approaches

Don't keep psychological ill professors in your departments. They will sexually abuse their students and the postdocs will get depression and will do suicide, special for postdocs that are foreigners (on Visa) and don't have the situation to go back to their country because of war or other things.

Healthy professors and postdocs should write feedback to each other every 3 months. Please teach to your professors to how to listen and how to talk politely. Don't insult, don't physically touch, don't tell to your students that I will do all of these things and you should be silent.

Response 1403

Perspectives on the postdoc roles and responsibilities

This position was a chance to directly manage projects and train to be a full scientist under direct mentorship of a supervisor.

Fundamental issues and challenges

Supervisor just views me as another worker. Was not provided any additional support and was expected to know everything when I first joined the lab.

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

Force all postdoc positions to follow NIH pay guidelines to make the postdoc career path enticing and affordable to families

Response 1404

Perspectives on the postdoc roles and responsibilities

A postdoc is a highly skilled researcher in a position that should facilitate increased independence and skill development. Postdocs are integral to the function of large biomedical research labs and often lead complex data analysis, mentor graduate students, and write grants.

Fundamental issues and challenges

Money. This is a straightforward issue with a straightforward solution. Current postdoc salaries are not commensurate with the level of skill and experience that is required. With so many lucrative career paths in the private sector and the volatility of the academic job market, for many people it simply does not make sense to pursue a postdoc position.

Existing NIH policies, programs, or resources

NIH should increase its payscale for postdoctoral researchers. Academic institutions seem to almost always adhere to this payscale by default, and so NIH has a lot of influence on how much postdocs are paid across the country. Unfortunately, this rate is not often adjusted for factors like cost of living. It also has not been adjusted for inflation and increases in the cost of living over time. My understanding is that this pay scale has not substantively shifted in many years, exacerbating the underpayment of postdocs and minimizing interest in these types of positions.

Proven or promising external resources or approaches

No response

Response 1405

Perspectives on the postdoc roles and responsibilities

A postdoc is an opportunity to continue producing academic research while hopefully preparing for the next phase of the individuals career (tenure faculty position, principle investigator, industry researcher, etc.)

Fundamental issues and challenges

The astoundingly low pay is the biggest challenge to postdocs at the moment. Academic researchers dedicate themselves to the advancement of the world around them and are not adequately compensated to even survive. The amount of work and the low pay expected from postdocs is one of the most toxic and abusive aspects of academia. This is likely one of the biggest reasons why people leave academia in combination with the lack of job prospects as a principle investigator or some other leadership role in academia.

Existing NIH policies, programs, or resources

Pay postdocs a living wage

Proven or promising external resources or approaches

No response

Response 1406

Perspectives on the postdoc roles and responsibilities

Secondary experience, mid-career opportunity before starting a lab.

Fundamental issues and challenges

Too high of expectations for too small of a salary, given the education level. Relative lack of job security, given lab funding.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1407

Perspectives on the postdoc roles and responsibilities

Depending upon the lab composition, an academic post doc holds may be the most responsibilities in a lab set up right after the PI. Starting from project management to lab management to mentoring, personal and professional development-a post doc has to fit in many shoes. Sadly so, a post doc is not provided by with the job security and compensation which might be deserved for someone fitting into so many roles, often making this to be a position which is accepted as being a transition state before moving to more promising secure opportunities outside of academia with better work life balance and meaningful compensation. For an individual at the prime of both their professional and personal lives, unfortunately this position seldom provides the peace of mind in the United States, as not only a post doc is at the complete mercy of the supervisor but often their are no structured policies even for a post doc to tackle issues.

Fundamental issues and challenges

Currently the lack of interest probably comes from the disillusionment stemming from the low quality of life associated with the profile. Specially after covid, which showed the importance of so many "taken for granted" things in life—mental health, spending time with family, personal care—investing so much time and effort and energy in a profession which in return provides so little fulfillment of basic necessities, individuals for whom being in academia isn't set in stone, they are choosing different paths. Of course for people coming to the US from abroad, a different path isn't an option due to immigration policies, or may be for whom, maintaining immigration status is a necessity-these people often remain post docs just to make use of the time until a better opportunity opens up. This often ends up with a general lack of motivation or appreciation for the profession since apart from that small stock who actually wants to be an academic, the profession is populated with disgruntled post docs who often elaborate their experience to there peers in the community which may be also adds up to the general lack of interest. An attitude of "we did it the same way, so can you"—as often phrased by the seniors in the field doesn't help since times have changed, and everything comes at a higer price as it did 5/10 or 50 years back.

A fair centrally controlled recruitment—similar to grad student recruitment, stating proper information regarding compensation, working hours, resources available for post docs might help? This also curbs the power of certain PIs who tend to exploit their post docs due to lack of transparency associated with the whole system.

Existing NIH policies, programs, or resources

Though some institutions try hard to honor policies to aid post docs, but still I know many universities/ institutions in the US which fail to provide so. Many of the post docs are immigrants like me come from a completely different nation, to gain best quality scientific experience in the US. It is sad when they get recruited in labs where they are not even compensated at the NIH scale. I have heard instances where the supervisor had mentioned that they have to work on the weekends or holidays if they want to get paid in accordance to the NIH scale. Or the incoming post docs are recruited at lower compensation than the scale.

Requesting leaves, are a whole new story. Lack of policies like paid and unpaid leaves—as provided to any staff or employees in other professions results in being reprimanded or not paid if they take some time off.

Lab timing—since post docs are not clocked in—most of the time they spend longer hours without weekends making them vulnerable to emotional and physical burn out.

Lack of basic rights—a colleague on J1 visa, was refused maternity leave in her lab, leading her to change her lab at sucha critical juncture in life.

Often an unofficial hierarchy exists in some labs, wher "bullying/emotional exploitation" remains uncomplained—as one is at the mercy of the PI for professional interest like recommendations, immigration; since if one has to change labs—the individual might have to deal with change of status and what's the guarantee that the next lab won't end up being the same as THERE ARE NO POLICIES.

These are basic necessities/rights a working individual should have in a professional set up—but we as a community lack our basic rights.

Proven or promising external resources or approaches

We need basic policies

We need

1) job security
2) work-hours which is reflected in compensation
3) aid to help post doc fight against oppression in the lab
4) resources to help with child care, mental health, comprehensive medical insurance
5) proper leave and clocking in and out
6) proper increments
7) a post doctoral committee to help with recommendations in case there is a falling apart with the PI
8) the PIs need to be educated to manage labs and people
9) We want to be valued for our efforts, for our hardwork and not being treated like machines to get more data.

If there is a properly structured transparent post doctoral recruitment and support system available which can promise a fair compensation and work life balance—people would be motivated to do science. It doesn't help when we see people with basic/vocational training or from other fields working 9-5 jobs and earning double or triple the amount than we do. It just makes not value the big picture science anymore but question our professional choices in the first place! Unhappy professionals cannot help in driving something for long. It is unhealthy for that individual and also for the profession.

Response 1408

Perspectives on the postdoc roles and responsibilities

An academic postdoc presents a great opportunity for me as it provides a platform to build and develop the necessary skills for being a successful independent investigator. Opportunities to interact with other fellows and the research community are extremely valuable and beneficial in discussing novel ideas, troubleshooting, finding collaborations, and networking. The mentorship support provided by a senior scientist in the field is indeed a great way to shape and refine my research project. In addition, virtual group seminars, workshops on leadership skills, and grant writing support are the things that I look forward to learning to make a smoother transition from my current role as a postdoctoral researcher to set up an independent and well-funded research program in the future as a PI at a reputed institution.

Fundamental issues and challenges

I really enjoy being in academia as a postdoc. The only constraint that I feel is with the stipend/salary as it's way lower than an Industrial post-doc would offer. I am thinking of moving to Industry only because I am not able to fulfill the family needs on a postdoc salary. There are no additional compensations for child care, dependents, etc. This overall diverts my focus from research to managing finances.

Existing NIH policies, programs, or resources

I believe raising the minimum salaries for post-docs and providing compensations like dependent care, child care, etc. would definitely enhance the quality of post-doc life in academia. I see many of my peers moving to Industry just because they get better salaries there. Instead, appropriate training should be provided to postdocs who would like to stay in academia.

Proven or promising external resources or approaches

Once postdocs are satisfied with the salaries, they will be more productive leading to better outcomes.

Response 1409

Perspectives on the postdoc roles and responsibilities

A postdoc should provide focused experience in their future research area; and have ample support for data analyses, data dissemination, and grant writing. How much is gained from a postdoc can greatly vary, and the quality of the postdoc mentor largely determines success.

Fundamental issues and challenges

Pay is too low. We are paid a subpar salary for years and treated as such. The fact that the pay scale does not take into account cost of living or inflation makes no sense. We have doctorates and are paid worse than most individuals working hourly jobs. It has become fairly common to complete 2 postdocs before getting your first faculty position, which means moving every other year, resulting in a lack of social support and financial stability. Moreover, as someone who comes from a disadvantaged background, current policies where individuals are not provided with moving expenses is classist. This restricts the ability to cast a larger net for postdoc opportunities to those who have the advantage of financial support from family, restricting future professional growth. This is especially disappointing given the NIH focus on diversity and inclusion. For me personally, I supported myself entirely though undergrad and grad school, so on top of my large amount of student loan debt, I have credit card debt because that was the only way to move for my 2 postdoc positions. I came from generational poverty and thought a doctorate would provide me with financial stability, but so far, I have incurred an incredible amount of debt and a lack of financial support.

Existing NIH policies, programs, or resources

I will reiterate my above response for consideration: Pay is too low. We are paid a subpar salary for years and treated as such. The fact that the pay scale does not take into account cost of living or inflation makes no sense. We have doctorates and are paid worse than most individuals working hourly jobs. It has become fairly common to complete 2 postdocs before getting your first faculty position, which means moving every other year, resulting in a lack of social support and financial stability. Moreover, as someone who comes from a disadvantaged background, current policies where individuals are not provided with moving expenses is classist. This restricts the ability to cast a larger net for postdoc opportunities to those who have the advantage of financial support from family, restricting future professional growth. This is especially disappointing given the NIH focus on diversity and inclusion. For me personally, I supported myself entirely though undergrad and grad school, so on top of my large amount of student loan debt, I have credit card debt because that was the only way to move for my 2 postdoc positions. I came from generational poverty and thought a doctorate would provide me with financial stability, but so far, I have incurred an incredible amount of debt and a lack of financial support.

Proven or promising external resources or approaches

No response

Response 1410

Perspectives on the postdoc roles and responsibilities

I view a postdoc position as a “soft entry” into a tenure track position in academia.

Fundamental issues and challenges

I am nervous that the postdoc positions will not pay nearly as well as a junior faculty role, which can be inhibiting to those of us who have been living on ~30k salary of full-time graduate students

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1411

Perspectives on the postdoc roles and responsibilities

The roles and responsibilities of the position entail a much broader range of activities to that of graduate students, even though it is often not treated as such. Postdocs who wish to remain in academia must devote a portion of their time honing skills like writing grants and research proposals, but also teaching and mentoring junior trainees, all the while coming up with a viable and independent strategy for future research. This is often ignored by senior researchers and principal investigators who see postdocs as a cheap work force attending only to their immediate research visions.

Fundamental issues and challenges

Given the recent inflation and hike in prices, the quality of life has degraded substantially, and many of us feel the postdoc salaries should be adjusted to meet the demands of the economic present. Otherwise, more and more people will put into action their plan to drop out, something many are already seriously considering.

Existing NIH policies, programs, or resources

NIH should raise the minimum salary for postdocs.

Proven or promising external resources or approaches

No response

Response 1412

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are largely research focused and provide additional experience. However, if this experience is not needed due to previous training, there are limited alternate routes. Further, it is typical for any career to involve on the job training, so it is not clear why this phase is prolonged and underpaid for postdoctoral scholars. As a clinical psychologist, the position is beneficial in allowing me to accrue clinical hours under a licensed psychologist.

Fundamental issues and challenges

Underpaid given expertise and contributions, especially within research spaces. Limited advancement to assistant professor positions within Psychology Departments. Negatively effects lifetime earning potential and ability to purchase a home or start a family.

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

Improving recruitment, providing smaller and more vast training supplements for postdoctoral trainees with lesser application requirements. This may help overcome differential access to well-funded mentors and collaborators that guide the federal-funding application process.

Response 1413

Perspectives on the postdoc roles and responsibilities

The postdoc position represents an opportunity to further develop one’s research skills in a particular area while gaining additional leadership experience. Responsibilities may include leading research projects, mentoring students, and applying for funding. By the end of a postdoc, one should feel ready to independently lead their own research program.

Fundamental issues and challenges

In my view, low salary and low likelihood of success on the academic faculty job market are the two biggest issues impacting recruitment, retention, and overall quality of life. The current annual increases in salary do not come close to keeping pace with inflation and are not competitive with non-academic positions. It seems hard to justify ~5 years of low pay in a postdoc position when the odds of obtaining a

desirable (i.e., tenure-track, at a reputable institution with adequate resources) faculty position are small, and one might have greater success on the non-academic job market without doing a postdoc.

Existing NIH policies, programs, or resources

Higher salary levels; greater annual salary increases.

Proven or promising external resources or approaches

I'm not sure exactly what form this would take, but it would be helpful to incentivize PIs to care more about their postdocs' career trajectories.

Response 1414

Perspectives on the postdoc roles and responsibilities

To me the postdoctoral position is a combination of training in new disciplines and research. We are the fundamental drivers of research in a university setting as we have the knowhow that graduate students lack and we work full time (I work >60 hours weekly averaged over the year) on experiments and data collection, unlike the professors who write grants, teach, and can frequently be very far removed from the lab.

Fundamental issues and challenges

For a person of my training (physics, data science, biology), it's not hard to find an industry job upon obtaining a PhD with an initial salary of 2X greater than what I am currently making. For a year or two this is ok, but with postdocs stretching longer and longer, this becomes very difficult. I'm in my sixth year now, I've started a family, and this year in particular I've had to take out loans. In other words, I am borrowing money to fund my postdoctoral period, as an investment in my future career. This financial pressure is so unsustainable that I will leave next summer, regardless of what is finished. Thankfully I am close to two sets of results. However, I am currently the only one in the building who knows how to use the system that I built (which cost > 1 million dollars). If I have to leave earlier than next summer because of financial pressure—will all of that be lost because my salary is insufficient to support my family?

Existing NIH policies, programs, or resources

The NIH should move towards funding 3-5 year contracted staff scientist positions with salaries competitive to those in industry, but without long-term stability (i.e. tenure). `Postdoctoral training' originally meant 1-2 years and then a decent chance of an academic position. Now it means > 5 years and low chances of an academic position, on top of a poor salary. If one understands the resulting financial pressures—who would sign up for this? On the other hand there are many people interested in doing science if the salary keeps up with what is reasonable (i.e. industry standards), and are willing to work on untenured track positions. Separately, the NIH should certainly increase existing postdoc salaries and in general remove salary limits on postdocs—if a PI wants to pay a large amount of money to a postdoc, why stop this? Surely laboratories should be competitive with industry, especially when long-term prospects for tenure-track jobs are low.

Proven or promising external resources or approaches

No response

Response 1415

Perspectives on the postdoc roles and responsibilities

A final training experience to prepare you to become tenured faculty or a scientist in an industry role

Fundamental issues and challenges

Too many years of training (the increasing expectation of completing two postdocs), salaries are way too low for a doctoral level scientist (why do a postdoc when you can go into industry and make 3x the salary), PI expectations of work hours are too high

Existing NIH policies, programs, or resources

Increased grant funding to allow increased postdoc salaries in academia; NIH mandated postdoc salaries should increase

Proven or promising external resources or approaches

No response

Response 1417

Perspectives on the postdoc roles and responsibilities

The post-doc remains an essential period of apprenticeship toward sustaining our position of excellence and leadership in global biomedical research (perhaps not so much any more). Training in biomedical research is not like training in business's nd it is being viewed and managed increasingly as if it is. This is a disaster, and I am very concerned about the future of our profession.

Fundamental issues and challenges

First and foremost, the goals expressed by a working group several years ago that created the rapidly escalating post-doctoral salary scale have been achieved—see the text in the introduction to this RFI. An express goal (I was at the meeting) was to reduce the number of post-docs in the biomedical research workforce as there was at the time apparently a perceived glut and bottleneck to professional advancement at the level of the post-doc. This was to be achieved by pricing them out of a job, to make them too expensive to keep in the lab and therefore force them to seek employment outside the intended career trajectory (I repeat, I was at the meeting where the white paper was presented by this task force). It has worked, and we are now in the dumpster!

Existing NIH policies, programs, or resources

If NIH is going to continue to insist on forcing an escalating and unreasonably burdensome pay scale for post-docs (including entry level), and if the current academic and social climate continues to encourage business-oriented initiatives like post-doc unionization and work stoppages, the publicly funded biomedical research initiative is doomed to self-inflicted failure. We can't put the toothpaste back in the tube, but two things may help if implemented immediately—

1. FREEZE the current post-doc pay scale for a period of several years, and gradually trim the rate of escalation esp after year 3, and;
2. SUBSIDIZE all post-doc salaries through supplements to existing and future R01s and other research grants on which they are paid. Then figure out how to incentivize PIs to hire post-docs, because right now the perception is that post-docs are, generally speaking, not worth it (again, an intended consequence).

But we all know that post-docs are the engine of our research enterprise, and they must be saved if we are to save their future and the future of our profession!

Proven or promising external resources or approaches

The primary answer to this self-created problem is money. More T32's, more F32s, more supplements to R01s earmarked to subsidize post-doc salaries. More money for transitional grants (K99/R00) to assist them move into independent positions and hopefully offset the prior initiatives that moved them out. We all saw this coming, and now that it's here, we have no-one to blame but ourselves (and I use "we" very broadly because there is blame to be laid.)

Response 1418

Perspectives on the postdoc roles and responsibilities

I view it as the next step in my scientific training. I hope to remain in academia so I know that this part of my career is really important for my overall goals. I see the postdoc as gaining more independence in their research, honing in on the questions they might want to explore in their own labs, and working on teaching/mentoring of junior students.

Fundamental issues and challenges

Pay! I have a dream of being faculty, but I know that until that happens I cannot expect to make a living wage or have long term benefits to help me in my life. I know that I don't have a retirement account through my employer like my peers would, and I am not given student loan deferment as a postdoc, so much of my meager pay will be going to those major expenses. How can you expect people to want postdocs when industry will give you all of that and more?

Existing NIH policies, programs, or resources

Create a new way to encourage older PIs to retire. That way, people going after postdocs feel like they could actually achieve their job goals. I also think adding more personal things to the F32 to help support retirement benefits, increased pay, and student loan benefits, and healthcare will also provide a path to financial stability for postdocs.

Proven or promising external resources or approaches

Unknown, I'm just a PhD student considering a postdoc in the future and what I've mentioned about financial things is one of the biggest things I'm scared of.

Response 1419

Perspectives on the postdoc roles and responsibilities

The postdoc to me is a necessary step towards my goal of finding a tenure-track academic research job.

Fundamental issues and challenges

The main issue I have witnessed among my colleagues and peers inhibiting recruitment and retention is the low pay compared to the pay available in industry, which is often double or triple the NIH base pay. Particularly in urban areas such as NYC, Boston, and SF, it is not practical to live on postdoc salaries, often forcing people to pursue industry jobs to support their families.

Existing NIH policies, programs, or resources

Increased base NIH pay and an automatic adjustment matching inflation.

Proven or promising external resources or approaches

No response

Response 1420

Perspectives on the postdoc roles and responsibilities

Postdocs are essential to lab research—they bring new ideas, expertise and enthusiasm to a lab

I don't think postdocs should be involved in teaching, but some of them seem to be interested in teaching, perhaps in preparation for an academic job. I am not sure what the solution for this is, but I would not want to pay a postdoc from my grants in order for them to teach.

Fundamental issues and challenges

The main challenge for recruiting postdocs is financial. The postdoc salary is borderline inhumane. Many PhD students don't want to continue in academia because they cannot imagine making a living and paying their student loans from a postdoc salary. Also, many postdocs delay or forego starting a family because of lack of resources.

So I encourage higher salaries for postdocs, but I want there to be extra money in NIH grants for postdocs. Otherwise, we risk drastically reducing the number of postdocs.

Existing NIH policies, programs, or resources

I think the eligibility window for K99/R00 needs to be expanded. In some fields, it is impossible for postdocs to get enough results in 3 years to apply for a K grant.

I think there should be an incentive for PhD students to continue in academia. For example, the F99/K00 grant should be opened up to all PhD students, not only minorities.

Proven or promising external resources or approaches

We started a postdoc recruitment day, but we are limited by access to institutional funds. Perhaps there could be a mechanism to apply for NIH funds in order to finance this kind of recruiting activities.

Response 1421

Perspectives on the postdoc roles and responsibilities

The purpose of performing a postdoc is to further one's scientific training, with the end-goal of moving on to another position in academia or industry.

Fundamental issues and challenges

The fundamental issue is that doing a postdoc is not attractive because the salary is low and the benefits are mediocre.

The rewards for doing a postdoc are not materially useful. The position is generally just a stepping-stone for entering the professoriate.

Existing NIH policies, programs, or resources

If the NIH wants to make it attractive to do postdoc work then they need a strong incentive to compete with industry careers. Perhaps after 3-5 years, a postdoc has the opportunity to apply to become a government employee / researcher, where they are directly paid by the government and not from nebulously expiring PI grants.

Proven or promising external resources or approaches

Typical corporate careers have some kind of progression with promotions, salary raises, and yearly bonuses. Postdocs have none of these things because it's a dead-end job. It's one external example that could inform the NIH of how employees like to be treated.

Response 1422

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellowships are critical for giving early stage investigators the time to immerse themselves in a specialized topic with significant levels of supervision from more senior investigators. Its a time to really define cutting edge research topics and opportunities, to develop professional relationships and to define your major interests, free from other academic responsibilities that come with academic appointments.

Fundamental issues and challenges

Current challenges include salary levels are very low, particularly in cities like NY or LA or Boston that are expensive to live in and particularly for PHDs vs MDs. Moreover, training grants do not support faculty time including leadership time and thus faculty do not have paid dedicated time. This is a critical barrier to really being able to provide the support post docs often need. Academic institutions just do not increasingly support this time.

Existing NIH policies, programs, or resources

Support faculty in their mentoring time, increase salary levels. Fellowships need to respond to changing world, changing academic support for these activities.

Proven or promising external resources or approaches

No response

Response 1423

Perspectives on the postdoc roles and responsibilities

The roles and responsibilities of a postdoc include

1. conducting and publishing mentored research with increasing independence and
2. providing mentorship and supervision to graduate, postbac, and undergraduate students and research assistants.

Because a postdoc is fundamentally a temporary trainee position, their activities should help prepare them for the roles and responsibilities they might find in a future academic or otherwise related position. Therefore, opportunities develop skills and experience in teaching, grant writing, consultation with industry, or other skills relevant for a particular postdocs career path are also essential.

Fundamental issues and challenges

The fundamental issue is that most postdoc positions seem to be set up to prepare postdocs to do one thing: conduct research in a major research institution (R1). Therefore, postdocs are prepared for temporary grant-supported i.e. "soft money" positions or for tenure track positions. There are not enough grants or TT positions to go around, so postdocs are basically being asked to "bet on themselves." The table stakes for this wager are quite large because postdoc salaries tend to be well below market rate for someone with a PhD. Postdocs are therefore expected to sacrifice considerable income for the chance at obtaining a future job in an incredibly competitive market. To do so, they are often expected to relocate for a short period of time with considerable uncertainty. This is particularly disruptive to postdocs with families. Finally, for postdocs who accept these conditions, their tenuous career prospects are often dependent on a single person, their PI, with very limited recourses should that relationship not be as supportive as they had been led to believe.

So in summary, the challenges are:

1) Limited career prospects in the field that the job prepares you for,
2) Low pay,
3) Need for temporary relocation,
4) Precarious dependence on a single benefactor without safeguards.

Existing NIH policies, programs, or resources

Increase minimum postdoc salaries. Increase grant funding to fund those salaries. Enable and encourage the prospect of remote work. Incentivize postdoctoral training that prepares postdocs for more diverse careers. Incentivize or require multiple mentorship models and/or institutional structures to decrease the dependence of postdocs on a single mentor.

Proven or promising external resources or approaches

No response

Response 1424

Perspectives on the postdoc roles and responsibilities

To me, an academic postdoc is a position to diversify my scientific skill set while taking on increased leadership and mentorship roles for graduate students in that lab. The position is also a means to increase my marketability to future academic institutions, via the renown of my post-doc advisor.

Fundamental issues and challenges

(regarding recruitment and overall quality of life) Given my current time commitment to my graduate studies, my work-life balance is heavily slanted toward my work. I accept that. I worry about how much more time I would need to lead a successful post-doc position, and thus how much more decreased my quality of life may be as a post-doc. I view the increase in salary as a means to purchase means to offset some of that extra burden, but I seriously consider weighing the costs and rewards of the position.

Existing NIH policies, programs, or resources

I am aware of and have applied to fellowship opportunities through the NIH. I am also aware of some stipend increases for some research positions. I am however largely unaware of NIH programs and resources that could support my path toward a post-doc position.

Proven or promising external resources or approaches

No response

Response 1425

Perspectives on the postdoc roles and responsibilities

The postdoc to me seems like a screening process for faculty hiring where you have to prove that your PhD success wasn't a fluke. This isn't necessarily a good thing, and creates a pervasive feeling of constant evaluation. In my mind, a postdoc should be a place and time where you can expand your skills as a scientist for your own sake and the sake of better science, and not for the sole purpose of only then qualifying for a faculty position.

Fundamental issues and challenges

It wasn't until recently (last few decades) that postdocs became effectively required for academic positions in the life sciences. But people's lives are more or less the same (when you get married, have children, buy a house, etc). The prolonging of training is quite detrimental to the wellbeing of young scientists. Postdocs are severely underpaid, and have no bargaining power whatsoever in their employment, salary and benefits. The most basic issues have to do with these things, i.e. livelihood. It is an exploitative system based on cheap labor and infantilization in the name of justifying appallingly low salaries and meager benefits for incredibly well trained professionals. These sacrifices are not only for the postdoc tenure, but have long lasting repercussions. For example, people who do postdocs most likely just did a PhD during which they most likely had no retirement savings. A postdoc is for many the first opportunity to start saving for retirement and yet they can't because there are no employer benefits, or they can't because their salaries are so low they can't really contribute to a retirement fund. The most important period for retirement fund contributions is at the very beginning of one's professional life. Postdocs generally love science, but more and more we are asked to choose between science and our current and future livelihoods. Why is this necessary? Eventually, science will probably lose because people need to live.

Existing NIH policies, programs, or resources

The NIH pays its intramural postdocs more than the advertised salary minimums. But universities, no matter the cost of living of their area, continue to pay the minimum because they can. They will continue to do so until they are forced not to do so (either through collective bargaining, or NIH policies). The NIH should enforce cost of living adjustments to minimum salaries, rather than just suggesting them. The NIH should make sure that postdocs with different statuses are not treated unfairly (NIH award recipients are frequently treated as contractors and not employees and do not receive certain benefits!). And the NIH should require certain basic benefits including healthcare, childcare, retirement funds, etc.

Proven or promising external resources or approaches

Generally, better pay and benefits can do wonders for recruitment. Exhibit A: tech and pharma.

Response 1426

Perspectives on the postdoc roles and responsibilities

There are two answers. One is training to become a PI. The other is learning specialized techniques on the way to becoming a staff scientist or other non-independent role. The latter is clearly more common for most people, especially as the competition for PI slots fiercens. As such, there needs to be more and more emphasis on postdoc training that does NOT assume that the goal is "prep to write R01s", but instead to "do good rigorous science".

Fundamental issues and challenges

Cost, cost, cost. Grad students are older and more medically complex. So are postdocs. Gender identity and caregiver role has diversified. Amazingly, the further you diverge from being a single cishet white male, the harder it becomes to fit into the current model of "work hard for low pay in hopes of a long-term payoff".

And I say this as someone who IS a cishet white male. (No longer single, and my own parental responsibilities as a postdoc were a huge challenge.) It was hard for me. It would be impossible for many others. I survived only because of family wealth.

Until we acknowledge that postdocs need to be per se economically viable and only minimally uncomfortable, the pipeline will leak like crazy.

Existing NIH policies, programs, or resources

An easy one: index the NRSA/Kirchstein stipend scales to

a) living waves and

b) geographic wage variations.

I have now had two trainees in my lab actually turn down a T32 appointment (to my increased cost!) because they would have to take a pay and health insurance cut and they could not afford it because of family and medical circumstances. More generally, those stipends do not reflect what it costs to live in a major American city adjacent to an R1 institution, and until you fix that, we're going to lose the smartest people to industry jobs.

I will also say that I come at this as both a PI and a former postdoc. When I was trying to live on NRSA wages in Boston, it was almost impossible and my wife nearly left me simply because she was sick of being under financial strain constantly. (And I mean she had a lawyer and was threatening me with actual papers.) I see it now affecting the productivity of the people in my lab who need to be working.

Proven or promising external resources or approaches

Working environment: again, I am going to speak from many years of personal experience having been a postdoc. I had periods when I was on fellowship or NIH funded, during which my salary was less, I had worse health insurance (because I was now a "student" according to my university), and I got no retirement or other employee benefits. I had periods when I was paid directly from an R-series grant, and then I was an employee with full benefits.

This dual treatment needs to end. There should be one class of postdoc, treated as an employee of the grantee institution. Period. Institutions that refuse to do this simply should not receive any form of NRSA, K99, or other postdoc-oriented support.

Response 1427

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a glorified scam promoting the illusion of research freedom for underpaid indentured servitude.

Fundamental issues and challenges

First and foremost: pay. Upon my PhD graduation, I had offers in postdoc academia and one in industry. The industry position paid 3.8x times the postdoc salary AND offered better, more concrete career progression. While I love academia and was excited about potential projects, how could the discrepant pay ever be a consideration? A secondary concern is obviously the struggle to attain professorships following postdocs. Ultimately it is a question of supply and demand, and I can't believe the NIH / universities are so naive to even be questioning why recruitment, retention and quality of life for postdocs is an issue.

Existing NIH policies, programs, or resources

Minimum pay?

Proven or promising external resources or approaches

No response

Response 1428

Perspectives on the postdoc roles and responsibilities

Postdoctoral scholars are obtaining advanced training and generating research outputs to make them competitive for permanent faculty/PI etc. positions. Although they are an asset to a lab, both for research productivity and builing infrastructure to train junior lab members, their primary goal should be to advance to the next step in their careers.

Fundamental issues and challenges

Salary and career prospects. Postdoctoral scholar are highly trained, doctorate-carrying experts. As is, they must choose between an uncertain postdoc-to-faculty/PI path that pays relatively little, does not guarantee a faculty/PI job, and likely requires frequent relocation, or a more certain professional path which likely pays more without frequent relocation. As faculty, I'd like to pay our postdocs more but salaries are dictated by what the NIH awards us to hire them.

Existing NIH policies, programs, or resources

Increase postdoc salaries. Provide more opportunities for senior postdocs to transition to faculty/PI positions, not only through K awards but also by allowing them to serve as co-PIs on grants with their supervisors to increase their salaries and funding success rates. This is especially important as many current postdocs have aged out of traditional F award mechanisms due to disruptions caused by COVID restrictions.

Proven or promising external resources or approaches

Increase postdoc salaries.

Response 1429

Perspectives on the postdoc roles and responsibilities

A successful academic postdoc is key to a successful career as an independent researcher. This is the beginning of your individual work and it is imperative that not only you have a supportive mentor but also the financial freedom to lead a project that isn't fully dependent on them. This is also the most difficult part of scientific training in my opinion.

Fundamental issues and challenges

Postdocs often have responsibilities outside of lab as at this stage of life they are starting or already have families to support, however they do not have the benefits of being a full employee (ie. parental and sick leave, holidays, annual raises). Often female researchers leave academia at this stage because if they do not have a partner that supports them or is supportive, then they have to find higher paying jobs in industry that also allow them time off. Male researchers at this stage also sacrifice time at home whether or not they are the primary earner in the family. Cost of childcare in this country is also prohibitive to many families so some researchers leave to even just stay home.

Existing NIH policies, programs, or resources

Fellowships can be awarded in a way that necessitates that universities count postdoctoral researchers as employees. The childcare grant is also helpful so expanding coverage and advertising it better helps, making sure universities are advertising it, etc.

Proven or promising external resources or approaches

Again, any sort of support that the NIH can provide in postdoctoral advocacy at private universities. Postdoctoral researchers often support the whole lab in addition to attempting to launch their careers. Even if there are supportive mentors there are still barriers since they are not full employees so they do not have the same university support for other aspects of life. Fewer and fewer postdocs operate as single-person, single-income, units.

Response 1430

Perspectives on the postdoc roles and responsibilities

You have a bunch of individuals who can’t afford to further any doctoral studies or research due to financial reasons.

Fundamental issues and challenges

You have a bunch of individuals who can’t afford to further any doctoral studies or research due to financial reasons.

Existing NIH policies, programs, or resources

More grants, more help financially to those who are interested in the work

Proven or promising external resources or approaches

More mentoring, more of a global perspectiveResponse 1426

Response 1431

Perspectives on the postdoc roles and responsibilities

It is like the equivalent of a medical residency but for a PhD looking to transition into an independent position. You are supposed to learn new skills but then rapidly apply those skills to demonstrate competency on the job market by publishing papers. Beyond learning to conduct research independently, you learn to manage others and make important decisions while having the “safety net” of a mentor. You learn to write grants and successfully funded grant proposals serve as a “ticket” out of the postdoc position. Other obligations include being one of the most senior personnel in the lab so you take a large load of direct mentoring, training, troubleshooting, sharing & developing protocols, and giving overall advice.

Fundamental issues and challenges

Lack of long-term stability in the position; Pay increases that are often nonexistent or lower than demonstrated competency; Skills becoming highly coveted by the mentor to the point that transitioning to independence is hindered

Existing NIH policies, programs, or resources

The K99/R00 pathway is an excellent opportunity. However, there should be rules on the degree to which a mentor can (or cannot) move into the research area of the postdoc’s K99/R00 proposal. There is a separation plan but in reality these lines get very blurred.

Proven or promising external resources or approaches

No response

Response 1432

Perspectives on the postdoc roles and responsibilities

I view the post doc as the opportunity to show yourself and the scientific community that you are able to independently initiate a project and take it from start to finish, acting with a high level of independence in deciding the trajectory of the project along the way. This view is more specific for postdocs planning to move on to academic or leadership positions after but I think it applies to most. I think other goals of the postdoc are to expand expertise, begin defining what your future area of science will be (academic), experience mentoring, and contributing to the overall productivity of the lab.

Fundamental issues and challenges

I think the biggest challenge to recruitment and retention is pay. Some grad students but most postdocs are now entering a phase of life where the discrepancy between their earning potential and the amount they actually make becomes too great to ignore, given the demands of their life (buying houses, having children, wanting to live in a way that is comparable to their non-postdoctoral peers). Other than that i

think there is a lot of inconsistency and lack of communication about the purpose of the postdoc and how much independence they'll be given during their time in the lab. This can lead to little sense of ownership over their science which, for me, is critical to enjoying and feeling invested in the work. Lastly, I have less experience with this, but there are other resources that postdocs are rarely offered that can be more accessible for their non-postdoc peers (for example, child care).

Existing NIH policies, programs, or resources

I think the NIH minimum salaries were a good idea, but should be increased. If we want to retain postdocs, i think this is the single most effective way to do that. Other resources, like childcare, would be helpful but ultimately are also issues of money/pay. I think issues of mentorship are harder to address at a policy level but better definition about the expectations for a postdoctoral position could help with that.

Proven or promising external resources or approaches

No response

Response 1433

Perspectives on the postdoc roles and responsibilities

Postdoc position to me is an opportunity to learn new methods that can help me shape my future goals and career. It's a great time to learn new methods, learn and train on grant and paper writings.

Fundamental issues and challenges

The main issue is financial. Postdoc salary is very low compared to other options. Especially here in the US, the cost of living is always on the rise and the postdoc salary did not increase to match that. I'm an international scholar, and I don't have many funding opportunities as well, so I think significant increase in the postdoc salary, and opening NIH funding opportunities to internationals can be huge step in attracting more postdocs

Existing NIH policies, programs, or resources

As I mentioned before, the main thing to me is opening the NIH funding opportunities that are available to US citizens to International scholars. Or alternatively having other programs that can support internationals

Proven or promising external resources or approaches

I would like to have a program that help with grant writing and in general scientific writing. Also, funded programs where postdocs can mentor Undergraduate or master students

Response 1434

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I think there are 3 fundamental issues here.

1) Salary impacts quality of life and ability to raise a family, so raising the minimum salary would help retention.
2) Classifying Post-docs as full employees increases job security and mental health.
3) Providing child care and especially parental leave increases the likelihood of those who want families to do a post-doc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1435

Perspectives on the postdoc roles and responsibilities

I view postdoctoral positions as necessary step towards becoming an independent Principal Investigator.

My experience is that Postdocs are viewed a paper generating machines. They have very little rights, especially if they are international and depend on PIs for working visas.

Fundamental issues and challenges

My experience is that Postdocs are viewed a paper generating machines. They don't have a lot of rights and there aren't many people or groups that advocate for them, especially if they are international. I have seen countless examples of Postdocs being exploited (working outrageous hours with very little pay) and they are forced to suffer through it because their work visas are dependent on the same PIs that are exploiting them.

Suffering through working as a Postdoc is not even worth the potential job prospects afterwards.

Existing NIH policies, programs, or resources

I think the NIH needs to work on changing the culture in science first and foremost. NIH policies are mainly responsible for the toxic scientific culture. Making it so difficult to obtain funding without really high impact papers and the amount of data required in a grant the NIH isnt even funding yet, creates incentives that leads to poor quality of life for both graduate students and Postdocs. The pressure that PIs feel trickle down to the people in their labs.

Secondly, PIs are not rewarded for great mentorship. They are rewarded for publications. There are many PIs that publish well, but in the process kill the passion graduate students (future postdocs) have for science. I dont know many graduate students in my program that are interested in pursuing science in the future and hence are not interested in applying for Postdoc positions.

Proven or promising external resources or approaches

No response

Response 1436

Perspectives on the postdoc roles and responsibilities

As a postdoc at a school of public health on a medical campus, I led manuscripts, developed data management work flows and built relationships with collaborators in support of an NIH-funded R01. The postdoc allowed me to continue conducting research on the disease system that was the focus of my PhD, and is a neglected area of research in the field. I saw the postdoc as a necessary step in developing my own independent research program in this area.

I was grateful to receive support from my supervisor to lead the submission of a grant proposal to a private foundation. Even with this support, because my salary was almost exclusively funded by the R01 grant, I struggled to set boundaries between my goals for developing independence and the needs of the grant.

Fundamental issues and challenges

Relocation. I likely would have found a non-academic job in the same city as my partner had my postdoc not been remote. My remote work arrangement allowed me to pursue the research that interested me without making substantial personal sacrifices (e.g., splitting time between my postdoc location and the city where my partner's job was while we were trying to start a family).

Paid parental leave. When I got pregnant, I quickly learned that postdocs fall through the cracks of parental leave policies on my campus. Because most postdocs are funded by the NIH in some way, the university didn't feel the need to extend the four-week parental leave benefit to postdocs, assuming that postdocs would be covered by the NIH's eight-week parental leave policy, which only applies to postdocs funded by NIH fellowships. Because I was by an R01, I had to cover my maternity leave with a combination of accrued sick and vacation leave and the short-term disability benefit I enrolled in in case I got pregnant. The fact that neither my campus nor the NIH extended paid parental leave to me really sent a message that postdocs are not valued for the contributions they make. I seriously considered alternative

career paths because of this, even though I was otherwise enjoying my postdoc experience. Even before our baby was born, staying in academia and having a family seemed like fundamentally incompatible undertakings. At the end of my pregnancy, I was offered and accepted a non-academic position that I expect will allow me to be both professionally and personally fulfilled (not to mention nearly doubles my postdoc salary). The biggest sacrifice in taking this position was giving up the neglected area of research that I am so passionate about.

Existing NIH policies, programs, or resources

Parental leave that covers postdocs on non-fellowship funding from NIH

Formal channels for recruiting remote postdocs for computer-based research

Paying postdocs competitively. NIH postdoc salaries can't even compete with similar roles in government, much less industry.

Providing guidelines for how to allocate effort for career development when funded on non-training grants

Proven or promising external resources or approaches

No response

Response 1437

Perspectives on the postdoc roles and responsibilities

I did three post-docs; two at the research bench and one in science education. the latter was, by far, the most influential for shaping how I share my work. There are many opportunities for post-docs to learn research skills, but far fewer dedicated to how we train new scientists, manage professional communication, and share our work beyond scientists. if you want to have greater impact and broader impacts, this is needed for diversifying our biomedical workforce.

Fundamental issues and challenges

Post-docs are often with a single faculty member who is intent on getting work published. While important, this misses the larger issue of shaping the career of the post-doc. Where do they learn a broader spectrum, the financial considerations of running a lab, and how to have difficult conversations so they aren't perpetuating inequities.

HIGHLY RECOMMEND HAVING POST-DOCS BE AVAILABLE TO JOIN EXISTING R25 GRANTS TO HELP MENTOR AND TRAIN YOUNGER STUDENTS —like SEPA, YES, and other similar programs.

Existing NIH policies, programs, or resources

Create funded opportunities within R25 and other training mechanisms for post-doctoral positions. Whether fully or in part, these experiences are unsurpassed for on-the-ground training of post-docs and help them recharge by seeing the light sparked in younger scientists in training.

Proven or promising external resources or approaches

Encourage near-peer mentoring teams within post-docs who work with younger trainees. highly influential. there should be encouragement of multi-level, interprofessional training for postdocs

HIGHLY RECOMMEND HAVING POST-DOCS BE AVAILABLE TO JOIN EXISTING R25 GRANTS TO HELP MENTOR AND TRAIN YOUNGER STUDENTS —like SEPA, YES, and other similar programs. These grants provide applied experience in mentorship, teaching, and sharing work. Plus, programs really need the support of diverse scientists —who often have to do volunteer with these opportunities. there are research opportunities and evaluative experience —it is not science education alone. This aspect is sorely lacking and we've found it to reinvigorate the science interests of our rising researchers across levels.

Response 1438

Perspectives on the postdoc roles and responsibilities

I run my own F32 grant and receive the rest of my funding (~25% RPE) providing methodological consultation for my PIs grant. I see my postdoc as a chance to transition to true independence by running my own grant primarily without oversight and running a team, while considering future career options

Fundamental issues and challenges

the pay is ridiculously small. I wouldn't be able to afford to live in a 1 bedroom in the cities either of my intuitions are in [redacted for anonymity] if my wife wasn't in finance

Existing NIH policies, programs, or resources

change to the postdoc minimum salary would help retain talent. Myself and many other methodologically focused researchers are fending off offers at least 2x the current minimum salary to do data science in industry, and more of us are taking this route. As a result, the people best positioned to steward public investments into rigorous research will leave the field.

Proven or promising external resources or approaches

This is an interesting question, but I don't know off the top of my head of any specific resources, but thanks for asking

Response 1439

Perspectives on the postdoc roles and responsibilities

When I was looking for my first postdoc position, I was encouraged to look for a lab where I could learn a new field. I was trained rigorously as a molecular neuroscientist and ended up joining a behavioral neuroscience lab. Although I had no issues understanding the work, there were issues at every turn with how I approached and completed my tasks. I had drafted a fellowship aims page that was mostly along the lines of the lab's expertise, with some molecular experiments I could add to bolster the findings. There was a specific quote that my former supervisor said that sticks out, "in writing your post—doctoral fellowship, we don't want to give the NIH the idea that we need anything from you; you are coming to us for training." In the end, I wasn't able to acquire the skills necessary to generate sufficient preliminary data and my contract was not renewed; the position lasted a year. It was a waste of time and frankly devastating. I am in my second post doc, and it is much more aligned with my prior training as a molecular biologist. I wish that more people would have encouraged me to just stick to my same field, because unless you have a supervisor that is patient and invested in your training, there is no point to doing a postdoc.

Fundamental issues and challenges

There is just no support for postdocs at all. there is no community building—offices of postdoctoral advancement are a great start. but overall, the structure of the appointment is a temporary position and discourages relationship building.

Existing NIH policies, programs, or resources

There are two long standing expectations of postdocs that make the postdoc quality of life untenable.

1. the "clocks"—one year post PhD for this grant, no more than three past PhD for that grant. All you are doing by imposing these arbitrary clocks is favoring applications from labs that already have a boat load of preliminary data. There is no emphasis on training for anyone that doesn't manage to snag one of these coveted awards.
2. moving from institution to institution. again, by imposing this policy and favoring people who are free to move, you have favoring single men. point blank. if you say you want to support postdocs as people you cannot in the same sentence tell us to move away from existing support networks every five years.

As an aside, the daycare stipend is a nice gesture, but realistically covers one month out of twelve in the state I live in.

Proven or promising external resources or approaches

Make our wages competitive. many of these quality of life issues can be overcome if our "maslow" hierarchal needs are satisfied.

Response 1440

Perspectives on the postdoc roles and responsibilities

Postdoctoral position for me means an opportunity to expand the knowledge acquired during the PhD and learn through practice how to independently develop a research project, gaining in leadership skills that will be required for the next step of becoming and independent researcher.

Fundamental issues and challenges

The main issue challenging both recruitment and retention in academic research is salary. The salaries in the US for a postdoctoral trainee are around a 50-60% of what a PhD could earn in the private sector. With those differences and the cost of living increasing there is no possible competition for academic research. That will be regarding national postdocs. Another major issue for international postdocs is the lack of rights as non-nationals. Meaning that your positions is always dependent on your PI, giving them either they are good or bad people a huge amount of leverage over these postdocs decisions and lives. Also the labor conditions (in some interviews some PIs explicitly say that in their lab you work 7 days a week) are not appealing even more considering the salary. If you put together all these issues with the recent experience of a pandemic, you could understand that conditions must clearly improve to become appealing to international people that are leaving their countries and families behind.

Existing NIH policies, programs, or resources

Better dissemination in order to reach the international candidates. I am an international postdoc and I am sure there are programs I could have applied to, but I haven't receive a clear information about their existence. Also some of them limit the applications to nationals, which is fine unless you are trying to increase the recruitment of internationals.

Proven or promising external resources or approaches

Different universities have started to increase their base salaries in order to attract postdoctoral researchers. Also facilitating applications to visas or the green card as well as access to tenure track positions in the faculties will be a great call for international postdocs.

Response 1441

Perspectives on the postdoc roles and responsibilities

I think that academic postdoctoral training is only valuable to those who want bolster their publication record and want to define their own research portfolio. If the idea is just to gain new skills, that is a part of any new role without being underpaid.

Fundamental issues and challenges

The biggest challenge to recruitment and retention is salary. Whether or not someone wants to stay in academia, postdoctoral years currently represent having all of the expertise to make real money, but choosing to be undervalued and overworked.

Existing NIH policies, programs, or resources

NIH pay scale

Proven or promising external resources or approaches

No response

Response 1442

Perspectives on the postdoc roles and responsibilities

Continued training to eventually be a PI. For me a postdoc is a really important time to learn and apply cutting edge research techniques. It is also important to me to diversify my training from the training I received in my grad lab. It's also important for me to have more independence in my work than I did in grad school. I expect a postdoc position to be one that has more responsibilities and a stronger leadership role in the lab. And also to expect a higher caliber of work from a postdoc.

Fundamental issues and challenges

The #1 biggest issue is salary. During grad school I was fine getting by with the bare minimum and not being able to save. But now I am entering into my 30s, I need financial security and I want to start a family. The low salary of the postdoc is very prohibitive of these needs. I really do enjoy my work and want to continue on in academia because I love my research and think it's important. However, by making barely more money than a student I am having to give up/push back the other adult goals in my life.

Existing NIH policies, programs, or resources

Please raise NIH minimum salary for postdocs.

Proven or promising external resources or approaches

Please raise NIH minimum salary for postdocs.

Response 1443

Perspectives on the postdoc roles and responsibilities

The post-doctoral experience that I expected to have was :

1) To be able to engage in research that expands my current skill set.
2) Develop expertise in a field of interest.
3) Have opportunities to apply and receive funding to pursue my own career as an independent research scientist.
4) Have the opportunity to engage in the latest technological advances.

Fundamental issues and challenges

Issues with recruitment:
1) Lower salary
2) Lack of career development guidance
3) Lack of support for international students with regards to visa
4) Lack of funding opportunities for international post-docs.

Issues with retention:
1) No security of career path.
2) Very few post-post doc opportunity
3) Lack of funding.
4) Low salaries

Overall quality of life:
1) Inability to have an average income and to be able to save for the future.
2) Better opportunities in industry
3) Lack of career development opportunities.
4) No support for international trainees with regards to visa.
5) Instability
6) Lack of forums for redressal of grievances.

Existing NIH policies, programs, or resources

MORE FUNDING FOR INTERNATIONAL POSTDOCS

MORE SALARY

VISA/IMMIGRATION SUPPORT!

Proven or promising external resources or approaches

No response

Response 1444

Perspectives on the postdoc roles and responsibilities

I see this the postdoctoral position as an opportunity to explore research with mentorship of an established researcher. This allows me to work as an apprentice in the academic field that I wish to do research in in the future, developing my network and solidifying my foundations in grants and scholarship.

Fundamental issues and challenges

Pay is the number one limitation of a postdoctoral traineeship. It is difficult to make a living with the low salary ranges provided by NIH grants. Recruitment was difficult because identifying a mentor who would provide support in my personal and professional development instead of being a "laborer" for an established academic was a rarity. Postdocotral positions are not setup for retention as they are short appointments with the hope of becoming junior faculty, which are positions that are diffcult to come by.

Existing NIH policies, programs, or resources

Funding related to postdoctoral fellowships needs to be increased for postdocs to be able to make a living wage.

Proven or promising external resources or approaches

No response

Response 1445

Perspectives on the postdoc roles and responsibilities

Propose and conduct an original research project that might be the basis for their lab once they have a faculty position. Mentor undergraduate or graduate students. Conduct service and DEI activities for their department.

Fundamental issues and challenges

The main limitation is the salary. Salaries and compensation is very limited and much lower than industry positions for filling similar roles. The limit on salary that is put by some institutions, anhd the difficulty of acquiring funding.

Existing NIH policies, programs, or resources

Increase the minimum postdoc stipend.

Proven or promising external resources or approaches

No response

Response 1446

Perspectives on the postdoc roles and responsibilities

The postdoc role is for individual seeking additional training that would help with pursuing a career in academia (albeit the training could also translate to a career in industry as well).

Fundamental issues and challenges

I believe the single most detrimental factor with postdoc recruitment/retention is the financial compensation/stability. Early career scientists are in a critical stage of their life. In order to be "successful" within a postdoc position, personal life decisions must be delayed or even abandoned. Generally, talented scientists understand their worth and are unwilling to make such sacrifices to pursue a career in academia.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1447

Perspectives on the postdoc roles and responsibilities

Exploitative training of little marginal utility in preparation for the faculty job

Fundamental issues and challenges

Poor compensation and prospects for a tenure-track faculty job despite intense work demands.

Typically long training time (4-8 years) post PhD before one can become competitive for faculty position appointments.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1448

Perspectives on the postdoc roles and responsibilities

Temporary training position to prepare the individual for a career in higher academia, administration, biotech startup, or upper level biotech positions. Responsibilities range from research, training/mentoring, teaching, management, and administrative work.

Fundamental issues and challenges

Cost of living crisis has reached a critical level, this is obvious from the many reports from high impact journals that lay out how severe this crisis has gotten. This issue is severely exacerbated by the recent increase in first-gen low income researchers that now hold a greater percentage of these positions (including myself). I am not a victim, the US biomedical research enterprise is the victim, brought on by its own set of outdated policies and embarrassing compensation rates (especially for high cost-of-living metropolitan areas, Boston, Manhattan, Bay Area, etc).

Existing NIH policies, programs, or resources

Stipend levels for 2023 are a joke and I'm actually embarrassed to be a postdoc at the "number one" school in the US. I don't know how much longer I will last with these "slave labor" stipends. I wish this was a unique perspective, but it is shared with greater than 90% of my colleagues.

Proven or promising external resources or approaches

HIGHER STIPENDS! If the NIH cannot fix this, labor unions will (labor union efforts are now underway at my institution). There are consequences for poor policies and poor management.

Response 1449

Perspectives on the postdoc roles and responsibilities

To me, my role as a postdoc, means that I am capable of contributing to the scientific knowledge and solve outstanding problems in the world independently. I take my years as a postdoc to gain further training in scientific methodology (problem identification, solution conceptualization and execution) to finally gain independence (open my own lab in a tenure track position). In summary, my work is to function somewhat independently to design, organize and conduct highly specialized and advanced experiments using established scientific protocols and procedures and in some cases designing new

protocols; summarize findings and publish results in research journals; assume general responsibility for scientific operations of the laboratory; provide supervision and guidance to junior technicians, students, and researchers.

Fundamental issues and challenges

1. Low salary. After 4 years of undergraduate, two years of masters and five years of PhD training in biological sciences, the salary, even at NIH pay scale, is minimal to survive. Even with the salary bump, considerable amount of my salary during postdoc is going towards health insurance. I get $2850/mo after taxes and insurance: $1480 (rent), Parking at work ($300), $100 (electricity), $100 Gas (or more during winter), Car payments 130, Phone and subscriptions: $100. That gives me $640 for everything else.
2. High intellectual demand yet low job security.
3. Over dependency on PI: Despite of hard work, the grad school/postdoc experience: whether you will publish, whether you will attend conferences and get networking opportunities, is dependent upon PIs. Ex. During graduate school, I was productive & had considerable amount of data in interesting directions. But my PI (indirectly) refused to publish until they got an R01. The R01s were submitted repeatedly from my year2-year5 just with the data that I had collected. I wanted to publish and graduate early, but it was impossible without getting R01. Therefore, form year3, my mental health, productivity and enthusiasm towards science deteriorated. My PI is still one of the better PIs. However, I was still unable to publish in time and even when I published it, 50% of my findings were retained for other grants and "future publications". It impacted my personal life. In Year4, my husband needed to move to another place due to personal reasons. As I was not allowed to publish and hence graduate, I remained. Our family had to suffer during COVID, which over-stretched our finances to credit-card loans & brought mental-health issues. I graduated after R01 was granted at the end of year5.

This is the story of a lot of hard working graduate-students and postdocs.

Existing NIH policies, programs, or resources

Salary could be increased.

Subsidized housing systems for postdocs would help.

Accountability for PIs in their actions.

Adding new grant mechanisms.

Proven or promising external resources or approaches

No response

Response 1450

Perspectives on the postdoc roles and responsibilities

Postdoc positions should deliver additional training for a scientist and allow them the opportunity to gain a deeper understanding of a subject and identify their own research niche.

Fundamental issues and challenges

- The pay is very poor and not competitive with salaries individuals with doctoral qualifications can obtain in industry.
- There is an expectation that postdocs should work very long hours, and accept a terrible work-life balance, for the prestige/freedom of being an academic.
- There is very much a sense that failure of a postdoc's research project is also a failure of the postdoc themselves. There is less of a 'team' mentality than in other positions.
- The pressure to publish and get grants is extremely stressful.
- There is very little support for families.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1451

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral role as one of exploration. I have always regarded the postdoc phase as the time to establish an exciting research program and fall more in love with research. I consider the role as one to develop my writing, presentation skills, and research development. As a postdoc, I am responsible for training students and looking after the best interest of yourself the scientist, and the team surrounding you. It should not be a lone-wold situation.

Fundamental issues and challenges

The BIGGEST issues is financial. Most people, specially those without the resources cannot justify getting paid a salary that is not enough to maintain current inflation prices and housing/living costs. So primarily, without proper modification of NIH salary cap, this issue will never subside.

Existing NIH policies, programs, or resources

NIH Fellowships policies need to change. For a postdoc that was accepted on a T32, and then because of the climate, be expected to apply to more fellowships, it is not fair, nor does it make sense to apply for an F32 when it only funds for 1 year. The amount of work that it takes to put these grants together does not reflect the type of award you would get.

Proven or promising external resources or approaches

No response

Response 1452

Perspectives on the postdoc roles and responsibilities

A step above a PhD where you’re able to work on an independent project with more independence from the host PI/lab.

You’re expectes to bring new ideas and solutions to the table. The PI shouldn’t make conclusions for you.

Fundamental issues and challenges

Cost of living is high. There is lack of appreciation. Having a pizza party doesn’t make sacrificing time with your family feel better.

Becoming a full professor is challenging from a postdoc. not a lot of positions available.

As a postdoc, you’re told that you get paid less because it’s a training program. However, industry, you’re still learning on the job but get paid more with better benefits

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1453

Perspectives on the postdoc roles and responsibilities

contribute to the science community with a significant less pay and a uncertain future employment in the U.S.

Fundamental issues and challenges

How can a postdoc concentrate on their work when their future is uncertain next or couple of years later.

Existing NIH policies, programs, or resources

Make sure the program is equipped to keep burgeoning scholars in the U.S.

Proven or promising external resources or approaches

Given them some time and resources to grow.

Response 1454

Perspectives on the postdoc roles and responsibilities

As I see it, the purpose of the postdoctoral position is to provide early career investigators with resources and mentorship to launch their career in academia. This can be accomplished via structured didactics, individualized mentorship, facilitated communication with investigators working on projects similar to the trainee's chosen specialty, and provision of funds to receive specialized training.

Fundamental issues and challenges

The postdoc problem is likely nuanced, with complex, interconnected factors operating across multiple systems.

Recruitment—Postdoctoral fellowships suffer from a selection bias; most people who apply/know of postdoctoral positions already come from R1 universities or are 2nd generation PhD earners. Moreover, many graduate students who may be interested in a more academic career path, but come from less traditional/productive research programs may feel discouraged about their chances getting accepted into a quality postdoctoral position, let alone an academic career. This is exacerbated by those previously mentioned R1 candidates, who can afford to skip the postdoctoral process entirely and take a lucrative, non-public job thanks to their connections from their PI or family.

Retention: Due to difficulties in recruitment, there is a lack of diversity in academia, including postdoctoral fellows and mentors. Fellows from underrepresented or minoritized backgrounds may feel uncomfortable in these environments, and may be perceived and evaluated negatively due to the implicit bias of privileged others, which can lead to premature termination of postdoctoral fellowship. Furthermore, the stipends associated with postdoctoral fellowships are well below the expected income of someone who has earned a doctorate degree. As a result, the only people who can afford to take a postdoctoral fellowship are those with generational wealth, have no loans or significant personal expenses, or are financially supported by a spouse or family member. This further limits the pool of available applicants.

Existing NIH policies, programs, or resources

Consider expanding and continuing to support programs like NIH FIRST, which prioritize creating a sustainable, inclusive workforce in biomedical and behavioral research. Perhaps, this program could be expanded backward, created an NIH FIRST-type program that begins earlier in graduate training to create a sustainable pipeline for postdoc recruitment and beyond.

Proven or promising external resources or approaches

No greater investment could go farther than increasing the stipend for postdoctoral fellows. If postdoctoral fellows are supposed to be investments in the future of scientific research and the research enterprise, than why is the stipend less than what can be earned with a bachelor's degree? People are considering alternatives to postdocs (an academia as a whole) because the opportunity cost and hardship does not equate with the financial compensation considering alternatives and non-academic paths. A potential solution for increasing stipend might be to add a cost-of-living adjustment, similar to how base pay of VA jobs are supplemented.

Response 1455

Perspectives on the postdoc roles and responsibilities

A postdoctoral position in my point of view serves as dedicated time to develop new skills, hone a specific skillset, and provide additional time and training before becoming an independent research within an academic setting. As a graduate student in clinical psychology, there is an aspect of necessity in completing a postdoc position regardless of interest in obtaining an academic position afterwards as the majority of states now require postdoctoral training to be eligible for licensure. For some I believe the

postdoc can be seen as a hindrance after completing graduate school and the internship, or an increasingly long journey to employment which may not include research.

Fundamental issues and challenges

I believe a main challenge for postdoc researchers is the pay non commensurate with their earned degrees and the cost of living. Increasing pay for postdocs, providing protections (unions, HR) as would be common in other settings might help this as well. Increasing flexibility in working arrangements such as work from home and remote work could also aid in this as for clinical psychology students we typically have to move for internship and so moving just a year later for postdoc provides a burden both financially but also socially or for romantic/supportive relationships.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increased pay would be the most beneficial but clear standards for goals to achieve during the training, access to resources and improvement for PIs would help as well.

Response 1456

Perspectives on the postdoc roles and responsibilities

A time to receive more training but working more towards independence.

Fundamental issues and challenges

THE PAY. There is nothing alluring about earning $50K while individuals outside of academia can immediately begin earning six figures immediately after earning their PhD. On top of the terribly low pay, the hours are typically longer/less predictable than a non-academic job, which isn't really any issue that should change but something to be aware of.

Existing NIH policies, programs, or resources

Increase R01 budgets so PIs can adequately pay their trainees

Proven or promising external resources or approaches

No response

Response 1457

Perspectives on the postdoc roles and responsibilities

The Postdoctoral Position is a skilled trainee position. The two main responsibilities for a Postdoc are to perform experiments in the lab outlined in funded proposals and to train for future positions. The training can include many different aspects depending on future career aspirations, such as experiments, career development training, conference attendance, teaching, clinical observations, and internships at industry or government labs. The end goal of the Postdoc is to be able to comfortably lead independent research in a specific topic, generally at an academic, industry, or government institution.

Fundamental issues and challenges

The main challenges are financial stress and future/current job insecurity.

Existing NIH policies, programs, or resources

NIH policy on postdoctoral stipend could be adjusted based on location, potentially related to relative per diem rates for locations. Additionally, postdoctoral support should not have a time limit as current expectations for postdoctoral training are extended dramatically beyond previous expectations; postdocs who are competitive for tenure-track positions at R1 institutions require >5 years of experience. This has limited my own ability to apply for fellowship grants.

Proven or promising external resources or approaches

Successful Diversity, Equity, and Inclusion initiatives focus mainly on career development training. These initiatives would be helpful to incorporate into funding mechanisms to support Postdoc recruitment and retention. This would be an expansion of award supplements focused on diversity, without the specific requirement of a trainee from an underrepresented class.

Additionally, smaller funding awards, potentially directly from NIH Program Officers, to Postdocs to support independent investigations would be extremely helpful and inspiring. The all-or-nothing outcomes of NIH proposals, along with the extended time-frame for grant review, makes this process difficult for Postdoc funding. An intermediate funding allocation that supports experiments, potentially small pilot funding at the discretion of Program Officers with exciting but ultimately unfunded F/K awards, would be very helpful. This works well at Universities that give pilot awards for small research projects.

Response 1458

Perspectives on the postdoc roles and responsibilities

Post doctoral positions mean hardwork, under recognition and low pay to build research on something another senior investigator is passionate about because I "need" experience to even take an inch toward getting funding to do my own unique innovate research. I feel this is doing all the work only to leverage the reputation of another more established senior research because otherwise I will be given no consideration for large funding within NIH. In addition having the right network or knowing the right people also plays into the cost of being a postdoc and sometimes that is hard to do alone.

Fundamental issues and challenges

Pay is very poor and inability to be creative or do my own unique work. The long hours required because of the workload result in a poor quality of life.

Existing NIH policies, programs, or resources

K Awards are very helpful to allow mentored experiences. More such awards that allow a post doc mentorship, generous reimbursement and ability to be freely creative in research work and given adequate credit can help establish a pipeline. In addition streamlining applications to consider a "pitch" first to select promising work for a more robust application.

Proven or promising external resources or approaches

I do not know of proven external resources however a suggestion is to motivate institutions through funding mechanisms to invest in their current grad and early career investigators specifically rather than the default of looking for outside talent to bring in. It is disheartening to here the reality of loyalty to an institution is looked down upon because not "diverse" experience and to be encouraged to move to another institution when rich roots and collaborations may be well established at graduate institution. This loyalty can be viewed as a strength due to the relationships and connections already present and ready to be nurtured.

Response 1459

Perspectives on the postdoc roles and responsibilities

- major workforce in modern biomedical science
- have the skill level required to advance cutting edge research
- main 'think tank' of most labs
- major role in mentoring more junior scientists

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

- Start treating the term of a 'postdoc' like a real job (it is!)
- Increase salary by at least 50% to match private sector
- increase salary of other more senior researchers accordingly
- Have more flexibility in retention of skilled postdocs
- increase benefits
- increase funding to junior PIs by limiting number of grants for senior PIs

Proven or promising external resources or approaches

Take a look at how well postdocs are treated in the private sector and then start making competitive offers. It's not rocket science.

Response 1460

Perspectives on the postdoc roles and responsibilities

A postdoc is a researcher, a scientist, training to become a professor. Meaning they already have the scientific and technical knowledge, and are "junior" researchers, learning how to train and mentor young technicians and grad students, learning how to submit grants, while conducting researcher under a "senior" researcher who is the PI.

Fundamental issues and challenges

Postdocs are currently viewed as students, when in reality they have already acquired the necessary knowledge and went to grad school and trained to become researchers. A postdoc should be considered as a junior researcher and not a student. Therefore, we shouldn't be considered as students and paid a salary that do not reflect our expertise and years of training. There isn't enough recognition of our status as researchers and this is also not reflected in the pay postdocs are currently receiving. I believe that these are the reasons why it is currently difficult to recruit and retain postdocs (I do not like to say "trainees")

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1461

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs are extremely underpaid for their level of education, and for the amount of value they bring to academic science. I just finished graduate school, and transitioned to industry; my new salary is literally double what I would make as a postdoc. Also, in the more expensive parts of the country it is nearly impossible to provide for a family on a postdoc salary.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

You could pay postdocs more. This would be the most effective way to increase recruitment and job satisfaction.

Training, working environment, and mentoring all vary by lab and principle investigator. These variables are effectively out of your control, but postdoc pay is something you can fix.

Response 1462

Perspectives on the postdoc roles and responsibilities

As a grad student, I've heard a lot of my peers express hesitation about doing postdocs after finishing their PhD. There are a few reasons for this:

Uncertainty about the future: Postdocs are often short-term positions, typically lasting two to three years. After that, you're back on the job market and have to find another position. This uncertainty can be stressful and make it difficult to plan for the future, especially if you're looking to start a family or buy a house.

Limited career advancement: While postdocs can provide valuable training and research experience, they may not always lead to permanent academic positions or other jobs in the field. There's often a limited number of positions available, which can make it difficult to advance your career in the way you want.

Poor work-life balance: Many postdocs are expected to work long hours, including evenings and weekends, which can make it difficult to maintain a healthy work-life balance. This can be especially challenging if you have family obligations or other commitments outside of work.

Low pay: Postdocs are often paid less than other professionals with similar levels of education and experience. This can be a financial strain, especially if you have student loan debt or other expenses.

Fundamental issues and challenges

I think that statement is very relevant and important to consider. Postdocs are an essential part of the academic research workforce, but they often face challenges that can impact their recruitment, retention, and overall quality of life.

One of the biggest challenges is the lack of job security and career advancement opportunities for postdocs. Many postdocs work on short-term contracts, which can make it difficult to plan for the future and can lead to high levels of stress and uncertainty. Additionally, there are often limited opportunities for career advancement within academia, which can be frustrating for postdocs who want to continue pursuing research but don't see a clear path forward.

Another challenge for postdocs is the lack of support for work-life balance. Many postdocs work long hours, including evenings and weekends, which can make it difficult to maintain a healthy work-life balance. This can be especially challenging if postdocs have family obligations or other commitments outside of work.

Finally, postdocs are often paid less than other professionals with similar levels of education and experience. This can be a financial strain, especially if postdocs have student loan debt or other expenses.

Overall, I think it's important for academic institutions to address these issues in order to recruit and retain high-quality postdocs and support their success. This might involve offering more job security and career advancement opportunities, providing support for work-life balance, and ensuring that postdocs are compensated fairly for their work.

Existing NIH policies, programs, or resources

One area needed for improvement is providing more support for career development and advancement for postdocs. Many postdocs are unsure of their career goals or how to achieve them, and may not receive adequate support from their academic institutions. The NIH could provide additional funding or resources for career development workshops, mentorship programs, and other initiatives that help postdocs identify their career goals and take steps to achieve them.

The NIH could consider increasing the funding and support available for postdocs, especially in areas such as work-life balance and mental health. Postdocs often work long hours and face significant stress, which can negatively impact their quality of life and mental health. The NIH could provide additional funding or resources for initiatives that promote work-life balance, mental health, and other areas of postdoc well-being.

Overall, I think it's important for the NIH to continually evaluate their policies, programs, and resources to ensure that they are effectively supporting the postdoctoral training ecosystem and academic research career pathways.

Proven or promising external resources or approaches

No response

Response 1463

Perspectives on the postdoc roles and responsibilities

The postdoc for me is was a preparation for the next step. its giving me the sources to construct a competent cv. And a discover of what i am good and where i need to improve

Fundamental issues and challenges

The biggest challenge for retention is salary. I want to suggest 3 things,

1. higher salaries.
2. adjust the salary depending on the state (e.g. Texas, California) of the hiring.
3. "Postdoctoral Experience Level",

there are different levels depending on the years of experience that each university/professor uses under their own rules, for example I know several cases with more than 2 years of postdoc experience (on that site) and they still on level zero!! NIH have to find a solution in which the university/professor is obliged to raise you in level and salary for years of experience. And if he/she denies it, he/she has to give a good justification.

Existing NIH policies, programs, or resources

Postdoc are busy at the labs, we dont have time to check policies, salaries policies and everything. Help us by giving the resources easily. I know NIH has a lot of postdoc to handle, but help us to get treat well by taking care of our salary rise every year according to our years of experience

Proven or promising external resources or approaches

No response

Response 1464

Perspectives on the postdoc roles and responsibilities

I view it as a step above graduate school, you are still a trainee and it's still unclear if you are an employee of the institution or not. This brings with it a lot of uncertainly about benefits, job stability, and administrative issues. It's an important stepping stone, but in a way it still feels as though you are at the mercy of your institution and lab and could be exploited for free labor.

Fundamental issues and challenges

Having more structure to the position would help, as would requiring more from institutions on how to treat their postdocs. Setting hours and benefits would be extremely beneficial, right now these just can't compete with industry for interested scientists.

Existing NIH policies, programs, or resources

More specific postdoc training programs that come with explicit requirements for institutions to follow.

Proven or promising external resources or approaches

Not sure, my host institution has slowly started providing more support for postdocs. This includes postdoc symposiums, networking events, training opportunities, but is slow to implement structural change to really make a difference.

Response 1465

Perspectives on the postdoc roles and responsibilities

Postdoc positions allow for advanced training in project management, independent research, and mentoring. Postdocs have more potential for autonomy in their research projects and opportunities to take

on leadership/mentoring roles that are not offered to graduate students. They can work at a higher scientific level than grad students and progress projects faster. Despite these clear benefits to doing a postdoc fellowship, I know that postdocs are still chronically underpaid, do not have competitive benefits, and are dependent on their PI to be successful. There is still a large power dynamic between PI mentors and postdocs, and the relationships can be beneficial and positive or can be toxic and abusive. I view the drawbacks/risks of a postdoc fellowship as outweighing the potential benefits of advancing my training.

Fundamental issues and challenges

After 5+ years of training for a PhD while being underpaid, receiving little benefits, and potentially being abused in the academic training system, it is hard to justify prolonging the academic journey for grad students who want to have a career in industry or other non-academic careers. I am about to defend my PhD and know that I want to have a career in biopharma. 100% of the people I have done informational interviews with in industry have advised me to 'not waste my time' with an academic postdoc and instead join the biopharma industry at the PhD scientist level. They have all told me that academic postdoc training does not prepare scientists for industry careers (even those who did academic postdocs and are now in industry) and the postdoc training will not help your career advance faster in industry.

Also I think it important to address that as a female scientist, the pay gap, household/parenting responsibility imbalance, and biological clock all heavily incentives women to jump straight into industry positions. I can't afford to freeze my eggs on a postdoc salary but also can't afford to make big financial decisions such as buying a house or starting a family during my postdoc. Most postdocs I know who have made large financial/family planning decisions during their training have had significant financial support from their partners or extended family.

Also, I know many postdocs who are floundering—stuck in 6+ years of fellowship or at the instructor level without support from their PI to make progress on their project or advance to the next career move. They are still underpaid and overworked like grad students, and have less training oversight to ensure their success.

Existing NIH policies, programs, or resources

I think the academic training system is broken, and fundamental changes need to be made to make graduate training and postdoctoral training less burdensome in order to keep people in an academic career path.

We need to be paid SIGNIFICANTLY more, we need better health, dental, and vision insurance (we technically have it but most of us go into immense debt with 1 medical emergency), we need retirement benefits, we need mandatory sick time and vacation time, we need mental health benefits, we need accountability for abusive/toxic/inappropriate PIs/mentors/faculty/administrators, we need unions, we need a functioning human resources group for trainees, and we need opportunities for career development.

I keep hearing about 'the postdoc crisis' and academics complaining that no one wants to stick around in academia because industry pays better, but the draw to industry goes well beyond pay. There are systemic changes that need to happen in academia in order to keep trainees on an academic career path—don't just blame grad students/postdocs for being lazy and greedy for wanting to have a more promising work/life balance and fair compensation by joining industry instead. I think this survey is a good first step to hopefully begin to hear the experiences of trainees and try to make an institution that is supportive and willing to change for the better.

Proven or promising external resources or approaches

The NIH OITE has done a great job, but these resources are still not widely distributed to academic institutions that aren't NIH.

Response 1466

Perspectives on the postdoc roles and responsibilities

For me, my postdoctoral experience allowed me to gain expertise in a new methodology. This methodology was probably the main reason that I got a faculty position and stayed in academia. While this training was great for me, I struggled with matching the funding available through the NIH with my career stage. In addition, I sacrificed a lot personally to get this far in my career—moving away from my

family and friends for my postdoc and waiting to have kids until it was financially more feasible (as a faculty).

Fundamental issues and challenges

Financial: Many people now have significant research experience before even entering graduate school. Therefore, most people ready to start a postdoc are now more established (e.g. married, with kids). Therefore, finances are often limiting as child care and living in major cities is becoming more expensive. Moving to a new institute (often in another part of the country) is very financially stressful. Without a relocation stipend offered by my postdoc institute, I could not have done it.

Career outlook: Many postdocs feel hopeless—that it will be impossible to obtain a faculty position and that there is no point in doing a postdoc if not for a faculty position. I think many people would opt for a postdoc and be more likely to stick with it if there was a better chance that it would be worth it (either financially, by resulting in an academic position).

Parenting: As graduate students get older, postdocs do too. That makes it more likely that someone will want to start having kids during their postdoctoral training. In addition to the financial strain, it often feels impossible for people to consider balancing parenting with doing a competitive postdoc that can lead to a faculty position.

Existing NIH policies, programs, or resources

1) Allow PIs to ask for more money in their grants to pay postdocs more in high cost of living areas.
2) Expand administrative supplements for critical life events
3) Increase and expand childcare supplements ($2500 doesn't even cover one month of childcare for me)
4) Change the structure of postdoc funding. In my experience the K awards are only awarded after people are ready for a faculty position (often have already secured a position). F32s don't help as much for securing a faculty position. I think having an award early in the postdoc that can help secure transitional funding (like the HHMI Hanna Gray) i think would help with postdoc retention.

Proven or promising external resources or approaches

1) Transitional awards earlier in the postdoc to maintain promising trainees destined to be faculty (like HHMI Hanna Grey)
2) Programs that encourage shorter discreet postdoctoral training and increase the chance for a faculty positions like the Marie Curie programs in Europe

Response 1467

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is an opportunity to add expertise and experience to one's readiness for an independent academic or industry position. Without a Ph.D advisor, postdocs have more independence and work in self-guided, self-censored ways. They also get involved more heavily in the what it takes the run a lab, not just to run the sciences, as they are supervising the work with trainees with less experience.

Fundamental issues and challenges

The insecurity of a faculty position at the end of many years of postdoc is a considerable deterrent. Outgrowing a postdoc of 2-5 years and remaining in the same lab comes with serious personal costs. The postdoc is seasoned and competent but not in charge of the research, not able to compete for funds, and often under pressure to leave.

Existing NIH policies, programs, or resources

I don't think the situation would be improved by NIH policies, programs, and resources. The core of the problems boils down to demand and supply; are we training more postdocs than what academia can absorb? Probably, yes. Are we training more graduate students that academia can absorb? Definitely yes. Is it necessary for the Ph.D. to go through postdoctoral training to take a teaching position, or other science-related but not research-centered positions? No.

Proven or promising external resources or approaches

A broader national conversation on this topic is warranted. The desire to improve the postdoctoral experience both for the postdoc and the PI has be considered within the realistic framework of funding, competition, job shortage, career uncertainty, and the likelihood that the investment of often more than a decade into academic research does not pay dividends.

Response 1468

Perspectives on the postdoc roles and responsibilities

First time research position post-graduate program. Can perform research with minimal PI input. More administrative and logistical responsibilities than a graduate student (budgeting, grant application, experiment design, procedural design, overseeing students, etc), but with PI understanding that the post-doc is new to these responsibilities and is finding their way, may need advice, and may make some mistakes. Still significant hands-on role in laboratory and field work in addition to these added managerial responsibilities.

Fundamental issues and challenges

Work-life balance. Post-doc positions are typically sought during prime reproductive years for educated women. Often families feel if they do not begin their families at this point (or earlier) their opportunity to have children may pass. In addition to the long hours and intensity of expectations for postdocs day-to-day, there is also an expectation that post-docs will move to whatever city/state they are hired. This is incompatible with romantic relationships unless the partner has no ties and complete freedom of movement. It is also incompatible with children who require consistency for their developmental health, and who begin school, make friends, and have family ties of their own.

Existing NIH policies, programs, or resources

Women are more likely to experience a career gap in response to starting a family than men. Minorities are more likely to experience family-related career gaps than white individuals, due to cultural values surrounding family. Originally men were doctors and scientists, and their wives took care of their children while they pursued their careers unhindered by those distracting responsibilities. We are still bumbling about trying to figure out what to do with the children now that both men and women pursue careers. Because young children need parents, the solution is not to stop women from having a gap. Instead, provide a path to re-entry after a gap. This will allow talented women who decided to spend time with their children to re-enter their careers, and it will also encourage more men to incur a gap of their own, with the assurance that there will still be a career waiting for them though they enjoyed some time focused on fathering. Leveling the playing field in this way will enhance diversity of skillsets on research teams by enhancing racial and gender diversity on those teams. A route to reentry might mean accepting a certain amount of re-training in post-doc positions, or it might mean creating a new position for those with a research gap, that pays a little less than a post doc, expects more than a graduate student but less than a post doc, and that funnels directly into a post-doc.

Proven or promising external resources or approaches

Creating an environment that supports people in their wish to have families. Not everyone wants a family, but realistically most people do. And they want to raise their children well. Especially educated people, who understand a great deal about child development and have high expectations for their child’s learning, mental health, and performance. These people will often find that no one can support their infant or toddler the way they can, and it feels inadequate to pick up the toddler from a subpar caretaker at 6pm just to put them to bed. If you cannot find a way to support EARLY parenting and research simultaneously, you will lose people. If you do not allow them a route to re-entry, you will lose them for good.

Response 1469

Perspectives on the postdoc roles and responsibilities

It is a training position to learn responsible, rigorous and reproducible experimental design and research that can be applied towards human health.

Fundamental issues and challenges

Stipends/Fellowships i.e. pay is so limited that you can only sustain yourself and pay off loans, not enough for a regular life. Retention is not possible because it is made clear that you have to find a job in 5 years or less but projects and resources offered do not make this timeline possible. The entire process is much harder as an international fellow

Existing NIH policies, programs, or resources

Workplace environment and culture needs to change and this means the grant funding agency aka NIH must survey the labs receiving funding for honest feedback without coercion from the PIs or advisors.

Proven or promising external resources or approaches

NIH's own OITE resources are very helpful and can be implemented from the graduate school stage. While this is helpful it isn't enough

Response 1470

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salaries inhibit recruitment of diverse candidates, particularly those from low-income backgrounds (i.e., first-generation college graduates). As with most PhDs, those from economically disadvantaged backgrounds have already assumed thousands in costs for their education, foregone salary/etc in lieu of higher education, and their next step (postdoctoral fellowship) only offers compensation that is ~50% of what they could make in the field. However, NIH must remember that candidates from low-income backgrounds are (likely) the most educated person in their family. And that prospective candidate has (by far) the greatest earning potential of any member of their family (who, remember, are struggling economically). The current compensation structure for pre-/postdoctoral fellows is the largest impediment to recruiting a diverse workforce. In reality, we cannot simultaneously:

1. recruit a diverse workforce; and
2. offer recruits drastically below-market compensation.

Those are in direct contradiction of each other.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1471

Perspectives on the postdoc roles and responsibilities

As a postdoc, you report to a PI but are expected to lead most of the experiments on your own with minimal input or guidance from your PI. You are also expected to train other people in the lab including lab techs, graduate students, undergrads etc. You are expected to publish papers in high impact journals, write grants, attend conferences, build networks, and stay up to date with the field.

Fundamental issues and challenges

1) Low pay: Academia offers MUCH lower pay as compared to industry which makes it impossible to stay in academia especially with the current inflation.
2) No protection of rights: Unlike industry, academia provides zero protection to post docs/graduate students in case they are getting abused/exploited by their boss/PI.
3) No work life balance: As a post doc, you are expected to put in 50-60 hours/week and most post docs usually have a family that they want to spend time with.
4) Maternity leave: As a woman, I cannot imagine staying in academia and have kids. The maternity leave is almost nothing as compared to what the industry offers.
5) Always worrying about grants: As a post doc and aspiring PI, you always have to write grants and get funding. Highly stressful.

Existing NIH policies, programs, or resources

Increase pay: It should be somewhat closer to what the industry pays.

Protecting the rights of graduate students and post docs.

More maternity and paternity leave for post docs and graduate students.

Better work life balance.

Showing some empathy and concern for employee mental health

Proven or promising external resources or approaches

No response

Response 1472

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

3 fundamental issues: pay, benefits, and respect. All three are severely lacking for graduate student work, and still lacking for a post-doc position. Even if you are willing to put up with these things, the odds are still low that you will secure a faculty position after completing a post-doc.

Pay and benefits are far too low for people around child-bearing age. There is also this pervasive sentiment among the PIs that graduate students and post-docs should be grateful for whatever scraps the university is giving. This has been demonstrated very clearly with the recent strikes across US universities. The message to graduate students is clear, 'we don't value you, get back to lab.' I don't know a single person in my cohort who is willing to do a post-doc in the wake of how the faculty treated students during the strike.

As someone who worked in industry prior to pursuing a PhD, the treatment towards students and post-docs is appalling. It would never happen in private industry because people would be able to quit or move teams without taking a hit to their career prospects. The real irony of this is, many PIs think they are good mentors. They have never had to deal with the consequences of abusing their trainees, because there are NO consequences. In fact, I would argue they are rewarded for overworking and abusing their workers.

I am 3 years into a 5-year grad school program. If this was a job I would have quit 3 months ago after the strike. At this point, I'm too invested to leave without the PhD, so I will stay. I'm sure once I graduate my boss will boast that he did such a great job mentoring me. Nothing could be further from the truth.

Existing NIH policies, programs, or resources

The NIH could increase the wages for graduate students and post-docs while also stipulating minimum benefits. Benefits like parental leave, sick days, and 15 days of vacation per year guaranteed to the workers.

The NIH also needs to rethink how principal investigators are trained. PIs become PIs because they are good at science, THATS IT. It does not mean they have good interpersonal skills. Why does the training

stop once PIs reach this stage? In industry, my supervisors had to attend management workshops twice a year.

Additionally, I had to review my supervisor with their supervisor yearly. This review helped identify problem areas and determine which kind of management workshop my supervisor should attend. It should go without saying that these reviews were confidential. I really think this approach could encourage better leadership.

Finally, graduate students and post-docs should have a dedicated HR to help them navigate these things and track incidences within the university between trainees and faculty. Why are these metrics not being tracked and reported?

Proven or promising external resources or approaches

Brene Brown, Simon Sinek, and Adam Grant are people who come to mind as experts in the workplace satisfaction field.

Response 1473

Perspectives on the postdoc roles and responsibilities

Generating independent hypothesis and testing them more independently than other lab members; assisting with training of lab members; having their own funding

Fundamental issues and challenges

European post docs pay more than US post docs. Congress has the ability to raise the post doc salary, but doesn't. PhDs have no business making 60k a year, these r people who quite literally waste their 20's in effort to advance science and help the world. This salary is causing almost all graduate students from my school and program to stop going for an academic route. No one wants to do a post doc for 60k$ when an industry position pays $150k+. We can't be expected to start families during these positions with such poor pay for people with PhDs. Post doctoral work is hard, and should be paid appropriately. At least closer to the level of a junior faculty member, because let's be real that's what they act like half the time. If you don't solve this, US post doc positions will be only filled by foreign scientists. Not to mention it's an Equity and Diversity issue to pay people so poorly.

Existing NIH policies, programs, or resources

Spend resources lobbying congress to increase cap on post doc salaries thru NIH funding.

Proven or promising external resources or approaches

It's all the money, guys. We give up years of our life for this training: by the time we have a PhD we deserve to make more than 60k$. This also doesn't change for folks working in cities with higher costs of living.

Response 1474

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an additional training period after the PhD but it's also the implementation of an advanced skill set and education we have gained during graduate studies. In doing so, we are professionals and are treated as replaceable individuals in the academic infrastructure.

Fundamental issues and challenges

In reference to my previous comment, the biggest issues I face with my postdoctoral position like many are the low compensation and lack of benefits. This makes my education and training feel not valued and looking forward to leave academia.

Existing NIH policies, programs, or resources

Salaries and stipends could dramatically be improved to start.

Proven or promising external resources or approaches

Attention to the nature surveys on postdoctoral satisfaction, quality of life and mental health.

Response 1475

Perspectives on the postdoc roles and responsibilities

I worked as postdoc researcher for 4 good years with aim of becoming an independent researcher, who could write grants, mentor young researcher and create a valuable research setup. Postdoc stage to me is supposed to me a training ground for all these goals with the idea of getting enough exposure and mentoring in general.

Fundamental issues and challenges

- high uncertainty in funding situation. My postdoc was always 1 year and then was renewed which gave me a constant feeling of instability to carry out my research.
- very low remuneration as compared to my industry peers. Leading to poor living conditions.
- lack of support for grant writing, and mentorship for academic track.

Existing NIH policies, programs, or resources

- salary should be increased specially for universities in big cities like Boston.
- Atleast 2 years support for postdoc positions
- A systematic postdoc support system for making pathways in academia

Proven or promising external resources or approaches

No response

Response 1476

Perspectives on the postdoc roles and responsibilities

I see it as research time for myself and personal development because the salary is not enough for my qualifications and administration are often rude & colleagues can be awful to one another because of the competition.

Fundamental issues and challenges

Postdocs are experts and I find it incredibly insulting to be spoken to as a trainee with over ten years of experience writing algorithms for public use. The salary isn't livable, my partner left me for someone else because he said I didn't earn enough money. I'm 36, I will never own a home, I will never find a partner or have children because I wanted to use my talents to help people. I'm viewed like garbage by most people in society because of my salary, despite paying approximately $160000 to landlords to rent their property over the last ten years of being shunted around different institutions for research projects.

Existing NIH policies, programs, or resources

Improve the salary and understand how qualified and expert post docs are.

Proven or promising external resources or approaches

None

Response 1477

Perspectives on the postdoc roles and responsibilities

Prepare trainees for independent scientist job, including managing a group of people, establishing research projects and acquiring financial support

Fundamental issues and challenges

As a postdoc in Boston, the living cost is rising to the point that our salary can minimally keep up with our minimal life expenses. I would imagine it is much more difficult for postdocs with kids and family. I am currently working in a lab that provides great training for me scientifically, but in general the effort from

postdoc and pay level received as a postdoc is very poor, especially compared to similar level positions in industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1478

Perspectives on the postdoc roles and responsibilities

A postdoctoral position offers the opportunity to diversify my skillset, gain experience applying to grants, and gain additional mentoring on mentoring students. A postdoctoral position can also serve to build a foundation of research upon which to base a tenure package if the topic area is independent of that of the supervising Professor and if the researcher owns/retains the intellectual property rights.

Fundamental issues and challenges

I never saw NIH funding as an open door to begin with. I had a class on writing NIH proposals in graduate school. My advisor wrote in the handbook that she expected us to apply for NIH doctoral training funding. Differing stories are circulating about whether students can get funding from the NIH when in a lab without NIH funding. Further, the number of people getting NIH funding is pretty small and limited to those with direct experience in labs funded by the NIH. At an R1 minority serving institution, I never heard of the NIH. I didn't know I needed that network for grad school. I didn't find a way to access it for a postdoc. The family pressure not to pursue one based on the low salary didn't help. The lack of reference letters from my own PhD committee and the lack of mentoring support during and following the pandemic did not help. Having my PhD advisor leave the university made it really hard to finish the PhD to begin with. The memories of faculty behaving inappropriately and the universal fear that I won't be able to find a healthy work environment regardless of what sector I go into are not helping me figure out the next steps in my career.

Existing NIH policies, programs, or resources

I have no experience with which to answer this question.

Proven or promising external resources or approaches

I wish you the best of luck improving things.

Response 1479

Perspectives on the postdoc roles and responsibilities

The postdoc in theory should be a brief apprenticeship to gain new skills before going on the academic job market. In practice, the postdoc has become a prolonged period in which highly skilled individuals are exploited as cheap labor to support the academic research system.

Fundamental issues and challenges

As a postdoc I felt expendable. I was acutely aware that only ~20% of PhD trained individuals end up on the traditional academic track with the majority finding positions in industry. During my training I also considered going on the industry job market and participated in resume building activities to make myself more competitive in the private sector. Completing a postdoc is not a valuable asset when transitioning to industry and merely delays the number of years that you have high earning potential. Increasing the NRSA pay scale is very appreciated and the shift several years ago that made universities start using the NRSA minimum pay for postdocs is a move in the correct direction. However, there is nothing to require or incentivize universities or individual departments/Chairs to follow the NRSA pay scale based on years of experience. So on top of low pay (relative to industry) it is really salt in the wound to postdocs who are not funded (or are not eligible) for fellowships to be paid less than their postdoctoral peers despite having the same or more years of experience. Finally, I think there has been a growing awareness of how challenging (read: hopeless) it is (particularly at smaller R1 institutions) to successfully compete for NIH

research grants. When my mentor submitted a fellowship application in the early 90s the funding rate was 50%. Meanwhile the funding rates have dropped while the pool of hopeful graduates has increased. The ESI and New Investigator initiatives (and RFAs like the Katz R01, DP2, Trailblazer R21, etc.) are much appreciated, but I think it will take time to determine whether these programs are successful and then further time to communicate that there is any sense of "hope" to individuals coming along the training pipeline.

Existing NIH policies, programs, or resources

I benefited from T32, TL1, and K99 funding as a postdoc and I attribute my retention in academia in large part to these funding/training opportunities. The specific training grants I was a part of were unique in that they had very structured mentoring from the training grant (or RFA) organizers with regular group meetings and workshops. Similar to graduate school, this created a sense of a 'training cohort' in which you had several postdocs at similar stages of training meeting regularly, setting timelines, and making deadlines (e.g., career award submissions). This created a sense of camaraderie, community, and repository of shared knowledge that is often lacking when a singular postdoc is hired in a new city/institution. I also do not think I would have made it to where I am now if I had children as a postdoc. The expectations about productivity and the stresses of long work days and lack of departmental support (my institution only revised their postdoctoral leave policy in 2019 to have 8 weeks paid leave) make me suspect that I likely would have left for a higher paying job with more benefits and more work-life balance. The grant supplements to support life events are a great resource for those on F or K awards and more NIH support along those lines (e.g., supplements to R awards to support trainees not funded by NRSA awards to go on leave?) might offset some of the negative perceptions about having family while in a training position.

Proven or promising external resources or approaches

No response

Response 1480

Perspectives on the postdoc roles and responsibilities

During my time as a graduate student, I have interacted with quite a few postdocs. From my experience, the role of the postdoc can be summarized as follows: They are typically responsible for supervising and overseeing their own project (or multiple projects) in the lab. As a part of this, they are often required to directly mentor junior scientists. At times, they can have more mentoring responsibilities than the PI of the lab, which they need to balance with performing experiments.

Fundamental issues and challenges

In academia, this topic is discussed quite a bit. Why does there seem to be less postdocs? In my experience, I think it really comes down to the amount they are paid and the amount of hours they are required to work. They are often required to work significantly more hours than graduate students but only get paid marginally more. In addition, in the current economy, it is difficult to support a family (wife+kids) on the average postdoc salary. Typically, the spouse of the postdoc needs a job as well. This requires the use of childcare, which is insanely expensive. Overall, these difficulties encourage students to go into other fields, which can pay significantly more.

Existing NIH policies, programs, or resources

Honestly I don't know what improvements can be made. The NIH is trying hard to address some of the issues I stated above. Providing childcare funds to those with fellowships is a huge step. However, it is simply not enough. Ultimately, postdocs need to be paid more and, in that regard, I believe the NIH's hands are tied.

Proven or promising external resources or approaches

I have nothing to say here.

Response 1481

Perspectives on the postdoc roles and responsibilities

Stopgap between a PhD and PI position. Useful to further one's training, but should not be used to create "super postdocs".

Fundamental issues and challenges

Salary. Industry pays 2-3x more than academia/government, so market forces push applicants to more lucrative career options with better work life balance. The fix is straightforward—a dramatic increase in salary (NIH levels) and at least 4 weeks of annual leave, like in Europe.

Existing NIH policies, programs, or resources

Annual leave policy should be updated to allow for more leave.

Proven or promising external resources or approaches

Some institutions in the EU are closed after 6pm and on weekends. Maybe this is something to look into it improvements in the working environment are needed. Also—salary.

Response 1482

Perspectives on the postdoc roles and responsibilities

Post-doctoral position means to me as stage where I get build my career to become a principal investigation. A Post-doctoral position is where Junior researcher are independent enough to define the lines of research for the future careers.

Fundamental issues and challenges

Because there are more PhD graduates than faculty academic positions, there is fierce competition and most post-docs will never be accepted in tenure track positions. Also, PhD students and post docs sometimes are seen as cheap labor so they don't get the guidance needed and that is why institutions graduate more PhD than academia needs. Most Post-doc positions don't pay well for the requirements, expectations **and responsibilities** that accompany those positions and therefore many post docs go to the industry. Academic environment has become very toxic not appropriate for mental well being. I found stunning that we were publishing on mental health and we were not expected to sleep or have personal life while on graduate school. Is specially difficult for women to think about family and a career in academia due to the lack of support for pregnancy, child delivery and child care.

Existing NIH policies, programs, or resources

Regulations about the working expectations for a post-doc position and an increase in salary.

Support trainees when they start families. Provide equal pay and equitable laboratory start-up funds for women. Rethink the tenure clock. Institutions should establish or expand reliable, high-quality, and on-campus childcare for children of both trainees and faculty.

Proven or promising external resources or approaches

No response

Response 1483

Perspectives on the postdoc roles and responsibilities

To begin independent research under the supervision of a postdoctoral mentor. This is a specialized job that should result in guidance for innovative studies that can be continued in the postdoc' own lab as a future PI. This is a JOB not a training position.

Fundamental issues and challenges

Funding is a major issue, as academic postdoc entry salary is 1/2 to 1/3 of an industry salary. There is a huge variability in benefits based on university/institution. For adults who have spent 9-10+ years studying for their degree, a starting salary that is barely above the living wage is insulting.

Prior to graduate school I had a job with a salary of $50,000/year. It is a waste of my time to spend 5+ years on a degree that will result in a postdoc salary that it $55,000/year.

Existing NIH policies, programs, or resources

More opportunities for non citizens

Proven or promising external resources or approaches

No response

Response 1484

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be a chance to continue training and developing more scientific independence, learn new skills, and contribute to a field of study. It should be time limited with clear goals that work toward a longer-term career for the trainee.

Fundamental issues and challenges

Unfortunately, this is frequently not the case. The postdoc experience seems to vary greatly on the whims of the mentor/PI. Unlike a medical residency, fellowship, or even PhD program, the postdoc feels very unregulated. The mentor and the trainee often have opposing motivations. The mentor would love the exceptionally cheap and highly skilled labor while the trainee would like a paper, grant, and/or a real career paying a real salary. There often seems to be little interest in the future of the postdoc beyond the big paper the lab wants to publish or the grant the PI needs for the next 4 years.

Existing NIH policies, programs, or resources

Shared success. What percentage of a lab's postdocs have moved on after 3-5 years to run their own lab or an industry position? If the lab isn't supporting their workforce development then they should be losing points on their grant proposals. You need broad structural and cultural changes to create a better postdoc experience. Your best way of doing this is with money.

Proven or promising external resources or approaches

Create comprehensive postdoc programs with a beginning, end as well as some external oversight that isn't solely within domain of PI. There might be something to learn from the bigger industry postdoc programs who support the overall development of their postdocs.

Response 1485

Perspectives on the postdoc roles and responsibilities

To my understanding, an academic postdoc is a necessity for pursuing a career in academia (and maybe multiple postdocs). It is a way to expand your skills and independence as a researcher to answer niche questions and think critically like a PI would. The research may be more high risk and reward than a project that a graduate student may take on. Postdocs are also senior members of the lab who can give advice and guidance to younger/more junior lab members.

Fundamental issues and challenges

In my opinion, pursuing an academic postdoctoral position is not something particularly interesting to me. To an extent, it seems to be a continuation of the poor work-life balance that graduate students experience. Furthermore, the pay in academia (especially as a postdoc) does not seem to be a fair compensation for someone who has gone to great lengths to obtain a terminal degree like a Ph.D. The combination of these factors (along with the arduous path to establishing an academic career) makes a postdoc seem very unappealing, especially when jobs in other sectors (such as industry) may have a better work-life balance/financial compensation.

Existing NIH policies, programs, or resources

One key step to promoting academic pathways and a healthy work environment for postdocs is to increase funding. This may come in the form of major grants awarded to the PI or more trainee benefits. Although there are grants and fellowships available in academia at every level, the base rate of the award or the

salary cap at the university makes it extremely difficult to live comfortably, especially when (as mentioned previously) the compensation does not reflect the amount of work that the individual has gone to obtain their qualifications.

Proven or promising external resources or approaches

No response

Response 1486

Perspectives on the postdoc roles and responsibilities

I view my postdoc job as the means for my self to contribute to science and public health protection. I also view it as an important transition in my career life as my postdoc experience directs me towards where I want to be, which can be very different than when I just started the postdoc job.

Fundamental issues and challenges

Low payment. I love research work, I love academia, but I could not afford a kid's daycare fee in [redacted for anonymity] as a postdoc. The low living standard I have with a PhD degree makes me rethink if the choice of being a postdoc in academia is correct.

Existing NIH policies, programs, or resources

Increase the NIH salary standards for postdocs, please.

Proven or promising external resources or approaches

University of California system and University of Washington have increased the lowest salary for postdocs at $65,000/yr. Postdocs need to be realized, for our hard, nonstop work yet only with this poor payment.

Response 1487

Perspectives on the postdoc roles and responsibilities

As a relatively "successful" postdoc who obtained an Assistant Professor position at a top institute, I view postdoctoral training as an important training process for scientists who are determined to pursue an academic position. However, the postdoctoral career in the US is so tough that I think it is almost not sustainable. As a junior investigator, I am also about to transition to an industrial PI position, so I can tell the pros and cons of each side. I am so happy to leave academia with no reservations.

Fundamental issues and challenges

Low pay, poor health insurance, almost no retirement benefit, almost no respect for personal time, and a high failure rate. Postdoc has no life. There is a clock counting down when you start the position. If you cannot manage to publish well within five years, your life, I mean your entire life, is doomed. Only 1% of postdocs can get a decent professorship. Most of the other not-so-lucky ones need to figure out what to do afterward. Compared to PhDs who go to the industry right after graduation, postdoc fellows have 0 advantages, their academic working experience is not considered, and they have to start as year 0 when they find a different job—the postdoc experience worth almost nothing. For the lucky ones who eventually become PIs, the salary is about 50% less than the PIs in the industry, with very few benefits. The US academic system is taking advantage of the "immigration restrains" to force foreign postdocs to stay in these much-underpaid positions, which drives out talents who deserve better. Postdocs have already invested their time (5-8) years to obtain a Ph.D degree (again, another underpaid position), when they finish, they have almost no rewards for life if they choose to continue the postdoc route.

Existing NIH policies, programs, or resources

Standard NIH R01 should at least double or triple to meet the inflation of costs on everything. Otherwise, the entire research community will get worse and worse.

Proven or promising external resources or approaches

Cut the supply. We don't need these many postdocs and these many graduate students for biomedical research when only a tiny fraction of them can be successful.

Response 1488

Perspectives on the postdoc roles and responsibilities

Before joining my graduate program, Postdoctoral positions meant that there is a clear path to establishing a career path in academia as a tenured professor. Since joining graduate school and learning more about the stifling process and unhealthy competitive patterns in academia with a subpar salary for work done or years put into the development of these expertise skills, postdoctoral positions seem like a less enticing career option.

Fundamental issues and challenges

The lack of certainty as it concerns obtaining a tenured position in college after years of hard work. The crippling selection process with lack of diversity and the minor salary range that does not match up, or at least compete with the salary gap in the industries or with professors

Existing NIH policies, programs, or resources

Create more avenues for diverse applications for grants for early researchers, making it accessible to both international and national graduate students.

Proven or promising external resources or approaches

No response

Response 1489

Perspectives on the postdoc roles and responsibilities

A training period to learn life skills as well as new, cutting-edge technologies of the field, while being part of a research project.

Fundamental issues and challenges

Funding issues for projects, lower incomes and benefits compared to industry jobs for the same experience levels.

Existing NIH policies, programs, or resources

Better training programs/workshops for developing various skills (communicating, tools, etc.) held more routinely, funding/stipends based on the living costs of the specific place, better mentorship/communication tools to help new appointees take advantage of the available options.

Proven or promising external resources or approaches

No response

Response 1490

Perspectives on the postdoc roles and responsibilities

The postdoc position represents a transition from trainee to trained. It is the first step to becoming an independent scientist.

Fundamental issues and challenges

The salary in academia is TOO low! If you take into account the hard work and the number of years spent on studying why should you choose to stay in academia when the industry out there would be paying you 3 times more?

Existing NIH policies, programs, or resources

Improving the salary. This is the main reason why it is so difficult to find a postdoc. After the covid pandemic, very few people move from Europe to come to the US. China has put even more restrictions on students that want to start a career in the US. And everyone here knows that American citizens don’t pursue an academic career because of the salary

Proven or promising external resources or approaches

It is not a matter of ecosystem. It is a matter of money and work-life balance

Response 1491

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1492

Perspectives on the postdoc roles and responsibilities

As I progressed through my graduate education I struggled with the question of whether I wanted to pursue my initial dream of becoming a faculty member and having a lab of my own where I can train the next generation of scientists in the field that I love and the ability for me to have financial security and the opportunity to live a life outside of the lab. At its conclusion, I chose to leave academic science for a myriad of reasons, but the top three being that I saw no opportunity for career progression as a post doc, I saw it as another opportunity to subject myself to the inherently broken and abusive environment that is cultivated at top-level academic institutions, but most of all I saw there was no way for me to compete with established professors for access to funding which would ultimately mean my life post graduation would be insecure for the next 10 to 20 years or until I made tenure/full-professor.

Fundamental issues and challenges

The fundamental problem for post doctoral scholars is the treatment of being a Ph.D. but making a salary that is a fraction of other professions like tech. There is also no incentive to stay in academia because faculty only hire to fulfill their grant obligations with no thought to provide skill training and further education opportunities to their trainees for their career advancement. While I was a grad student I saw too many times how post docs in our lab and others were not allowed to attend conferences, workshops, or obtain other training to advance their own goals. PI's have the unilateral authority to restrict what they worked on and even would create hostile work environments to force work at break-neck paces. Post doctoral scholars are the backbone of academic research, especially for larger labs as they are the ones on the front lines doing the training and teaching of graduate students and interns. Another challenge I think exists for post docs is that PI's take advantage of scholars who are on Visas. Many post docs from foreign nations come to the U.S. to train in the best labs we have to offer but end up in situations where they feel backed into a corner because they are on a visa, and this forces them to be subjected to inhumane working conditions. While this may not be an issue the NIH can solve directly, I think working with policy makers to create safeguards that allow post docs to move labs or institutions to protect themselves is necessary.

Existing NIH policies, programs, or resources

As i did not stay in academia beyond my graduate education, I don't really know much about the NIH's policies for facilitating post doctoral career advancement but some of my general ideas are as follows. Create training grants that enable post doctoral scholars to obtain skills training beyond the lab such as people and resource management training. I think such a program would be highly beneficial to academia holistically because many PI's lack fundamental people and resource management skills and this is a root cause some of the issues with PI's today. As mentioned above, work to create policies for post docs on Visas so that they are protected from bad actors like abusive PI's. Increase the salary minimum for post docs to be competitive and adjust for inflation and cost of living. In many institutions, post doc salaries do not increase annually to adjust for rising costs. This is detrimental to the mental health of post docs and

the science as a whole. Many institutions do not give graduate students or post docs guaranteed PTO, and even if it is mentioned in their handbooks the PI has 100% discretion. This policy needs to change because many academic scholars suffer from burn out due to the working conditions which also hurts the researchers and the science. I think holistically, the NIH must enforce proper training of new faculty, with continued training on skills for being effective managers. In many labs, especially at top tier institutions, labs are like individual dictatorships which stifles creativity, discussion and innovation, which is the life's blood of this enterprise. Creating an environment in academia that encourages discussion and creativity rather than compliance is necessary.

Proven or promising external resources or approaches

I think a model to look at is the post doctoral environment in Europe. While it is not perfect, my colleagues overseas have better work life balance, happiness and are still able to pursue their lives outside the lab in fulfilling ways.

Response 1493

Perspectives on the postdoc roles and responsibilities

To me, postdoctoral position means opportunity to continue research and grow as a scientist, learn and prepare for further role as a professor and principal investigator leading independent and innovative research. As a postdoc, I expect to be rewarded for years invested in education that always required personal sacrifices. As researchers with PhDs and many years of practical experience, we are experts in our fields and we show outstanding knowledge. At work, we are expected to show high quality of research, innovative and significant findings while maintaining scientific integrity. Additionally, we are being asked to do this fast to ensure our 'competition' will not reach the goal before we do. In another words, we are being pressured and since it is our career and future, we are pushing ourselves to the limits, working extra hours and often 7 days a week.

Fundamental issues and challenges

Postdocs in most groups are being treated as technicians that supposed to produce data quickly. There is lack of respect to postdoctoral fellows and years they spent on actively working and learning. The status 'trainee' is highly discouraging. In many European countries, you need to complete Master course before applying for PhD. This means approx. 10 years of higher education/working in Academia, and being just few years apart from advancing to Professor, yet we are being called 'trainees' with low salary and little benefits. It is shocking and sad to understand how little PhD and being Postdoc means in this country.

Postdocs contracts are not protected from sudden termination, which often happens when PI decides that postdoc=trainee is not productive enough (how do you reliably measure productivity in research?). There is poor support and clarity for international personnel—currently issues related to taxes are overwhelming and stressful to majority of my colleagues, and despite seeking help to understand U.S. tax law and forms, we have no support from the institution. Low basic salary and no annual raises are another issue that highlight lack of respect to this position.

Existing NIH policies, programs, or resources

I don't have sufficient knowledge on available NIH programs to address this question.

Proven or promising external resources or approaches

If possible, NIH could try to establish and enforce general law by which Postdocs will be protected and treated with deserved respect. Currently, these BASIC issues are not right in any Academic institution, and only local Unions are trying to improve working environments, but this still, affects our productivity and wellbeing. Considering many public complaints, it is obvious what are the issues related to postdoctoral working ecosystem. The solutions are very simple and relate only to primary rights and fair contracts, the only question is if anyone care enough to change it?

Response 1494

Perspectives on the postdoc roles and responsibilities

[redacted for anonymity]

Fundamental issues and challenges

Independent Researcher in Oncohematology field.

Existing NIH policies, programs, or resources

Not applicable.

Proven or promising external resources or approaches

Postdoctotal training improve Advances in cariere.

Response 1495

Perspectives on the postdoc roles and responsibilities

The postdoctoral program for me was like an introduction into the world of research as practiced in the USA. I was expecting it to be more like an independent research but that's not entirely true. On some occasions I still feel like a graduate student. I just feel that the postdocs are overburdened with work especially if they are very serious and committed to their job. Like the more you work the more work they give you. You cannot expect to finish a project fast and take some rest.

Also, I got this strong feeling of the postdoctoral workforce being treated as cheap labors. At low salary, most faculty hire too many postdoctoral students only to push the lab work.

Fundamental issues and challenges

The biggest challenge is surviving in a new country with such low salaries. Postdoctoral students mostly aim to become academic professionals and delivering high quality research is a key towards that goal. However, while we spend 8-10 hrs of our prime working age every day in lab, the salaries are less than half when compared to our friends in other fields of work. I came to USA to pursue science not to waste time thinking how will I manage my expenses on a tiny salary.

Second thing which really gets me thinking is the sheer discrimination between graduate students and postdoctoral students. I have faced it myself on certain occasions. Like it feels they are given a lot of flexibility and choices at every stage but postdocs are treated as cheap labors.

The issue with visa situation is another reason for students from particular countries feeling unwelcome to pursue postdoc here. We either have to get a waiver that takes almost a year since Covid happened or continue to be without green cards for so long and that becomes a limiting factor in getting recruited.

I also feel most institutions really on hierarchy and known connections or big names while recruiting. As such majority of people with good research ideas and backgrounds but no connections here in the USA get ignored. It's very rare that you hear a new recruit not being from a handful of the top institutions.

Existing NIH policies, programs, or resources

NIH has been working towards salary raise and that's a good starting point. However, the gap is huge and especially for students in big cities the NIH scale has not been sufficient. Better salaries culminate in better quality of life and mental wellbeing. So that is something which needs to be actively worked upon.

Most institutions do not have an active postdoctoral quality of life committee that works seriously. Considering postdoctoral students are mostly immigrants I feel they should be allowed to be an active part of institutional clubs and groups. This way people feel much more welcome and that is a good networking experience as well.

Also, if NIH could help solve or atleast make the visa crisis better. Most postdoctoral students pay a huge sum of their salary on taxes but they are not able to reap the benefits of that because of their visa status. I think solving the salary and immigrant's crisis is of utmost importance if we want to maintain a healthy and secure working environment & attract more postdoctoral students to the institutions here.

Proven or promising external resources or approaches

No response

Response 1496

Perspectives on the postdoc roles and responsibilities

The bridge from graduate school to independence.

Fundamental issues and challenges

The salary is really low!

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1497

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a time-limited position to be used for career development and additional training. However, I do not view myself as a student anymore. Thus, I also want my position to have benefits, reasonable vacation time, good salary, etc. I view it as a time to explore new subject matter areas or gain additional career development tools such as teaching/mentoring experience, while being able to produce high quality data for the lab.

Fundamental issues and challenges

The single largest challenge for postdocs is insufficient salary. Many of the other problems post-docs face (inability to afford childcare, housing, debt, etc) would be addressed by salary increases. Retention of postdocs would also be improved by increased salary.

Existing NIH policies, programs, or resources

Increased training grant opportunities would be the most important for promoting academic research careers.

Proven or promising external resources or approaches

No response

Response 1498

Perspectives on the postdoc roles and responsibilities

Simply put, they are essential personnel who work on each funded project and generate scientific data.

Fundamental issues and challenges

We were able to recruit good international postdocs from China and Korea (until five years ago) who have been key for our research. However, for many reasons (e.g., many top institutions in those countries can hold top postdocs by paying more, publishing top papers, establishing strong networking, etc.), the applicant numbers are markedly decreased in recent years.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1499

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The nih salary stipend is too low and we are unable to supplement based on regional cost of living with nih funds.

Existing NIH policies, programs, or resources

Stipend vacation family leave

Proven or promising external resources or approaches

Online training for postdocs, requirements for mentorship training for mentors, require nih funded mentors to submit idps and postdoc submit yearly progress report to nih. This may prevent exploitation

Response 1500

Perspectives on the postdoc roles and responsibilities

Goal is to gain additional skills, papers and expertise (admin and research) for running an independent lab.

Postdocs bring experience, maturity, perspective to new lab where they can engage in an intensive research period to generate publications. They are still trainees in the new area but transitioning to independence. Should take leadership position in the group and thereby gain skills in mentorship and management.

Fundamental issues and challenges

Highly competitive academic job market means postdocs are very long (5+ years). Pay should be higher.

NIH needs to increase stipend levels as this is the guideline used by PIs and departments.

Modular budget should be increased to account for this change, or allocate supplements for postdoc pay increases.

Existing NIH policies, programs, or resources

https://grants.nih.gov/grants/guide/notice-files/NOT-OD-23-076.html

Excellent step in the right direction but this money need to come from somewhere—administrative supplements?

Proven or promising external resources or approaches

No response

Response 1501

Perspectives on the postdoc roles and responsibilities

Academic postdocs must contribute to rigorous evaluations of the impact of their tools on improving patient outcomes. They must be encouraged to publish papers in top medical journals describing the impact on outcomes based on their pragmatic randomized controlled trials.

Fundamental issues and challenges

The main problem is that postdoctoral training programs are not teaching the modern skills needed to perform the job upon graduation. Instead they are taught how to perform weak evaluations and continue the hype and hand waving.

Existing NIH policies, programs, or resources

NIH often has a policy that forbids randomization. This forces postdocs and others to perform weak science. The NIH should have a policy that no one is every forbidden from using randomization in their research.

Proven or promising external resources or approaches

You asked for a "Proven or promising external resources or approaches that could inform NIH's efforts to enhance the postdoctoral training ecosystem."

There is an excellent new book that would be ideal for helping postdocs learn the skills they need. The title is:

"Artificial Intelligence for Improved Patient Outcomes—Principles for Moving Forward with Rigorous Science" by Daniel Byrne.

https://www.amazon.com/dp/1975197933/

Postdocs would learn how to conduct pragmatic randomized controlled trials for their research projects.

The issues of retention and burnout are related to the frustration with weak science and lack of forward progress. Postdocs must be taught how to build and validate robust predictive models in a modern way. Currently their training in this area is lightweight and lacks scientific rigor. For example few can explain regression to the mean or intention-to-treat. They need to be taught the pros and cons of machine learning methods but also logistic regression so that they can use the right tool for the right problem.

Response 1502

Perspectives on the postdoc roles and responsibilities

The postdoctoral fellow should be placed in a position to learn new skills and gain competencies that enable them to establish and lead their own laboratory. The learning of these skills is expected to involve hands on leadership of research projects. Often postdoctoral fellows are learning skills sets that they were not able to learn during graduate school (a graduate advisor can't teach someone everything).

Fundamental issues and challenges

The postdoctoral fellow is a trainee position. They should be able to see how the postdoctoral experience is a step in the career path. If there is insufficient career options in paths that come from a postdoc, the fellow will not find the work satisfying. The postdoctoral experience should be viewed similar to medical residency or serving as a law clerk.

Most NIH investigators have been trained to see the postdoctoral fellow as a workhorse in the laboratory. They hire only people who already have the skills needed for the project and don't really teach those people new skills. Career progression is viewed as continuing their existing line of investigation. If the postdoctoral fellow is a trainee, not an employee, the scientific work they do should instead be a vehicle for learning and establishing new ways of thinking and approaching problem and gaining skill sets and experiences that were not available as graduate students.

Existing NIH policies, programs, or resources

If the NIH really cares about postdoctoral fellows they would enforce a 3-4 year limit on the postdoctoral experience. Why should a postdoctoral fellowship be ilonger than medical school?. The NIH already implies something like this with the time limits on K99 applications. This will force investigators and institutions to have technicians and staff scientists rather than "trainees" as the primary workforce, not trainees.

Proven or promising external resources or approaches

There you go again saying "job satisfaction". Instead we should be talking about "educational satisfaction"

Response 1503

Perspectives on the postdoc roles and responsibilities

Sometimes it can be difficult to more on from post doc positions into something more permanent, especially when trying to pursue a career in academic research.

Fundamental issues and challenges

Academic institutions are competing against biotech/pharma companies, matching salaries and benefits is very challenging.

Existing NIH policies, programs, or resources

NRSA T32 stipends could be increased and training programs could provide more interactions with biotech/pharma companies as a bridge so that trainees can succeed.

Proven or promising external resources or approaches

No response

Response 1504

Perspectives on the postdoc roles and responsibilities

These individuals play an important role in all biomedical research and should be considered important partners with the PI not non-key personnel.

Fundamental issues and challenges

At many institutions postdoctoral trainees are considered "temporary" and thus not vested into retirement programs or other important benefits programs. This is detrimental to their future careers. Broad policies are needed to be sure this is corrected. Also pay increases are needed and should be standardized. The NIH payscale is a good start but still far too low. Research institutions and departments need to invest in professional development programs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1505

Perspectives on the postdoc roles and responsibilities

As the PI of a training grant in biomedical informatics, we have found it more and more difficult to recruit postdoctoral candidates. Although potential candidates often say they see the value of the type of mentored training offered by a high-quality postdoc position, the stipend we can offer through the training grant is a fraction of what they could earn in industry or junior faculty positions. (Our field is growing rapidly enough that many PhD graduates can get hired directly as junior faculty.) Without far, far higher stipends, much closer to what an entry-level faculty job offers, candidates recognize that they would be foolish to take a postdoc. Please consider raising the stipend we can offer through NIH training grants.

Fundamental issues and challenges

Increase stipends

Existing NIH policies, programs, or resources

Increase stipends

Proven or promising external resources or approaches

Increase stipends

Response 1506

Perspectives on the postdoc roles and responsibilities

it is a huge opportunity and one that i am grateful for. i love the autonomy i get, all while learning new things. it is a lot of responsibility and of course i want to get paid more. everyone does. but i can always leave and get paid more elsewhere—this is why people leave.

Fundamental issues and challenges

we are required to attend too many pointless meetings/trainings, we get too much departmental spam email, and diversity is shoved down our throats constantly (when it is obvious many of the higher ups do not actually care about diversity as much as covering their own tails or pushing their own agendas)

Existing NIH policies, programs, or resources

funding for INDIVIDUAL awards (f, k, etc) should not be so explicitly tied to the mentor having several R01s. these awards should be longer and not so temporally constrained.

R, U, etc grant amounts should be reduced and given hard limits. and PIs should be limited in the amount of NIH money they can receive so that more people can be funded. people do not need as much money as they put in their (completely made up) budget—everyone knows this is a joke, so why bother bean-counting and having reviewers/accountants waste their time looking at budgets they do not know anything about? just cap it. constrain the budget that way—PIs can then run their lab accordingly. we have an understanding of what our research costs. if we know our budget is 250k per grant per year max, we can plan accordingly.

Proven or promising external resources or approaches

the only things that will make a difference are salaries and job security, or some combination of the two. without familial financial support nobody wants to do a postdoc when they get paid $60k and yearly contracts that are dependent on their PI's grant succeeding in a study section filled with bonehead reviewers whose decisions amount to a coin toss.

Response 1507

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should provide time, mentorship, and access to resources for the postdoc fellow to start building their independent program of research. The postdoctoral fellow should not be viewed as an advanced research assistant or spend most of their time supporting the work of someone else.

Fundamental issues and challenges

Postdoctoral pay is very low, which is an issue that is more severe in high-cost areas (e.g., Boston, New York City). The postdoctoral position also does not come with research funds, typically.

Existing NIH policies, programs, or resources

NIH-funded postdoctoral fellowships would be improved if the salary floor was raised significantly if fellows received at least some funds to conduct a pilot project (e.g., $15,000+) in addition to the funds provided for conference presentations and courses, if there was an organized mentorship program outside the host institution to make certain aspects of mentorship and support equitable. For example, a summer institute where fellows received feedback and support on a grant application, etc.

Similar to Ph.D. positions, there also needs to be a balance between postdoctoral positions and the availability of faculty positions. People spend years in postdoc positions aiming for a faculty position, and it is very hard to achieve even with postdoc training. Indeed, it seems that the more postdoc training one has, the chance of receiving a tenure-track faculty position declines.

Proven or promising external resources or approaches

No response

Response 1508

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a key valuable academic research position. A postdoc has sufficient training to take on advanced responsibilities in conducting and designing experiments, as well as management roles and directing lab output (writing grants, papers, etc.). It's a full time job, not a "trainee". Postdocs should be seen as an important invaluable resource in how academic labs operates. They have undergone significant training to get to their position and should be valued and full time employees.

Fundamental issues and challenges

Pay. The salaries for academic postdocs are abysmal and practically no benefits are given. In 5-10 years no rational American citizen obtaining a PhD is going to remain in academic science. You cannot pay up to half of what an equivalent position would pay in industry and expect people to pursue an academic postdoc. The system is deliberately designed to devalue the labor of postdocs so PIs and Universities can exploit them for their training and expertise, keeping them trapped in a "transitional" state and underpaying them deliberately. It is an absolute travesty that is harming US science output and productivity. Working hours are high, stress is high, expectations of responsibilities are on par with positions that would pay up to double the salary at a government or industry job, and benefits (health care, child care, retirement etc.) are nearly nonexistant. How the NIH thinks this is sustainable for people who are at the middle of their productive lives/careers while simultaneously increasing the time (4-7 years) it takes to move on to the next career stage is laughable.

Existing NIH policies, programs, or resources

Increase minimum salaries for postdocs.

Proven or promising external resources or approaches

Increase minimum salaries and benefits.

Response 1509

Perspectives on the postdoc roles and responsibilities

An academic postdoc can fulfill multiple purposes depending on one's goals. The "PI tenure track" postdoc purpose is to prepare one for becoming an academic PI including establishing a distinct scientific focus and research program as well as the leadership capabilities to run a lab. "Alternative track" academic postdocs purposes include wanting to gain particular experience (technique or field) that will allow them to transition to a non-PI position such as a staff scientist in academia or industry. There is currently no distinction for these types of postdocs, this should change. "PI tenure track" position by nature tend to be longer (5-6 years) because it takes time to get high impact publications and establish oneself in a field to the extent required to get a PI position, and also require a RO1 level type of project. "Alternative track" academic postdocs could be shorter (2-3 year MAX) and on smaller projects with the primary goal of additional training/experience for a person and to help the PI move smaller projects forward or get preliminary data etc with discrete, timely deliverables. The support for these positions could and should look different! I believe establishing these distinct types or "tracks" of postdocs would help postdocs find positions that match their goals and help PI's get the right people on the right projects and career trajectories.

Fundamental issues and challenges

I chose an industry postdoc over an academic postdoc for several reasons. First, I knew I did not want to be pursue being a PI because the dismal chances of landing an academic PI position. I think I could enjoy being a PI, but the odds are not in anyone's favor. Second, the industry postdoc gives me the chance to work on academic-like projects with a higher salary (~92,000 a year base pay, plus bonus), a competitive retirement package, established vacation days, good healthcare, fringe benefits (gym membership etc.), and is only three years maximum. Ultimately, I could not put my life on hold for an academic postdoc. My wife and I may want to have children soon, I couldn't rationalize trying to support a family on an academic postdoc salary when I could get a higher paying position elsewhere. I also have aging parents that may need support both financially and with my time.

Existing NIH policies, programs, or resources

1) Expand existing programs like the F99/K00 and make the pay more competitive (increase 62 K/year to 82 K/ year) and offer retirement packages.
2) Require PI's to provide retirement packages for postdocs. The impact here could be huge. This factor alone is a huge deterrence for many people considering a postdoc. I can not think of a single other position that requires a higher education degree that does not offer a retirement package.
3) As hinted at above, promote the idea of PI's distinguishing between "tenure track" and "alternative track" postdocs. I think this would help pair people (PI's and postdocs) better as well as pair goals and projects better. NIH could also create funding opportunities that PI's apply for based on these positions.

Proven or promising external resources or approaches

1) Competitive pay
2) Retirement packages
3) Goals and training alignment

Response 1510

Perspectives on the postdoc roles and responsibilities

Overall, a postdoc is a very appealing position. An opportunity to do interesting research under the mentorship of an experienced faculty member.

Fundamental issues and challenges

The problem with postdoc recruitment and retention is not quality of life or opportunities but extreme uncertainty about the future. Medical doctors do residencies and fellowships for low pay because they are nearly guaranteed a stable, highly paid and highly respected career after training. Meanwhile academic graduate students and postdocs are bombarded with statistics about how few of them find junior faculty positions, how hard it is to obtain grant funding, and how few of them achieve tenure. Additionally, postdoc positions narrow ones specialization which limits their job prospects. As such, many postdocs opt for higher paying industry jobs as soon as an opportunity becomes available. More and more graduate students are being hired directly into junior faculty positions and that has become more of the expectation, making postdocs even less appealing.

Existing NIH policies, programs, or resources

The NIH should promote policies that either increase the pay of postdocs or decrease the uncertainty of future opportunities in academia. Postdocs need to paid at a rate competitive with industry. Keep in mind, new PhDs in industry jobs get "mentorship" from senior scientists, growth, and training and opportunities, so the mentorship in an academic environment is not as much of a draw for a postdoc anymore. To decrease uncertainty about future job prospects, the NIH could increase the number of K99/R00s funded to increase the acceptance rate. Ideally, that mechanism would not be limited by funding constraints so that any quality application can be funded. The NIH could also promote "pathway to faculty postdocs" for institutions to guarantee a faculty position with startup funding after certain milestones are met during a postdoc.

Proven or promising external resources or approaches

It is no secret that immigrants make up a large portion of postdocs who are willing to take on the low pay and career uncertainty of a postdoc. Policies to ease immigration would solve the challenges with postdoc recruitment. Getting US Citizens to do postdocs will require a much larger investment from the NIH.

Response 1511

Perspectives on the postdoc roles and responsibilities

My postdoc has entirely been focused on research with some mentoring of graduate students. That is mostly how I envision a postdoc, to be focused on developing a complementary set of skills to those gained in graduate work so that you can start off in a new direction from either of your advisors. I have

enjoyed the mentorship aspect of it, but I feel like in large labs (>10 people), the postdocs tend to do most if not all of the technical advising while the PI focuses on continuing to write grants to fund such a large group.

Fundamental issues and challenges

The salary issue is huge. My university does a great job topping off NIH funding, providing subsidized childcare, excellent health insurance, etc. But, the cost of living for many of the best institutions is still ridiculously high and rent takes up half of my stipend, even with it being topped off. NIH minimum salary should be cost of living adjusted for each institution.

There is also a growing expectation that training time for postdocs should be 5 or more years. This has caused fundamental conflict in working on interdisciplinary projects since in engineering, shorter postdocs of 2-3 years are the norm. So when going on the job market after 2 years of postdoc, my biomedical mentor was less than enthusiastic. Training times are stretching on and on. For women in particular, this is very bad if it causes them to delay having kids, as there are increasing health risks with age.

Existing NIH policies, programs, or resources

A very simple thing could be to make the K01 renewable indefinitely to create a straightforward funding mechanism for soft-money staff scientists. There could also be a K01B or somethings that provides increased research funding and smaller salary support (with total $ to the university being greater than the K01) to encourage institutions to fund those positions internally, permanently.

Create more funding mechanisms like the NIBIB Trailblazer award with an intermediate level of funding that prioritize young investigators.

Change the K99/R00 mechanism to not require 1 year at the postdoc institution and extend the eligibility to faculty in the first 2-3 years of their independent position, provided they have appropriate mentors. The AHA has mentored career development awards for early career faculty that are something the NIH should have an equivalent kind of award for.

Make the minimum NIH effort for each grant 35% for single-PI grants and 25% for multi-PI grants (or something to decrease the number of grants that go to senior PI's). Increase the funding level of individual R01's some to make up for the lesser number of grants available to PI's.

Response 1512

Proven or promising external resources or approaches

No response

Perspectives on the postdoc roles and responsibilities

I initially saw the postdoc as an opportunity to learn new techniques and add tools to my repertoire. After 1 year in the position I now understand that it is simply indentured servitude for anyone with a Ph.D. and no real guidance as to how their skills are applicable in industry. As a postdoc I expected to have graduate students and undergraduates working under me so that I could take a more broad approach to my research. I thought that it would be good training to become a principle investigator. Instead, it feels like I am starting my graduate training all over again. I have no one working on any project remotely related to what I am doing in my present lab. I am required to work 7 days a week to maintain cell lines and experiments. I am required to build protocols from the ground up with little to no guidance (less than in my Ph.D.). There is no structure. The PI controls collaborations, funding, and my salary--due to the structure of T32 grants I am currently being paid less this year every paycheck than I was last year.

I am not trained to be a teacher. I am an expert in a specific field. I do not want to be used to teach or supplement the learning of students that are paying upwards of $70K in tuition annually without being compensated for my time--which takes away from the bottom line of NIH funding in the first place.

Fundamental issues and challenges

1) There is NO structure to a postdoc. PIs are allowed to simply use us as skilled graduate students. There is no direction in our contracts and there is no guarantee that we will be using our hard-acquired skills in our new lab--even if we are told this in interviews. We are told we are wanted for our expertise, but we are really just wanted for our fine-tuned hands.
2) Postdoc pay is NOT competitive. Institutions and PIs are left out to dry by the NIH because funding has no been increased for R01's--they are not on pace with inflation and industry has to charge more for consumables to sustain itself. Furthermore, as inflation has increased over the past 2-3 decades, postdoc salary has not kept pace.
3) To be a postdoc is to be a slave. As a first generation US-borne postdoc I feel as though I have been lied to. The postdoc salary is not enough to support someone that is vastly approaching middle-age. I am trapped because I have no "real" work experience and industry does not want someone who "has been in school too long."
4) To be an international-borne postdoc is to be a prisoner. My colleagues who are here on visas from other countries are not allowed to seek other employment without sponsorship. This means that losing their postdoc position--even if it is abusive--will cost them their legal status in the US. PIs threaten their status when they are dissatisfied with work products.
5) The career opportunities for academic postdocs are nil beyond becoming a professor, SRO, or non-tenure track employee at a university. It's simply a poor decision to make that is forced upon nearly every single graduating Ph.D. in the US. Our responsibilities are so broad and vague that industry cannot see our value.

Existing NIH policies, programs, or resources

1) Get rid of T32s and T90 grants. They need to be completely restructured. They are meant to train us to be successful, but the "training" we receive is bureaucratic rather than practical. I've personally sat through more "ethics trainings" because of bad actors that are currently funded by the NIH than I have sat through trainings that will support my development as a thinker and a technical expert. The funds should be used to teach us techniques and purchase supplies to support our own interests rather than simply take the cost burden of a student or postdoc off of an R01 or department account. There is zero benefit to me.
2) Restructure who gets grants. Overhead costs are ridiculous. The institution should support the PI and stand by their research. PIs should not be writing grants to pay themselves. Institutions should be the ones begging for money as they take >50% of the total cost to the NIH in overhead. Make institutions (not grants) pay postdocs as employees with hard-earned doctorates.
3) Perhaps create a sustainable staff-scientist role for people with PhDs.or without them that are capable of doing day-to-day lab tasks.we run the labs anyways.
4) Get rid of the idea of a "program." A Ph.D. should be awarded to someone that makes a SIGNIFICANT contribution to science. Not just anyone that completes a program. You need less Ph.D.s so you can pay us more.
5) Give us employee status.You need to stop giving universities free money. Undergraduates are not supporting their income.grants and tax-free endowments are. Postdocs and PIs are not paid by universities as much as universities are paid by our grants. Universities should be responsible for acquiring funding and then required to spend it on promising PIs and postdocs.

Proven or promising external resources or approaches

1) Grants that are awarded to low-income individuals during undergraduate education should be available to postdoctoral scholars. Our salaries are too low. Unless you have deep pockets, you will not be able to support a family or your spouse. This is a "rich-MANs" sport.
2) Trade schools are perfectly capable of teaching lab technicians how to do basic biochemistry, field data collection, and other repetitive (but incredibly important) tasks in research. There is NO reason that a lab should have to employ someone with a PhD. to do manual labor. We are trained to think.and we hardly get to because of the sheer amount of manual labor required of us.
3) Utilize industry services for repetitive tasks. A PhD. is meant to train us to work smarter, not harder physically. Industry exists to automate and reduce the costs of repetitive tasks. Grants do not currently allow for the purchase of equipment that industry produces to make these tasks more manageable.
4) Pay us more. If you want more US-borne postdocs staying in the US and becoming PIs you need to recognize that our dollars don't go as far here as they do in other countries. This is why international-borne postdocs are so common in academia. It's easy to get a visa, and they can send money home and are supplemented by their own government to survive in the US during a graduate or postdoc experience.
5) Look at industry. People are treated as people. HR actually represents all employees and serves as a liaison between employees and the company. While there are drawbacks.it actually protects both parties.

Response 1513

Perspectives on the postdoc roles and responsibilities

Very important phase of a scientist career, it helps you build confidence that you can successfully run and manage your own lab, helps scientists equip with latest technical skills.

Fundamental issues and challenges

Extremely low compensation (especially if you have to afford child care) and benefits, too long often close to 40 years, before one gets an academic position,

Existing NIH policies, programs, or resources

INCREASE POST DOC SALARY that means an increase in the amount of funding to the PIs as well. Offer more career grades like teaching specialists etc that will provide more alternate ways of career

Proven or promising external resources or approaches

No response

Response 1514

Perspectives on the postdoc roles and responsibilities

The postdoctoral position provides an opportunity for a recent graduate to spend a few more years figuring out what they want to do with their career. For many graduate students completing a dissertation does not necessarily mean they are ready to immediately jump into a faculty position. Some are, but other are not. Transitioning to a postdoc allows one to establish independence, or figure out that they do not like the stress of that independence, in which they may could choose to go into industry or work as a research scientist. The postdoc is also a time to learn new a new skillset, which could be related to benchwork, grant/research writing, or statistical analysis.

Fundamental issues and challenges

Because you are not an independent scientist yet, postdocs are wholly reliant upon the funding or data availability of their mentor to succeed. You can have a great idea for a project or 'next step' based upon your dissertation, but without start up funds you are often unable to pursue this idea, unless it just so happens that your new mentor is also interested in said project AND also has funds beyond just

supporting your salary (or you receive extramural support from a F31 or similar mechanism). The thing is, with how many people graduate with PhDs nowadays, the odds are that you won't find that match.

As a postdoc you are juggling so many different things from what your mentor expects of you, lingering PhD projects, and also trying to carve out time to make a future for yourself. The last part is probably the most important thing, but its often the one postdocs spend the least amount of time on because they are trying to just stay afloat.

Existing NIH policies, programs, or resources

First off, salary thresholds need to be updated more frequently. With how volatile the market has been with consumer costs, the salary thresholds should be updated on a semester (fall/spring) basis. Although updates would feasibly 'kick in' only when individuals are hired or renew their contract, having more frequent updates prevents the role from lagging behind cost of living. Furthermore, these salaries are often used as an excuse for faculty to pay their postdocs less than would be appropriate for a given location. For example, the first year minimum salary for a postdoc is going to go a lot farther in Texas than it is in California.

Secondly, one of the biggest struggles with postdocs is the move to a new location for that first postdoc. While faculty can often negotiate for a moving stipend, this is not at all a norm for postdocs. I can recall at least 4 different accounts (out of 6 cohort members) where we tried to ask for a moving stipend but were summarily denied. Having a funding source through NIH that could provide this assistance would be great, especially since new tax laws have restricted deductions for job-related moving to only those in the armed forces.

Finally, it would be awesome to see a funding opportunity for smaller scale projects that is not so labor intensive to apply for. I'm talking one year awards on the scale of $10-$20K that are not about providing salary support, but are just funds to support postdoc projects prior to a larger R21, R03, or R01 submission.

Proven or promising external resources or approaches

No response

Response 1515

Perspectives on the postdoc roles and responsibilities

The postdoc position should serve as a stepping stone to gain additional technical skills, develop independence as an investigator, and instill professional training in the individual.

Fundamental issues and challenges

Incredible financial burden, mental and emotional burnout, barriers or complete inability of healthy work-life balance and/or having a family, very little guidance or respect for career development beyond traditional academic paths

Existing NIH policies, programs, or resources

Payscales should frankly be doubled to accommodate the financial burden and expertise of postdoctoral scientists

Proven or promising external resources or approaches

Utilizing and encourages industry partnerships for training and overall greater crosstalk between academic training programs and industry

Response 1516

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

- Bad salary and underpaid (Why do a computational postdoc if you can make 100k more every single year as a computational biologist in industry? That is the difference between academic postdoc salary and my peer's full-time role salaries (75k as a postdoc vs 150-200k)!)
- Total uncertainty (Why do you think your good enough to get a PI position? There's no guarantees this postdoc works out the way that you want it to. If you get unlucky with your science—which, as science is hard, requires getting lucky!—then you won't get a PI position.)
- Work location in the present and future (Want to get a PI job? --> move to a select town/city with an elite research institution for your postdoc. Where do you want to live for your PI job (potentially the rest of your life)? If you're location restricted, e.g. due to family then you can only look at a couple institutions for PI jobs, and you hope that one happens to have a job opening and that you can get a job at one of them. An alternative? Work in industry—lots of companies in most cities/towns. Plus remote work is big, and you can work remotely from anywhere. Can you take an academic PI job and work remotely full time? Haven't heard of that yet, at least until you're senior w/ tenure.)

Existing NIH policies, programs, or resources

- Pay postdocs more. Narrow that gap w/ industry!
- Somehow enable postdoc-->PI prospects go up. e.g. K99s help awardees get PI jobs on the market, but the timeline isn't great. By the time I feel competitive for K99, I'm ready to move on (academic PI applications). why not a K99 straight out of PhD? have a set timeline for postdoc funding (e.g. 2-3 years) before it is expected that you have PI funding for 3 years. would be different than K99 and different than early independence. allows a postdoc to just pick up new skills rather than stress about getting papers before starting as a PI

Proven or promising external resources or approaches

No response

Response 1517

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The issue is simple. Postdoc is very low pay compared to industry science jobs. Postdocs are seen as the pathway to become an assistant prof, but prof jobs are extremely limited and competitive, and often require the scientist to move across the country or further. These requirements are frustrating and a bit ridiculous for someone who has a PhD and spent their life committed to science. We just want to move forward science and feel valued with a good salary. But that is not an option unless you get a prof job.

Existing NIH policies, programs, or resources

The only solution is to make the position of research scientist more glorified. Introduce grants for research scientists to make six figures. Make research scientists feasible permanent positions at research universities. Allow research scientists to apply for R01s or similar NIH funding. This will also retain the most productive members of labs for longer. Otherwise, postdocs that don't get faculty positions will continue leaving for industry or other fields where they are actually valued with good salary an more reasonable work-life balance. Why wouldn't we? It's difficult being over 30, having worked weekends most of your adult life, and watching your peers in other fields easily make above six figures. Life as a postdoc has zero stability. We want to plant roots and start a family, but I might need to move to a different state soon? I have no idea where my life will lead next.

Proven or promising external resources or approaches

No response

Response 1518

Perspectives on the postdoc roles and responsibilities

I am currently at my second post-doc position, previously in New Jersey, now in [redacted for anonymity].

After 4 years in the previous lab I published (first author) very high-end papers, but I was made clear that there was no room to grow more in the same place.

In [redacted for anonymity] I see myself going on with the same determination but with no or very low perspective of being stabilized and become faculty.

I love the job that I do, but is not granting much no matter the impact factor.

Fundamental issues and challenges

Low salaries, insufficient for living with dignity in big metropolitan areas.

Sharing an apartment is no more an option, as I would like to create a family.but salary is barely enough to live as a graduate student.

Low professional ladder, with no pathway leading to stabilization, with implies no possibility to get even a mortgage.

Increasing requirement to publish at good levels, requiring a external network that often is unwilling to collaborate for data protection.

Literally NO BENEFITS.

Existing NIH policies, programs, or resources

Increase the number of fellowships and grants for young and growing Post-docs even if not faculty.

We are in a limbo, where we cannot apply for funds after 3/5 years after PhD, but to step forward we need to be faculty.

Portability of funds from an institution to another: funds should be more related to the investigator and not bound to the applying institution/lab/PI.

Proven or promising external resources or approaches

Talk about us.

We are NEVER called to express our direct voice.

Postdoc Associations are never ever heard at the table that matters, please invite them to share their requests during specific and dedicate meetings.

Response 1519

Perspectives on the postdoc roles and responsibilities

Postdoc position used to be an intermediate position before the tenure track positions, however due to the recent developments in the field of especially biology related sciences, a postdoc may reach up to over 5 years easily. This suggests that it should be acknowledge as a proper position with proper benefits. Postdocs are not able to even do any family plannings. They are taken advantage of and getting paid much lower than the other options (ie. industry, teaching etc).

Fundamental issues and challenges

Can you make any life plans if you have a contract of 1-2 years? You cannot even think of getting a bank loan because you are unsure of your future. How can one produce science with a pressure of financial limitations? Postdocs in academia are getting paid 1/2 or 1/3 of what they could easily get in industry. So far, we only continue because we are the older ages (over 30 years old generation). New generation is not as humble and resilient. The future of science in the US is at risk. Most of the science is done thanks to postdocs, and the least appreciated position is postdoc. Science and art goes where they are appreciated. All international people are flowing to the US because US used to be the place caring the scientists. Now, I am having difficulty to pay my rents with the salary I am receiving. I purchase the cheapest food. I have the most basic health plan. Why do I have to live in this situation? Even after postdoc, tenure track PI

position is so scarce. Why do I have to live in this stress? I will turn into early 40s when I have my tenure in the best case scenario. The amount of vacations I can have is 1-2 weeks at most which is to visit home country. I can very easily get triple amount of salary next month in industry right across the street. My very basic question is "Why do I have to live in this condition?" Answers is easy, I think it will be fixed, if not, thermodynamics will fix it, people will just leave academia and sciences, they will become engineers of biology at industry. It will affect the future of the country sadly. I hope you fix it before that.

Existing NIH policies, programs, or resources

Postdocs do not want more trainings. We have a PhD we can train ourselves if needed. We do not need fancy wordings and pizza parties. We need to be acknowledged properly and paid fairly. All our peers are getting the mortgage for their second houses. We cannot even afford a one bedroom apartments. Yes, American cities are great, American standards are great. Why do I care, I cannot even afford opera or a concert? Did you know I have to pick between either a dinner with friends or going to a movie, because I cannot afford both at the same month? Being pushed to make sacrifices each time in order to have even most basic pleasures of life is for sure what to improve first. Especially as international postdocs we are in a more difficult condition with 1-2 years contracts due to visa costs each time, to be have to go back to our home countries to get a visa each time.

You want suggestions, I give you the results:

Training ecosystem: Do nothing, give us travel budgets we can use, and we will train ourselves.

Academic research career pathways: No need for more talks or conferences on this, we see that our friends are working 3 times higher salaries, we already see the path, we see that our friends are offered a secured position in European institutes we already see the path. If you want postdocs to stay here 1—Give green card, 2—Increase the salaries twice for Boston region (and take into account geographical life-costs), 3—Make a Medicare type of social state approach for scientists ie. Scientist-care where our health insurances, retirement plans and children education plans are covered by the government

Science is not done under financial pressures, science is done with peace of mind and tranquility.

Proven or promising external resources or approaches

We are most of the time already over qualified for the jobs. Thank you but no need for more trainings. Give us the budget for traveling and open your infrastructure for postdocs for free and we are gonna come and get the trainings we need. This is already kind of happening via fellowships, grants from NIH. You can increase the acceptance rates and be more flexible for interdisciplinary trainings. This will be sufficient.

You really need to focus on how you are seeing postdocs. Even with all these questions you think that postdocs are machines to make better research for you. You think adding more trainings will make them happy and puffy. If you continue not acknowledging them, they are gonna move on to where they are acknowledge it is that easy.

Make a national postdoc ID card, use it as a starting point for postdoc benefits (ie. social, financial helps etc). Make it easier to stay on postdoc positions if researchers wanted to (ie. Staff scientist). It looks like postdoc is not an intermediate position anymore and it is actually a research position itself. Take all the postdocs that wants to work for NIH with stable job contracts as researchers. Then, they will at least feel like they always have an option in research and they will be more resilient towards difficulties that are going on today.

Response 1520

Perspectives on the postdoc roles and responsibilities

Postdocs contribute expert research skills to labs and push research projects forward. While the traditional views postdocs as being trainees in preparation for an academic faculty position, given the scarcity of faculty positions this model no longer applies in the vast majority. Instead postdocs should be considered expert staff for short term projects with a comparable salary.

Fundamental issues and challenges

Low salaries/stipends, lack of clear career prospects, poor work/life balance, toxic research environments. I will reiterate low salaries/stipends, as I think that this is the largest challenge in today's economy. Salaries across the research sector have not kept up with inflation and cost of living increases for decades

and the situation is now coming to a head with researchers at most career levels being unable to support themselves or their families. Low salaries for current postdocs is compounded by a landscape of low salary positions at the next career levels in academia, making the incentives to stay in academia for a career low to none.

Existing NIH policies, programs, or resources

NIH needs to revamp its grant structures to provide higher and protected salaries for postdocs and really any positions that are funded by soft money. Time and effort also needs to be put into the enforcing funding policies for academic institutions and ensuring that money is not being siphoned off for "fringe benefits" that may or may not actually being used to benefit the grantee(s). In my experience academic institutions take advantage of the grant system, taking large indirect costs, without clear support for the researchers that are bringing in the grants and suppressing researcher salaries to inflate institutional administration.

Proven or promising external resources or approaches

As the root of this problem is low government funding this issue is systemic across the country and there are not many functional models. A place to start looking may be at private research foundations that are less dependent on government grants for research funding.

Response 1521

Perspectives on the postdoc roles and responsibilities

My studies aim to convert non responders tumors into responders by combining basic tumor biology with preclinical knowledge and clinical needs.

It is very challenging and exciting work.

My ambitions are to acquire new advanced technology : imaging studies, therapeutic studies. and new research skills.

Fundamental issues and challenges

It seems to me be ok. I have no issues.

Existing NIH policies, programs, or resources

No idea

Proven or promising external resources or approaches

No idea

Response 1522

Perspectives on the postdoc roles and responsibilities

The role of an academic postdoc is to contribute to scientific advancement. Postdocs are typically referred to and treated as "trainees;" however, in my view and my experience as a postdoc they are typically independent scientists who are responsible for designing and driving projects, training and mentoring students, securing funding, and are integral to the day to day operations of the lab. While there is still training and learning going on by working under a supervisor, that is true of careers in all industries and postdocs are professionals who have advanced degrees and have worked in their field for typically at least close to a decade. I view being a postdoc as a job, one that is necessary to pay my bills and support my family as well as an opportunity to hopefully advance my career. Personally, I chose my postdoc in a lab that would allow me to improve my academic skillset but also in a location that would allow me to support my family and maintain a healthy work life balance. I think too much emphasis is placed on an unfair perception that postdocs need to sacrifice for the good of science to be successful and that we should be viewed as what we are, highly experienced professional scientists with the highest degrees in our fields.

Fundamental issues and challenges

I started graduate school immediately after graduating with my bachelor's degree and therefore entered my PhD and postdoc relatively young. When I first started my postdoc I was excited about making more

than the graduate student salary (especially since I stayed in a lower cost of living area); however, those feelings quickly changed when I realized how little it actually changed my ability to provide for my family and realize my personal goals. I have friends in many industries who all made more money straight out of college than I make as a postdoc now. Friends with no advanced degrees make 2x as much as I do with much more free time and better future career prospects. Every day I consider making a change to even a non-science job (despite loving my work) because I don't feel like I will be in a position to afford and realize my personal goals like having children or owning a home with the lost income potential from working as a postdoc. We work long hours, 7 days a week, doing the work that makes our labs run and get no respect to show for it. In my department we had to form a postdoc association to even get our pictures on our website, we don't get the same benefits as employees, and we are constantly forgotten about when it comes to department planning. We have the highest degrees in our field, with many of us having great training and publication records but are treated like entry level employees because we are "trainees." One look at jobs in any other industry for people at our level of success and training make it very obvious why there is a problem with recruitment and retention. Love of science doesn't overcome need to live.

Existing NIH policies, programs, or resources

Universities should not be allowed to hire postdocs on this "independent contractor" type basis where they are free to not give them employee benefits. It is ludicrous that postdocs can be in positions that don't give retirement benefits. This is especially bad for trainees like myself on T32 grants who get paid stipends that prevent pre-tax investing and also force us to pay taxes on health insurance subsidies.

Childcare is another huge issue for postdocs due to the typical age that they are started and even for grants that do give subsidies for childcare the amount offered is laughable.

Anything that can aid in the transition of postdocs to their future independent careers, especially when those programs decrease the time spent in a postdoc. It is taking longer to publish and even getting preliminary data for grants seems to take years in certain fields and putting restrictive time limits on grants and programs makes it difficult for early stage postdocs and makes you feel like you are always under pressure. Couple that with the limited number of academic positions available it creates an unnecessarily stressful time while you are trying to get useful data, learn about and apply for grants, and also potentially support and care for your family.

Proven or promising external resources or approaches

Look outside of science on how other industries treat people with lots of experience and advanced degrees. Why don't top engineering and tech companies have trouble with recruitment? If you want to improve recruitment, focus not on the science but on the people doing it. Better work will be done when the workers are less concerned about how they are going to be able to live. We want to attract the best people not the people who are willing to sacrifice the most, offering improved wages and benefits will not only increase the pool of applicants you have to choose from but will also make science more inclusive and prevent this career from becoming one that only the wealthy can afford.

Response 1523

Perspectives on the postdoc roles and responsibilities

In my opinion, the postdoctoral position is a stepping-stone experience from graduate student studies to a long-term professional career. It provides the necessary in-depth, focused training in ones particular field of interest. In some cases, the postdoc experience is an opportunity to learn new techniques, and/or expand their knowledge in a particular field with much success. They are also allowed to apply for internal/external funding opportunities to fund their research as well as engage in successful research dissemination. In other cases, postdocs are treated as glorified graduate students with minimal pay, and not given opportunity to apply for funding and limited opportunities for research dissemination. These experiences are dependent upon the principal investigator/primary research mentor and ultimately the institutional environment.

Fundamental issues and challenges

As a US citizen I have not had to worry about visa issues, but several of my colleagues who are postdoctoral trainees have had a challenging experience with visa issues. Most particularly their primary mentor will use the postdoc's visa (and renewal) as a threat to push their research (the PIs) forward,

keeping the postdoc from advancing in their own careers and training in order for the PI to meet critical career benchmarks or research deliverables.

Aside from the above issue, postdoctoral trainees are under considerable amount of pressure with long hours (50-70+ hrs/wk), minimal pay(!), lack of job security, medical/mental health benefits, family/childcare benefits, paid time off, combined with having to deal with microaggressions, discrimination, and bullying. These challenges contribute to the lack of recruitment, retention, and overall quality of life forcing postdoctoral trainees to seek other careers.

Existing NIH policies, programs, or resources

Accountability! The individuals (administration and PIs) responsible for training the postdoctoral trainees need to be held accountable for their actions against the inhumane ways they treat trainees and the only way to do this is to enact policies and programs reproving their actions. Mentor training should be REQUIRED for all PIs who are funded by federal government money (e.g., NIH/NSF/DoD grants). In addition, a funding scale should be implemented based on reports filed against the PI—for example, if a PI has multiple (verifiable) reports filed against them, then based on certain criteria, they will get less funding distributed than another PI who has an excellent record.

Postdocs should be able to voice their concerns without fear of retaliation from senior researchers. Currently, there is no mechanism in place where postdocs can file complaints or concerns and know that it will not be in vain, but rather that something will be done, whether it is a formal investigation or the postdoc has an opportunity to leave and receive training somewhere else without fear of risking their reputation or being black-balled.

Proven or promising external resources or approaches

No response

Response 1524

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is an important period for researchers to transition into independent investigators.

Fundamental issues and challenges

Lack of an affordable living wage and benefits for academic postdocs. The current pay scale is so low that more researchers leave academic settings.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1525

Perspectives on the postdoc roles and responsibilities

It is a research scientist position that allows you some freedom to explore a research question that one is curious about. Based on my observations, you can be expected to work as a lab manager and a supervisor to graduate students, meanwhile, you are expected to read the literature, design experiments, collect and analyze data and create computational models that explain your data. In industrial postdoc positions, this seems to be more organized, where scientists only are responsible for tasks relevant to their core skill set.

Fundamental issues and challenges

Based on my observations, it looks like academic postdoctoral positions are expected to work in a job that would be divided into a team in an industry setting. The total compensation is way below compared to postdoctoral positions in the industry or around one-third of an entry-level scientist position. Additionally, the benefits the universities provide don’t match up to job market standards, such as a comprehensive healthcare plan with dental and vision insurance, family support such as adoption or surrogacy benefits, and childcare support, unlimited paid time-off, and flexible working arrangements. Anyone in my circle is

rigorously looking for research scientist positions outside of a university due to unsatisfied basic needs, and whoever lands a position immediately leaves their lab.

Existing NIH policies, programs, or resources

Allowing internationals to apply and compete for NIH fellowships may lead to retaining a fraction of them in academic research. To retain US citizens, debt cancellation and matching salary and benefits to industry settings can make it attractive to stay in academic organizations.

Proven or promising external resources or approaches

People don't want to live in poverty after years of training. Why would they make 50k with limited benefits, when they could make 150k with actual benefits doing the same research, but for a different organization? Match total compensation to industry pay scales, or there will be no one left in a university in 10 years.

Response 1526

Perspectives on the postdoc roles and responsibilities

Postdoctoral training gives a way to acquire further career goals in academy or industry.

Right now it is a sacrifice in personal and financial life to get a better position in future, to fulfill postdocs scientific interests.

Fundamental issues and challenges

PIs don't have any negative consequences for their postdocs career failures. Which leads to any kind of abuses.

Postdocs are completely dependent on their principal investigators (PI). This monopoly on postdoctoral trainee future leads to corruption:

Postdocs have to obey PIs for further career advancement—if not, then their chances to secure next position almost zero.

If PI don't have any incentive for postdocs development, postdocs are abused just as cheap labor force.

PI plays a great deal in postdocs career development—unlike industry, where market is less corrupt where people getting hired for their skills and not because of their PIs

Postdocs who decided to stay in academia having extremely high competition due to high number of postdocs and low number of advanced positions on the market.

Many academic positions have more than 2000 applicants per position.

Postdocs have only PIs as a role model for their development, which limits their view on their career paths.

Extremely high job insecurity for postdocs:

Feeling that we can be fired at any time, we have to please PIs to advance in our careers

Have to change their location on position change every time plus extremely high working hours leads to no personal life, postdocs are very poor choice as a life partners

Existing NIH policies, programs, or resources

First of all NIH policies, programs and resources should be known to postdocs.

Postdocs are working 12hrs a day and in many cases without weekends—they don't have time to read that is not related to their research.

Postdocs should have secured job position, if not then adequately compensated:

Salary in industry for the same position are 3x times higher and they have job contracts. Postdocs have low salary and no job security, plus extremely low chances to get higher positions in academia.

These programs should give a clear view on postdocs have a future career.

Proven or promising external resources or approaches

improving postdoctoral recruitment:

Postdocs should have a clear career paths. Right now they are hired and left abused.

Training:

- Training must be available for postdocs. Not is just working for their principal investigators, without actual training.

Working environment:

- Postdocs should have an option to have personal life. Like having partners, family, kids. Not possible right now—no time, have to move frequently, no money to buy a house or apartment (no money even to rent a studio and follow spending 50/30/20 rule).

Mentoring:

- No abuse should be tolerated. Now postdocs are just cheap labor force for their PIs. PIs don't have any negative consequences for their postdocs career failures.

Job Satisfaction:

- Postdocs should receive acknowledgements for their research, not just a name in the paper. Now this is abused by their PIs who claims all the research results exclusively to themselves.

Postdocs should have a light in the end of the tunnel, and this light should be for the postdocs as well, not only for their PIs.

Response 1527

Perspectives on the postdoc roles and responsibilities

In theory, a postdoc is a time to gain more training and learn how to manage a lab. In practice, this is not what I have always experienced. PIs often view postdocs as experienced labor (better than undergrad/grad student) they can get for cheap (not as expensive as career technician) and don't pay sufficient attention/prioritize the needs or goals of the postdoc. In general, I don't think postdocs should be in that position for the 5-10 that is about average in the US. I don't feel that there is much value added to my development as a scientist or as a group leader from my postdoc experience, except that the time is required for search committees to look favorably on my application to tenure-track positions and for me to accumulate more first author publications (again so the committees think I have "enough").

Fundamental issues and challenges

One issue I see with recruitment is the salary differential between academic/government postdoc positions versus going into industry immediately. Increasing the minimum salary for postdocs in academia/government would help, as well as allowing postdocs to be treated more like employees with benefits (saving for retirement, health insurance, child care, etc). Another big issue I have experienced, primarily related to quality of life, is the lack of training everyone receives in regard to mentoring. Bad mentors can completely ruin someone's postdoctoral experience, and I personally know a number of postdocs or former postdocs who have left academia or are considering leaving academia entirely because of this lack of mentoring. In a lot of ways, this mentoring issue is related to and compounded by the overall culture of science, encouraging overwork, being less than welcoming to women and/or minorities and/or people with disabilities, and negative competitiveness. Further, everyone is aware that there are many more grad students being produced than potential tenure-track positions available and many people are leaving postdocs early or not doing a postdoc at all because they are not interested in the highly competitive and unstable lifestyle of a tenure track PI.

Existing NIH policies, programs, or resources

I think PIs that are going to use postdocs in their R01 supported research should have to write career development plans for those trainees as part of the R01 application, like trainees have to do for F and K series fellowships. All non early stage investigators should also submit a letter from a former trainee talking about how good of a mentor the PI is. This would enable study sections/program officers to actually reward good mentoring as well as good science. There should also be more training available to

PIs and grad students/postdocs on how to mentor trainees and manage people. I also think that allowing postdocs or late stage grad students to practice the ins and outs of being a PI (grant and paper writing, mentoring, budgeting, organizing collaborations, managing people, etc) in "mini-PI" positions like the NIH Independent Research Scholars would be hugely beneficial to our training. I know many people who are very anxious about starting their own lab because there are so many different roles PIs need to take on that they have little to no experience in and allowing greater access to these kinds of positions would be extraordinarily helpful in preparing postdocs interested in academia/tenure-track positions for their future careers. I also think that acknowledging that there aren't enough tenure-track positions for all the grad students being produced and encouraging more career exploration early would help. Its possible that the grad student-postdoc-PI model is no longer viable and labs should move away from relying on postdocs to do the brunt of the science anymore.

Proven or promising external resources or approaches

No response

Response 1528

Perspectives on the postdoc roles and responsibilities

It is an opportunity to conduct independent research while benefiting from the mentorship of a senior scientist.

Fundamental issues and challenges

The NIH salary caps for postdoctoral positions are unfairly low compared to junior positions outside academia (or research institutes)! This is one of the biggest reasons for the migration of young scientists from academia to industry. A Ph.D. in a postdoc position earns less than a recent college graduate in the industry. Starting salary of a person with a PhD is around $72k—$100k, while a first-year postdoc earns less than ~50k.

Existing NIH policies, programs, or resources

Salary guidelines should be compatible with the degree and competency of the postdoctoral trainees. Match the salary to what is offered outside academia if we wish to keep young talented scientists in academia and research institutes.

Proven or promising external resources or approaches

No response

Response 1529

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as the career scientist's analog to the medical doctor's residency. A step above prior training, more expectations and independence, and a deeper specialization with one's area. It's an opportunity to grow and be mentored in a new area.

Fundamental issues and challenges

Pay/salary is miserable. Postdocs in academia are pay well below contemporaries in other positions. Attracting and keeping postdocs is extremely difficult to do when industry offers, at a minimum, financial security. Recent cost of living increases make life as a postdoctoral scholar increasingly difficult. The feeling is postdocs are not meant to be retained. Our presence is temporary and our lives at our institutions are transient.

Additionally, postdocs are often ignored when it comes to institution-wide increases in pay, insurance, or other factors. We have very little protections when it comes to certain matters and are often forgot about or are unable to be properly categorized when it comes to university services or policies. Are we students? Are we staff? The distinction is rarely clear.

Existing NIH policies, programs, or resources

Guidelines for pay should be frequently updated to make postdoc positions more desirable and competitive. They don't need to match the extreme payrates of, say, silicon valley technology corporations but the current policies on pay level are unbelievably outdated and only get worse with each passing day.

Proven or promising external resources or approaches

Seriously, just pay us more and encourage institutions to treat us with the respect we deserve.

Response 1530

Perspectives on the postdoc roles and responsibilities

When I was applying for my postdoc I viewed it as an opportunity to gain advanced training in my specialty area, some experience in other areas that closely aligned with my ultimate career goals, and hone any skills that needed further development, with the ultimate goal of launching as an independent scientist. I thought this would be a great opportunity to publish a significant amount of papers, engage in professional development opportunities and networking, and write my training grant to help secure funding to get to the next step in my career. When I was accepting my postdoc position (which is funded by an NIH R01 at the top university in the US), I was told I would get all of those things and more. Now, I see my postdoc as a glorified research assistant position. Instead of getting the experiences I wanted (and that were sold to me during the interview) I am responsible for things that typically an undergraduate or post-bac RA would help with, collecting data, analyzing data, managing databases. The only experience I am getting that I wanted was publishing. However, I am treated essentially as a publication factory on top of the RA responsibilities that I manage. So this leaves me no time to further my career, develop any training grant ideas (or write a training grant), or engage in any independent research of my own. All of my time is dedicated to the research activities of the lab, and there are no research supports (research assistants, volunteer undergrads, etc.) in place to even help with these duties. Yet, my PI and the Co-PIs on this grant receive .25 FTE and only show up to a 30 minute weekly meeting maybe? If I had to sum up my experience I would say, exploitative.

Fundamental issues and challenges

First, the pay structure for postdocs is insulting. Yes, postdocs are technically "trainees" but we hold advanced degrees and have years of technical training. (Also, the argument could be made that the vast majority of us aren't actually receiving training.) In many cases, RAs who hold a bachelors degree and have far less research training are receiving the same (or sometimes more) salary than the postdocs in the lab because of the NIH postdoc salary structure. In fact, my PI has stated that because of the NIH salary structure and the benefits packages it is actually "cheaper to hire a postdoc than a research assistant and you're getting someone with more specialized training." So the PIs KNOW that they are exploiting postdocs for cheap labor. And the fact that postdoc salaries aren't at least adjusted by location is even more insulting. I work 70 hours a week for $3500 a month after taxes in Boston. How am I expected to save for my future at all, pay basic living expenses? How do postdocs with families support themselves? Second, the current structure in place for postdocs makes it beneficial to the PIs to keep us as long as possible. If postdoc positions actually did what they were supposed to do, and launched you into the next stage of your career, then the financial sacrifice for a couple of years might be doable (not fair or ethical, but doable). However, because the PIs know that it's to their benefit to have postdocs instead of RAs, they don't put any time into training us or helping us to launch. Instead, they bring us on as essentially RAs to run their studies and crank out publications, leaving us no time to develop our own careers, and don't assist us along the way at all.

Existing NIH policies, programs, or resources

The salary structure for postdocs needs a major overhaul. If you're going to provide the same salary based on years of experience, then it at needs to be at least adjusted by location so people in Boston/NYC/large metropolitan cities are able to actually live on their wages after they worked for 5+ years to get a doctorate. On USAjobs, positions that require a doctorate are paid at GS11, which has a starting salary in the $77k range, which is far above the starting ~55K that a postdoc makes. We also need more accountability for PIs who bring on postdocs. I was never given a formal IDP. My contract was renewed without consulting me and without any formal performance review. There need to be strict systems in place that show the PI has the time to contribute to training postdocs when they apply for NIH

funding that has effort written in for a postdoc. If a PI has multiple R01s (like mine), plus additional foundation grants and teaching, where will they have time to train the four postdocs? The answer is that they don't. So there needs to be a system in place when researchers apply for NIH funding and include postdocs in their budgets where they describe how MUCH time they will dedicate to training a postdoc, and what activities a postdoc will assist with, and what activities a research assistant will assist with. Then, there needs to be some oversight to ensure that the plan is being enacted. For example, perhaps a PI needs their trainees to submit a report of their activities and the training they've received as part of their RPPR? Anything to protect the postdocs and make sure they aren't being exploited.

Proven or promising external resources or approaches

I think this survey is an important first step. And I would love to see a qualitative analysis of the findings of this survey. I have no additional approaches to offer.

Response 1531

Perspectives on the postdoc roles and responsibilities

It is a transitioning position for high qualified intellectual workers.

But I don't really think we need a transition and postdoc is not the place to learn how to do research, because this is what PhD means. Postdoc is as is time to apply and improve our skills, because learning never ends. Everybody is constantly learning.

So, sometimes I see myself as a postdoc like "I don't know what to do next, so I'll take this position to have time to figure it out", but sometimes it really feels like "it is hard to find a job with my qualifications, let's take this position until I find a good one, unemployment is not an option".

As a Brazilian, I never thought that I needed a postdoc to be a faculty, because theoretically we don't need it. However, the competetion is increasing quickly, not only because maybe we have more postdocs but because we have less postitions? In summary, I think that the reason why PhDs need a postdoc now is because when there is a faculty position opened, PhDs will complete with postdocs that will have more experience and accomplishments. It is more likely that a postdoc will get academic positions. So, I need a postdoc to be better prepared, and a competitive candidate for a faculty position.

When I started my postdoc being hired after an open position, I felt like I was being a research assistance without a real research project, but collecting data. The situation changed when a project came out and I worte my first fellowship project, althoug I haven't received a fellowhsip yet. I think some principal investigators can treat their postdocs like data generators rather than investigators that have hypotheses and questions of their interests to ask and test.

Fundamental issues and challenges

Salary level: the income is low when compared to industry jobs with same qualifications. Salaries of biomedical postdocs are very low compared to salaries of postdocs in engineering, technology and computational fields of research.

Lack of training and mentorship for postdocs who pursue a career in academia. Training should be as important as research and lab work per se, and mentorship should be taken seriously.

Existing NIH policies, programs, or resources

Many grants and programs are only for US citzens and as being a foreigner I can't apply for most of them.

Proven or promising external resources or approaches

Education is crucial. I benefited substantially from a workshop offered by NIH on grant-writting. I think that initiative should be part of NIH efforts in a regular basis. I guess we also need mentors that care about training their postdocs, therefore, NIH needs to motivated them. Awards for faculty mentors is a good way to increase awareness of this important issue.

Response 1532

Perspectives on the postdoc roles and responsibilities

As someone who did a postdoc for 1.5 years before transitioning into a state government job, here are my perspectives. The "goal" of a postdoc is to allow someone with a fresh PhD independently perform research under the guidance of a seasoned mentor. This can be useful in several cases, such as switching fields and needing more training in a specific area, gaining experience at a different institution with potentially different resources, or experiencing a different style of mentorship. The ideal timeframe is probably 2 years, at which point the postdoc is ready to enter the academic workforce. The mentor should be helping the postdoc find job opportunities, establish a research and teaching plan, statements, etc, and utilize their connections and experience to help the postdoc move on to their next position. Since papers are the currency of academia, publishing should be a priority as well. The postdoc should be given the same amount of resources as a new PI would, as ostensibly they are training to be a PI.

The benefits of the postdoc position only apply if someone is financially supported in other ways (family, spouse, etc) AND is looking to become a professor. Otherwise, directly entering the workforce into industry or government is financially a much better decision.

Fundamental issues and challenges

The main issue with the postdoc position is the low pay. If someone is not looking to be a professor, a postdoc is generally not useful and is financially a very poor decision.

Retention should not be an issue for postdocs, as the goal is not to keep them for a long time—the position is specifically a transition and should not last more than 2-3 years. Postdocs should not be staying in one lab for 10 years.

Quality of life for postdocs is poor for several reasons: low pay, lack of support and comradeship, lack of job security, and more often than not, overwork. Postdoctoral pay is not to scale with the economy and is definitely not competitive with industry or even government positions. The lack of cost of living adjustments for expensive cities is even more damaging and creates situations in which some people may not be able to afford to do a postdoc at elite institutions in expensive cities such as Boston, New York, and San Francisco.

As a grad student, you have other grad students in a cohort to develop comradery with. Postdoc'ing is an incredibly isolating time, as you are not involved with the grad students or the faculty and are often not considered a full employee of the university and therefore cannot receive benefits such as retirement. Often the position is unstable and dependent on funding, adding stress. Additionally, as a postdoc often you are expected to perform an experiment beginning-to-end without any additional help, and therefore end up working greatly more than 40 hour weeks. Particularly toxic PIs may try to keep postdocs in their lab for longer to exploit their work.

Existing NIH policies, programs, or resources

The salary level for postdocs that is set by the NIH should be increased significantly to be competitive with industry/government and should account for cost-of-living adjustments in expensive locations.

Proven or promising external resources or approaches

A substantial increase in base salary

Perhaps a system of "rating" the conditions in a lab as a postdoc, or an effective system to report abuses by PIs (and consequences for those reported).

An overtime pay system

Training guidelines for PIs—i.e. what the postdoc should be able to do upon leaving the lab (e.g. finding an academic position, publishing papers)

Guaranteed retirement benefits

A postdoctoral association, union, etc for comradery between postdocs.

Response 1533

Perspectives on the postdoc roles and responsibilities

A post-doctoral fellow is a training position that prepares an individual for their role as an independent investigator after completion of their doctoral degree. It is an opportunity to go into a new area of research or system and to master new approaches that will be critical for transitioning into a faculty position.

Fundamental issues and challenges

The lack of funding for research and the limited number of faculty positions is resulting in fewer PhD students wanting to pursue post-doctoral studies. Industry is now hiring PhDs directly from their graduate programs and so there is less of a need to pursue post-doctoral studies. Writing grants and low pay are the top reasons why individuals tell me that they do not want to pursue a career in academic medicine.

Unfortunately, our PhD students and post-doctoral students see how hard it is to get funded for our research and this is discouraging for them. When I was a PhD student, during Clinton, it was much easier to obtain external funding and this never factored into my career choices. The lack of funding for our research is draining our scientific talent from our institutions and preventing scientific advancements. In addition, the emphasis on "translation", and not basic science, is a missed opportunity for important fundamental discoveries to be made.

Existing NIH policies, programs, or resources

Being a post-doc correlates with when individuals would want to start a family and sometimes money is a primary concern. In terms of graduate education, more of our students have masters degrees or take a few years off to work as a technician before starting graduate school. This means that individuals are older when they finish their PhD and may be starting families or have student loans to pay back. One idea is to help to offset childcare costs for post-doctoral fellows and for graduate students as well. When I was a post-doctoral fellow at [redacted for anonymity], my salary was less than my children's subsidized university childcare and so I was actually negative salary without paying for rent or food. This is a major issue for women in science.

The other issue that I faced as a post-doctoral fellow was that the cost of living in [redacted for anonymity] was a lot higher than other parts of the country and yet the post-doc salary was the same regardless of where you lived. That meant that I had less disposable income to pay for basic necessities. This is something that could also be easily fixed.

Lastly, more programs, like the K99/R00 (in which I was a recipient in its early days), is critical for the transition to an independent faculty position.

Proven or promising external resources or approaches

Unfortunately I have no good models to suggest.

Response 1534

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a training position that diverges from being a Ph.D. candidate in that the responsibilities and individuality expected are at a higher level. Postdocs are asked to completely drive projects forward and often mentor graduate students or research associates in the lab. In this way, they (in theory) are afforded the opportunity and training for establishing themselves as an expert in a field and ready for the next step. However, in reality postdocs are often exploited and underappreciated by their PIs.

Fundamental issues and challenges

The #1 fundamental issue inhibiting recruitment and retention is in pay. Postdoc salary range of $55k is nowhere even close to the entry-level industry scientist pay of $110-120k. As such, how can postdocs justify spending time in those positions, especially in very high cost of living situations or in the event they have to care for a family member? Moreover, coupling the low pay with the often abusive nature of PIs with postdocs, it makes the job just not worth it. Even further is that every postdoc knows that there are an extremely finite number of faculty positions available and very low odds of obtaining such a position.

Given that, there doesn't seem to be a reason to stay as a postdoc for a very long time at all when industry scientists make double the money with no requirement for postdoctoral training. For many scientists, even doing the postdoc in industry is preferred given that it gets their feet in the door of an industry job while still earning more income than a standard university can provide.

Existing NIH policies, programs, or resources

Both the publishing and grant systems need to be overhauled, given the emphasis placed on both at such an early stage in the career. For instance, the K99 is often thought to be a critical grant to proving the ability to obtain independent funding, however if there were other mechanisms to obtain bridge funding between postdoc and PI then that would allow for less straight-line postdoc-to-PI transitions. Furthermore, there is a stigma surrounding publications as the 'currency' of academia yet I wholeheartedly disagree that publications are indicative of someone's ability to do work. For many PIs, publications are often given as incentives/promises to join a lab, adding someone as an author with very little work done to earn this authorship.

Proven or promising external resources or approaches

Too little accountability is held for abusive PIs in that Universities are actively encouraged to cover up any deficiencies because it directly affects their bottom line. A PI can often abuse multiple generations of graduate students and postdocs while suffering no repercussions from either the NIH or the University. The power imbalance between PI and postdoc/graduate student often sacrifices the humanity for the research. A stronger accountability system tied directly to funding would keep both Universities and PIs honest about the way they conduct research.

Response 1535

Perspectives on the postdoc roles and responsibilities

I see my postdoc position as a temporary one. It's not something I can afford to be in for very long (financially and in my career), and I view it as a stepping stone to a more permanent career path in industry science.

Fundamental issues and challenges

Overwork, underpay, and very little chance of advancement in the academic science career path.

Existing NIH policies, programs, or resources

NIH funding to individual postdoc fellowships and grants should be increased.

Proven or promising external resources or approaches

No response

Response 1536

Perspectives on the postdoc roles and responsibilities

I view a postdoc as a stepping stone from PhD to faculty appointment. It is a great training stage to learn new techniques and/or apply them to a new field, and to develop more management skills prior to establishing a lab. I feel that this stage has really allowed me to develop my own independent research ideas and to learn which areas I really want to pursue in my future research program. However, I think this experience is highly dependent on the lab environment and the support of the PI.

Fundamental issues and challenges

Postdoc pay is far too low. I am at a crucial point in my career and comparing academic jobs with those in industry. Starting salaries in biotech (even without PhD) are far higher than postdoc salaries. This perpetuates exclusion in academia as only people who can afford to take the financial hit whilst in this phase can follow this path. In particular, this is unsustainable for people with dependents and for international postdocs.

I have also been disheartened by the lack of funding opportunities available for international postdocs here—I have often been sent information about schemes only to scroll to eligibility and find that I must be

a citizen or permanent resident to apply. There is no good reason for this. I pay taxes and would love to stay in the USA to establish my lab, so why can I not participate in schemes like the T or F grants? This also creates a more hostile environment for international postdocs and disadvantages us in terms of career development. To my knowledge, only the K99 is available and I had already aged out of that by taking a postdoc in Europe prior to moving to the USA.

Existing NIH policies, programs, or resources

Expand grant schemes to fund international scholars.

Increase postdoc pay scales.

Increase the funding awarded to R01s (especially modular budgets) to allow for increased postdoc (and PhD!) salary.

Guidance on visa options for postdocs—some universities are better than others, so a centralized information point would be great.

Proven or promising external resources or approaches

Additional training opportunities in project management, negotiation skills, strategies for successful collaborations, mentorship etc. This could form part of a broader NIH "Future Leaders" type scheme that provides career development support for postdocs who want to stay in academia and, in doing so, simultaneously improve mentorship for the next generation of PhDs and postdocs.

Response 1537

Perspectives on the postdoc roles and responsibilities

Training program that is designed to provide research scientists with more experience in independent roles. Mentoring aspects simulate the advisor-advisee interactions they would have during a PI position. It is a position of increased work and responsibility, but also allows the freedom (possibility) for making mistakes in a controlled environment, allowing for increased learning opportunities. The postdoc has an opportunity to investigate avenues or research to truly understand what type of career they want (i.e., is academia the right choice for them).

Fundamental issues and challenges

Hours: This is a position that requires many hours of work, typically well outside the 40-hr work week.

Salary: There is a national standard that is equal regardless of location. Postdocs in Los Angeles get paid roughly the same as those in Kansas. The former has a much higher cost of living, either prompting living in unsafe environments and/or living with other individuals. Either situation can prove mentally and physically challenging.

Authorship: As a recent graduate, postdocs will be "fighting" for first-author positions to help launch their career. In the same breath, graduate students are doing the same to help launch their career and/or secure a postdoc position. Regardless, there are typically not enough projects within labs for both groups to secure first-author positions, often leading to conflicts and eventually lack of enthusiasm for higher academic positions.

Existing NIH policies, programs, or resources

Speaking on previous comments, if existing programs are not implemented nation-wide, but region specific and tailored to those areas (e.g., Los Angeles vs Kansas). Additionally, each of those communities have unique extracurricular interests that help shape the community and research activities of those academic institutions. For example, underserved communities is a bigger concern in downtown Los Angeles and in Manhattan than it is in upstate New York or even Hawaii.

Proven or promising external resources or approaches

I feel most of the concerns that I hear from postdocs in a larger city are centered around pay. Most are content/complacent with the long hours, but not being able to enjoy life outside of these hours is hindered by costs of living. The research interests of the postdoc will guide them to certain labs, but they are most often deterred by cost of living in big cities. I, personally, have had individuals decline for these reasons. There may be resources out there that address this, but making them more apparent might be beneficial.

Response 1538

Perspectives on the postdoc roles and responsibilities

I view the responsibilities of a post doc position as: conduct experiments under the grant of a PI, train and mentor graduate students, write their own grants as well as edit grants with a PI, managing and balancing multiple projects for multiple members of a lab

Fundamental issues and challenges

No work/life balance (i.e. hours and work load is often the same if not more than that of a PhD, leading to burnout and loss of passion for the sciences/field that I was initially interested in). BIGGEST factor in my opinion is money/pay: Postdocs are overworked and underpaid, whereas more lucrative (often 3-5x the salary of a post-doc) and less demanding industry positions are more favorable to those exact points. Traditionally, postdocs were 2-3 years and then the individual moves up to a faculty position. Now, it's more common for post docs to complete 2 or even 3 post docs before moving up to a faculty position, which is more time being financially deprived and overworked than before.

Existing NIH policies, programs, or resources

More grants that can financially support a family as they enter and transition up the academic chain (i.e. child care grants, help with home buying/home owning near the institution grants, etc.). It is often financially impossible, especially in this economic climate, for an individual to start or even grow their family on a post doctoral salary unless their partner is also a working parent and is a very lucrative job position.

Proven or promising external resources or approaches

More mentor/mentee feedback, job satisfaction, transparency during recruitment of what the post-doc journey would look like (i.e. hours, pay, expectations), and outreach to senior graduate students to ask where do they lean (academia/industry) and why—this specifically would help to prevent a post doc shortage instead of reaching the pool of PhDs that are in industry to go back to academia.

Response 1539

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary and benefits seem like the biggest ones. At least half of the people I know who didn't do a postdoc after graduate school chose industry instead solely due to higher pay, retirement benefits, and less demanding hours. They likely would have preferred a postdoc if these things were more comparable between academia and industry.

The remaining people who didn't do a postdoc were a mixed bag, but generally this was due to things like a perceived inability to become a PI down the road or worries about postdocs being similar to graduate school but with more expectations/stress, which in combination with lower pay/benefits than alternatives, made other options much more attractive. Paths within science that don't end in a PI position would help, though this issue would also be substantially mitigated with better pay and proper benefits.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1540

Perspectives on the postdoc roles and responsibilities

The draw for me to become a postdoc is because I really want to be an academic PI. I love mentoring students, I love grant writing, and I love looking at samples on the microscope even at late hours of the

night. So I was going to do a postdoc no matter the cost because it is what one must do to get to that dream job I want and think I will be really good at. The pros and cons of staying in academia versus going to an industry job have been weighed, and my choice has been made, a choice I would make again. Postdocs are, in my experience, the true pioneers of new and creative ideas in scientific research. As a postdoc, I bring new directions and avenues of interest to my PI's lab. My faculty advisor then advises me on how to present these questions as interesting topics in grants, at conferences, and in papers. However, I see the postdoc as the expert on the topic being researched—the most fluent in the literature, knows the details of all the experiments, and has thought about where the project should go. I think postdocs need training in how to pitch their ideas and might join a lab to acquire new technical skills, but they know how to ask good questions and how to design good experiments. Postdocs are also extremely productive scientists because they are driven to succeed in the limited job market, feel very passionately about their chosen area of research, and have extensive technical/skills training in the PhD. Therefore, they are valuable employees in the lab, training graduate and undergraduate students, advising the PI on their grants, and leading a new avenue of research in the lab.

Fundamental issues and challenges

The main issue with recruiting and retaining postdoctoral trainees is the lack of competitive salaries and benefits in academic research. During my PhD, colleagues were graduating, taking industry jobs, and making at least twice as much as postdocs in the same geographic region. This isn't just something that "feels bad." This severely limits the ability to plan for the future regarding retirement and family planning. Furthermore, the lack of guaranteed academic faculty positions after a 5-6 year postdoc means you could just be putting yourself years backward in retirement savings without clear job advancement prospects. The financial stability risk is really high and is worth giving up the "dream job" of being an academic research scientist in a lot of cases. This is compounded by the fact that retirement planning is complicated even if you can save money in your postdoc because of the structure of F32 funding from the NIH. As an NIH fellow, I am no longer an employee at my institution, so I cannot take out pre-tax retirement savings despite having the financial ability to save some money each month. Some postdocs also suffer tax burdens because they must pay taxes on income used for health insurance benefits. Lastly, the explosion of biotech companies doing exciting scientific research makes moving to industry a much more enticing prospect for PhDs with interesting scientific questions. A decade ago when I started on this career path, I thought that the only industry job I could do was drug development, which I wasn't interested in. I have learned this is not the case, and there are a lot of really creative and interesting topics of research in the biotech industry such that leaving academia doesn't mean you have to give up as much creative license and passion.

Existing NIH policies, programs, or resources

First and foremost, postdocs should always be considered employees, either of their institution or of the federal government. I think the NIH could give all F32 and K99 recipients employee status, with health insurance and retirement matching. This standard would encourage universities to do the same for postdocs not on NIH fellowships. While this would be the ideal fix, one small change to an existing policy that would be helpful would be to change how health insurance payments are made to fellows. The NIH should set aside a budget of up to $15,000 solely for health insurance for F32 recipients that is separate from an expense budget of say $5000 for research purposes. Currently, if your child or spouse is on your health insurance it eats up all of your F32 supplementary funds. It's not fair that I have more money to spend on a conference and a computer, just because I have no dependents. Second, if the postdoc salary isn't going to increase, the NIH should at least allow PIs to budget some of their R01 money to top up postdoc pay if they want to, as this is currently not allowed.

Second, the minimum postdoc salary should be increased to better compete with industry positions and recognize the expertise and leadership that postdocs bring to their fields of research. I would recommend starting at $70,000 (the low end for entry-level Scientist I positions in biotech). This might mean fewer postdocs, which I think is ok. If postdoc positions are more competitive, the best candidates will occupy them. If those top candidates are stable and happy they will be the most productive. There are not enough academic faculty jobs for all the postdocs we have currently, so having fewer postdocs would make the long-term job prospects of each individual better.

Proven or promising external resources or approaches

Unfortunately, I don't know of any "proven" programs that help postdoctoral training. Perhaps a grant system to design and report on new postdoc training ideas would be beneficial. Departments could apply

for training grants that fund postdoc training programs and provide professional development skills for participants. This could also be a way for departments to adapt to higher salaries for postdocs. If a department wants to raise postdoc salaries they could write grants for NIH funding that would supplement those salaries outside of PI grants. They would need to provide a plan for how they will enrich the training experience of participants and use funds from the grant to both top up postdoc salaries and pay for professional development programming.

Response 1541

Perspectives on the postdoc roles and responsibilities

The academic postdoctoral role is predominantly focused on designing, conducting, and interpreting experiments in an effort to produce substantive material for conference presentation and peer-reviewed publication. Additionally, ambitious postdoctoral researchers seeking independence are often required to identify and obtain sources of funding in the form of grants, fellowships, or partnerships beyond what is offered by their PI. Experimental research productivity in the form of publications and grants are facilitated by developing a strong presence within a particular field of interest which implicitly requires the additional responsibility of networking in order to gain better understanding of the working relationships within a given scientific research field. An additional role is mentorship training/education of undergraduate and graduate researchers, particularly if career goals emphasize education and/or teaching, or if the lab PI is unable/unwilling to accommodate all trainees. In other cases, postdocs may advise or conduct experiments if their lab partners with private sector research groups or companies for a common goal. Ultimately, many of these responsibilities are not rigidly defined for each postdoc in terms of a checklist or deadlines and prioritization is incumbent upon the postdoctoral mentee as well as the postdoctoral mentor.

Fundamental issues and challenges

Income disparity compared to private sector employment alternatives inhibits postdoc retention and recruitment. Many pioneering research labs are localized in large coastal cities with high costs of living. Cost increases are often 2-3 times higher compared to other parts of the country, and postdoctoral salaries are rarely scale to match these costs. The cost of working in cutting edge academic research is significant, particularly for postdocs starting families. Established businesses and startup companies alike are offer a pay for PhDs which is often 2X higher than a starting postdoc salary. Importantly, these include potential for promotion/growth, whereas the postdoctoral income climbs at fixed increments regardless of performance. In some ways, this de-incentivizes quality output. If there is no financial reward for working harder, then working the least amount possible maximizes the earning per hour.

In contrast, many immigrants working in the US work very hard to stay in good standing within US academic institutions due to the threat of losing temporary protected status. This is particularly salient for postdocs from countries with economic/military conflict where motivation is strengthened due to the looming threat of deportation. For PIs, this provides an opportunity for fear as a motivating factor to keep foreign postdocs working too hard. This same fear of deportation contributes to preventing discussion of PI abuse (verbal, sexual, labor, or otherwise). American postdocs in these labs unwilling to meet the same standard of work often leave for industry jobs with a more realistic work/life balance without fear of deportation.

Another issue limiting retention of postdocs which also affects quality of life is the emphasis on specific non-transferable skills during training. These limit lateral mobility for jobs within academia and beyond. Many postdocs leave for fear that they will become unemployable due to the narrow focus of training and experience.

Existing NIH policies, programs, or resources

It is good that there are awards in place for postdocs to fund additional training (T32, F32), particularly in institutions with less funding where this can financially support incoming postdocs. Expansion of the number of these awards and financial scope of these awards (i.e. the alottment for salary) would greatly increase their utility. For universities and hospitals, employee benefits like health insurance are dependent upon institutional employment in terms of monetary compensation. Thus, for many postdocs getting a training grant or fellowship means losing the eligibility for benefits. Thus, recipients of an award often find that their salary actually reduces because they now have to purchase things like insurance at cost.

Ultimately, these awards would benefit from being able to increase postdoc salary beyond the amount allotted for research.

K22/K99 awards are good in principle because they provide a public stamp of approval for independent investigator status on the path to becoming an academic PI. However, can also be at odds with the postdoctoral/PI relationship because the time spent writing/planning and applying for the grant ultimately takes away time the postdoc has for their primary appointment. Ultimately, the reward will also involve removing key resources (i.e. the postdoc and their research project) from the greater lab environment. From the PI perspective, it would ultimately be cheaper and more productive to have a postdoc finish their training without wasting time on outside projects and grants, and would not generate future competition for scarce resources. Instead, a PI can get full-value from a postdoc for 4yrs without distractions. One improvement for the postdoctoral training ecosystem would be to de-couple these awards from the existing institution and PI, or to add additional awards for independence which can be applied for during the final years of PhD or first year of postdoc training.

Proven or promising external resources or approaches

Hybrid postdoctoral programs at established companies like Genentech, Amgen, or Roche provide good models for effective postdoctoral training because they provide five key elements which improve the training ecosystem.

1. The pay is more fair than an academic postdoc
2. the skills learned/employed are highly transferable beyond the specific research question at hand and
3. the training occurs under an experienced investigator and involve peer-reviewed publications in the field of interest and
4. subsequent postdoctoral training culminates with possibility of long-term or permanent employment opportunities
5. hard work has potential to be rewarded with additional personal growth or pay increases. Obviously, these private companies are distinct from many academic institutions. Nonetheless, providing these five elements would improve the postdoctoral training ecosystem.

In terms of improving postdoctoral recruitment and training, there need to be concrete steps taken to clearly distinguish the difference between graduate training and postdoctoral training which at this point are not very distinct. Pay is comparable, lab responsibilities are comparable, the working environment is identical, mentoring received is comparable, and ultimately both a PhD and postdoc tend to have very low job satisfaction. Clear ways to delineate these for postdocs are: increase salary, increase scientific independence, increase performance based rewards, and provide stable employment options for after the postdoc is over. These would likely improve the environment for PhD students and research assistants as well by providing a "light at the end of the tunnel". As it stands, the job itself requires a great deal of monetary risk, job insecurity, and stress which contribute to poor recruitment, retention, and quality of life for post docs. Creating new career incentives in the form of a higher salary, additional potential permanent research positions, or adding merit based achievements based on performance are steps in the right direction.

Response 1542

Perspectives on the postdoc roles and responsibilities

How I view a postdoc:

- Additional training meant to teach the individual to become a more independent scientist
- Opportunity to expand your knowledge (i.e. new techniques, new field)
- Crucial if you choose to stay in academic science, but not of value for pursuing other non-academic careers

Roles/responsibilities of a postdoc:

- One of the main scientific drivers of projects and the lab
- Mentor position within the lab, where you prior experience is used to help guide other people's experiments and projects
- Expected to bring in your own funding

Fundamental issues and challenges

This is a multi-variable problem that begins at the graduate school level. Getting into a competitive PhD program these days requires at least a few years of prior research experience, if not several co-authored papers. Fundamentally, this means potential PhD students are taking gap years after their bachelors degree in order to be competitive for graduate school, resulting in students who are on the older side when entering graduate school. By the time students graduate they are older, possibly married, or possibly parents. The value of a postdoc at this point is decreased, as alternative academic careers find high value in PhD's who also had prior experience even before entering graduate school.

This brings me to my next point which is postdoc wages are not competitive with up-and-coming non-academic positions (such as in industry). Starting salaries in other fields such as consulting can be $115k, and industry postdoc positions can even be in the $80-90k range during your first year. For students, who are looking for job security and wages to support things such as buying a home, a car, or children, a postdoc salary is not providing enough security for these other important life events.

Finally, postdocs seem to be of high value if pursuing a career as a PI. Given the constantly shrinking job market for PIs, and the constant uphill battle to be in the top 1% of scientists who can make it to this step, the need to do a postdoc seems like more effort than its worth (again given that other alt-academic careers value scientists who didn't do a postdoc).

Existing NIH policies, programs, or resources

Excluding international students/postdocs/scientists from many grants perpetuates is inequitable. Additionally, leaving the green card status of international trainees in the hands of PIs can lead to abuse of power of the PI. Several colleagues of mine are forced to work holidays and weekends because they are afraid of the green card status.

Proven or promising external resources or approaches

Yale's YSM Fellows program seems like a good start to addressing some of the issues mentioned above: https://apply.interfolio.com/108050

Response 1543

Perspectives on the postdoc roles and responsibilities

Advanced training toward an independent research career, regardless of sector.

Fundamental issues and challenges

NIH budgets. Grant budget caps do not allow us to pay anyone-student, postdoc, staff, or faculty-commensurate with industry. NIH policy to carve out funding for ECR/ESI applicants would have been a sensible approach to a short term problem, but over a generation it has instead created a larger PI pool that has decreased ability to recruit and retain talent in the public sector and consequently spread the same dollars over more labs, with less ability to pay postdocs enough to stay with public research at least through a typical training period. Other NIH policies exacerbate a tournament economy, with attendant path-dependent success rates such that we have very large research groups (often inefficient with respect to the last-chosen trainee, resulting in trainee disengagement while rewarding the PI) and very small groups (often struggling to maintain critical mass of personnel and equipment).

Existing NIH policies, programs, or resources

1) Index salaries/stipends supported by F, R, or T series awards. (New college graduates in most STEM fields make more than a third-year postdoc. That isn't right.)
2) Expand K99/R00 series as a pathway with sustained support. Anecdotally, this seems more productive than expanding ECR funding at first R01 only to have them fail at renewal.

Proven or promising external resources or approaches

No response

Response 1544

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a role for a trainee to work independently using skills from graduate school and gain further experience and build a research portfolio for their next career step. Ideally, a postdoctoral position will match an individuals career goals; the responsibilities and research should fit well with their next desired position. If a PhD is about learning how to think as a scientist and perform all parts of the research process then a postdoc is about becoming the scientist you want to be through practical experience.

Fundamental issues and challenges

I think many individuals view a postdoc as a waste of time unless you want to be a primary investigator, and many think that becoming a PI is not worth ultimately worth it. In the end they can get an excellent job right out of graduate school doing good science without doing a postdoc. Additionally, working in pharmaceuticals or biotech is viewed as better experience for future non-academic jobs than a postdoc. In my personal view, I want to do a postdoc because I like the academic environment, even though I am not certain about becoming an academic PI. I want to develop my skills in new subject matter and gain more perspective. A personal hold up is I have seen how lab dynamics are crucial and finding the right postdoc for my research, career goals, and personal goals seems incredibly challenging.

Existing NIH policies, programs, or resources

I am not particularly fluent in this area. I found the rotation year as a new graduate student to be incredibly helpful for selecting a lab to do my PhD in. Creating opportunities to connect with other labs and perhaps have PhD students experience other labs (maybe "intern") would be valuable for identifying future labs to work in.

Proven or promising external resources or approaches

No response

Response 1545

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an additional training position after graduate school to build skills and develop a scientific project to launch an independent research group. While technically still training, postdocs are highly skilled scientists whose work drives research output, and postdocs are often involved in mentoring as well.

Fundamental issues and challenges

Two things come to mind:

1. the uncertainty of academic path/opportunities after postdoc (will I be able to get a tenure track academic job?) and
2. the salary (can I support myself and my family?).

Existing NIH policies, programs, or resources

The NIH postdoctoral fellow pay scale sets the standard for postdoc pay (as an NIH funded IRACDA fellow, it directly sets my salary). To improve the postdoc training ecosystem and retention in academic research,

salaries need to go up, probably everywhere but definitely in high cost of living areas. I can only do this job (and it is job—despite the fact that it is also a training position) because my spouse (also a post doc in academic science) and I are DINKs—double income no kids. We also don't have other family members to support, and were lucky to have our parents pay for college. Basically, we can only do this because of immense financial privilege and no other obligations. This isn't equitable—the system is selecting for people with certain privileges, in direct conflict with the supposed goal to increase diversity in academic science.

Proven or promising external resources or approaches

No response

Response 1546

Perspectives on the postdoc roles and responsibilities

My perspective on the role of a postdoc is to be a final stage trainee to become an independent investigator. A postdoc should be driven and able to work independently at a skill level beyond a graduate student, thus should have the prerequisite skills to interpret data and design experiments under guidance of an established faculty mentor. Further, a postdoc should be able to communicate research needs and discoveries to grant providers and the community at large.

Fundamental issues and challenges

There is absolutely zero financial incentive to become a postdoc. A grad student is at least fighting for a degree. What do postdocs get in the end? Companies can train good scientists just as well and pay better to do it. Despite holding a terminal degree and being capable of highly skilled labor, I am paid less than I could have made by entering the workforce immediately after undergrad. I will likely not be able to own a house until I'm near my 40s. The mere mention that I wish to stay in academia is met with pity from friends who chose industry. Simply put, my lab is lucky I want to be faculty mentor one day.

A good mentor is extremely hard to find. I got lucky with my current position, but I've seen very clearly that not all PIs value their postdocs. Unfortunately a good scientist is not always a good mentor.

Quality of life is pretty low for postdocs who lack a spouse, significant other, etc. Single postdocs can barely set aside savings, nor have free time to do housework. Recreation time is low. Morale is low. A man in his 30s should not have to have a roommate.

Existing NIH policies, programs, or resources

I do not know. The NIH is a nebulous agency to me hidden behind walls of bureaucracy. Maybe it's dependence on the NIH that is the problem. Universities should probably be valuing and supporting their faculty research environments far more than a federal agency.

Proven or promising external resources or approaches

No response

Response 1547

Perspectives on the postdoc roles and responsibilities

Postdocs are researchers in the lab, working on their own research project and usually mentoring graduate/undergraduate students on a team.

Fundamental issues and challenges

I am unfamiliar with issues faced by postdocs

Existing NIH policies, programs, or resources

Unknown

Proven or promising external resources or approaches

Unknown

Response 1548

Perspectives on the postdoc roles and responsibilities

A postdoc is a skilled researcher who has intentionally chosen to undergo further specialized training for the purpose of attaining some higher-status position. Although this higher-status position does not have to be a tenure-track faculty position, it usually is. Because of these aspirations, postdoc positions are by definition transitory, in contrast to a research scientist who is a skilled researcher that intends to stay at the same location.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

- Expand the modular R01 to be at least $500,000, and preferably higher. This will reduce the amount of time faculty have to spend writing grants and free up more time for science.
- Put explicit minimum salaries on the R01 and other grants that are more in-line with the skills being employed, e.g. $80k-$120k for postdocs depending on COL.
- Reduce the amount of work that professors have to do! Less paperwork for grants, hiring, etc. Whenever possible, let submissions contain only a minimal amount of information initially, with the full grant only being submitted once the research idea is chosen
- Put limits on the number of postdocs that a lab can hire and direct labs to hire research staff instead. Why are we training so many postdocs if there are not nearly enough faculty positions for them?
- Start a publicly funded, NIH-led series of journals, where papers are initially screened by reviewers and then review happens in the open post-publication. This will reduce wasted time and costs spent at a journal and increase the ability of the NIH to reward good science, e.g. by forcing submissions to make all data open source, and by rewarding reviewers directly.

Proven or promising external resources or approaches

Increased pay, more tangible rewards, and more certainty about career paths tend to make people happier.

Response 1549

Perspectives on the postdoc roles and responsibilities

My view is a fairly traditional one, i.e. that an academic postdoc is an opportunity for advanced training that provides a springboard for someone with a Ph.D. to the next stage of their career, whether that is in the commercial sector, academia, public policy, etc. In my opinion, a postdoc has been (I am trying to understand whether it still is) a critical opportunity for someone to select an experience that is tailored for their next steps, after they have achieved the scientific maturity and knowledge to be able to narrow down what they want their future to look like.

Fundamental issues and challenges

There are four fundamental challenges in my mind, which are interrelated and which reduce the pool of highly qualified postdoc candidates:

1. Students no longer accept that a post-doctoral position is necessary to achieve their career goals;
2. Trainees are obsessed with "work-life" balance and do not feel they can achieve this in an academic postdoc;
3. Stipends/salaries are too low to support the life style that trainees desire and companies are raiding academic research labs, offering twice (or more) the salaries that we can provide in academia;
4. PDs (and Ph.Ds for that matter) are taking too long in part because it is getting more and more difficult to publish impactful stories in the best journals as expectations have increased so much.

Things have been changing for some time, but the ability to recruit postdocs has dropped precipitously since the pandemic. Raising salaries has its own downsides of course, as the higher the salaries, the fewer

people we have to do research in our labs. This is already happening with the unionization of students and PDs at many institutions. The model of how we do research in academia is going to have to change.

Existing NIH policies, programs, or resources

As a T32 director I have always been concerned that reviewers of our training programs are behind the times w/ respect to how they evaluate programmatic offerings. Current trainees desire career guidance and activities that are almost exclusively non-academic and encompass speakers and workshops that include careers that may not be (I fear) received well by reviewers. If NIH were to embrace career development more broadly and encourage T32 directors (by educating study section reviewers) to provide opportunities for postdocs to develop networks and career paths of all sorts, the trainees may see the academic postdoc experience as adding more value to their career progression. They may not go into academic faculty positions, but they may still choose to do a postdoc and then go on to productive careers in the commercial sector, government, etc. In addition, it is (mostly) not possible to support international trainees through traditional NIH funding (training grant/fellowship) mechanisms and many foreign trainees no longer see us as a place they want to come anyway. If NIH were to help increase the pool of qualified PDs by supporting international trainees, that would be helpful. NIH could also expand mechanisms that support more permanent research scientist positions in academia. NIH has experimented with this sort of funding mechanism, and if this path were expanded, trainees may see that there is a more permanent position possible following a short PD training period. There is also a cohort of postdoctoral fellows interested in jobs at smaller teaching institutions that also have a research component (running a research lab with undergraduates). Encouraging trainees on this path could be helpful, as those folks will be mentoring future researchers at these small liberal arts colleges.

Proven or promising external resources or approaches

Most institutions have offices of postdoctoral affairs that provide great programs for postdocs, and national societies also host retreats and career development programs and internships, but I don’t think I have anything specific/useful to add here that can’t be found online.

Response 1550

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as an opportunity to enhance training while gaining independence as a scientist to pursue a new project (different than graduate school) and add mentoring opportunities to more junior trainees.

Fundamental issues and challenges

First and foremost is the financial issue. Many of my colleagues have skipped the postdoc or left their postdoc positions for industry that will pay up to three times the NIH level for an incoming postdoc. Many postdocs have family and other financial responsibilities that require a higher salary, in addition to rising inflation costs for food and housing. Other factors inhibiting recruitment of talented postdocs include toxic PIs during their graduate school experience and for many survivors of harassment they would rather leave academia than start again in a new institution that may also have possible toxic supervisors and work environments. Many trainees experienced long work hours and unrealistic work expectations in graduate school and therefore leave academia and do not complete postdoctoral training to escape these toxic expectations.

Existing NIH policies, programs, or resources

I am in support of any NIH grants that require postdoctoral formal training and mentorship by supervisors/principal investigators. Additionally, as an IRACDA fellow I am very happy with the professional development resources in this program and recommend additional funding for this award to be available to more institutions and more postdoctoral trainees.

Proven or promising external resources or approaches

I have attended conferences with trainee workshop sessions where some trainees have voiced that their institutions do not have a center postdoctoral training office. It is extremely challenging for a postdoc at one of these institutions to find resources and support when their home institutions does not recognize the postdoctoral trainees via a central office or program. Examples for such offices include an Office of

Postdoctoral Affairs, Postdoctoral training program, etc. This central office would be the administrative voice and connection between postdocs and postdoc resources within the institutions and larger science community (ex: National Postdoctoral Association).

Response 1551

Perspectives on the postdoc roles and responsibilities

A postdoctoral position allows the research to gain experience, socialize, and expand horizons, all of which are required to be an independent investigator.

Fundamental issues and challenges

Major Issue:

Less salary—I live [redacted for anonymity] and I pay more than 40% of my salary on house rent. The postdoctoral salary a way below if we compare it with industrial postdoctoral position.

Very less postdoctoral fellowship opportunities for immigrants.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1552

Perspectives on the postdoc roles and responsibilities

My time to showcase my earned skills and learn new technics in the field of interest, learn and advance ability to run my lab in the future. Increase number of senior future advisory connections and network.

Fundamental issues and challenges

Very low pay, absence of yearly bonuses, no job security due to short term contracts, on a grant being pushed to shift to Postdoctoral Fellow loosing benefits and doing taxes as independent contractor are stressful and unfair destructions in a postdoc life! Lack of postdoctoral NIH programs for international scientist even after joining Lab at US university, most existing would require permanent residency which takes years to get, as most international postdocs are hired on exchange visa originally. Transition NIH grants like K99 and R22 have inappropriately short time limits, good risky ground research project that are good enough for internarial postdoc to be competitive for future do not take less than 3 years especially for animal research. not all PIs will allow to take in Lab research as your idea that will take longer than just 3 years to fully form!

Existing NIH policies, programs, or resources

Set appropriate postdoctoral pay, not just 100$ above hourly worker, its ridiculous! Promote postdocs to apply for grants by adding a small bonus upon receiving one and require university to treat us as proper employee on a grant and not as a random contractor! Science supposed to be borderless, if I'm competitive enough to work in one of the best US universities I should have chance to compete for NIH training support as rest of ppl here, at least add grants for international postdocs or drop citizenship requirements at least for some! Increase years to apply for transition grants 5-6 year to give a chance to mature ideas and not to trap us out of science just because we did longer project! More grant opportunities for senior postdoc in the lab to actually start a branched independent research project , aka K99 without R00, to help postdocs develop their own direction before job search.

Proven or promising external resources or approaches

Like SFARI BTI increase or remove maximal postdoc years for transitional grants. Setting better pay levels and proper contracts (2-3 years at least) and treatment as university employees and not just a contractor with no days off, will help keep postdocs for choosing the corporate world. Organize or sponsor development of postdoctoral training programs at the university for lab management, collaboration forming and job applications/search etc. as future independent PI, to prevent postdocs to be trapped in

the lab and help to become part of university. Start asking postdocs to rate mentor and not only other way around, promote or require more than one mentor for the training.

Response 1553

Perspectives on the postdoc roles and responsibilities

The purpose of a postdoc should be to provide training to the postdoctoral scholar and to prepare them for a career in academia, by giving them mentored experiences in necessary research skills, including proposing and running studies, IRB, data management, data analysis, writing publications, grant writing, etc. Ideally, this is a mutually beneficial relationship between the postdoctoral scholar and their faculty mentors. However, too frequently, this is a relationship that mostly benefits the faculty, with little or no benefit (and sometimes harm) to the postdoctoral scholar. The power dynamics make this a precarious situation for postdocs, where it's difficult to prioritize their own career and growth.

Fundamental issues and challenges

It is not appealing to take a poorly paying postdoc when there are so few jobs in academic research and even the brightest scholars often don't make it, especially when there are viable alternatives that pay much more in industry. The additional sacrifices of moving for grad school, then again for a postdoc, then again for a faculty position, combined with the cutthroat nature of the academic job market make this untenable for many (or even most). Not to mention, postdocs are often designed to benefit faculty and not the postdoctoral scholar, meaning the postdoctoral scholar may spend their time on menial tasks that do not help them grow as a researcher or build their CV. Further, postdoctoral scholars are often overworked and at the mercy of (potentially abusive) faculty, with little to no recourse. Especially for prospective postdoctoral scholars with any type of family obligation (e.g., children, partner, caregiving duties to parents or extended family, monetary obligations to family or other dependents), this makes doing a postdoc difficult or impossible. Many can't afford the personal and financial sacrifice after 4+ years making poverty wages (and even taking out loans!) in graduate school. The system is set up to benefit the most privileged among us, and this harms individuals, communities, and science as a whole.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

The minimum salary needs to be increased, both for postdocs and graduate students (i.e., F31 and F32 minimum stipends). There need to be systems and structures in place to help postdocs who find themselves in abusive situations as well as formalized support and mentorship for postdocs who work with faculty who shirk their mentorship duties. There also needs to be more concerted effort to help students and postdocs who face structural barriers and inequities. There needs to be enforcement of maximum working hours.

Response 1554

Perspectives on the postdoc roles and responsibilities

Research training. Leadership training. Project development. Networking.

Fundamental issues and challenges

[Redacted for anonymity] systematically avoids the minimum postdoctoral salary by given a low population of postdoctoral scholars a different professional title without a minimum salary! It's my impression that this in particular applies to international scholars that are not paid by any US funding.

Existing NIH policies, programs, or resources

Treat postdocs well! Treat EVERYONE equally! Be inclusive! Be open and listen!

Proven or promising external resources or approaches

No response

Response 1555

Perspectives on the postdoc roles and responsibilities

My role is to earn additional experience running a lab, performing experiments, publishing, mentorship, and project management. I do all of these activities daily in addition to professional development and networking.

Fundamental issues and challenges

Financial limitations of salary and limitations to pay in general for outside services rendered. Without financial support, I am unable to stay a postdoc for more than a year or two. I am also limited in pursuing research interests of my own beyond that of my advisor which limits the amount of time I will stay a postdoc and my quality of life.

Existing NIH policies, programs, or resources

Overall, it is impossible to get credit for writing and managing large grant-funded projects as a postdoc as we cannot be listed as a co-PI on many grants despite this being our primary role. Not getting credit in this way is a major drawback to the position and also furthers the mistreatment of postdocs.

Proven or promising external resources or approaches

Providing options to get more one on one mentorship beyond our primary institutions, and guidance on how to access or where to access other resources to help career or professional development would be helpful.

Response 1556

Perspectives on the postdoc roles and responsibilities

Trained scientist that deepens its knowledge in a specific subfield in preparation for an independent position in academia. undertakes independent research and manages projects.

Fundamental issues and challenges

Severe lack of appropriate salary to offset cost of living. Increased interest in hiring life science doctors from other industries (biotech, consulting). Lack of opportunities after postdoctoral level (no added value on resume of pursuing a long postdoc if tenure track is not possible).

Existing NIH policies, programs, or resources

Increase the NIH postdoc minimum by 25%, include a cost of living adjustment for expensive cities (NYC, SF), pressure universities to lower fringe costs associated with postdocs hiring to principal investigators.

Proven or promising external resources or approaches

Many universities are increasing postdoc salary and it seem to have boosted postdoc interest. It is very obvious that salary is a big factor for people that may consider a postdoc but decide not to.

Response 1557

Perspectives on the postdoc roles and responsibilities

Vital to research and helping train grad students, postdocs are also well positioned to speak to the general public about what research they are doing. Postdocs represent more diverse backgrounds than PIs, are more aware (in general) of importance of social media and how to use it, and might be motivated to do public speaking.

Fundamental issues and challenges

Pay is still an issue, and outreach must be rewarded in some way (and have PI and departmental support).

Existing NIH policies, programs, or resources

More training on science communications, best practices, where to find good resources. Connect with regional SciComm groups and National Association of Science Writers. A lot of us give talks and trainings on science communications.

Proven or promising external resources or approaches

Working SciComm professionals could provide mentoring, but again, there needs to be some financial support to cover science writers' time and effort.

Response 1558

Perspectives on the postdoc roles and responsibilities

Roles:

1. Mainstay of advancing fundamental human scientific knowledge;
2. Communicator of cutting-edge research results to the general public;
3. Mentor of the next generation of scientists.

Responsibilities:

1. Independently manage high-impact research projects;
2. Envision, design, plan, conduct, and interpret experiments;
3. Reading literature;
4. Mentoring students and colleagues;
5. Writing grant applications.

Fundamental issues and challenges

Issues:

1) Glorification of high-impact papers and long working hours and simultaneous negligence of other valuable aspects of the postdoc's work (e.g., outreach, mentoring) as well as areas of life outside of work.

2) For international postdocs specifically:

a) lack of opportunities of fellowships and grants (most require permanent residency or citizenship of the US);

b) more challenging career prospects: it's much, much more difficult to get an industry job on a work visa than with permanent residency, but obtaining permanent residency is very costly (time and finance).

3) Much lower compensation (esp. salary) compared to a similar-level job in the industry. Rarely access to a decent retirement plan (vast majority of academic employers don't match contribution to 403b at all) only exacerbates that. This makes an international postdoc's life much harder combined with point 2) above (e.g., I'm in the processing of spending $7000 dollars to pay for me green card application and fees for a legal team who help construct the petition case. That's about as much as money I can save in a year! Not to mention the tremendous amount of energy that I poured into crafting the written materials).

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1559

Perspectives on the postdoc roles and responsibilities

A postdoc needs to be 50% do-what-you-want-to-advance-your-career (e.g., resumes, job applications, grants, publication writing) and 50% training for new skills (e.g., "on-the-job experience" with your PI).

Fundamental issues and challenges

Upon graduating with my PhD, I looked at several postdoc opportunities. However, the pay was not livable. Instead, I chose to work for a nonprofit where I can still publish academic articles in my area of specialization and get on-the-job training in more marketable skills (e.g., presentations to non-science audiences and true interdisciplinary work with advocacy/public policy professionals). If I wish to go back into academia as a professor, I plan to use this nonprofit experience and resulting publications as my "postdoc" experience. Of my friends who stayed in academia, most went straight into being professors without postdoc experience. Also, schools don't know whether to treat postdocs as students or as staff—Â so they end up getting none of the benefits and all of the downsides of both.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1560

Perspectives on the postdoc roles and responsibilities

A chance to gain independence and developed and refine a project/skills needed to establish and run an independent lab.

Fundamental issues and challenges

Childcare, perception as a women in stem, work-life balance, affordability of area, moving multiples times to different cities or states to gain the needed training not easy with spouse and children, access to resources to develop a project, being seen as a trainee but also a researcher, not having resources to help people with disabilities, out mentors not receiving proper mentorship training resulting in ab unsupportive environment

Existing NIH policies, programs, or resources

Expanding child care grant in training grants and adding an independent application to help cover childcare or spouse travel to conference. Having PIs take the resilient scientist program. Setting guidelines for hours worked under NIH funding. Adjusting grants based on area cost of living.

Proven or promising external resources or approaches

No response

Response 1561

Perspectives on the postdoc roles and responsibilities

I'm a former postdoc and have been an academic research administrator for the past ~20 years.

The first job of a postdoc is to discover something important. But their role should not simply be to produce data for the PI's next paper or grant proposal, which is unfortunately how many PIs see their postdocs. A postdoctoral appointment should be a career development position, and it should be a joint responsibility of the postdoc and their PI (and institution) to develop skills for a future career, whether academic or other. Technical skill in execution of experiments is necessary but not sufficient—postdocs should also learn to identify important problems in their field, plan research strategies to address those problems, develop professional networks independent of their PI, and (importantly) communicate effectively about their work. The late Patrick Winston (a prominent computer scientist at MIT) gave a talk to students in which he begins: "Your success in life will be determined largely by your ability to speak,

your ability to write, and the quality of your ideas—in that order." Unfortunately, many postdocs receive little or no training in the first two skills.

Of course many labs also need technical staff with specific skills whose job is to produce data under direct instruction from the PI—but those roles should be filled by staff scientists, not postdocs.

Fundamental issues and challenges

Our institution recently conducted a survey of postdocs, and unsurprisingly salary was the top concern. Our city is expensive, and the NIH scale does not reflect the rapidly rising cost of rent and other living expenses. Furthermore, many postdocs report being paid below the NIH scale, because PIs disregard prior years of experience to reduce salary costs. Although institutional policies discourage this, they are not always effective.

Our survey also revealed a surprising level of discontent at the quality of mentoring that postdocs receive. I believe this problem is exacerbated as the percentage of foreign postdocs increases (because low salaries and uncertain career prospects are unattractive to US citizens). PIs too often view foreign postdocs as cheap temporary labor. In addition to their vulnerable visa status, foreign postdocs' ability to self-advocate is sometimes limited by challenges of cultural integration and language fluency. Also there is an assumption (sometimes unspoken) that many of them will eventually return to their home countries, where their future career progression will not be the PI's responsibility.

Foreign postdocs are often reluctant to express concerns because they fear reprisals from their PI, on whom they depend for visa support and career progression. Institutional whistleblower policies are not sufficient to protect against these consequences, which can be subtle and are often invisible or unprovable. Thus, institutions will not discover the extent of postdocs' concerns unless they conduct anonymous surveys.

A fundamental problem is that individual PIs have too much power over their postdocs. In undergraduate education, students routinely evaluate their professors, and colleges compete to provide a valuable educational experience for their students. No similar reciprocal relationship exists for postdocs, and the power asymmetry leads to a system that is ripe for abuse.

Existing NIH policies, programs, or resources

Increase the postdoc salary scale, with adjustments for the wide differences in living costs between cities. This seems like a pressing issue, given that the cities with the greatest concentration of NIH funding also tend to be among the most expensive to live.

Issue guidance how to count previous years of experience when setting salaries, including experience in other countries, or in industry, or other academic disciplines.

I understand that resources are limited, and that higher salaries may mean that fewer postdocs can be supported. But it seems better to have fewer postdocs of high caliber, well-paid, happy and successful, rather than an excess of 'second-tier' candidates who are poorly paid and chronically discontented.

Include postdoc mentoring environment as an explicit review criterion, not just for training grants but for all grant applications that include postdoc salary support.

Require these applications to include a postdoc mentoring plan, which could address questions such as: Does the PI have a publicly visible mentorship statement? Are the lab's current and previous postdocs easily identifiable, and what is their professional visibility? Does the institute have a postdoc association, and what is the level of participation and activity? What % of postdocs completed an annual career conference? Does the institution have a formal mentoring system for postdocs, analogous to graduate thesis committees? What mechanisms exist for postdocs to convey their views and concerns to institutional leadership? What resources exist to support international postdocs and help with their cultural integration? Simply by requiring applicants to address these questions, NIH could provide a strong incentive for PIs and institutions to implement better policies toward their postdocs.

Consider awarding (small) grants to support postdoctoral associations, ideally with some level of independence from institutional control.

Proven or promising external resources or approaches

Some PIs have started to publish mentoring statements on their websites 'What you can expect from me, and what I will expect from you.' These websites sometimes also include names and contact info of current

and former lab members, explicitly encouraging future applicants to contact them to learn about the lab environment. NIH could collect such examples of best practice and promulgate them in its own mentoring guidelines.

I hear often from PIs that it is hard to recruit postdocs and expensive to advertise in journals or society websites. I learned recently of https://jobrxiv.org/ which seems like an interesting experiment that might be deserving of financial support from NIH. Advertising options are currently very fragmented, and all parties could benefit from an efficient low-cost online system for advertising/finding academic research positions.

Response 1562

Perspectives on the postdoc roles and responsibilities

I always have viewed postdocs as trainees who intend to join the research team to acquire training, learn to become independent, develop their own research direction and move forward to become independent PI. This position is meant to be occupied for 3-5 years at most. Unfortunately, nowadays postdocs are viewed as a cheap workforce that is hired for an indefinite amount of time to advance the prestige of the lab and support the growing careers of the PIs, who often forget how to run experiments and work at the bench and are reduced to the activities of the grant-writing machines. That happened because:

1. unhealthy views that a successful PI must have a large lab;
2. reduced and further reducing funding to support these large labs;
3. poor job security;
4. lack of benefits;
5. absence of work-family balance support

Fundamental issues and challenges

see above:

1. unhealthy views that a successful PI must have a large lab;
2. reduced and further reducing funding to support these large labs;
3. poor job security;
4. lack of benefits;
5. absence of work-family balance support;
6. declining prestige of the academic position.

These are the reasons why postdocs do not stay in academia and tend to join the industry workforce. Many of my younger colleagues who would be perfect junior PIs now are turning their backs to academia. Who would like to be a poorly appreciated workforce, working 12-14 hours/day for a $50k/year salary, with minimal benefits, no child support, especially in the coastal US cities, where the minimal rent of a 1-bedroom apartment begins at $3000? At the same time, the newly minted Ph.D. would receive ~ 140,000 in salary in an average California startup company. It is a no brainer fewer young trainees are attracted to academia

Existing NIH policies, programs, or resources

Funding! Make it competitive to the industry standards. Include family benefits and child support. Make it prestigious. Make quality over quantity, we may need fewer postdocs, but we need high-quality researchers. We do not need large labs, but smaller but highly productive labs. The PI should be a part of the team, working in the lab, mentoring, and training their team, not an advertising machine pitching their research at the international conferences and grant-writing mole, spending their time competing for NIH grants 24/7. We have been trained to run experiments, obtain new data, and make discoveries to advance our knowledge, and not to be grant-writing robots. We can do much more and much better than that. Also, fund the high-risk, high-reward approaches. NIH is notoriously known to grant R01s to research that is mundane, low risk, non-exciting, and has already been ~ 80% completed. Because this is, unfortunately, a recipe for a successful R01 application.

Proven or promising external resources or approaches

Private funding agencies that support early career investigators and trainees and make these jobs appealing and prestigious. Look at Pew Scholar Biomedical research fellows, GRS—seminars run by and for trainees. Also, I am not a big fan of postdoc unions—these organizations will eventually reduce postdoc-PI relationships to employee-employer one and will eliminate mentor-mentee relationships entirely.

Response 1563

Perspectives on the postdoc roles and responsibilities

Postdocs are the lifeblood of academic research. They are well-trained researchers capable of independently driving projects forward. Importantly, they are also in need of training in critical areas to become directors of larger research enterprises.

Fundamental issues and challenges

As highly educated, well-trained scientists, postdocs in academia are relatively underpaid. Increasing postdoc salary would help to retain the most talented doctoral students in research. That being said, increases in postdoc pay are passed on directly to individual investigators, whose budgets are already stretched to bursting.

Existing NIH policies, programs, or resources

Increasing the modular budget cap would significantly aid individual investigators in recruiting and retaining talented postdocs. Another tool could be the expansion of fellowships and training grants to support international postdocs. A cap on the indirect cost percentage recouped by institutions would free up dollars for direct research support.

Proven or promising external resources or approaches

postdoctoral offices at institutions help to centralize resources and provide stable training infrastructure that doesn’t rely on individual investigators to provide for all of the training needs facing postdocs.

Response 1564

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Postdoc salaries are too low. They need to be increased. However, this would leave grants with less money for research. The $500K/year limit for research grants have not been raised for decades. This limit has to be raised and postdoc salaries should be increased. In addition, these salaries should be calibrated by state—for example 50K postdoc salary in CA (San Franscisco, San Diego, LA) would buy much less than $50K salary in Mid West. This is not fair. Postdocs in CA spend over 50% of their salary on housing whereas for postdocs in Mid West housing would amount to 30% of salary. Needs correction by state and cost of leaving in that state toi make this equitalke.

Proven or promising external resources or approaches

No response

Response 1565

Perspectives on the postdoc roles and responsibilities

From my perspective, the postdoctoral position seems like a less than ideal career path for someone who has already completed their doctoral degree. In my opinion, it feels like a last resort for those who were unable to secure a job in their chosen industry. However, I also acknowledge that my personal views may not necessarily reflect the experiences of others who choose this path.

Despite my initial reservations, I have found my postdoctoral experience to be beneficial in terms of developing my research skills and providing me with opportunities for professional growth. Nonetheless, I feel that the recognition and support for postdocs are often insufficient. This is particularly worrisome considering that many postdocs work long hours and face financial difficulties due to the low pay and minimal benefits that come with their positions.

Furthermore, postdocs often lack job security, as their positions are temporary, and they may not have access to adequate mentorship and guidance. This can be especially challenging for those looking to establish a long-term career in academia. While postdoctoral training can be valuable in terms of building skills and experience, the current system needs significant improvements to better support postdocs and promote their success.

Fundamental issues and challenges

Postdoctoral training is crucial for individuals who want to pursue a career in academic research. However, the challenges that postdocs face can impact their quality of life. One of the significant obstacles is maintaining a healthy work-life balance. The demanding nature of academic research often forces postdocs to work long hours, leading to burnout and mental health issues. This is a concerning situation because postdocs with the same degree may have different lifestyles depending on whether they are academic postdocs or working in the industry. Low wages and minimal or no benefits offered by postdoc positions make it difficult for postdocs to cover their living expenses, such as housing, food, and healthcare. Some postdocs struggle to make ends meet and rely on university food pantries to fulfill their basic needs.

Most postdoc positions are temporary with little or no job security, leading to stress and anxiety among postdocs. The lack of mentorship and guidance negatively impacts their professional development and career growth. Postdocs work in isolated environments, which hinders their access to resources and support to advance in their careers. In some cases, labs are too large, making it impossible for one person to provide support to a team of 10 or more postdocs. To ensure equal opportunities for all postdocs to receive adequate support and mentorship, organizations like NIH should regulate the number of lab members a professor can hire.

Despite the valuable skills and experience that postdocs gain through their work, the highly competitive job market in academia limits their career advancement opportunities. Institutions should create more opportunities for career growth and advancement for postdocs. Hiring talented postdocs from outside the US could benefit institutions, but current visa and hiring processes make it challenging to hire foreign postdocs. Simplifying these processes could benefit postdocs and the institutions that employ them.

Existing NIH policies, programs, or resources

There are several existing policies, programs, and resources within NIH that could be improved or expanded to enhance the postdoctoral training ecosystem and academic research career pathways. One potential area for improvement is in the funding mechanisms available to postdocs. NIH could consider increasing the number of training grants available to institutions, which would provide more stable funding for postdocs and reduce the financial uncertainty that many face. Additionally, NIH could increase the stipend levels for postdocs to ensure that they are able to cover their living expenses and reduce financial stress.

Another area for improvement is in mentorship and career development resources. NIH could expand its existing mentorship programs to provide more comprehensive support to postdocs, including training for mentors and resources to help postdocs identify career paths and opportunities. Additionally, NIH could provide more funding for career development workshops and programs, such as the NIH K99/R00 grant program, which provides funding for postdocs to transition to independent research careers.

Finally, NIH could improve the job market for postdocs by encouraging institutions to provide more stable and secure job opportunities. This could include providing incentives for institutions to convert temporary postdoc positions into permanent staff positions or creating more postdoc-to-staff transition programs. By improving the postdoctoral training ecosystem and academic research career pathways, NIH can help ensure that the next generation of researchers is well-supported and able to make meaningful contributions to the scientific community.

Proven or promising external resources or approaches

There are several proven or promising external resources and approaches that could inform NIH's efforts to enhance the postdoctoral training ecosystem.

One such resource is the National Postdoctoral Association (NPA), which provides valuable resources and support to postdocs, including professional development opportunities, networking events, and access to a community of postdoctoral scholars. By partnering with the NPA and similar organizations, NIH could improve postdoctoral recruitment and training, as well as provide postdocs with more opportunities to connect with their peers and advance their careers.

Another promising approach is the implementation of mentorship and career development programs, such as the NIH's BEST (Broadening Experiences in Scientific Training) program. BEST provides postdocs with opportunities to explore different career paths, develop new skills, and receive mentorship from professionals in their field. By expanding such programs, NIH could enhance the working environment for postdocs and improve job satisfaction, ultimately leading to greater success in academic research career pathways.

Furthermore, NIH could also look to international models of postdoctoral training and career development. For example, in Germany, postdocs are often provided with more job security, benefits, and professional development opportunities than in the US. By studying and implementing successful international models, NIH could improve the postdoctoral training ecosystem and make it more attractive to talented individuals from around the world.

Response 1566

Perspectives on the postdoc roles and responsibilities

Postdocs are highly skilled professionals who have a PhD but seek to gain additional research experience. Roles and responsibilities are typically similar to PhD students but with increased expectations for performance with inferior support and a

Fundamental issues and challenges

Postdocs are not 'trainees'—they are highly trained professionals who have obtained the highest degree in their field, a doctorate, and are paid what is typically not a livable wage, at an age when there is increasing urgency to purchase a home, have a family, and save for their future.

In addition to all of this, faculty are often poor mentors to postdocs and there is essentially no accountability for poor faculty behavior.

Existing NIH policies, programs, or resources

Pay postdocs more money, increase automatically each year with inflation or at least increase every 3-5 years with inflation.

Proven or promising external resources or approaches

No response

Response 1567

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a time to develop additional skills for eventual group leadership positions or for transitioning from one's phd field to a slightly related field. For many positions away from academia, a postdoc is not necessary. Postdocs are relied on for keeping American labs running smoothly, often mentoring graduate students and running projects.

Fundamental issues and challenges

The postdoctoral pay in the US does not enable a single person in their late 20s/30s to have the quality of life/standard of living that such an advanced degree and stage of life should afford, in my opinion. I could have taken my 4 year BS degree and received a higher salary. This is understandable in graduate school when tuition and fees are covered, but a postdoctoral degree is often 100% research, a highly specialized job, that should be paid accordingly. This is particularly true in labs where the pressure to achieve has

postdocs working 60 hour weeks. The inadequate salary is a massive hindrance in the large cities where many competitive postdoctoral positions are offered (e.g. Boston) and the cost of living, especially housing, is particularly high. This is also a primetime for children, and childcare expenses are so high and rarely subsidized. Ultimately, a postdoc needs a partner with a competitive salary or generational wealth to support the family. Sometimes persons with competitively awarded fellowships actually receive less support due to eligibility issues for other types of assistance.

Existing NIH policies, programs, or resources

People often delay parenthood during graduate school and postdoctoral training. Many private companies support women and men in their family planning by covering egg freezing, and I know this would have made a difference to me in recruitment to a US postdoctoral position. More comprehensive and adequate funding of childcare costs (as above) would be helpful. Postdocs who also have to start paying on students loans after graduate school may particularly feel the budget crunch. More support for health insurance costs would also be advantageous, this was well covered in graduate school and made the stipend livable.

Proven or promising external resources or approaches

No response

Response 1568

Perspectives on the postdoc roles and responsibilities

It is an opportunity for further training of a more independent nature after earning a doctoral degree.

Fundamental issues and challenges

Pay, benefits, and the short term nature of the positions.

Existing NIH policies, programs, or resources

There should be more NIH support both in base pay and benefits like parental leave.

Proven or promising external resources or approaches

Money, it is extremely difficult to live on a post doc salary in the majority of America. NIH could also offer specific programs for postdocs interested in their next steps. Workshops on faculty applications, industry transition, etc.

Response 1569

Perspectives on the postdoc roles and responsibilities

I don’t see any use in a post-doc.

Fundamental issues and challenges

I was fortunate to do a post-doc in a top lab and was able to obtain multiple funding sources (Damon Runyon, NIH). The main problem is that a post-doc simply isn’t useful. If going into industry, a post-doc is a huge opportunity cost (3-5 years of prime working time), and hiring managers generally do not count the experience—i.e. your experience level is zero if coming from a masters, PHD, post-doc, professor etc. The time is much better spent gaining actual experience beyond academic research and getting into a career path as soon as possible.

An example I saw recently were two professors, one assistent, one full, go into industry only as entry-level scientists. Academic experience simply isn’t valued past a certain threshold. If you are a true expert in a field, those cases are certainly different, but few and far in between.

As for QOL, it was generally good and I enjoyed the experience. Pay is certainly low, and was hard with kids etc. Again my only regret was not starting my actual career after my PhD. Basically I did what I thought was good work, published etc, but just no one values the experience.

Existing NIH policies, programs, or resources

Make more actual career paths for academic scientists. There are a lot of people that enjoy the work. No one wants to be paid 50K in an expensive city and delay starting families etc though.

Proven or promising external resources or approaches

NA, again a post-doc is not useful. Need real career paths.

Response 1570

Perspectives on the postdoc roles and responsibilities

Postdoctoral researchers are highly-trained and highly-specialized researchers. At a minimum, theu have some 8 years of higher education behind their backs. This position should be intended to:

1) Further their professional development: Ph.D. programs are very specific and result in specialists formation. By means of one or several postdocs, those researchers can be exposed to a wider range of science to further their views, which in turn will help them succeed in the long run.
2) Be competitive in nature: one thing we have learnt in recent years is, there are way too many Ph.Ds. graduating. Academia cannot keep up with the number of positions required, which in turn drives compensation for those down, and dilutes the effort it took to get where they are.
3) Be a launchpad to their senior careers. Postdoctoral research is surrounded by uncertainty. When will funding end? What will I do next? Some institutions succeed in talent retention, but most don't, and that fills postdoctoral research with anxiety, high-turnover, etc.

Fundamental issues and challenges

1) Compensation: The COVID-19 pandemic has showed us how poorly compensated most scientists are, including postdoctoral researchers. Although the NIH has done an stellar job in recent years in increasing fair compensation, it is still far from ideal.
2) Career trajectories: Postdoctoral positions should be launchpads, not landing ones. As it sits right now, a postdoctoral researcher may spend several months applying to positions that are more-or-less related to their graduate training. In some cases they will succeed in finding a role that is a continuation of their academic progression, where they can expand on it. But most won't, and will be tied to a laboratory where they are regarded as highly-qualified technicians, which they are not. Even when they succeed in finding the correct laboratory, many things can go wrong. Bad mentorship, poor colleagues, high competition among team-members, etc. Some of the issues are in the institutional domain, but others can be tackled from a systemic point of view.
3) Work-life-balance. Academia is one of the fields with the poirest work-life-balance out there, with postdoctoral-scientists being one of the groups that has it worse. With long work-hours and extra days of work, postdoctoral researchers who are most likely in their late 20s to early 30s have it hard to create and maintain families, this in addition to the poor compensation results in really bad quality of life.

Existing NIH policies, programs, or resources

1) A complete redesign of the postdoctoral support is needed, and further into researxh programs and policies. From how many postdoctoral researchers are allowed per grant to how many NIH-funded grants are allowes per investigator, NIH policy should be rethinked with the objective of quality science:
2) Limit overfunding: it may appear that the more funding a laboratory has, the higher the changes of misconduct. With increased funding there are increased number of personnel to supervise, data to keep track of, etc. Limiting the number of projects an investigator can have will allow for better oversight of the projects and personnel, production of higher quality science, and postdocs will benefit from more focused mentoring.
3) Create early to mid career funding. Some programs like the F99/K00 transition award offer excellent opportunities for growth, but their support is only limited to the training stage of their careers. A F99/K00/R21 program (for example) will offer a longer path for career development into the early-stage researcher stage.
4) Offer more support for alien postdoctoral researchers. Many postdoctoral researchers are not US residents, but they have long careers here. Most NIH programs require residence or cityzenship, limiting access to a large proportion of postdoctoral researchers to funding that would advance their careers, and presenting an unfair advantage to some others.
5) Related to 1, reduce the number of grants offered, but increase the support on those, especially for high-quality personnel.
6) Limit number of personnel per grant.
7) Offer personnel-only grants.
8) Offer mandatory training for supervisory positions on NIH-funded grants to ensure proper mentorship.

Proven or promising external resources or approaches

No response

Response 1571

Perspectives on the postdoc roles and responsibilities

The postdoctoral position allows for additional training beyond the scope of the Ph.D. thesis. It is usually in the best interests of the trainee to choose a field distinct from their Ph.D. training in order to gain a wide breadth of expertise and develop an appreciation of many active areas of scientific investigation. The postdoc is expected to leverage the experience gained by executing the scientific method during their thesis.

Fundamental issues and challenges

The current framework for postdoc training is actively and effectively pushing our most ambitious postdocs to private industry. A postdoc that nearly misses the recommended milestones is faced with the reality that they will never be given the opportunity to be a tenured faculty member at a research institution. This is true regardless of whether their later years are veritably more productive. That previously vicarious type-A research leader fueled by grandeur ambitions of running their own lab is now sidelined to a career path with very few opportunities for advancement. Their ambitions were futile and will have to adapt themselves to be complacent to put in their 9 am-5 pm to maintain their employment and vie for a raise that barely outpaces inflation. This realization precipitously drops their level of productivity and this reality is true for the vast majority of postdocs, which produce the bulk of the scientific discoveries. To reiterate, the majority of science is conducted by individuals who have been passed over by promotion because they narrowly missed the recommended milestones. It is no wonder, that our most ambitious researchers choose to leave publicly funded research institutions to pursue a career in the private industry. A person would not need to visit very many labs to find a highly intelligent individual that is more than qualified to run their own lab, but has been sidelined and is now begrudgingly content with a paycheck because they know that working harder will not open any windows of opportunities. Many talented, driven scientists miss the milestones due to starting a family or because, as a minority, they did not have socioeconomic support. It is no wonder there is little diversity in science faculty.

Existing NIH policies, programs, or resources

First, eliminate the time restrictions on K99 and other laboratory starter grants. These are intended to catapult scientific prodigies, but instead privilege individuals who were fortunate enough to receive an abundance of socioeconomic support and mentorship prior to receiving the K99. In addition, these time restrictions are counterproductive, the most talented postdocs are usually given more challenging projects that yield more impactful research with longer upfront time investment. Thus, the industry's most talented are being passed over and those opportunities are often handed to individuals who encountered fewer adversities in their training. Also, time limits stifle productivity, once the last deadline is passed, the postdoc realizes the doors of opportunity have closed on them and so ambition, then, becomes fruitless. Second, provide real incentives for postdocs to submit grants. Similar to faculty, a postdoc should receive a stipend boost when a grant is accepted. Otherwise, there is no actual, real, immediate benefit to submitting a grant. It is absurd that faculty are financially rewarded for funded grants, but not postdocs. Lastly, raises should be mandatory or more structured. These raises encourage postdocs to keep their positions at academic institutions. At the very least, these raises should outpace inflation. I have been told that most principal investigators neglect to provide annual salary increases to their postdocs, a service that even the most neglectful employers provide.

Proven or promising external resources or approaches

The best resources are those that advance the career of the postdoc. Even though the vast majority of postdocs will never manage their own lab because that opportunity is taken from them a few years after their career has begun, many postdocs desire professional advancements. Therefore, any service intended to foster career advancement is welcomed. For example, as a postdoc gets older, their work is seen as an indicator that they are a great bench worker rather than an indicator of a great principal investigator. Encouraging departments to have colloquiums for postdocs to speak would show the other faculty in the department the postdoc's true potential. The lack of these speaking engagements communicates to the postdoc that the department is not interested in their achievements unless it benefits their mentor. Training courses in grant writing, teaching, time management, and data analysis are welcomed and appreciated. Our institution provides these training classes and also plans many networking socials.

Response 1572

Perspectives on the postdoc roles and responsibilities

The postdoc's role is primarily to participate in research projects. Some of these projects will be relatively independent, others will be part of larger team science undertakings, and still others will involve explicit training of the postdoc by either their PI or others. Postdocs mentor graduate students and participate in both the local and wider academic community by giving talks, serving on committees, founding and participating in various initiatives related to the academy, and so on.

While postdocs do often learn new skills as part of their position, I do not think it's correct to view it primarily as a training position. This masks that postdocs often have significant independence, often already have a significant and highly developed repertoire of skills, and often spend a significant portion of their time acting in a managerial role.

Fundamental issues and challenges

From many perspectives, the postdoc is the worst option for employment for a person with a PhD. The pay is often worse than what is possible in industry, the work hours are often longer, the prospects for future advancement are often more bleak, the employment benefits are often worse (retirement, healthcare, etc.). None of the positive reasons for doing a postdoc come from the material conditions of the position. This presents an obstacle to recruitment, retention, and quality of life. These obstacles are also an issue of justice: since people with material security will be more likely to go on to postdocs, and this material security intersects with class, race, and gender.

Existing NIH policies, programs, or resources

One significant step the NIH could take would be to increase the minimum salaries, as well as ideally tie them to the cost of living in the area of the postdoc (and to increase with that cost of living).

Proven or promising external resources or approaches

Postdoc unions at public and private institutions provide probably the most definitive information about what postdocs feel that they need for better lives. The NIH can follow developments in unionization, contract demands, and contract achievements to guide their own programs. In my own union, salaries are important, along with better support for postdocs with childre, better health insurance, and better processes for bullying and harassment. The NIH could make positive interventions in all of these things.

Looking at unionization efforts will also underline that many of the concerns that postdocs have are material.

I also personally believe that more explicit NIH support for longer term research scientist positions can help evolve the postdoc into a more stable category of employment.

Response 1573

Perspectives on the postdoc roles and responsibilities

Postdoc is a temporary position hired by PIs to conduct mostly independent work with minimum cost both financial and advisory timewise to the PI.

Fundamental issues and challenges

Postdoc is a temporary position so the experiences could vary a lot depending on the hiring PI. Also postdocs are hired at PI's funding status and needs of PI's individual project. There is no guidelines from NIH on the the balance between postdoc hired and real demand of academic positions. It is not hard math, a continuedly funded PI could works from his/her 30s until 60-70s, plenty of postdocs have been hired during PI's career and only one could replace the position available when he/she retires. Academic jobs are not known for fast expanding. The system might seem to be beneficial to PIs but in the long run it is not competitive to attract best people to science.

Existing NIH policies, programs, or resources

Postdoc should not be a training position, These are already highly trained people. The current academic research pathway definitely needs to make more room for people between graduate students and PIs.

Proven or promising external resources or approaches

It will be good if NIH has guidelines/rules on how many postdoc a PI can hire with each type grant. Maybe adopting some measures from the medical doctor recruiting, training and career pathways.

Response 1574

Perspectives on the postdoc roles and responsibilities

A postdoc should should lead novel research, making use of the existing resources of an established lab to drive their own research forward to a point where they can obtain a faculty position and funding to start a lab themselves.

Fundamental issues and challenges

Post doc positions offer a low level of pay for a professional position with 5-10 years of prior experience.

Academically, post docs are seen as only possessing minimal training in need of more, not as proficient experts in their field.

Post-doctoral academia offers little job security. It is difficult for post docs to get tenure-track research faculty positions, and there is little incentive to do a post doc if desiring a career outside academia.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1575

Perspectives on the postdoc roles and responsibilities

1. An opportunity to learn technical skills
2. Mentor
3. Practice grant and manuscript writing
4. Get involved in service

Fundamental issues and challenges

1. Low payscale for tarinees
2. Unaffordable childcare/housing
3. Lack of uncertainty in terms of being able to sucessfully land a faculty position
4. Lack of mentorship
5. Mentors unwilling to support grant applications
6. Unwilling to let postdocs take their projects with them

Existing NIH policies, programs, or resources

1. Faster dissemination of information
2. Timely response from officials to inqueries
3. More guidance/mentorship role from the NIH when navigating academic journey

Proven or promising external resources or approaches

No response

Response 1576

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellowships are a temporary (1-3 year) transitional period for graduate scientists to further develop their administrative and technical skills necessary to either independently run an academic lab or move to industrial positions. Postdocs are great ways to PIs to generate data and hypotheses for the lab, but have additional roles that should be supported more by the NIH. Postdocs are responsible for assisting the PI more directly with grant securing, paper submission, project development, training of graduate students, and developing their independent academic roles within an institution/broader scientific community in order to build their reputations.

Fundamental issues and challenges

On a direct scale, MONEY. Postdoctoral fellows are often in their late 20s and early 30s, beginning new stage of personal life. Graduate students cannot expect to transition into the next stage of their personal lives on less than 55k/year in areas with high-COL. PAY POSTDOCS MORE. NIH make it more attractive financially for science and we will continue to go into it! Increase grant payouts to scientists to support themselves.

At the institutional level, space for tenure-track professorship has stagnated at major academic facilities. This needs to be addressed by the NIH through incentives granted to academic institutions. Make it better for institutions to add tenured professors to their roster. There is no guarantee that post-docs will be able to transition to professorship at any institution, which makes the uncertainty of the low-paying “temporary status” of postdocs increasingly less desirable.

Existing NIH policies, programs, or resources

Money. Pay postdocs more to be able to support themselves.

Scientific advancement has also progressed much farther than in the past, so the requirements for publishing have become much more stringent. This puts pressure on postdocs to have to “publish more” in order to meet minimum requirements for success or transition out of postdoctoral positions into faculty spots. The NIH should address competency requirements for success to transition out of postdoctoral fellowships, such as “securing fundings” or other metrics that allow them to support themselves.

The big theme here is that postdocs are supposed to be like flowering seedlings in a greenhouse. The NIH needs to water them more and support them so they can transition out into the field and stand on their own. Postdocs will grow when they are supported and will want to continue to do good science when they are supported, financially and academically.

Proven or promising external resources or approaches

I mean to start, money. Just pay them more. That will make more people interested in going into a postdoctoral fellowship.

Response 1577

Perspectives on the postdoc roles and responsibilities

To me a postdoc position is supposed to provide specific training in the area of the mentor as well as support to pursue the postdoc's specific interests and career goals. Mentorship should include jointly creating a training plan and actually following the training play (making adjustments as appropriate and needed). The postdoc should not be expected to primarily perform research assistant tasks, but rather should receive hierarchical training/mentorship in supervising research assistants and how to effectively manage/run a research lab. While working on the mentor's research is an integral part of being a postdoc, postdocs should be allowed—and EXPECTED—to complete individual projects and collaborations that will grow their own areas of expertise. This should be supported by the mentor and not discouraged. Postdocs should have supplemental didactic training related to the research and data analyses being conducted and provided with professional development opportunities (e.g., funding for conference attendance and presentations, workshops, career exploration). Further, postdocs are often expected to pay out of pocket to attend trainings or conferences--again this is not sustainable as postdoc salaries barely cover the cost of living! I can't afford to attend conferences to gain training, networking, or other invaluable experiences without funding help because my salary barely covers my monthly expenses just to live in a metropolitan area where my postdoc is located.

Fundamental issues and challenges

Mentors often don't encourage or allow postdocs to pursue their own research to work towards their independence. They are expected to be solely devoted to the mentor's research at the expense of the postdoc's personal/professional growth. Mentors lack formal mentorship training making the postdoc experience negative and draining, causing burnout. Lack of support to pursue one's interests (e.g., applying for small grants for independent projects, allowing time to finish manuscripts from dissertations) makes staying in the postdoc environment something that I don't want to do. Due to lack of adequate mentorship (e.g., reluctance of the mentor to have formal weekly or biweekly lab meetings, lack of structured didactics) I am leaving research/academia for a private organization where mentorship and postdoc wellbeing is prioritized. For those not on T32s but funded by the mentor's grants there is lack of paid parental leave. This is an issue that i quite frankly a major reason why individuals leave postdocs. AND, often times faculty do not support their postdocs receiving paid parental leave because the mentor "needs them to do the work" rather than support the postdocs in developing skills for having a healthy work/home life. Postdocs are treated as cheap laborers rather than being trained for specialization. The pay is too low for our level of experience. Recent graduates from master's programs (e.g., Master of Social Work) often earn $55,000 to $60,000. Yet, postdocs despite their extra training and expertise make less than that. It is not sustainable for cost of living in most major cities and is very much a deterrent for pursuing a postdoc. Industry positions and postdocs will pay much more. Postdocs want to be compensated appropriately for their level of training and expertise.

Existing NIH policies, programs, or resources

Every faculty who is going to be a postdoc mentor or have trainees should be required to attend yearly mentorship training. Postdocs should be allowed and encouraged to complete evaluations of mentors each year to ensure that mentors are providing the training and services that are needed for postdocs to be successful. This should be mandatory for ALL faculty that has a postdoc at any institution that receives NIH funding, regardless of whether the postdoc is on a F32, T32, or funded by the mentor's grants. It should be a uniform policy that should be evaluated each year to ensure that postdoc training is at minimum adequate, fair, and protecting postdocs.

Proven or promising external resources or approaches

No response

Response 1578

Perspectives on the postdoc roles and responsibilities

As a postdoc my core responsibilities include conducting and publishing research, applying for grants, mentoring students, presenting at conferences, developing my own research program, building collaborations with colleagues online and offline, and keeping up with latest scientific developments. I view the position of postdoc as similar to the role of Assistant Professor, but with less focus on administrative and grant-writing tasks and higher focus on data generation, analysis and non-administrative scientific writing.

Fundamental issues and challenges

The fundamental challenge is low pay for postdocs, especially in high cost of living environments, combined with limited career perspectives and security within academia. While pay and career perspectives have stagnated, the bar for successful academic grant and job applications has been set higher and higher, as evidenced by the increasing length of postdocs.

Existing NIH policies, programs, or resources

As a non US citizen and non-permanent resident, I am not aware of NIH programs that could be useful to me.

Proven or promising external resources or approaches

Focus on fewer, better-paid postdoc positions, providing a clearer and more transparent path to faculty roles.

Response 1579

Perspectives on the postdoc roles and responsibilities

The main perspective is to get a permanent position in industry, thinking in a 3-5 plan, but not discarding the possibility to get a position as a PI or similar in the academic field

Fundamental issues and challenges

Low wage considering:

1. The years expending in training and study to obtain a PhD degree—Similar positions outside academia pays twice more
2. Increase cost of living

Visa restrictions obliges us submit ourselves to wait at least 5 years to get a job without worrying about visa sponsorship

Existing NIH policies, programs, or resources

More grant options directed to foreign postdocs

Proven or promising external resources or approaches

No response

Response 1580

Perspectives on the postdoc roles and responsibilities

Frankly, in an academic setting, postdocs carry the burden of the research activities although they were not part of the planning process. Recognition for the work we do has fallen short, but I am hopeful that change is coming.

Fundamental issues and challenges

The difference between the medical residents and fellows and postdoctoral researchers is in the type of work. However, there is very little difference between them other than salary. Both are trainees, supervised, long hours, and given increasing responsibilities with experience. Salaries do not change for postdocs as they gain experience when residents do. To improve retention, provide equivalent salaries:

https://www.cc.nih.gov/sites/nihinternet/files/internet-files/training/gme/Terms_Conditions.pdf

Existing NIH policies, programs, or resources

As a pending fellow, it was disheartening to learn that I will not have the same benefit as a university employee (aka postdocs not on NIH fellowships). The reason, the definition of "employee". NIH Fellows benefits are restrictive if not viewed as an employee of the university. Because of this discordant, it has produced dissatisfaction before I even begin. Contrary to popular benefits, not all benefits are created equal. So, let's expand the policy to allow employers to classify postdocs as employees—regardless of the funding source. On the financial backend—employers are reimbursed for providing benefits rather than allowing separate entities to handle it.

Proven or promising external resources or approaches

Continued collaboration with the NPA—they hear the voices of postdocs frequently.

Response 1581

Perspectives on the postdoc roles and responsibilities

I am in the field of social work, which often comes with a heavier teaching and service load that other disciplines. I know that fact discourages many social work academics from applying for post-doctoral training opportunities. Additionally, I am a woman with children and a disabled aging parent and juggling the commitment to my training with personal and professional responsibilities can be difficult.

Fundamental issues and challenges

I wonder if having the ability to commit 50% of time to a career development award would be beneficial in helping those with other professional and personal responsibilities feel that they can apply for a CDA and be successful.

Additionally, CDAs are seen as highly competitive and I was explicitly advised against applying for such an award (by someone who is now my mentor for my CDA). Perhaps the perception of the barriers to success reduce applications?

Finally, as a social worker who conducts services research—social work may be a field for new growth for training from the NIH. Many social worker researchers don't feel that it is an option for them —for the reasons stated above and because social work often feels that it has to fight for legitimacy and prestige amid other social science research disciplines--but in my view social workers (which emphasizes a professional background in practice settings prior to getting a doctorate) will be critical to advancing health and health services research. Our deep knowledge of practice and practice settings (which many other health services researchers do not have), a LONG history of considering social and structural determinants of health (social work basically invented the concept), and advanced methodological training and experience in stakeholder engaged and anti-oppressive approaches to research (social work also basically invented the concept of anti-oppressive research) are required to move health research forward.

Existing NIH policies, programs, or resources

See above.

Proven or promising external resources or approaches

No response

Response 1582

Perspectives on the postdoc roles and responsibilities

Postdocs (when present) generate the vast majority of the research that any given lab produces. They mentor undergraduate and early graduate students and establish protocols within the lab. They often take on responsibilities of lab managers when such a person is not explicitly employed in the lab.

Fundamental issues and challenges

Postdoc'ing, as it is currently set up is an underpaying, overworking, and highly precarious form of employment. The job prospects following postdocs, that are supposed to be appealing enough to entice PhD level people to make this sacrifice, hire at an incredibly low rate. All of this occuring during the time when people are thinking about or have already started families. Offering improved benefits (subsidized housing, subsidized child care, SIGNIFICANTLY higher wages) could offset this. Something should probably be done to address the rampant unreported overtime and borderline (or overt abuse) by PIs particularly towards international postdocs.

Existing NIH policies, programs, or resources

Easy—More fellowships attached to individuals that pay more.

Proven or promising external resources or approaches

No response

Response 1583

Perspectives on the postdoc roles and responsibilities

The academic postdoc serves the purpose of cheap labor for PIs and the associated institutional bureaucracies. This de facto wage slavery is compounded with threats and exploitation to any form of protest/dissent by the aggrieved, which reinforces the totalitarian tendencies of the modern university. The role and responsibility of the contemporary postdoc position is to serve capital interests. Everything else we are told (e.g. exciting career potentials, helping the world, bettering mankind, etc.) is a lie.

Fundamental issues and challenges

See above. Also, it's clear there are internal contradictions in the fundamentals of the current system that will cause the system to self-implode. This will be highlighted by declining recruitment, retention, and a severe deterioration in the quality of life of postdocs. The word choice of "trainee" highlights the extreme totalitarian hierarchy present in the current postdoc system, where indebted wage slave must report without dissent to their masters. So yeah, [redacted] NIH.

Existing NIH policies, programs, or resources

NIH needs to be eliminated. It does more harm than good for society. Once NIH is eliminated, we will be able to address the role of the university as an institution in society.

Proven or promising external resources or approaches

See above.

Response 1584

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

SALARY. Postdoc salaries are not competitive. Although NCI pays its fellows higher than average postdoc salary, the lack of benefits makes it not worth it.

The fact that NIH postdoctoral fellows don't have access to a 401K (and in the case of foreign fellows, we also are not allowed to open Roth IRAs since the first 2 years we are non-residents). The lack of unemployment benefits too.

LACK of CHILD SUPPORT. 12 week paid maternity leave is not enough for any woman to recover, or for spouses to support them. Most fellows are foreigners which means we don't have any family support in the USA. How are you supposed to leave a 12 week old baby in daycare?. Although NIH has daycare, I don't know of anyone who managed to get their kids in it. All child support is only elegible for employees, not fellows. The fact that we are fellows makes us inelegible to subtract daycare from our taxes (or to file jointly with our also foreign spouses).

J1 visa 2-year rule (212E)—needless to say this is a huge problem for foreign postdocs fellows who want to stay in the US. In my case I was not informed this would apply (this was my second J1 visa and in my previous one it didn't apply). If I would have known, I wouldn't have joined NIH as this has complicated my personal life.

Existing NIH policies, programs, or resources

Paid maternity/paternity leave increase. NIH should take a hard look at European Research centers and their policies.

Real access to NIH daycare or "grants" to cover part of daycare outside of campus.

Flexibly work environment.

Ability to work remotely from outside the US for foreign fellows in case of family emergency.

Increased stipend.

Proven or promising external resources or approaches

No response

Response 1585

Perspectives on the postdoc roles and responsibilities

Now that one has a PhD, the postdoctoral position is a time to learn new techniques and expand on the knowledge area into what one is interested in, and also learn more about biotech, pharma, policy, academia, etc. to transition to an independent position afterwards.

Fundamental issues and challenges

Most of the fundamental issues stem from short-term postdoctoral positions available (sometimes advertised as 1—or 2—year positions), no retirement plan, low pay after having very low pay during graduate school, and no long-term position without moving again. Postdocs are an asset to the research enterprise, and should have pay that is consistent with expertise and cost of living in the area.

Existing NIH policies, programs, or resources

"NIH minimum" pay stipends are often seen as the normal pay offered. Institutions' benefits often change when postdocs gain outside funding—this should be mandatory to require benefits. Grant funding mechanisms should provide enough in the budget to allocate for postdoc pay and benefits along with other lab personnel.

Proven or promising external resources or approaches

% Time allotments for training, expertise, courses

Benefits (health, dental, vision)

Pay = cost of living in area

Require mentors of fellows to have taken RCR or equivalent

Climate survey of institutions' programs

Allow funding mechanisms for not-independent long-term careers (research associate, research fellow, post-postdoc)

Response 1586

Perspectives on the postdoc roles and responsibilities

Postdocs are critical to the research mission but are next to impossible to find / hire.

Fundamental issues and challenges

the #1 issue is salary. We are in Boston MA and it is impossible to live in this city on the NRSA post doc scale. It needs to be increased

Existing NIH policies, programs, or resources

the NIH needs to fund higher salaries for post docs

Proven or promising external resources or approaches

No response

Response 1587

Perspectives on the postdoc roles and responsibilities

Postdocs are the ones driving academic research, with the technical knowhow to conduct experiments and the academic knowledge to drive their own projects. They are the ones that are training new lab members and mentoring graduate students. In addition, they are expected to be applying for grants, publishing manuscripts, and furthering their professional development in preparation for opening their own labs. PIs are exceptionally dependent on postdoctoral work for publications and grant applications.

Fundamental issues and challenges

Salary is the biggest one. If you compare postdoc salary to the comparable positions in industry, there is no contest. Postdocs have more technical training than almost anyone else in any career, and are still barely paid a livable wage. Even if post docs have a love of science, that's not enough to pay the bills, especially if they have a family to support or live in an area with a high cost of living (Boston, California, etc). After 5-7 years of low wages as a grad student, the majority of post docs don't have savings and are likely in their thirties with little to no opportunity to buy a house, save for retirement, pay off student loans, etc. and yet are still expected to work more hours than their counterparts in industry. There's also very little protection for trainees in academia, with the majority of oversight left to individual PIs, which can and does lead to exploitation of trainees. In short, paying postdocs what they are worth and giving them benefits (access to retirement accounts, maternity leave, etc) and putting systems in place to give trainees recourse against exploitation are good places to start, or we will continue to see the exodus of post docs to multiple industry options which offer these.

Existing NIH policies, programs, or resources

Currently, postdocs supported on a fellowship are not allowed to contribute to our school's 403b option, as they are considered to be on a "stipend", and therefore are not eligible to contribute to retirement. Meanwhile, their peers who are supported by their PI's grants are considered employees and therefore are allowed to contribute to their 403b. It's the same job title, and same compensation, the only difference is that the students on fellowships obtained their own NIH funding. It does not seem fair that they are being punished for that. In industry, they would have a 401K with matching. As someone in their thirties who has a PhD, they should absolutely be allowed to start saving for retirement. And they should be making enough that they can contribute to retirement while still being able to afford to live in the area where they are working.

Proven or promising external resources or approaches

All efforts to enhance the training ecosystem are all good ideas but will do very little without first raising postdoc salaries and increasing benefits. Postdoc positions are no longer the only option for graduating PhDs, and they are no longer competitive. Inflation is at an all time high, yet salaries have stalled. If you want postdocs to stay, then you need to pay them fair wages. This is the absolute biggest thing to do to improve postdoc recruitment and job satisfaction.

Response 1588

Perspectives on the postdoc roles and responsibilities

I was a federal postdoctoral fellow, working at the NIH and FDA. I was excited to gain more independence and authority as a postdoctoral fellow. In my experience postdoctoral fellows drive the work conducted in major research laboratories at both academic institutions and in the federal government. We did the day to day running of the lab, wrote papers, trained staff, and informed the PI about adjustments to protocols. It should have been the most stimulating time in my career but it was stressful and disappointing because of how postdoctoral fellows are paid in the federal government. It was hard to focus on my work while being reminded that if I became severely ill or didn't get a W2 job soon, I would either end up homeless or working until I died of old age.

Fundamental issues and challenges

I advise everyone who doesn't want to become a tenure-track faculty to get out as fast as possible because of the massive financial hit American postdoctoral fellows take. Despite being highly trained professionals, fellows are treated like students in a "temporary" training position. While my stipend was enough to live comfortably off of, I was penalized by the IRS and banks because of my status as a 1099-G paid fellow. For example, I did not "earn" any of my income meaning that my family couldn't receive childcare benefits. If anything happened to me, I had zero social security. I could not save for retirement either and had to put money into a spouses account under his name. We shouldn't have to be married to have retirement savings. Finally, my status almost prevented us from being eligible to purchase a home. First time homebuyer programs exclude 1099 income. This might be OK for someone in their early 20s but can becomes catastrophic for someone who has this form of income for 10-15 years, the time it takes to complete predoctoral training, a doctoral degree, and a postdoctoral fellowship these days.

Existing NIH policies, programs, or resources

The NIH needs to reconsider how fellows are paid so that they aren't financially penalized and ineligible for basic worker protections and benefits. The NIH needs to be more explicit when recruiting postdoctoral fellows so they understand the limitations of 1099-G income.

Proven or promising external resources or approaches

I have heard that in other countries, and in the past in the US, postdoctoral fellows are employees not "students". I have also heard that it depends on the type of funding the postdoctoral fellow receives. Graduate students and postdoctoral fellows would be more willing to stay in the lab driving American biomedical research if it weren't a financially irresponsible thing to do.

Response 1589

Perspectives on the postdoc roles and responsibilities

Independent project development and management, practicing independent thinking moreso than during PhD. I don't view it as necessary if not interested in academia as a career path

Fundamental issues and challenges

Low pay, no tangible end point, lack of work life balance, high amount of effort for not as much benefit if not going into academia

Existing NIH policies, programs, or resources

Fighting for grants and using grant funding as a metric of success is not conducible to personal and professional development. Career development workshops and courses seem beneficial

Proven or promising external resources or approaches

Higher base pay, more opportunities for funding, workshops for existing postdocs that focus on teaching ability, requirements for teaching programs for current postdocs

Response 1590

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Considering all the hats that postdocs have to wear to be successful (outstanding lab work, teaching courses, mentoring, lab managing), we should be paid significantly more than the NIH minimum.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1591

Perspectives on the postdoc roles and responsibilities

A postdoc is an opportunity to further one's expertise within a field and prepare for a leadership role in academia (PI of a lab) or industry (expert in the field for consulting, or project management).

Fundamental issues and challenges

Money. Stop pretending there is any other issue. I just spent 5 years making less than minimum wage and now you want me to dedicate 1-5 more years doing more work for ~$30/hr. The NIH shows nothing but disrespect and lack of value for a person in a postdoc position by offering half the salary to what is earned in industry. "For the love of the job/science" is the biggest exploitation scam out there. We have 8% inflation, sky high rent (because $55k a year will never afford someone a house), increased food costs, and every company cutting corners at consumer expense to maximize profit but you're telling us we are "experts in the field" worth only twice minimum wage. The NIH has job postings for project manager positions requiring a bachelor's with pay ranging up to 100k but you're telling me a PhD is only worth half that? You're shooting yourselves in the foot and in the same breath asking what happened.

Existing NIH policies, programs, or resources

Pay people more. https://arxiv.org/pdf/2205.12892.pdf

Proven or promising external resources or approaches

Whatever you need to do to pay more.

Response 1592

Perspectives on the postdoc roles and responsibilities

A time to expand into a new skillset while working independently towards their own career—they help the lab solve a unique problem by bringing new ideas and techniques. They help disseminate information and as such are an apprentice, except they act to develop their own line of thinking.

Fundamental issues and challenges

US students have too much debt to take on the low salary

Academic careers look unappealing as funding is so hard to attain.

They are discouraged as even the most excellent students do not get F or K awards.

Industry offer good salaries that are perceived to be more stable *in terms of employment.

Overseas post-docs are great and abundant but if Indian/Chinese, visa issues are present and they are taxed at a uniquely high rate so their quality of life is poor

Existing NIH policies, programs, or resources

Training grants and Career development awards—make these smaller so you can give out more to provide that reassurance and encouragement for trainees not to give up and stay in academic careers

Increase stipends

Allow post-docs that have clear paths to US residency the opportunity to apply for standard K awards (currently only K99 allowed)—for example O-visa holders?

Proven or promising external resources or approaches

Perhaps a way like glassdoor.com so that post-docs can post information about institutions and their lab environments so toxic labs can be identified by people looking around. PIs of labs could be reviewed like physicians are! Institutions could be ranked on their support methods?

Response 1593

Perspectives on the postdoc roles and responsibilities

Postdoc SHOULD be a training position focused around completing the postdoc's skillset in order for them to obtain a long-term position that uses their scientific background. Unfortunately in practice, postdoc positions often function as a source of cheap highly-skilled labor for academic labs, where researchers can be hired for low salaries without any serious effort to provide meaningful training as there are no oversight structures such as graduate programs.

Fundamental issues and challenges

Postdoc training is only truly necessary for a faculty position, and the training path for a faculty position has become too demanding. Between PhD and postdoc, trainees are expected to spend about a decade of their prime earning years in a position that requires immense financial and personal sacrifice, without a strong guarantee of getting the desired faculty job in the end. Postdoc salaries are incredibly low for the training required (much lower than industry, and even intramural NIH postdoc salaries are much better). Benefits are inconsistent and typically poor, with most universities excluding postdocs from retirement benefits and often classifying postdocs funded by fellowships in a way that prevents them from paying into and thus qualifying for social security. The expectation to move cities between grad school, postdoc, and faculty positions comes at great personal cost to many: trainees wishing to have children must constantly recobble together a support network that can compensate for their terrible salary, trainees with partners face the choice of moving to extremely high cost of living cities where both can get a job but postdoc salary is a poverty wage, or moving to more remote locations where the partner will likely struggle to find good positions. Postdoc training seems roughly analogous to medical residency, which also pays poorly temporarily, with the key difference that medical residency programs are set up so that the residents are essentially guaranteed to readily obtain a well-paid job as an attending physician.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

As is stands, the financial sacrifices required to compete for an academic faculty position are so great that only individuals who come from highly economically priviliged backgrounds can pursue academic science seriously, as most people cannot afford to spend so much of their prime earning years in poorly-paid training positions that hold unclear prospects for obtaining faculty positions that pay well, but nowhere near well enough to compensate for the financial sacrifice incurred during training.

Response 1594

Perspectives on the postdoc roles and responsibilities

Postdoc is an intense training period where you should learn skills for a future independent career and achieve some accomplishments in your desired field that will open doors for future jobs. The postdoc should be responsible to understand, and articulate, exactly what they need / expect from this training period. They should expect support for those goals, drive themselves to rapidly achieve them, and then move on with their career.

Fundamental issues and challenges

1. PIs treating postdocs as graduate students—i.e. not giving them space to pursue independent directions, not giving them lead roles in developing stories or writing manuscripts and grants.
2. Lack of financial support for child care.
3. Lack of structured mentorship programs that prioritize progressing the postdoc's career over their mentor's career.
4. Mentoring experiences that are largely PI-postdoc. Postdocs should have a mentoring committee as a formal part of all their training to protect from undo influence from the PI.
5. Length of time needed to build a strong CV for academic jobs / overly long publishing timelines.

Existing NIH policies, programs, or resources

Raise postdoc minimum salary to 75K. This will mean fewer postdocs can be hired, but it will put pressure on graduate students to not treat postdoc as a default next step.

Proven or promising external resources or approaches

Have the NIH sponsor childcare at universities. Have it set up so sick kids can participate and parents aren't on call every time a kid throws up or runs a fever. Subsidize the complete cost of childcare such that the net income (after childcare expenses) to parent postdocs is the same as those without kids. Sponsor this through the University or require it from indirect costs that that it doesn't fall on the PI budgets.

Response 1595

Perspectives on the postdoc roles and responsibilities

My stereotypical view of being a post doc included drafting manuscripts and writing grants. However, my position at a public regional university has involved some of this, but has primarily focused on training and managing undergraduate research assistants. I never intended to take a postdoctoral position as I attended graduate school to become a professor at a small liberal arts institution and create a strong undergraduate research program (since research opportunities can be difficult to find at these institutions, making graduate school admissions difficult for students from them). Because my current position was advertised as geared towards mentoring undergraduate students, I decided to apply. I also had never attended or worked at a public regional, so was excited to explore this type of institution.

Fundamental issues and challenges

I believe many graduate students have the same perception of postdoc positions as my original stereotypical view--days spent writing manuscripts and grants. Along with this, they are believed only to be useful to those interested in an assistant professor position at an R1 institution. However, they know these opportunities are limited in the current academic job market. So, why seek out a postdoc position if the end goal is not possible? To help with recruitment, there need to be more broad postdoctoral opportunities, including those geared towards alt-ac and industry positions. In order to recruit specifically for retention in academic research, there needs to be a pipeline to tenure-track faculty lines. Graduate training also needs to be improved. For example, my PhD advisor never assisted me in learning how to apply for grants. I applied and received several internal grants and small external awards, but feel there is a large hole in my training. I am not prepared to apply to a job at an R1 institution, even if I wanted to do so. My quality of life as a postdoc seems quite good, but that is only because I make more at the NIH rate than I would as a tenure-track assistant professor at a small liberal arts school ($51,000/year). This discrepancy in base salary based on institution type is also a problem, since those postdocs who do not get a position at an R1 institution will be taking a pay cut at a smaller institution, normally in an undesirable location.

Existing NIH policies, programs, or resources

1. Use AI to target the NIH Guide TOC to subscribers research interests
2. Find a way to advertise NIH Grants Conference to ALL grad students in biomedical research (assist them in learning the NIH ecosystem early & incentivize this participation)
3. Expand opportunities for the full range of higher education institutions (can partnerships be developed between small liberal arts institutions and R1s so that researchers at smaller institutions have the necessary infrastructure to be awarded grants?)

Proven or promising external resources or approaches

Improving the ecosystem will involve improving graduate degree mentoring and improving the academic job market. Postdoc life is not divorced from these issues. However, postdoctoral positions could be better advertised. Many of these positions seem to only be advertised within specific niche scientific societies or transmitted through grad advisor's connections. There are the T32 mechanisms, but you have to have a graduate mentor who encourages or makes you aware of these opportunities early in your grad career. PIs also need to be held accountable for postdoc mentoring. The postdoc should weigh in on their mentoring as part of the faculty member's performance review. Currently, postdocs are in a weird place in many academic institutions. They have no place in shared governance and limited contact with those outside of their PIs' lab. This can be particularly isolating for postdocs at institutions with only one other postdoc. So, postdocs need some kind of specific support and networking assistance.

Response 1596

Perspectives on the postdoc roles and responsibilities

A postdoc position serves as additional training and as a preparation period for setting up the direction of a future lab.

Fundamental issues and challenges

I believe two major things that inhibit people from seeking post-docs. The first is the salary. Postdocs put in a lot of work for a minimal increase in salary after getting their PhD. The thought of going to a different type of position where the pay is much much higher is incredibly enticing after spending so many years financially struggling and now being faced with having to pay back any accumulated student loans. Relating to this, if people want to finally start having families after years of being a true "student", the low salaries are a huge detractor. Second, PIs seeking postdocs qualify their search by stating they are in need of "quality post-docs". This says to me, "I want a postdoc that requires zero training". The point of the postdoc in my mind is to continue learning new things.

Existing NIH policies, programs, or resources

Increased pay across the board. Funding for child care in funded fellowships/grants. Mentorship training for PIs wanting to hire postdocs.

Proven or promising external resources or approaches

No response

Response 1597

Perspectives on the postdoc roles and responsibilities

Personally, I feel that initial two years of postdoc positions is a learning platform for advancing career. Further, to execute our own ideas using that acquired skillset that might bring some novel and innovative concept.

Fundamental issues and challenges

Recruitment is one time event; however, too much less salary is the biggest hurdle in maintaining quality of life. Usually, postdocs are on that age when they are married and live with their children. They get

Existing NIH policies, programs, or resources

First to increase salary to respected amount. Make the policies that fix in hand salary for postdocs and fix the taxes and insurance in other head of the fund. So, that institutions do not interfere in salary head. Secondly, make biometric system to track the overwork and fix the pay/hour for that.

Proven or promising external resources or approaches

No response

Response 1598

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

The current NIH policy that prevents postdocs from being considered employees of their institution for purposes of taxation and benefits is outdated and leads to undue burden that could easily be alleviated by changing this policy. Beyond the curbersome issues created by the need for the NRSA fellows to calculate and pay their own taxes, there are real negative consequences as a result of this policy. My health insurance is billed indirectly through a third party and I have had my insurance mis-billed and even cancelled multiple times during my NRSA fellowship. This has created undue burden and stress on my own family. I feel strongly that if the NIH does indeed value its postdoctoral trainees and the training ecosystem, this NIH policy needs to be revisited.

Proven or promising external resources or approaches

No response

Response 1599

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is a step towards independence in academia. Practice in formulating your own questions and acquiring funding.

Fundamental issues and challenges

Wages.

Postdoctoral salaries are way too low.

Existing NIH policies, programs, or resources

Pay postdocs more.

Proven or promising external resources or approaches

No response

Response 1600

Perspectives on the postdoc roles and responsibilities

I view the academic postdoc as a position that allows for additional/orthogonal training to what was received during doctoral training. It is also a position one would take if they want to pursue a career in academia.

Fundamental issues and challenges

The primary concern is money. Taking a position in industry after finishing graduate school generally pays better. Also, working for a PI seems to have little to no protection compared to working in industry. Some

PIs are abusive, and there is little to no recourse for the abuse. Leaving a postdoc position without multiple publications effectively kills a career.

Existing NIH policies, programs, or resources

I recognize that there are significant policies, programs, and resources available. At the end of the day, working in science is exhausting. The primary thing that makes a difference is bringing home more money to have better stability for my family and having protections against abusive PIs. I am hesitant to take a postdoc position because I landed on a wonderful PI for my doctoral program and have witnessed the stark difference between him and nearly every other PI at my institution. I fear going anywhere else because I doubt many PIs would be as understanding of the fact that I have a family.

Proven or promising external resources or approaches

I cannot think of any.

Response 1601

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as something to pursue only if you wish to have your own lab.

Fundamental issues and challenges

The poor pay. The lack of support such as healthcare, childcare, vacation time, affordable housing. Someone with a PhD shouldn't be asked to work for 50k.

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

Pay postdocs more money.

Response 1602

Perspectives on the postdoc roles and responsibilities

Considered as a training scientist with additional responsibilities like training junior staff, students (undergrad/graduates). Seen as having independence to steer projects and developing skills to lead an independent lab. Occasionally involved in lab management duties. Coordinating with other collaborators and staff with projects that are important to the lab.

Fundamental issues and challenges

Issues with compensation and benefits. For a professional, graduate degree, the compensation is far too low—not allowing for any leeway for family planning. This is driving talent away from academia and towards industry. The competition for NIH funding is way too stiff for a job that offers little in return. While anecdotal, there are still far too many instances where science undergraduates are being paid way higher as a starting salary and beyond, than a postdoc—how can anyone expect post docs to be satisfied with this way of life after spending at least 4 years in graduate school. Many PIs do not understand the struggle and use the NIH guidelines for salary, which is far too low and outdated in this day and age—this further demoralizes the postdoc academic workforce.

Existing NIH policies, programs, or resources

Increase compensation. BENEFITS: PROVIDE, PUBLICIZE and MAKE ACCESSIBLE. From healthcare, family planning, further education, children's education—give postdocs a reason to be happy with their life outside work.

Proven or promising external resources or approaches

No response

Response 1603

Perspectives on the postdoc roles and responsibilities

My students go into a postdoc for three reasons: they want to pursue academia, they are international students who need sponsorship and feel it's easier to get one as a postdoc than in industry, or they don't know what career path they want to pursue and thus use a postdoc as a "placeholder" while they figure this out.

I see a postdoc as a required step for a student who is determined to go into academia and is aware of the requirements/expectations of this career path.

Fundamental issues and challenges

Students often feel the career options for their degree are academia, where they are paid little, work intense hours, have few benefits, lack work-life balance, and don't see a clear/guaranteed career trajectory—or, industry, where they almost always start over six figures, work fewer hours, have stronger benefits, see work-life balance, and can better understand how promotions work/see a clearer career trajectory. In this comparison, industry almost always wins.

Further, postdoc hiring is almost a shadow process—it happens behind the scenes with PIs emailing other PIs, with no real job description or transparency, and the hiring process is highly inconsistent. In industry, networking is important but not everything; candidates find jobs online and go through a more transparent and standardized hiring process, and I think this feels safer and like they're more in control.

PIs also have too much influence in this process—students who want to pursue academia often change their minds after working with a PI who appears miserable or difficult, or who lacks appropriate mentorship/interpersonal skills. Often, students come into our institution intending to pursue academia post-graduation, but change their minds after seeing what the work environment of a lab is like, or seeing the negative long-term impacts of a high-pressure environment on other postdocs and the PI in the lab.

Existing NIH policies, programs, or resources

NIH sets guidelines for salaries, and this influences university salaries. Postdocs deserve more money, but universities won't change anything until the NIH itself changes.

Many PIs live and die by the science, and refuse to attend to things like mentoring their trainees or building their interpersonal skills. We offer optional mentorship trainings as well as multicultural trainings but the PIs who need these most fail to attend, and our school is hesitant to mandate this type of training for fear of upsetting the PIs as we rely on them for research, funding, and so on. The NIH should mandate mentorship trainings for PIs, if not also multicultural trainings. PIs have an incredible influence on the career trajectories of their trainees, and we're failing these students by not making sure PIs can appropriately mentor as well as reduce their personal biases in the lab environment.

The NIH should also have a policy about treating postdocs like other employees at the institution in terms of benefits (same healthcare plans available, same vacation days and sick time, etc.) and representation through human resources. Too often postdocs are treated like some sort of sub-employee.

Proven or promising external resources or approaches

No response

Response 1604

Perspectives on the postdoc roles and responsibilities

I view it as an opportunity to get the additional training/experience necessary to transition from grad student to PI, and a chance to develop more research with a new advisor before applying to faculty positions.

Fundamental issues and challenges

Postdocs are paid poorly relative to their life/career stage & expertise, and funding is difficult to come by. Also, as with all junior academic positions, you're very dependent on your advisor.

Existing NIH policies, programs, or resources

I think the paypack policy for the F32 grants is really awful and harmful; it has the potential to keep postdocs trapped in unhealthy positions, exacerbates the power dynamic between them and their advisor (because they can't just quit their job if needed), and keeps out people for whom paying back their salary would be such a disastrous option that they can't risk it at any cost. (I almost turned down my F32 offer because of the policy.)

Proven or promising external resources or approaches

Pay us more and remove the payback policy.

Response 1605

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salaries needs to be revised and adjusted to reflect the reality of cost of living. It really boils down to money for a highly trained work force that trying to start a family or settle down with an income that in some locations is barely above a living wage.

Existing NIH policies, programs, or resources

Given the efforts to help improve diversity in STEM fields, it would be beneficial that—just like it is done for responsible conduct of research—to require trainees to participate in culturally-aware mentoring training. This would not only help them identify improved ways of receiving mentorship themselves, but for those who go on to become independent investigators ensure they properly equipped with how to train the future diverse generation of scientists.

Proven or promising external resources or approaches

No response

Response 1606

Perspectives on the postdoc roles and responsibilities

A short-term professional position to develop the final skills necessary to independently develop and maintain their own research. An intermediary before beginning a professorship career.

Fundamental issues and challenges

Low pay for the education and skill set of a post-doc especially when compared to industry positions and increasingly extended times in a post-doc position before moving into a new job.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1607

Perspectives on the postdoc roles and responsibilities

A short term positions (2-4 years) to receive extra training and gain experience in a research laboratory before transitioning to a long term career in science and/or education.

Fundamental issues and challenges

A postdoc position in some ways feels like going back to graduate school with a little bit better pay. Unless someone is passionate about continuing in research and thinks a postdoc position will benefit their career development in a big way, it's more attractive to most PhD graduates to look into more lucrative industry

positions. For example, my partner who has a masters in biology makes nearly twice as much as me working for a bay area biotech company. I feel like there could definitely be more support for people who are interested in starting a family and being a postdoc. Especially for women, it feels like you have to choose one or the other. It'd be great if there was significant funds to support postdocs with children.

Existing NIH policies, programs, or resources

I think there could be better advertising of programs maybe. I'm part of the NIH-IRACDA program and I really like how there's an education training aspect of it, so more programs that support specific career goals would be good.

Proven or promising external resources or approaches

I appreciate being asked my opinion. Surveys like this and anonymous surveys give postdocs a way to express their concerns without fear of losing funding or facing other forms of retaliation. I think sending promotional emails and materials (emails, posters, etc.) to universities to disseminate to graduate students is a good way help make students aware of NIH programs.

Response 1608

Perspectives on the postdoc roles and responsibilities

As an academic postdoc, I am expected to leverage skills gained during my doctoral studies to independently work on and advance ongoing projects in the lab, assist and mentor more junior scientists, contribute to manuscripts and present at conferences. During my postdoc, I am also supposed to expand my professional network and grow soft skills that will aid me in pursuit of future positions.

Fundamental issues and challenges

Current academic postdoc salaries fail to compete with the rising cost of living and make it hard for postdocs to support themselves and their families. Additionally, they are significantly lower than salaries for comparable positions in industry.

Work-life balance is another source of contention that often attracts people to industry over academia, as academic positions are traditionally known for the lack of said balance.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1609

Perspectives on the postdoc roles and responsibilities

I see a post-doc as a way to shore up the skills gained during a Ph.D. I know why a post-doc is valuable for an academic career, but I wanted to enter into industry and still did a post-doc to shore up skills I felt were weak during my Ph.D. Post-doctoral training is valuable.

Fundamental issues and challenges

Recruitment—not an issue

Retention—I think individuals who want to enter into industry tend to leave more quickly while intended gov't and academic career post-docs stay longer.

Quality of life—HUGE ISSUE—THIS SHOULD NOT BE ALLOWED TO BE A SECOND PHD, OTHERWISE, THERE NEEDS TO BE A RE-EVALUATION OF THE PHD TRAINING PARADIGM. And training should actually happen. So many PIs don't take the training portion of this seriously and just appreciate a set of hands and let department activities train their people. I don't know how NIH necessarily helps with this as the average post-doctoral appointment creeps up in length.

Existing NIH policies, programs, or resources

I think the NIH already does a lot. Your websites are a bit tortuous and could contain more summary information and navigation aids. I would like very clear summaries laid out for students on training grants as to how many years they can be supported on one as a Ph.D. or post-doctoral researcher. Also, very obvious specific statements at the tops of grant web pages as to how many grant cycles at the start of a Ph.D. or post-doc can a trainee apply for would be great. Maybe even an interactive checklist with an immediate answer output.

Proven or promising external resources or approaches

PIs taking on undergraduates, graduates, and post-docs could be made to undergo annual training on managerial skills, team leadership, and conflict resolution. It would be great if it were mandatory for PIs to invite review by their trainees on their leadership. Also, PIs should essentially be training their trainees to take their position or enter into leadership positions when they move on. It would be great if PIs had to introduce you to the facets of their jobs 2-3 times per year and if PIs had to tell you a week in advance when they would be no-contact for an extended period of time. (I learn in meetings with other professionals when my PI is leaving. He often doesn't tell anyone and leaves for days at a time, but he becomes upset if you work unsupervised while he is away.) It would also be phenomenal if PIs had to allow opportunities for internships when requested. I know several people who were guilted out of accepting or applying for experiences that would have benefitted their careers because their PI told them it was inappropriate or directly told them they couldn't because the PI didn't know how to run various things in their own lab to allow the trainee to leave.

Response 1610

Perspectives on the postdoc roles and responsibilities

Scientifically this is an excellent possibility to get training beyond the PhD, learn a new field and expand network.

Fundamental issues and challenges

Pay the minimum salary!! We are working under very bad circumstances and then [redacted for anonymity] even doesn't pay us the agreed minimum postdoc salary. While this is clearly not official policy, some [redacted for anonymity] departments (not all) give postdocs a different title to avoid the minimum salary requirement. This is ridiculous, and should not happen!

Existing NIH policies, programs, or resources

See above.

Proven or promising external resources or approaches

No response

Response 1611

Perspectives on the postdoc roles and responsibilities

To continue developing scientifically, gain new technical skills or scientific perspectives; to gain experience in mentoring, teaching, and grant writing; to establish some independence as a scientist; to explore careers and apply for jobs.

I believe the postdoc experience should serve as a bridge between PhD training and an established career but is only necessary for people who need this bridge and should be short. It should be clearly focused from the beginning on the goals (eg, filling gaps in CV, learning a new discipline) and the advisor should be aid the postdoc in the transition rather than incentivized to retain the postdoc for cheap labor for extended periods of time. Academic postdocs are mainly beneficial for tenure-track scientists but it seems so mainly for CV boosting/politics rather than actual developmental necessity.

Fundamental issues and challenges

The compensation and benefits are extremely poor and the learning/growth are not as substantial as one would experience in a permanent role. It takes time to generate publishable science, especially when

entering a new field or advisor/industry. Ultimately it feels like a postdoc is an expedited PHD2, where you have the basics of independent science mastered, but you are no longer the expert in your area (as you were at the end of PHD1). At this point in people's lives, they may have student loans, want to have children, buy a house, establish themselves in a location; the postdoc does not offer support for those things. The salary is barely enough to live. The benefits are much worse than industry or professor positions, and it is a temporary position that may require moving to begin and moving after its complete. There are significant limitations for postdocs on T32 grants hoping to gain a tenure-track faculty position as they prohibit supplementing stipend and some research funds with other government-funded grants. so there is little incentive to apply for NHS funding which later prohibits them from being competitive for tenure-track positions since they lack a funding track record. There is often larger expectation of postdocs to have non-science roles (ie, teach, mentor, write grants) and therefore, it is more difficult to be scientifically productive (the main metric of evaluation).

There is little support from NIH or institutions on how to navigate the transition from postdoc to tenure-track faculty.

Existing NIH policies, programs, or resources

Higher salary caps, longer paid parental leave, more $$ and support for conference travel, more flexibility of T32 grants to supplement salary/stipends with other grants. A better mechanism for postdoc to K to R pathway. Currently a postdoc wanting to apply for a K needs to have insitutional support. If the postdoc wants to change institutions, this is incredibly challenging to orchestrate under the current funding pathway.

Proven or promising external resources or approaches

No response

Response 1612

Perspectives on the postdoc roles and responsibilities

I think the value of the postdoc position is becomingly increasingly unclear for those who do not want to pursue tenure track positions. While marketed as a "training" position, it seems like you just continue working long hours similar to graduate school and are not compensated to the level that your experience would require in a non-academic environment. The lack of clarity around the length of a postdoc, what the deliverables are, and what exactly your role within both a given lab as well as the larger institutions creates an environment filled with anxiety and, at times, toxicity.

Fundamental issues and challenges

The compensation (salary, benefits, 401K) must be improved to recruit and retain postdocs. If I can make 1.5-2x as much in industry and contribute to my retirement fund all while doing exciting science, why would I pursue a postdoc position? Why would someone stay in a postdoc position if they receive an offer in industry? This leads to a decrease in the workforce that is required to perform the research outlined in most, if not all, grants and slows down research. I also think the lack of the compensation can exclude individuals from lower-socioeconomic and first-generation backgrounds from pursuing these positions. Identifying as both, it is hard to justify financial and quality of life costs of pursuing a postdoc, even though the research is exciting.

Existing NIH policies, programs, or resources

Increase the allowable budgets for salaries and increase the minimum salary level, with a scaling factor for cost of living. Also provide more structure for mentors and institutions for the duration and deliverables of a postdoc position. While obviously these will vary by field and project, having at least some guidance is better than nothing.

Requiring IDPs or similar plans, and regular check-ins/updates/progress reports, for all trainees whose research and/or stipends are directly supported by federal grants. At the moment, it seems like something you fill out but do not have to actively maintain unless the individually is motivated to do so and can be difficult to use when a mentor is not supportive or apathetic towards the process.

Proven or promising external resources or approaches

No response

Response 1613

Perspectives on the postdoc roles and responsibilities

The academic postdoc model is outdated and I am glad to hear that graduate students are finally seeing it for the exploitative dead-end proposition that it is. I have been a faculty member for five years after nearly a decade as a postdoc. From the postdocs' perspective, the position is a way to continue performing research temporarily while waiting for a suitable (or unsuitable) faculty job to materialize. It's fun at first; postdocs mostly just do the research they love without the pressures of a graduate student or the responsibilities of a faculty member. Over time it becomes more stressful to continue working for low pay in a temporary soft money position with the knowledge that the majority of postdocs do not get faculty jobs. Meanwhile, PI's find it difficult to get grant funding without large-scale, labor-intensive projects, so the PI with the most postdocs wins. In many STEM fields faculty are still recruited out of graduate school, without further training. If NIH considered postdocs to be trainees, the priority would be on keeping them in the workforce after investing in their training. It sounds as though NIH is concerned about PIs being unable to find fresh young postdocs when the old ones expire (pass the K99/ESI cutoffs and give up on a science career), however, which is unlikely to be a useful attitude in solving this problem. Personally, I am not hiring postdocs and I am honest with my graduate students about their prospects should they choose that route.

Fundamental issues and challenges

Aside from being underpaid and having uncertain job prospects, postdocs are also vulnerable in other ways. They depend on soft money, and if a fellowship or PI's grant runs out they are forced to find a new position and may need to abandon projects. They have little recourse in case of a conflict with a PI except to seek a new position, which similarly may result in lost work. As far as recruitment, consider that people are being recruited to spend a few years competing with each other for scarce jobs, and there is no consolation prize for the ones who fail. It's a tough sell, even if you ignore the poverty.

Existing NIH policies, programs, or resources

NIH needs to decide how it wants to structure academic research. If research is conducted in teams consisting of a PI with multiple trainees, there are only two options—either permanent jobs are created at an exponential rate to absorb trainees, or the trainees are culled. Decades ago when universities were expanding and labs were small a short postdoctoral fellowship akin to a residency made some sense. Predictably, making cheap, highly-skilled labor available led to larger labs and the inevitable slowdown in faculty hiring left postdocs trapped. NIH policy is to cull postdocs by setting time limits on F32/K99/ESI programs, so that postdocs must either quickly secure a faculty job or leave science. If the goal is to continue with this system of churn, it will be difficult to keep enticing more grad students. There must be jobs waiting for them. If NIH wants PIs to keep working with teams of temporary trainees, there need to be fewer trainees to lower the competition for jobs. If NIH wants PIs to keep working with large teams, there need to be permanent well-paid positions on those teams that are not contingent on grant renewals.

Proven or promising external resources or approaches

NIH will need to work with universities to reform the research system. Either stop allowing universities to use NIH funding to expand the number of grad students and postdocs beyond what the job market can absorb, or redirect funding to establish permanent non-faculty positions for full-time researchers. The latter option is probably the best investment NIH can make, in terms of retaining the valuable, highly-skilled scientists whose training is wasted in the current system.

Response 1614

Perspectives on the postdoc roles and responsibilities

I view it as an opportunity for professional development and career mentorship to make me a more competitive candidate for career progression.

Fundamental issues and challenges

PI's either micro-manage postdocs as if they are high school students or do not provide sufficient guidance and mentorship.

PI's and study coordinators seem to expect postdocs to be available after hours and weekends and manage duties/ studies outside the scope of work hired for. Any difficulty reflects poorly on the Postdoc. This is not good for Postdoc quality of life and retention.

Existing NIH policies, programs, or resources

Introductory workshops on scientific research writing, how to use Rstudio and other data analytic tools, communication skills for managing up and managing down, offer hybrid remote and in-person work days, subsidize parking passes for on-campus parking.

Proven or promising external resources or approaches

Mentor and mentee training workshops, Postdoc association social activities, allowing postdocs to participate in writing, teaching, mentorship, and data workshops, medical librarian led workshops.

Response 1615

Perspectives on the postdoc roles and responsibilities

It's an opportunity to gain experience in an area that you did not get exposure to as a graduate student that you will need in your future desired career and to develop more independence as a researcher in order to start your own lab (if desired)

Fundamental issues and challenges

First, I actually think it's not an issue at all if postdoc recruitment/retention has decreased—in fact I think it's necessary given that a small fraction end up being able to start their own labs in academia. Doing a postdoc has a huge opportunity cost and most postdocs end up not reaping the benefits of securing a faculty position. Why would you want more people to take this gamble? It's exploitative. Second, I wonder how postdoc retention is being measured here—is publication required before leaving? If the purpose of a postdoc is to gain desired skills for biotech research positions, then a postdoc is complete when they've gained experience in that area (which happens prior to publication).

However, if the goal is to retain postdocs until they publish, then they need to be offered benefits that rival what they can get in alternative careers. This means 100k minimum salary, 401k matching, parental leave, vacation days. I think reducing the number of postdoc positions to increase the salary/benefits for those who choose to do a postdoc could work. I'm sure faculty would not be happy with this suggestion but with the explosion of biotech opportunities and decrease in open faculty positions, this problem will only get worse over time. As a former postdoc in the bay area, I have seen peers with families to support on a 60k stipend where the median rent for a 100 yr old 2 bedroom apartment is over $3500, lining up on weekends to pick up free food boxes. These are the top PhD graduates in the country who could get jobs paying $150k+ and with good work life balance just down the street. The slight chance that they could become a professor somewhere just often isn't enough to convince them to stay.

Existing NIH policies, programs, or resources

Greatly increasing the NIH minimum salary, maybe with a multiplier based on cost of living.

Greatly reduce the number of open postdoc positions to make the salary increase possible (perhaps have a max number of postdocs allowed per grant). This will also help to increase percentage of postdocs that becomes faculty.

Require universities to provide subsidized housing at a max rate for all postdocs.

Require universities to provide parental leave and additional subsidies for postdocs with children.

Provide retirement benefits.

Proven or promising external resources or approaches

Apart from financial opportunity costs of a postdoc, one major driver of postdocs leaving is a difficult advisor. This is far too common and anything that can be done to make advisors accountable would be

helpful here. Perhaps requiring anonymous letters/ratings from trainees, both current and former, when applying for NIH funding. This has been done for tenure/promotion at the places I trained but should really be done more often.

Response 1616

Perspectives on the postdoc roles and responsibilities

To me this role is an extension of graduate work with more independence and responsibility, but less training and support. High pressure job with low salary not commensurate with experience, and potentially negative impact on job prospects due to lack of professional skill building for most careers.

Fundamental issues and challenges

Beyond the issues of low salary and lack of professional development support, I decided not to do a postdoc for two main reasons. The impression that it would be an isolating experience and that the work would not be impactful. I am interested in social justice and integrating participatory research, quality pedagogy, mentoring, and community building into my career. In my field (molecular biology/immunology/neuroscience) I didn't see many opportunities for postdoc roles where I could do these things and be supported and rewarded for them.

Existing NIH policies, programs, or resources

Having opportunities and training in community engagement and participatory research for basic science. Not just "outreach" and education programs but collaboratively building research priorities and programs with affected communities. Having funding mechanisms and staff support for diversity, equity and belonging initiatives, and for improving teaching practices, and postdoc roles that explicitly include these activities in the job description.

Proven or promising external resources or approaches

See above. Also better relationships with industry, government, non profits to set up internships/fellowships/collaborations for postdocs. This would help set them up for success after the postdoc.

Response 1617

Perspectives on the postdoc roles and responsibilities

1. A continuation of graduate training, which means there should still be learning and mentoring resources covering both technical skills and professional skills (writing grant, etc)
2. A platform for more independent research. This means the mentor should be open and supportive of postdocs' own research ideas

Fundamental issues and challenges

1. Low income
2. Lack of mental support from advisor. Being more independent doesn't mean being left alone in a dessert

Existing NIH policies, programs, or resources

1. Higher salary for postdocs
2. Provide an anonymous platform for trainees to review PIs so that people can avoid toxic PIs

Proven or promising external resources or approaches

No response

Response 1618

Perspectives on the postdoc roles and responsibilities

The role of the postdoc is to develop and conduct near-independent research projects/programs, with the supervision and guidance of a supervisor. They have a high degree of technical expertise, but are not simply skilled technicians who conduct research planned by someone else, and play a fundamental role in the conceptual development of projects.

Fundamental issues and challenges

The most fundamental challenge to recruitment, retention and quality of life of postdocs is pay. This is particularly true for postdocs in cities with high cost of living, where the best research institutions also tend to be located. This is compounded by the expectations of postdocs to work extremely long hours, suffer through repeated failures, and with a low chance of securing a long-term position (see below). I believe it is unreasonable to expect sustained recruitment and retention of postdocs when they are expected to work 80+ hour weeks while also expecting them to spend over half their income simply on rent, yet alone other basic costs of living. This creates a very poor quality of life and can also negatively impact research quality/production. This is particularly prohibitive to people from lower income families and disadvantaged backgrounds, as well as postdocs who have started or wish to start their own family. Obtaining a PhD and pursuing a postdoc should not only be for people who's "Papa Has Dough (PHD)" as one PI once told me. And as mentioned above, the low pay is exacerbated by the high work demands on postdocs and the often hostile work environments they work in. PIs are incentivized to push postdocs to work harder and longer to generate publications and grants, while having little incentive in reality to promote the professional development of postdocs. Tenured PIs are also highly protected from negative consequences from how they treat their employees, while postdocs have vulnerable employment (contracts are only one year long) without common protections (e.g., severance pay). This creates an environment ripe for PIs to take advantage of postdocs. This is potential is even greater for international postdocs whose visas are tied to their position.

Existing NIH policies, programs, or resources

The NIH directly regulates postdoc pay in the US through their minimum stipend levels. Even if individual PIs wish to pay their postdocs more, this can be challenging to justify in budgets for grants if the NIH and institution minimum is lower. The NIH should modify it's minimum stipend levels to help ensure postdocs have a living wage across the US. Some may be hesitant to simply increase the minimum stipend levels across the US as it may not be feasible or unfair across different research institutions. After all $56,000 goes a whole lot further in Pittsburgh compared to New York City. However, I believe a minimum stipend that is scaled by the cost of living of where institutions are located should be considered.

Proven or promising external resources or approaches

NIH should develop programs to improve the mentorship and partnership of PIs with their postdocs. NIH should provide mandates for institutions to provide formal mentoring training as well as monitor mentorship performance and employee treatment of NIH-funded PIs. This should help improve mentorship skills and also help give incentive for PIs to provide a beneficial working environment for PIs.

Response 1619

Perspectives on the postdoc roles and responsibilities

Even though it is the path to be a professor it is not accesible to everyone due to the financial burden of those that decide to pursue a postdoc. For example, delayed 401k contribution, issues on getting a house due to lack of real income and delayed family planning due to lack of resources for postdoc with families

Fundamental issues and challenges

Income is too low for someone that already has the highest degree possible. You have to decide between starting a family getting a home or continue nourishing your scientific career.

Existing NIH policies, programs, or resources

Parental benefits, real income, 401k retirement assistance.

Proven or promising external resources or approaches

No response

Response 1620

Perspectives on the postdoc roles and responsibilities

A postdoctoral position amounts to the fleecing of the next generation of scientists. Most of my former postdoc colleagues, including myself, felt like they were being devalued and dehumanized on a daily basis by the system and the PI. In most labs, the postdoc is responsible for training graduate and undergraduate students but have never actually received any formal training themselves on how to lead teams or provide constructive feedback. Postdocs are in a state of purgatory because it is abundantly clear there are very few paths to a professorship but are not allowed to receive career training from their institutions on how to transfer their skills to non-academic careers.

Fundamental issues and challenges

SALARY and LACK OF RESPECT! The quality of life for a postdoc is not much better than a graduate students because they are still struggling to cover basic necessities. There is almost a huge time drain insisted upon them by the PI to train others and keep the lab running in their absence. This causes an overwhelming amount of stress and burnout. In fact, there are lots of postdocs who will say that the stress and financial insecurity has caused them to put their family plans on hold thereby depriving them of one source of happiness. The lack of diversity in the academic ranks also is major red flag for postdocs from historically marginalized communities. Toxic work environments and lack of leadership training for academic advisors are leading causes for postdocs to jettison to industry roles. A solution would be to compensate postdoc with salaries on par with their industrial counterparts as money can and will provide security and happiness to those that have never experienced it prior to obtaining a Ph.D. It would be worthwhile to have a scoring system for grant applications that is tied to the PI’s lab or institution ranking of diversity and retention. This scoring could be obtained by requiring feedback from all of the lab’s current graduate students and postdocs to understand if funding the grant will actually help further their careers in addition to the PI’s. I’m sure if the NIH was to ensure that the feedback would not be disclosed to the PI then graduate students and postdocs would be more inclined to provide honest feedback.

Existing NIH policies, programs, or resources

You could mandate a higher salary and access to university sponsored career training and resources for postdocs for any NIH funded grants or institutions.

Proven or promising external resources or approaches

No response

Response 1621

Perspectives on the postdoc roles and responsibilities

Learning new skills or training for academia-track position.

Fundamental issues and challenges

It is exploitation. Post docs are doctors who do 4x the work for 1/4 the income. Poor pay, poor quality of life.

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

More pay. Less exploitation.

Response 1622

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a unique period of time where the trainee learns a new expertise in a new environment. Simultaneously, the academic postdoc can utilize their existing skillset to grow the host lab's scientific research in new directions, which may give a foundation for their own science in their independent career. In my perspective this is often where and when the most innovative science can emerge.

Fundamental issues and challenges

Fundamental issues include

1. competing postdoctoral positions in industry tend to be higher paid and
2. immigration barriers for international postdoctoral trainees to come to and hopefully stay in the USA.

Existing NIH policies, programs, or resources

Postdoctoral fellowships that support international trainees will ensure that we attract the best talent to come to the USA. Existing programs and resources can be expanded to ensure that the postdoctoral salary is competitive and the training enterprise remains strong. There is also often travel support for graduate students and not for postdoctoral fellows that hinders the overall ability of postdoctoral fellows to network in the scientific community and augment their CVs.

Proven or promising external resources or approaches

No response

Response 1623

Perspectives on the postdoc roles and responsibilities

An academic postdoc has a diversity of roles and responsibilities. Their contribution in advancing the research enterprise is obvious. They are highly trained and largely responsible for advances in academic researcher laboratories. The postdoctoral experience provides career opportunities and growth for the scientists to choose a career path of interest. To achieve both of these goals, the mentor and mentee need to be on the same page to manage expectations.

Fundamental issues and challenges

There are many fundamental issues. I believe the largest issue is career opportunities after postdoctoral training are somewhat limited. In some ways, graduate students are surveying the opportunities and deciding that postdoctoral training is often not necessary to pursue their career goals. We cannot flood the market with postdoctoral trainees if there's nowhere for them to go after training. Another issue of course is recruitment of talented postdoctoral opportunities when salary compensation (and benefits) is considered low relative to other opportunities. This is a double-sided issue of course, as if you increase postdoctoral salaries we could have a flood of postdocs increasing the talent pool with further diminished opportunities post training.

Existing NIH policies, programs, or resources

Over the years academic institutions have pushed the burden of supporting graduate students almost entirely on federal agencies, in this case NIH. I believe NIH needs to push back , particularly for graduate education to make institutions more responsible for those costs. There is an obvious need is to increase support for the training mission of NIH, and this training should not be delegated to individual PI grants, but instead to fellowships. A substantial expansion in NRSA individual awards could be helpful as opposed to postdoctoral slots on T32's. The NRSA application process intrinsically selects for postdocs with a genuine interest in pursuing research. Further, since they are awarded to the individual, it provides better opportunities for career engagement. These NRSA's have become very competitive and discouraging to applicants.

Additionally, the challenge with international scientist is enormous. There is tremendous global talent, and many of these postdocs are not eligible for some of the funding mechanisms. If we continue to have a loss of domestic postdoctoral candidates, we need to increase mechanisms for funding international postdocs.

Proven or promising external resources or approaches

I think this RFI is a good first step, as are the planned open forums to get different perspectives. I do not think the solution is to simple throw more salary and benefits to postdocs. These are training programs and I believe postdocs need to understand and use postdoc training time accordingly. Postdoc should not be careers. Long-term postdocs could become exploited. I do believe most of the challenges postdocs are currently encountering are not from their actual training, but rather the opportunities waiting for them after the commit there energy and time to their training. It more postdoctoral slots were linked to post-training careers, I believe much of this anxiety and dissatisfaction would be diminished.

Response 1624

Perspectives on the postdoc roles and responsibilities

Transitional period between terminal degree and independent research position, designed to provide training opportunities under conditions with adequate support from senior scientists.

Fundamental issues and challenges

Many people are choosing not to do postdoc simply because they have no desire for a career in academia, which I think is a separate issue in of itself. Most people see the hardships and life style of principle investigators, especially young investigators, and decide it is too difficult of a career track. In some cases, these individuals choose to find careers in industry because they are under the impression that a non-academic job will be more personally rewarding, and industry does not always value postdoc experience because it is seen as a way of grooming people for academia.

Overall, a stigma has developed where a postdoc is viewed as an inconvenient step on a ladder toward an academic career, and not a personally rewarding training opportunity that could provide a wide range of training geared toward many different career options.

Existing NIH policies, programs, or resources

When most extramural researchers think of NIH they think of funding opportunities. Learning to write grants is still one of the greatest barriers to an academic career. Most postdocs who receive salaries from research grants like R01 or R35 don’t feel the need to start writing grants because their PI will basically do it for them. Many people are deterred even from trying to write F or K series proposals because they find it too difficult. Even though these are very rewarding experiences in grant writing and can provide significant support, the amount of time and effort it takes to write these coupled with the length of the grant review process can be intimidating (it can take over a year to write, submit and review a proposal while a postdoc position might last only 1 or 2 years for some people).

I think if there were F and K style grants which awarded smaller amounts of money for partial salary and research support, had a more rapid/frequent review cycle (more than 3 submission deadlines per year with expedited review time) and awarded a relatively high number of applicants then young scientists would feel less intimidated and pursue these opportunities. In turn they would learn early on how rewarding the grant writing experience can be, which would encourage an academic career.

Proven or promising external resources or approaches

Maybe NIH staff attending scientific conferences could host workshops directed at postdocs specifically, giving them a chance to promote awareness of NIH resources while also providing a direct interaction with postdocs. This would be the best way to really observe individual’s opinions and experiences.

Response 1625

Perspectives on the postdoc roles and responsibilities

Postdocs are a lifeline for innovation and faculty development. They are the scientific workhorses in many labs, receiving hands-on training, generating first-author papers, and developing the skills and experience needed to transition to early career investigators.

Fundamental issues and challenges

As a T32 director I am frustrated that some of the brightest trainees emerging from our clinical training programs are not eligible for T32 (or most K-level) support because they are not citizens or green card

holders. This is a systems-level obstacle to the diversification of our workforce, and driving trainees from diverse backgrounds into clinical roles rather than investigators. These individuals often have substantial debt from their graduate or medical training. That our primary funding pathway for postdoc and early career development does not provide non-citizens support is translating into lost opportunities for all of us.

Existing NIH policies, programs, or resources

End the citizenship requirement for T32 and K-level funding. If the concern is that foreign nationals will take the training and then go back to their home country, then there need to be incentives in place to encourage US citizenship as part of postdoctoral and early career training.

Proven or promising external resources or approaches

As above.

Response 1626

Perspectives on the postdoc roles and responsibilities

My idea of a post doc is someone who is looking to go into academia and wants to have more experience/publish more papers. They seem to have equal responsibilities as graduate students and work relatively similar hours (not 9-5, on weekends, etc).

Fundamental issues and challenges

The pay is awful. Candidates just spent 4+ years barely making minimum wage and now that they have a doctorate they still are barely scraping by in most cities. Additionally, most post docs are in their prime family-building and wealth building ages. It is nearly impossible to support a family and also save for retirement, and the lack of an employee-sponsored 401k (or similar) + match is debilitating to retirement prospects. Additionally, many institutions do not even provide benefits like child care and have minimal/bad healthcare that typically does not include vision or dental. Jobs outside of academia, even if they pay the same salary, almost always offer these retirement, health, and wellbeing benefits that are a large draw for people that are typically in their 30s.

Existing NIH policies, programs, or resources

Raise the R01 amount—PIs often want to pay/compensate their post docs and grad students but have no more funds. also it is important to consider that prices of reagents and equipment have also gone up in the years since the R01 amount has changed.

Proven or promising external resources or approaches

No response

Response 1627

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are not trainees. They have completed their training, which is what the PhD represents. They are professionals, who have the developed the skills required to execute intricate, complex and deeply technical work to produce biomedical research that supports USA healthcare. They should be treated as such.

Fundamental issues and challenges

For the past 30 years inflation and wage stagnation have eroded the standard of living of those who work in academia to near poverty. This means that many postdoctoral fellows are unable to support a family or be financially responsible while earning only their full wages. Many must work second jobs to supplement their income which has the deleterious effect of distracting from their main career.

Existing NIH policies, programs, or resources

NIH salaries guidelines are an embarrassment to science. Postdocs have by definition earned an advanced degree, yet the dismal wages standards set by the NIH would leave them near poverty, barely able to afford basic housing and living standards, let alone consider the ability to begin or support families.

consider that many other professions offer far higher compensation with a mere college diploma. This dissuades any college graduates with any sense from pursuing academia, and relies heavily on the import of postdoctoral candidates from abroad.

Proven or promising external resources or approaches

If you want to attract better people, offer better wages. You could likely redirect all funding dedicated to mentoring towards salaries and be far better off.

Response 1628

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Job prospects in academics are poor for postdocs. As Chair of a basic science department, I can report that 300 applicants apply for a single, tenure-track position. This would be okay if there were alternative academic paths for postdoctoral trainees. There aren't. In my view, this is a terrible situation that represents a structural flaw in the funding system. With much funding in my area supported by R01s and R35s, there is very little incentive and in fact a disincentive to hiring a postdoc as a senior researcher in a lab. Pretty quickly, the salaries of such individuals can double if not triple that of a graduate student. Hence, there is a systemic force to pass over senior researchers in favor of graduate students, despite the fact that they can provide continuity, maturity, dependability, and wisdom to a lab, just to name a few of the traits. In my view the solution is simple. NIH needs a funding mechanism to support senior researchers—not even to pay their salary all of the time, but to reward them for achievements and idea and to agree to support them for a length of time, such as 5 years (not even with any expectation of renewing). This would i) support the research endeavor, ii) define a track that many postdocs would be happy to pursue, and iii) encourage PIs to hire and retain such individuals, especially the talented ones, with such a new financial calculus. Even if a postdoc does not pursue such a path, it renders being a postdoc more attractive, by defining another rewarding and realistic career path.

Existing NIH policies, programs, or resources

See answer above. Creating a funding mechanism for postdocs that have graduate to senior research (ideally in a lab outside of the postdoctoral training).

Proven or promising external resources or approaches

No response

Response 1629

Perspectives on the postdoc roles and responsibilities

Learning new topics do more research publish more practical papers and training

Fundamental issues and challenges

The rents are getting much higher that I can afford to live comfortably next year, the benefits and insurance and parking at my institute also are expensive. There's no clear path if my PI can apply for my green card and how she needs to proceed.

Existing NIH policies, programs, or resources

Breaking down some findings and allowing PI to use them for postdoc life quality. Having NIH policy to include that there shouldn't be a maximum salary for postdocs. My PI tried to increase my salary and the department didn't allow because of the maximum salary rule that exists in the department, however, if NIH put the word out that there shouldn't be a maximum she could've done it.

Proven or promising external resources or approaches

No response

Response 1630

Perspectives on the postdoc roles and responsibilities

With the ongoing over killing competition, there's no clear avenue for securing a job after the long training period. Therefore, people tend to leave academia to industry

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

1) Increasing postdoc salary to commensurate with the level of education specially with the ongoing inflation.
2) Limiting training to 3 years max, and establishing a clear scientific pathways for what trainees could to do after concluding training

Proven or promising external resources or approaches

Increasing research funding

Response 1631

Perspectives on the postdoc roles and responsibilities

A postdoc position is supposed to be time in your career to receive additional training in new techniques and field of research. A postdoc should be receiving mentoring specifically to increase their professional development. They can also work on developing independent research projects that they can take with them to a new position.

Fundamental issues and challenges

Many postdoc advertisements that I see list several necessary technical skills that the applicant must already have to gain the position. This means the applicant would not be receiving training in new technical skills. Fundamentally, postdoc positions have lost a lot of the training and mentoring aspects and instead are just ways for labs to hire highly skilled but cheap labor. Many postdocs are treated as staff scientists in all ways except pay. Furthermore not all career paths require a postdoc, so there is no reason for many to pursue a postdoc.

Existing NIH policies, programs, or resources

Postdocs need to be paid significantly more if they want stay competitive.

Proven or promising external resources or approaches

More money for postdocs.

Response 1632

Perspectives on the postdoc roles and responsibilities

A post doc should be energetic and working for his mentor. A postdoc relationship should be a symbiotic mentor-mentee relationship. The goals should be to develop the career of the postdoc and contribute to the work of the lab. The postdoc should be able to leave the host lab with excellent published papers and with preliminary data and a path toward a k99, R21 or R01 application. The host lab should be left with some excellent papers that represent a body of work that form a basis for new thinking. The mentor should have an almost daily, informal interaction with the post doc.

Fundamental issues and challenges

1. Low salary
2. Weak postdoc association

Existing NIH policies, programs, or resources

1. K99 grant should be in two categories 1-4 year postdoc and 5-10 year postdoc (who never got promoted or not got any grant)
2. T32 grant should be 3-5 years which give the basis for the preparation of mk99

Proven or promising external resources or approaches

NIH needs to reform its policies regarding post-docs:

1. The salaries are too low and not competitive with those in Europe.
2. The prohibition on supporting non-US citizens is a self-inflicted injury on American science. It means we turn away many talented scholars from around the world. In fact, there should be more international outreach to countries that are under-represented in American science (e.g. every single African country). This would greatly enrich the cultural and racial diversity of American science.
3. The limit of 3 years of support on T32 and F32 grants is unnecessarily rigid.

Response 1633

Perspectives on the postdoc roles and responsibilities

I think postdocs should be first getting leadership and management skills for scientific research. Second to this is training in additional scientific skills.

Fundamental issues and challenges

Leadership does not seem to care and is out of touch. We just went through a pandemic where anyone with young children really, really suffered with school closings. Leadership everywhere did not, and still does not, seem to fathom what a toll this took. Nobody lifted a finger to help young families and they still don’t seem to get how challenging this was and how much everyone in this position is exhausted, falling behind, and stressed as a result of not being able to work at normal levels. A little concern through thoughtful emails and meetings to ask what they can do would go a long way. Make grants and postdoc funding more easily extendable, eliminate paperwork, and offer increased pay and child support. Really, postdocs just want someone to express a little sympathy and show some curiosity about how to help. Show some emotional intelligence or get appropriate training on emotional intelligence. This survey is a good baby step forward.

Existing NIH policies, programs, or resources

All postdocs should have to apply for funding and be asked to do more independent work. They should supervise 1-2 people. Right now, doing a postdoc is like basically doing a 2nd PhD and postdocs do not learn any management or leadership skills. This is a HUGE problem. We need to fundamentally rethink postdocs as a position that trains in leadership, as they would get in industry. In addition: get rid of K99 awards. They basically are given to postdocs who need more training (i.e. are apparently lacking in some way) but are also viewed as the top-tier award for excellence. This is an obvious contradiction. Give out awards based on promising proposed research and previous accomplishment (and give it early in the postdoc —and make it extendable for longer). Stop this awful K99 program that rewards people who failed to get enough training in the early part of their postdoc.

Proven or promising external resources or approaches

No response

Response 1634

Perspectives on the postdoc roles and responsibilities

Transitioning from a student to a postdoc should have the goal of learning new skills and thought. Postdocs should be encouraged, but not required, to seek external funding for salary or research expenditures. Postdocs should be treated as junior faculty and not a student considering they are more similar to junior faculty than students. In this regard, postdoc responsibilities are not dissimilar from a faculty member. They should be conducting rigorous experiments, reading new literature, writing for

publication or funding, reviewing papers for journals, be involved with the institution, department, and societies, and build collaborations.

Fundamental issues and challenges

Based on the similarities to junior faculty, postdocs should be paid similarly. Most experiments are conducted by students, postdocs, and research technicians and they are payed substantially less than the principal investigator (PI). Having been a postdoc at two institutions, many PIs have no sense of their lab culture, how experiments are conducted, or how results are obtained. Moreover, postdocs are systemically stuck to be viewed as inferior or unknowledgeable. For example, postdocs can not apply for R01 grants or many institutional grants due to their position title, or opinions and positions are not valued due to "inexperience/youth". Postdocs, especially international postdocs, can be exploited to work long hours or procure data unreasonably, or face being fired for "inadequate performance". In summary, postdocs are treated as inferior, payed inadequately for their skills, and often systemically stuck to be a postdoc for many years until they become junior faculty. Alternatively, industry pays twice as much as being a postdoc and allows the postdoc to begin life. Many postdocs are not given junior faculty status until extramural funding is procured like a K-award or career development award which typically doesn't occur until their early to mid 30s. Given that most institutions do not provide matching retirement for postdocs, this presents a systemic problem for attaining wealth. While many of my peers began working and saving for retirement in their early 20s, I will not make enough to save for retirement until my mid-to-late 30s. That's almost 20 years of compounding interest and inflation that postdocs can not capitalize on because of the path they chose. Lastly, many current postdocs feel tenure is going away which means our final position as a faculty member will never be secure.

Existing NIH policies, programs, or resources

Postdocs need to be treated as faculty members. In this regard, they should be payed more. Postdocs are often payed through NIH grants which stipulates they can only make as much as the NIH pay scale from NIH grants. Anything above that must come from other funding sources. This should be removed. Nearly all PIs pay postdocs according to this scale making "shopping around" pointless. If postdocs could be paid more through NIH funding that would allow PIs to pay more to reach competitive postdocs allowing postdocs to seek better opportunities much like other job industries.

Postdocs can not apply for many grant mechanisms as they are a "trainee". This should be removed to allow postdocs to seek more funding opportunities for research and salary.

Much like other government sectors, NIH should adjust funding to meet the expense of the area. Direct costs of 250k/year goes much further in rural areas compared to urban areas. For example, Seattle/Boston-area institutions must pay their research technicians much higher than Birmingham/Dallas-area institutions.

Indirect costs should be better accounted for and redirected to help supplement bridge funding for scientists considering those indirect costs were brought in by scientists.

Proven or promising external resources or approaches

Many of these problems are systemic and compounding. While paying postdocs more is a strategy, it will take away from research dollars as well as the number of postdoctoral positions. It is only recently that the postdoc structure has been challenged so dramatically. As a result, I am not aware of many changes that have been proven to work. Even the state of Washington has developed a structure to pay postdocs more but the result of this change won't be determined for several years. I would imagine the lopsided pay structure of the administration, to the faculty, to the postdoc, to the student, will have to change.

Response 1635

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a way to augment training and expertise through the lens of what would comprise my ultimate independent research program. For example, as a graduate student I received training in nonhuman primate models. I knew at the time that I wanted my eventual research program to incorporate more rodent models to allow for more experimental manipulations, so I pursued postdoctoral research training in that area. I don't believe that postdoctoral training should be considered perfunctory in terms of getting an eventual faculty position. I believe that graduate students should

identify whether they see gaps in their training or expertise, and if they do, look for a postdoc experience that would incorporate training in those particular areas. I also view the postdoc position as a way to get more supervisory training, e.g. advising more undergraduates and technicians, as well as receiving more training in laboratory management, such as budgeting, mouse colony management, etc.

Fundamental issues and challenges

The current framework for postdoctoral training in terms of expectations, pay, is prohibitive to individuals from marginalized backgrounds. The expectation that postdoctoral training should be obtained at a different institution is an outdated concept, accessible only to those who have the means and lack of familial obligations to move geographic locations for a temporary (~5 year) position. I remained at my home institution for my postdoc because of my spouse's career, and I was frequently reminded that I would be at a disadvantage for funding because I stayed at my home institution. This is in spite of the fact that my postdoctoral training massively augmented my expertise—I went from work doing single unit recordings in awake behaving primates to performing targeted circuit manipulations in rodent models of disease. There is no reason why my training should be considered lesser than, or that I should be viewed as "being afraid of a new challenge" (which is feedback that I had been explicitly given during preparation of fellowship applications) because I made choices based not just on my own aspirations, but the needs of my family.

Even more straightforward: postdocs must be compensated more. Many graduate students I know enjoy laboratory research, but they go to industry because there is higher pay and more job security. As non-academic jobs for PhDs are gain visibility, the postdoc recruitment and retention problem will not go away until compensation can compete with those jobs. As for job security, there should be more of a permanent career track for postdocs. Knowing that there is no permanence to our jobs, no recourse if we get let go, when there are other jobs with higher pay and better job security, of course this will lead to more talented scientists leaving academia behind.

Existing NIH policies, programs, or resources

1. Higher paylines for F31 and K99/R00 fellowships
2. More career level non-K99 fellowships for longer term "senior scientist" type positions
3. Require that any PI receiving NIH funding pay their postdocs the NIH minimum—do not just make it a suggestion or something that is contingent upon an individual fellowship. This is especially critical for institutions that do not have postdoc unions. At my home institution, our postdoctoral association spent over a year trying to negotiate with the institution to set postdoc minimum pay to NIH minimums. After all that negotiation, the institution simply said no. NIH could step in here and make this a requirement
4. To that end, increase R01 budgets so that PIs have the ability to pay postdocs more
5. More transitional awards for postdocs to pursue faculty positions at their current institution. If a postdoc can develop a research program that is independent of their advisor(s) (as in the transition to independence outlined in a K99/R00), there should be no reason why they can't get a position at their current institution.

Proven or promising external resources or approaches

This has mostly been covered above—More job security, higher pay, etc.

In the case of job security, having more oversight over employment rather than the postdoc's direct supervisor would be helpful. Often times, departments have no idea which postdocs even work in which lab, and no one is keeping track of e.g. abusive advisors repeatedly letting postdocs go or otherwise mistreating them.

Response 1636

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The primary concern that is causing decreased interest in pursuing postdoctoral positions is uncompetitive pay for these positions. Many individuals spend many years in such positions in hopes of them as a launchpad to a faculty position. Following years of even lower pay as grad student, signing on to 2-5+ years of low pay as a postdoc is not a very attractive prospect. Many individuals have to put major life milestones on hold and cannot begin to save for things such as retirement until their 30s-40s due to compensation structures within the realm of academia. Altogether, this makes pursuing a postdoctoral position a financially inviable prospect for most individuals, particularly in light of the salaries available in industry positions.

Existing NIH policies, programs, or resources

There is also hesitancy around staying in academia due to the lack of faculty positions available. Some will tout the comparatively higher salaries of principal investigators/professors as making the years of low pay as a grad student and postdoc as being worth the sacrifice, but securing such a position is far from guaranteed. I am also aware of many people who are interested in remaining in academia, but many not be interested in heading a lab themselves. I believe that additional funding for staff scientist positions for PhDs would allow for upward career mobility within academia, both for those interested in moving up on the ladder prior to securing a position as a principal investigator and those who would be interested in such a position as final career goal.

Proven or promising external resources or approaches

No response

Response 1637

Perspectives on the postdoc roles and responsibilities

I think the postdoc position is a position to further strengthen your scientific resume in academia so that you can start your own lab or become faculty at an institution. The postdoc likely is proposing and managing a research project. They will likely need to teach graduate students in the lab how to operate as a scientist, and will also need to provide a high level of intellectual contribution to the lab.

Fundamental issues and challenges

Honestly the salary is an absolute laughing stock for postdoctoral trainees in academic research. Postdocs and graduate students are being abused financially. The NIH minimum is what institutions give to postdocs which is way too low. Youre asking people who served 6 additional years in a graduate school program making 30-35k a year in a city to then get paid 45k a year for another 5 years. There is no family support, benefits, healthcare etc. That barely covers food and rent. We need support and the salary is being outcompeted.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Postdocs work alot for little. They also sacrifice a large amount of time without a guarantee for a position.

Response 1638

Perspectives on the postdoc roles and responsibilities

An academic postdoc as I view it should be a constrained (1-2 year maximum) position that aims to launch a well-trained scientist into independence while establishing their niche of choice, whether that be with the goal of an academic position or not. The purpose of the postdoc should be to apply the PhD toolset to a new problem that the individual is excited about, in an environment that is well-suited to launch the individual into that project, which means the project will inevitably have some component that is shared with the lab PI’s domain expertise, though this component should be proportionally smaller than for graduate school trainees.

If postdocs were to be kept between 1-2 years in the life sciences, the limited benefits and pay might be more bearable, however this is not currently the case, as most postdocs go past 4 years. Because of this, the main 2 ways to fix the system as I see it is to shorten the length of a standard postdoc (which will require opening up positions that are non-tenure tack such as staff scientists, project managers, grant writers, etc), or to increase the funding for the current extended postdoc durations, which I view as a shorter term solution that is not sustainable in the current political climate.

Fundamental issues and challenges

Lack of structure, lack of community, low pay, minimal benefits, low job security at the end of it all (partially because they are mostly "Trained" (if you could call it that), with the default mindset of academia. Postdocs suffer from isolation and inflexibility for these reasons.

Further inhibition of recruitment are increasing industry wages along with the ability to do creative science outside of academia. The increasing administrative bloat and scarce funding (which leads to reduced racial/ethnic/gender/sex variability in science as the same privileged people are able to go to the same 8 institutions for the bulk of academic jobs) within academia.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

The whitehead institute's model for postdoc treatment is better than 99% of institutions in terms of pay, benefits, and community for its postdocs. The easiest of these to implement in other institutions is the idea that postdocs can come in as "cohorts" that can attend classes and have regular meetings of their choice, and for this to be mandatory and not opt-in, at least for a fraction of time investments. Something as easy as having to attend a number of seminars or take 1 class a year to keep their postdoc status, for example.

Response 1639

Perspectives on the postdoc roles and responsibilities

Academic postdocs are for continuing training and advancing knowledge to be able to get a job as a PI. Postdocs are integral to the productivity of a lab.

Fundamental issues and challenges

I'm a 4th year Ph.D. student and highly consider not doing a postdoc and going into industry because of the pay. As someone without a lot of external financial support and resources, the gap between academic salaries and industry salaries is becoming too large to ignore, particularly at the postdoc level. Additionally, the requirement of moving for one or more postdocs for a low salary and no relocation funding doesn't make fiscal sense to me. I didn't go into science to get rich, but I thought having an advanced degree wouldn't put me in such a financially precarious position.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1640

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral position as a way to test my independence and creativity as a scientist. For example, my ability to think of my own ideas and execute them as publishable works that will be the foundation of my own lab someday. In my field, the expected time to completion will be 4-6 years.

Fundamental issues and challenges

The most fundamental issue for me, as as woman of child-bearing age and from a low-income background (I am the first to go to college and graduate school), is getting enough income to live in the same city that I work in (Seattle, WA). Similarly aged friends from college who are not in science are buying homes and starting families. I earn just enough to survive, in part subsidized by my partner who left academia to be in industry. I am treading water: I am unable to appreciably save money for retirement, let alone a downpayment for a home. Having a family does not seem possible between my salary and work-life balance limitations. My partner meanwhile is earning 1.7x my salary and works 30 hours a week (with no weekend work). My postdoctoral training is starting to feel like a scam, given that there is no secure promise of a tenure-track academic job following my postdoc. After 12.5 years of intense schooling and training, I am wondering everyday if I should stay in our current academic system. I am starting to pivot to ensure that I have desirable skills for industry science, like computational biology skills. It makes me feel incredibly sad because I am passionate about my research and feel that it can have potential to be transformative for regenerative medicine.

Existing NIH policies, programs, or resources

I am a mid-stage postdoc asking more and more questions to principal investigators in my home department about lab budgeting and how they feel about recent strikes (e.g., in the UC system). They have to continuously write extremely competitive grants (to NIH and others) because funding amount per award has remained stagnant for decades and/or not keeping up with costs of reagents, personnel, equipment, etc. Their research dollar doesn't stretch as much as it used to. Meanwhile, our university soaks up 55.5% of each NIH grant for overhead costs, and yet they don't pay for all of the salary of my PI and keep using delay tactics on union members to prevent negotiation for a more fair working contract. It sounds like PIs will have to foot the bill for salary increases of personnel, which puts even more strain on limited grant dollars, rather than give up some of that 55.5%. I'm unsure if the NIH alone can solve this problem, but from where I'm sitting it sounds like we simply need more money per award.

Proven or promising external resources or approaches

I think the academic system in general needs to compete better with industry: more pay and fairer work-life balance. Right now, it is very costly to stay in a postdoctoral training position. It's hard to feel job satisfaction with extremely low pay while having very expert skills. Some admins around me make much more money than I do, and they don't have a Ph.D. Something is very wrong when managing paperwork pays better than doing transformative science that can create the next new disease therapy or cure.

Response 1641

Perspectives on the postdoc roles and responsibilities

Training following the PhD focused on productivity and stepping up toward an academic or research career.

Fundamental issues and challenges

Low pay. We require post-docs with engineering and computer science skills. Even if new PhDs with these skills are considering academics and research, it is hard for them to resist pay in the tech industry world that is twice or three times what is offered by a post-doc assignment. We currently need 3 post-docs and have none.

Existing NIH policies, programs, or resources

Post-doc pay scales at NIH are 20th century. If the post-doctoral training system is important to the NIH then they must keep up with the times and compete with tech and biotech industry.

Proven or promising external resources or approaches

Possibly industry partnerships that could improve the quality of a post-doc job to be attractive to someone with many options.

Response 1642

Perspectives on the postdoc roles and responsibilities

The post-doctoral period is one of additional training that should encompass: project development, independence, mentoring, and professional development.

Fundamental issues and challenges

Non-academic positions are more and more attractive. PhD students can get a job after graduate school at a starting salary on par with many tenure track Asst. Professor positions, which require at least 5 years of post-doctoral training. It used to be that students pursued academic positions to be able to pursue independent research in their own area, but the difficulties in funding make that often a dream rather than a reality. The continual grant writing and associated stresses are apparent to students, and they don't want it. Add to that the deep and ever-growing levels of administration at most universities, and the term of academic freedom is a relic of the jurassic era.

Existing NIH policies, programs, or resources

Better pay and benefits, better prospects for funding down the road. In addition, limit the amount of salary that can be charged to NIH grants so that medical schools and private research foundations can't use NIH funding to support their investigators. This would force these places to provide appropriate support to faculty, which in turn would make academia more attractive.

Proven or promising external resources or approaches

No response

Response 1643

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as additional training, a level above graduate school, to enable independence and prepare an individual to be a PI at a research institution. In the medical field, doctors go through a residency where they have increased independence and care for patients, but have oversight from an attending physician. I believe a postdoctoral position should be similar, with postdocs taking the lead on developing projects and moving ideas forward, with the guiding oversight of a mentor.

Fundamental issues and challenges

The top issue is absolutely financial. Many people leave the world of academia after obtaining a PhD because their talents are valued much more in the private sector. Why would people want to work long hours and weekends just to barely receive a living wage when they can work in an industry setting, get better benefits (like retirement contributions), nearly double the pay, and with a 40 hour work week? The NIH minimum pay for postdocs needs to be much higher, there is no way around it. It's really a simple concept, want to retain postdocs and improve their quality of life? Pay them their market value!

It also does not help that career prospect in academic settings are grim compared to the private sector. There is very little room for growth in academia, with very few tenured track positions becoming available each year. Without the clear space to move up, it is easy to feel stuck and undervalued.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1644

Perspectives on the postdoc roles and responsibilities

Almost free labor.

Fundamental issues and challenges

Low pay. Postdoc salary is unbelievably low and does not provide postdocs a living wage.

Existing NIH policies, programs, or resources

The pay structure must be reconsidered. The accountability of mentors should be measured.

Proven or promising external resources or approaches

No response

Response 1645

Perspectives on the postdoc roles and responsibilities

There are two phases of postdoctoral work; in the initial phase (lasting approximately 2 years), the postdoctoral researcher is expected to generate results and produce publications; in the second phase (lasting approximately 2 years), the postdoctoral researcher is expected to develop their own research program by mentoring students, generating preliminary data, writing grant applications, and providing service to the community (serving on committees, serving as guest editors at journals, chairing conference sessions, etc).

Fundamental issues and challenges

Non-traditional postdoctoral researchers have difficulties obtaining positions in academia at research-intensive universities, despite the potential increase to diversity within these departments. For example, I completed a first postdoctoral research fellowship in a middle-income country abroad and then transitioned to a teaching role at a university nationally. Since it has been >7 years since I graduated, I am no longer eligible for many NIH funding opportunities for postdoctoral researchers. This has led to issues with both recruitment and retention as follows—

Recruitment: During my search for a second post-doc, many faculty at R1 schools did not want to accept me into their labs due to my late-stage and perceived international status. Although I am a citizen, many PIs made assumptions about my nationality and did not want to recruit me to their labs. Furthermore, given the difficulties of completing advanced research projects in middle-income and low-income countries, using standard metrics of success (high impact publications) is not accurate. I believe this to be an issue for many international postdoctoral researchers.

Retention: Fortunately, I was able to find a postdoctoral position at a PUI. However, my current options for securing mentored funding awards are limited by NIH policies that require strong mentorship and facilities that are not always available at PUIs. Therefore, my ability to continue in my position as a postdoctoral researcher is fully dependent on my PI obtaining necessary funding. I believe this to be an issue for postdoctoral researchers across non-R1 universities.

Existing NIH policies, programs, or resources

To aid in recruitment, allowing more opportunities for international postdocs, specifically from low-income and middle-income countries, to apply for funding would increase faculty recruitment of students and postdoctoral researchers who would otherwise not have had the opportunity. Ultimately, any mentored postdoc award could be expanded to include an increase in diversity.

To aid in retention, increasing the opportunity for postdoctoral researchers from PUIs and who have spent time away from postdoctoral research would improve retention of postdocs in these two categories. Here, any mentored postdoc award could be expanded to reduce the impetus on facilities and eliminate the time-based cutoffs.

An additional note on enhancing the postdoctoral experience: I reached out to a program officer, who was dismissive and unsupportive. They indicated that there were no opportunities for my situation and ignored a request for a 15-minute conversation to identify options. Therefore, having designated personnel at the NIH that can help answer post-doc eligibility and guidance questions would greatly improve the postdoc experience with the NIH.

Proven or promising external resources or approaches

No response

Response 1646

Perspectives on the postdoc roles and responsibilities

Postdocs are highly trained workers generating primary data sources for publication, grants, and applications.

Fundamental issues and challenges

Postdocs are not trainees. They are employees that work full time hours, greater than 40 hours a week, and are being heavily exploited.

Existing NIH policies, programs, or resources

You must pay postdocs more money and provide a stable career track.

Proven or promising external resources or approaches

No response

Response 1647

Perspectives on the postdoc roles and responsibilities

Most fields in biology exist to address pressing problems. I gave up seven years of my life and accomplished a lot in that time (more than 20 publications related to my PhD thesis). I regret pursuing postdoctoral study as a means of furthering my education. I should have gone into the industry because I would have made more money and had a better life.

Fundamental issues and challenges

It was the worst choice I could have made, financially and age-wise, to pursue a postdoctoral position.

Existing NIH policies, programs, or resources

You must increase your salary. Doctoral students and postdocs are not indentured servants. They're well into their 30s, at the very least.

Proven or promising external resources or approaches

No response

Response 1648

Perspectives on the postdoc roles and responsibilities

- Gain new experience and professional development/skill acquisition in an area that relates to the PhD's area of study
- Opportunity for protected research time
- Opportunity to develop an independent line of research expertise that is complementary but distinct from the PI

Fundamental issues and challenges

- Salary. Too many talented PhD's are leaving academia for industry because the salary is too low, and not financially viable to continue on (particularly after a long PhD course of study that does not pay well).
- The NIH standard minimum salary is the standard that many locations use to set salary. It is nearly impossible to live on this salary in many cities where biomedical campuses are located, particularly for someone with a highly developed skillset.

Existing NIH policies, programs, or resources

Make the standard entry level salary $70,000. If a PI can't afford this, perhaps they should re-consider if having a post-doc in their lab is right for them.

Proven or promising external resources or approaches

No response

Response 1649

Perspectives on the postdoc roles and responsibilities

In my field, neuropsychology, post doc is required if you want to get board certified in neuropsychology; however, we are able to be licensed and can practice independently after completion of our PhD/internship if we want to forgo board certification. I view this as supplemental training and experience.

Fundamental issues and challenges

The post doc match process and low salary/salary discrepancies make it very difficult if you have a family/children. At this point, we are all in our 30's and have 10+ years of post college training. To have such a low salary at this point compared to faculty/attendings and having to put off family planning is becoming a large rate-limiting factor. Many programs are offering well above the NIH standard salaries (between $60-80k) to help correct for this, but not all programs are able or willing to increase salaries.

Existing NIH policies, programs, or resources

Increase salary or decrease time requirements (e.g., 1 year instead of 2 years for neuropsychology).

Proven or promising external resources or approaches

No response

Response 1650

Perspectives on the postdoc roles and responsibilities

A postdoctoral scientist is in his/her early scientific career. It is a learning process of how to run a lab and an opportunity for self-growth.

Fundamental issues and challenges

The pay scale is the most disheartening situation for a postdoc. With the inflation all around, the salary is still not at par. Some universities do not even pay the NIH scale. The work pressure and expectations are too high when compared to the meagre salary that is been given. This leads to lack of motivation and a stressful life.

There is a gap when a postdoc wants to transfer from academic to industry for the next phase of life. There should be more opportunities to train a postdoc for an industrial job in an academic lab environment.

Existing NIH policies, programs, or resources

Yearly trainings, more travel grants to attend international and national conferences, and payscale.

Proven or promising external resources or approaches

To ensure that the basic postdoc salaries are equal according to seniority levels across the country. All the universities should be following to pay a minimum amount that is set by NIH because even the labs get NIH grants, the postdocs are not paid the amount that is allotted to them and are deprived of their minimum rights.

Response 1651

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as training for the next step in my career, but also as a role where I can contribute from the beginning. In graduate school, classes, teaching, and basic lab training take up much of the first 1-2 years, but postdocs can be productive in their first year of training.

Fundamental issues and challenges

Being a postdoc parent is a significant challenge. Although both official policies and informal culture are improving, the default is still to assume that graduate students and postdocs have little to no family responsibilities that might impact their schedule. In my experience, the logistics of taking parental leave were not familiar to either my PI or departmental staff, which contributed to the sense that taking the leave was not expected.

Existing NIH policies, programs, or resources

The NIH childcare supplement is a great program, both to help defray the costs of childcare and to normalize being a parent in academia. I suggest that the program could be expanded by removing the requirement that the money can only be used for licensed daycare, as this is not the only way to incur costs for childcare. In my case, my husband stopped working outside the home to become a stay-at-home parent, which was associated with far greater costs than daycare, but made me ineligible to utilize the childcare supplement granted as part of my fellowship.

Proven or promising external resources or approaches

No response

Response 1652

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

We are severely underpaid—we are highly skilled scientists and the pay rate for postdocs is disrespectful and does not reflect the number of years of education/training we are expected to have for the position. Low pay affects the recruitment of postdocs (especially postdocs of color), retention of postdocs, and our overall quality of life and MUST be addressed.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1653

Perspectives on the postdoc roles and responsibilities

Postdocs are both trainees learning to transition to independence in their research career, and a productive workforce in pushing scientific projects ahead and mentoring in their supervisors' labs.

Fundamental issues and challenges

Unsustainable salaries and benefits

Mentor qualities might help with retention of postdocs, but it's a hit and miss on whether you end up in good support or not —there's no structural protection for postdocs in this regards

Existing NIH policies, programs, or resources

Increase postdoc salaries to 3x an average 1bed1bath apartment in the cities where they do their postdocs

Add matched retirement benefits

When postdocs are funded by the NIH through training grants, universities should be mandated to continue to sponsor health insurance and benefits instead of putting that burden on PIs and the postdocs themselves. It makes no sense that when a postdoc brings indirect money to the university, they lose their benefits as supposed to when they are "university's employers" paid by PI grants.

Proven or promising external resources or approaches

No response

Response 1654

Perspectives on the postdoc roles and responsibilities

I started an academic post-doc with the intention of remaining in academia as a tenure track faculty, but after three years of unsatisfactory mentorship, I have decided to leave academia. I have received inadequate training on how to become a scientific advisor, and the lack of job security contributes to an unsatisfactory and stressful work life.

Fundamental issues and challenges

I am not being paid according to the current NIH standard stipends.so as a postdoc 3 I am now making less money than a postdoc 1 who started this year. The NIH must make it compulsory that PIs should pay their mentees the current NIH standard salaries when funded directly bu NIH grants. This is an especially important issue in retention and job satisfaction of international postdocs who cannot write their own NIH training grants.

Existing NIH policies, programs, or resources

Make it compulsory to pay postdocs at the current NIH standard salary levels. It is unfair that older postdocs are being paid less than newer postdocs.

Proven or promising external resources or approaches

PIs should receive training on management and mentorship. Most PIs are good scientists but terrible mentors. They only care about their bottomline without caring about the postdoc’s career prospects or career development.

Response 1655

Perspectives on the postdoc roles and responsibilities

A post doctoral position is a good opportunity to transition from a student position (PhD) to a permanent position. It represents the opportunity to conduct independently a research project, interact with your mentor and other peers from the field. It is also a good time to be aware of all the paperwork related to administrative, financial responsibilities related to managing your own lab.

In my opinion, post doc trainees should also be responsible to train and mentor students, on short periods.

Post doctoral training represents the opportunity not only to work on your research project but also to think about career in the long term (trainings, meetings, collaborations, funding opportunities.)

Fundamental issues and challenges

The salaries offered for a post doc position are not attractive (on the NIH grids) compared to similar positions in the industry. In most places, this salary does not offer the opportunity to have a decent housing and family life. In some case, having a family life is incompatible: no guarantee for parental leave, salaries are too low to afford child care. The benefits are not attractive, especially when you considerer that many post docs also work during the week end to fulfill their work duties. Moreover, permanent positions academia are very limited.

Existing NIH policies, programs, or resources

Many funding and grants opportunities are limited to US citizens only. As academic research is an international environment, it would be worth to open these funding opportunities to everyone, regardless their citizenship. For example, none of the EU research funding is limited to EU citizens only. Moreover, international post docs already have the burden of the visa, which most of the time are only one year long, and requires to be renew every year (meaning more financial expenses).

Proven or promising external resources or approaches

No response

Response 1656

Perspectives on the postdoc roles and responsibilities

I perceive an academic postdoc as an extended traineeship—a transactional role where you are to provide your services to a heaf of a lab while they occasionally facilitate you learning new things within their realm of expertise, particularly as they pertain to benefitting the lab.

Fundamental issues and challenges

High levels of variability in expectations from heads of lab, combined with "bait-and-switch" tactics make the benefit of a postdoc position volatile. With my 2 postdoctoral mentors so far, the first one promised substantial training in their expertise then treated me as a glorified lab manager, prohibiting my participation in experiments because "nobody else is good at managerial/health and safety/administrative tasks". In addition, the constantly changing workload and leverage that mentors have in coercing postdocs to do tasks that serve only the head of lab's priorities without clearly benefitting the lab itself is start, using leverage of letters of recommendation or contract renewals to achieve these outcomes.

Existing NIH policies, programs, or resources

Some universities to not have an ombudsperson, which can make postdoc advocacy difficult, especially when the university has a vested interest (e.g., financial, prestige, etc) in the faculty member but not the postdoc. Building in explicit conflict resolution plans into F—and T-level grants would greatly benefit the trainees, as would access to an ombudsperson (or similar mediator).

Proven or promising external resources or approaches

No response

Response 1657

Perspectives on the postdoc roles and responsibilities

I view being a postdoctoral fellow as a training period to prepare for the next career step. When describing my role to friends and family outside of academia, I compare it to the "Residency" period for medical students with the caveat that postdocs are optional. From that perspective, the roles of postdocs change based the training goal for each fellow. In my case, I would like to be an independent, academic Principle Investigator. My perceived roles and responsibilities are: conducting science in a field I want to become an expert in, digging into the literature to become an expert in my targeted niche, contributing to peer reviews, assisting my mentor with grant writing, training other laboratory members, and engaging in departmental service. I view my role as a laboratory leader, and someone my mentor is training to be a successful investigator. Therefore, my role is to engage with my mentor in the manner of an apprentice on topics like lab finances, grant funding, being a good collaborator, and networking. However, not all postdocs would have these perceived roles. My labmate is a postdoc whose training goal is to gain a specific skill set prior to transitioning into industry. Thus, their role is to focus on developing and applying their specific technique and engaging in department leadership is not as critical of a training component.

Fundamental issues and challenges

Postdocs are not viewed as valuable resources. We are relatively cheap labor for the extent of expertise and contributions we make to departments. Most postdocs receive the NIH minimum salary and basic university benefits. However, my institution does not match retirement, and our peer institutions do not either. This is a fundamental example of how postdocs are viewed by universities. Full-time lab staff with less experience get this match, but it is not extended to the title of "postdoctoral fellow".

As a postdoctoral fellow at a top 10 funded university, in a department that is historically well respected, I only know 3 postdocs wanting to become faculty. This route has become exhausting due to the low opportunities for funding to transition to the next step. Many universities require independent funding to secure a position, yet opportunities for these are highly stressful and select for a specific profile of applicants. It is incredibly discouraging to see the applicants being invited for university interviews and match that many have top tier publications and K99/R00s. The productivity needed to achieve these things in the short period of time given to postdocs does not accommodate for families or disabilities.

Existing NIH policies, programs, or resources

The NIH could make it mandatory for universities to match BENEFITS as well as salary. Institutions wishing to hire postdocs must give them the same package as staff. Additionally, the NIH could extend the eligibility window for postdocs to apply for funding. The five year crunch for K99s and K22s is exhausting. I would be less stressed and more happy in my position if I had the time to develop top tier papers—and had the financial resources from my university to do this without tanking my retirement or family savings. I love the time-period of being a postdocs, but the system is designed to be highly stressful and degrading.

Proven or promising external resources or approaches

I feel confident that talking directly to postdocs and graduate students—not their universities—will reflect the sentiment of low tolerance for the high stress/low perceived value that is endemic to the current postdoc experience.

Response 1658

Perspectives on the postdoc roles and responsibilities

I personally believe a postdoc, especially in the early stages of his/her career, should be considered as a trainee, requiring minimal supervision at first. In their latest stages, postdocs can supervise junior trainees, including students and technicians. Postdocs must attend seminars, give lectures and minimal teaching, present at research conferences and meetings. Preparing manuscripts for submission, as well as writing grants is a must, especially if they plan to continue working in academia.

Fundamental issues and challenges

The fundamental issue (which has been partially addressed) in recruiting and retaining postdocs is the harsh competition with industry. Nowadays postdocs look for job security, better pays and improved work-life balance. I understand that applying a 4-hr/week schedule to postdocs does not make sense, but we need to improve their work-life balance in some way, so that they don't feel underpaid work force. Retention at academia can be achieved by providing easier career paths and facilitating the path to independence (maybe increase the number of K99/R00 awards every year?)

Existing NIH policies, programs, or resources

K99/R00 is excessively competitive as of now and the limited number of awards makes it almost impossible to achieve. Furthermore, nowadays NIH reviewers tend to consider a K99/R00 potential awardee as someone who comes from a famous institution and has published on high IF journals (e.g. Nature, Science, Cell.), which not always completely reflects the quality of the applicant (indeed, publishing on Nature often reflects the ability of the mentor, rather than the postdoc.).

Proven or promising external resources or approaches

Postdoc salaries should be adjusted based on cost of living. For example, postdocs in NY, California or Colorado should receive higher salaries. More training opportunities should be available, along with institutional (or NIH) funds to facilitate trainings.

Response 1659

Perspectives on the postdoc roles and responsibilities

I view this position as an apprenticeship. The role is to conduct independent research under the guidance of a primary mentor and a mentor team, and to develop skills required for the desired research position in academia, government or industry. This should include training in experimental protocols and bioinformatics, presentations and networking at scientific conferences, grant writing, and mentoring students. Responsibilities include publishing high quality manuscripts, working as a member of the lab, leadership within the lab and in desired scientific societies or networks, and working with the mentor to develop a career plan to achieve the desired job.

Fundamental issues and challenges

Postdoctoral fellows are dependent on NIH grants not only for salary, but also for supplies and reagents. Thus, increasing salaries without increasing the overall modular budget can hurt the postdoc in limiting

funds available for experiments, travel and publication. One fundamental issue is the limited opportunities for foreign scientists to apply for NIH grants, beyond the K99. Obtaining independent grant support can make the postdoc more competitive for the job market, and more independent in directing resources for their training. Postdocs should be able to apply for supplements that can help offset the exorbitant costs of daycare. The cost of living can also vary a great deal across different cities in the US. PhD level staff scientist positions in academia would greatly expand opportunities for postdocs wishing to continue in academia.

Existing NIH policies, programs, or resources

Expanding opportunities for foreign postdocs to apply for NIH grants would be very helpful. A mechanism to connect postdoc candidates with interests in particular fields with NIH funds scientists would also be helpful. A mechanism for postdocs to apply for travel grant support would be valuable for allowing them to attend scientific conferences and to network. NIH sponsored career fairs would allow postdocs to learn about different job opportunities and career tracks. The low NIH grant funding lines are very discouraging to both students and postdocs, and lead many students to pursue an industry position rather than academia. I think study section reviewers could use more training, and I think the R35 NIGMS mechanism for junior scientists is a great way to encourage creative, new approaches and research.

Proven or promising external resources or approaches

I think institutes and Universities could invest more in supporting postdocs including supplements for childcare and housing. I think they should also provide opportunities to supplement salaries through teaching, service on committees, peer review, editorial services, formal mentoring, workshop organization and service on thesis committees. This way the postdoc's salary would not need to be fully supported on the NIH grant, and would expand opportunities to tailor training and experiences for a specific career track. Perhaps scientific journals could pay postdocs for reviewing publications. Excessive "unpaid" labor in academia has long been a problem but is particularly difficult for postdocs who make less salary than faculty.

Response 1660

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is the path to independence and a way for a Ph.D. recipient to gain know-how to mentor, teach, and do high-impact research.

Fundamental issues and challenges

Low salary and more work hour expectations.

Job and visa insecurity

Low insurance and health care coverage for international applicants.

Academic bullying and protection of the PIs by institutions

Existing NIH policies, programs, or resources

Please enforce strict norms for a good pay grade. We are not just underpaid, we are too underpaid. Each program should enforce that if there are postdocs employed through grants, the PIs will ensure that they strictly adhere to work hours and pay the employees well. If the PIs on NIH grants are caught by whistle-blower policy bullying, their NIH grant to carry out research would be terminated. The money used to support grad students and postdocs will, however remain effective till the grant ends!

Proven or promising external resources or approaches

No response

Response 1661

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is ideally an opportunity to obtain additional training on grantsmanship, publication, and training related to research activities. I view it favorably. It would be a great opportunity to further develop my research skills and focus on publications.

Fundamental issues and challenges

The biggest barrier to me completing postdoctoral training is the low pay. I've spent the last five years on a very small monthly stipend, which only covers my mortgage (not childcare, health insurance premiums, or food). I can't afford to make half of what an assistant professor would make for 2, 3, or 4 more years, especially because my student loans will need to be paid 6 months after graduating. I also can't afford to relocate with my family, as my partner's job is located in one place. Additionally, the postdoctoral training opportunities that I've searched for are working on someone else's project, which isn't related to mine. There are not postdoctoral opportunities in my field of study. I wouldn't be able to maintain immersion in the literature while working on someone else's project. The postdoctoral opportunities I've looked at range from 2-4 years. I can't imagine working on someone else's research for 4 years just to get a faculty position.

Existing NIH policies, programs, or resources

The pay should be increased to at least $80,000 per year, but should be adjusted for the location. High cost of living areas would be challenging to live in on $80,000 a year, while $80,000 would be appropriate in low cost of living areas. Additionally, postdoctoral opportunities should allow trainees to explore their own research while also helping with other faculty projects.

Proven or promising external resources or approaches

No response

Response 1662

Perspectives on the postdoc roles and responsibilities

A postdoc should be a training position that provides the individual the opportunity of lead research projects independently at the time at the time it provides the chances to get familiar with other relevant skills required to become a Principal Investigator. Some of these additional skills are grant writing, mentorship, budget preparation, and IRB documentation.

Fundamental issues and challenges

One of the main issues on the recruitment and retention of postdoctoral candidates in academia, is that the economic compensation is not up to the assigned responsibilities and current cost of life. A postdoc salary can barely support a family, while the postdoc is expected to lead a research project, to mentor undergrad and grad students, write grants, articles, all of it at the same time it is expected for him to train to become and independent PI. In the last stages, an additional activity is to look for work positions, which is also time consuming.

The postdoc position should provide from the start a clear path of professional development. If the working environment fails to truly prepare and guide the postdoc through this transitory position into a research independence position, the postdoc will lack motivation to endure the hardships and under-compensation.

Mentors for postdocs should be regularly audited in terms of success of their mentees, drop-outs, and productivities so that toxic environments can be identified and corrected.

Existing NIH policies, programs, or resources

Expand and complement programs oriented towards the transition from postdoc to independent PI such as K99/R00 would provide the postdocs with motivation and a clear path to independence.

Proven or promising external resources or approaches

Improve salaries and benefit packs for postdocs to a level that honors the relevance of the postdoctoral position in the research enterprise, that corresponds to the stakes and responsibilities, and allow family planning.

Response 1663

Perspectives on the postdoc roles and responsibilities

I view it as time to develop a plan for an independent research career. I work in informatics and have my own datasets. This position makes me more independent than peers who are reliant on a mentor to provide them with guidance and are more tied to their lab/productivity. However the way academia is organized, the lack of a mentor doing exactly what I do feels like a setback as well.

Fundamental issues and challenges

The dichotomy between needing to be in a lab and focusing on your mentor's needs, while developing your own unique ideas and identity, seem impossible to navigate in a two year span. I do think this impacts retention significantly, and for most post-docs, increases their workload and decreases their quality of life as they essentially do two jobs at once.

Existing NIH policies, programs, or resources

More NIH-issued coursework would be appreciated since there is so much variability in T32 curriculums. I also think there are important missing conversations about how industry interacts with NIH—if NIH takes control of this narrative and teaches its trainees how to proceed in this realm, it feels like more of a symbiosis rather than a conflict of interest that impacts retention negatively.

Proven or promising external resources or approaches

No response

Response 1664

Perspectives on the postdoc roles and responsibilities

Post-Doctoral position means—learning how to manage a lab, how to write a grant or article and learning to be a PI. Nonetheless, somethings not improve in a lab where you are micromanaged, although, PI supports you for your grants and writing articles. Additionally, post-doc should be a person that could effectively run a project with minimal guidance from his/her PI. Sometimes, it is possible only when a PI and lab has enough trust on that post-doc.

Fundamental issues and challenges

Issues: Work-life balance—unable balance these two because of work load or some other profession issues including professional miscommunication with colleagues.

Salary: it is too low to spend good time with family after working for several extra hours

Recruitment and retention: because of the university rules to give one year extension, it was difficult to focus on work when the visa is coming to an end

Quality of life: I did not go to India for like 3.6 years, because visa restrictions and money issues

Existing NIH policies, programs, or resources

One thing that could be modified is—salaries for post-docs, it should be minimum reasonable amount

VISA: visa should be provided for like 5 years therefore post-doc can have chance to go to their home country and visit their family

Proven or promising external resources or approaches

Above things should help to improve this section

Response 1665

Perspectives on the postdoc roles and responsibilities

The postdoc is position that allows a researcher to pursue additional training to become more qualified for a faculty or senior scientist position. It gives one the chance to fill any training gaps, switch or merge fields, learn new techniques, pursue projects more independently, do more mentorship, learn more managerial skills, improve writing skills etc.

Fundamental issues and challenges

1. Yes, low salaries and benefits, but there's much more.
2. Poor mentorship & training.
3. Poor job prospects. Most postdocs aim for faculty positions but most of these are given to those from a very small number of universities (and typically large labs that easily put smaller labs at a disadvantage). This makes the job market incredibly competitive, and biased.
4. Overworked, as postdocs we often work multiple extra jobs, we fill-in for the busy PI, serve as lab managers, technicians, writers, mentors, etc. This generally goes unnoticed and taken for granted even though it generates poor work-life balance.

Overall, I believe the top reasons making postdocs leave academia are issues 2 and 3 above, issue 1 if a minority.

Existing NIH policies, programs, or resources

1. Increase pay and benefits—postdocs are research scientists and should be compensated as such. One option is to increase the modular R01 and perhaps to encourage institutional support.
2. PIs should be held accountable for the quality of training a postdoc receives. At the same time, PIs should be incentivized to provide good training and mentorship.
3. Provide additional funding opportunities to post-docs. For example, extend T32 and F32 eligibility/funding or provide funding opportunities that fill the gap between these and a K99/R00, or provide more transitional grants that start earlier than a K99.
4. NIH should advocate supporting professional staff, such as project/research scientists, especially in labs where the PI does not have the bandwidth to provide good training/mentorship and to cope with the limited number of faculty positions available.

Proven or promising external resources or approaches

Not really, but this article starts with a good analogy:
https://www.insidehighered.com/advice/2023/01/24/research-university-needs-professionalization-opinion

Response 1666

Perspectives on the postdoc roles and responsibilities

Necessary post-graduate training that allows focus (similar to post medical school residency) on specific projects. In the past few decades the postdoc training period has increased from 3-4 years to 6-10 years which is too long for someone to be in that position.

Fundamental issues and challenges

In order for the US to remain competitive in biomedical research, postdoc salaries should be increased 30-40% over current standards and PIs, granting agencies, institutions, etc. should encourage postdoc training to last about 4 years and after that time should transition to research scientist position with higher pay and more responsibility (ability to acquire independent funding if desired). Postdocs should have significant benefits including health care, dental care, and retirement savings programs so that time lost in training does not result in lost time accruing savings over a career.

Existing NIH policies, programs, or resources

Postdoc salary scales should be increased and grant budgets should be increased to cover those costs. For example, the standard NIH RO1 modular budget has not changed in decades and likely needs to be increased from $250,000/year to at least $350,000/year to accommodate personal salaries.

Proven or promising external resources or approaches

NIH should hold public meetings to discuss future of postdoc training. Do we want to keep training postdocs for too few academic principal investigator positions or should the training be specific to industry or academia? Would it make sense for institutions to have many more independent PIs with small labs or few PIs with very large labs? Currently, the system only rewards those with very large labs as small labs struggle to maintain funding and personnel. The funding cycle is so short that most PIs spend 50% time writing grants rather than concentrating on science and mentoring trainees which seems counter productive. This will likely squelch innovation and breakthroughs as scientists need time and freedom to explore different avenues.

Response 1667

Perspectives on the postdoc roles and responsibilities

I worked in the scientific world for most of my career (NOAA, WA State Dept of Ecology) and now have my own training company (Cathy Angell Communications). I've had the opportunity to train many Fellows around the country who work for federal and state agencies, as well as science-based non-profits. These individuals are often in positions where they need to speak to other scientists, agency staff, conference attendees, and to the public. Their presentations are often ineffective because they are modeling the way that they've seen other scientists give presentations (slides filled with bullet points, graphs that the audience may not be able to easily interpret, way too much focus on "their process" as opposed to what the audience is interested in or how they best take in information).

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

I believe that offering excellent science communication training to postdocs is critical. We live in a world with complex environmental issues (and misinformation!) that need to be clearly communicated. There are many excellent trainers in different parts of the country.

Proven or promising external resources or approaches

There are organizations and institutions made up of people who focus on clear science communication, such as the Association of Science Communicators (https://www.associationofsciencecommunicators.org) and The Science Communication Network (https://sciencecommunicationnetwork.org).

I offer training (virtually and in-person) to institutions and agencies in the United States that help scientists and public officials present their research and projects in a way that people can easily understand. I help them develop clear messages, create effective slides that keep people engaged, and present information in a way that sticks in people's brains. After one of my trainings, a graduate fellow stood up and said "If I had taken this training in graduate school, it would have changed my life." Alex Rosen, former Sea Grant Fellow working at the WA State Dept of Ecology). I think that the NIH could make a massive impact on how science is communicated by supporting science communication training for postdocs.

Thank you for the opportunity to offer feedback.

Response 1668

Perspectives on the postdoc roles and responsibilities

It seems a postdoc position is marketed as an additional training opportunity. However, as a current PhD candidate, it feels like a postdoc is a poorly paid position designed to keep cheap labor in academia. After earning the highest academic degree possible while earning minimal wages for multiple years, we are then expected to take an additional 2-3 years earning minimal pay which is not commensurate with cost of

living in many areas of the country. And a postdoc by design has no job security, so I would have to relocate for a postdoc to then have to relocate again for a job that may or may not be available when I finish postdoc training.

Fundamental issues and challenges

Low pay for someone who just earned a doctoral degree, lack of ability to direct your own line of research (i.e., moving the PI's research line forward), lack of independence, no job security or promise of a job upon completing postdoc training.

Existing NIH policies, programs, or resources

Paying postdocs what they are worth would be the first step. We are not research assistants or graduate students. We are professionals who have earned the highest academic degree and paying us to reflect that is the first change that needs to happen. Also assisting with job placements after finishing a postdoc position would help make a postdoc position more appealing.

Proven or promising external resources or approaches

Making this an opportunity that actually helps postdocs establish their own line of research rather than being cheap labor to advance the PI's research.

Response 1669

Perspectives on the postdoc roles and responsibilities

A job in academia that requires me to conduct research, analyze data, acquire funding and mentor graduate students.

Fundamental issues and challenges

Expectation of the performance of a trained professional while paying the salary of a trainee. Results in poor personal and professional quality of life.

Existing NIH policies, programs, or resources

The NIH mandated payscale for postdocs should be a minimum of 65K p.a starting.

Good institution covered health insurance and retirement benefits with institution contribution should be mandatory.

Postdocs should be allowed to be co-PIs on grants with their mentors. Several institutions do not allow this and this severely hampers a postdoc's prospects of a career in academia. True especially for international postdocs who have only the K99 as a career grant option.

Proven or promising external resources or approaches

Higher pay.

Better benefits including parental leave.

Career development opportunities like grant writing, industry collaborations, teaching opportunities etc.

Response 1670

Perspectives on the postdoc roles and responsibilities

Postdoctoral are highly skilled workers and thus, although part of an academic is training in nature, overall, postdocs are the major contributors to skilled academic research and should be compensated as such. Academic research would stall without the contributions made by postdoctoral research. Postdoctoral researchers contribute their skilled labor and are the major drivers of intellectual progress in academic labs. Postdoctoral researchers are often responsible for training junior scientists, and thus are the major contributors to future scientific endeavors, as well.

Fundamental issues and challenges

The major issue inhibiting recruitment, retention, and overall quality of life is the NIH's policies limiting the maximum postdoctoral salaries. Postdocs are highly skilled workers and deserve to be compensated as

such. As a senior graduate student considering an academic postdoc, I have chosen not to pursue an academic postdoc solely due to the lost wage potential and inability to support myself and my family in the current climate. Another major issue is the viewpoint that postdoctoral researchers are "trainees." This is a misconception that allows for the mistreatment of postdoctoral researchers under the guide of providing training opportunities.

Existing NIH policies, programs, or resources

Remove the salary maximums and allow grantees to request more funding to pay postdoctoral researchers their market value.

Proven or promising external resources or approaches

No response

Response 1671

Perspectives on the postdoc roles and responsibilities

Academic postdoc is a critical training period for people who are enthusiastic in a career as principle investigators in an academic environment or to gain experience in leading research projects and managing funding. Postdocs are also the more productive workforce in a research lab compared to other graduate and undergraduate trainees, and contribute to the research diversity of a given lab by bringing in new ideas and technologies from their graduate experience.

Fundamental issues and challenges

The low income of academic postdocs in comparison to industry research scientists with comparable experience level is a huge hurdle for choosing this career path. Postdoctoral years coincide with the phase in life when people are raising young children or purchasing homes, both of which are extremely challenging or nearly impossible with a postdoc salary, especially in cities with high living cost. As a result, postdoc career path may be only appealing to people who are enthusiastic about starting their own labs, and only feasible to those who don't have any financial pressure.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1672

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Compensation is the largest hurdle in recruiting and retaining postdocs. Especially at institutions in areas with higher costs of living, the pay is insufficient to cover living expenses. While pharma has always had it's influence in drawing from the doctoral talent pool, the growth from the tech industry has been accelerating in recent years. As our methods and techniques have advanced, we have moved away from simple linear and logistic regressions to utilizing machine learning and big data. This skill set is highly sought after in the tech sector, especially as they are beginning to recognize the value in having subject knowledge as opposed to technical knowledge. These companies provide 3-4x the compensation of a postdoc position. Coupled with the increasingly competitive funding environment, and the transitionary period that many postdocs face with considerations to starting a family, the financial burden of receiving less pay for 3-5 years in hopes of securing a faculty position become untenable. Similar to the debates that have been ongoing surrounding minimum wage, the pace at which federal agencies operate make it difficult to keep up with the rapidly changing job environment that is being offered from industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1673

Perspectives on the postdoc roles and responsibilities

I came to the US with 2 different fellowships for my postdoctoral phase to work at an Ivy league university in Boston. I am very dedicated and want to become a professor in my field and have never considered any other job. It was always my dream to have my own laboratory. A postdoctoral researcher who comes with it's own money should be able to focus on science 100% of the time to produce the best possible scientific output and ultimately improve the life and health of humans. A postdoc should be willing and able to work over 80h and not shy to go to the laboratory on weekends. It is a dedication and decision for life.

Fundamental issues and challenges

After living in Boston for 1 year with a J2 dependent (who is not getting any job because no green card) I am about to reconsider my career path which is very painful to me. The financial situation becomes unbearable which several recent articles in scientific journals clearly illustrate. Postdoc salaries get evaluated by people that are not in postdoc shoes and are unable to judge the hardship postdocs face. In particular when living in cities like Boston, San Francisco or New York city. Rent is eating up over 60% of the income and without a spouse working even going to the dentist causes existential anxiety. It is clear to me that industry positions will always be paid better than academic ones but they are currently 3-4x as high as the NIH postdoc recommendation which illustrates a severe imbalance. It is impossible to have a family since the money is clearly not even enough for 2 persons. A postdoc is highly educated (>20 years of education) and still kept at a trainee salary whereas industry appreciates postdocs as fully educated and valuable scientists. In my opinion salary is clearly and almost exclusively the reason so many postdocs leave academia. Other reasons which make up a much smaller fraction why postdocs leave is the job insecurity and flexibility that is expected leaving people in their 30's with a very insecure future. Even moving to the USA as an outsider one faces usually a broker fee, 2x rent, a security deposit and expensive visa and junk fees that have to be paid excluding many people to come. Usually PI's are not willing under any circumstances to pay a welcome bonus, any financial support or help with housing. Furthermore, foreign fellowships are getting decreased by fringe benefits from the employing institutions.

Existing NIH policies, programs, or resources

Postdoc salary pay scales have to be adapted to the living costs in the institutions place. A yearly salary of 60k will guarantee for a good life in Texas whereas in Boston or San Francisco it is below the poverty level. I personally see no other resort than the NIH forcing PI's to pay higher salaries to postdocs because almost nobody will be willing to increase by themselves. In particular in Ivy league institutions this is a big problem. Higher RO1 grants will most likely result in higher overhead fees that are not controlled at all and in some places will make up >70% of grants and it likely will improve the salaries of administratives only. (Almost every administrative at a US university gets paid significantly more than postdocs despite much lower education requirements). Allowing a maximum overhead fee for an RO1 would guarantee that the money which is intended to be spent on science can actually be used for scientific research. Foreign postdocs usually have no coverage of healthcare which when paid private is unaffordable for any foreign fellowship holders. Requirements for guaranteed healthcare that gets supplemented by labs that are funded by RO1 holders would include several foreign postdocs that are willing to come if they can afford it. Fringe benefits on fellowships should be controlled and ideally inhibited by the government. Tax treaties exist for some foreign scientists whereas some nations are excluded from such benefits. A way to allow equal access to postdoctoral positions would be NIH supported tax cuts for postdoctoral researchers to avoid financial hardship.

Proven or promising external resources or approaches

https://www.nature.com/articles/s41587-023-01656-4

https://www.science.org/content/blog-post/time-fix-trainee-salaries

Response 1674

Perspectives on the postdoc roles and responsibilities

Physicians rarely have dedicated time to participate in research during their clinical training years. Postdoctoral fellowships create an opportunity for physicians to dedicate time to research and develop a research career.

Fundamental issues and challenges

Postdoctoral research fellowship salaries are not competitive or sufficient for individuals navigating their careers with families and/or greater burden of educational loans. For instance, I am a physician researcher currently in my seventh year of postgraduate training and I do per diem clinical work, up to 70 hours per month, to ensure that I can afford rent, other living expenses, and make payments towards my educational loans (original principal balance over $300,000). This is an additional 17.5 hours per week, or 57.5 hours weekly if assuming 40-hour work week in the postdoctoral fellowship, although, hours for research are often more than 40hours/week and near 60 hours if one is productive and writing regularly. That is a nearly 80-hour work week. I am able to do this for now, but I also am single and have no dependents and associated costs to cover. In general, there are significant opportunity costs for participating in a postdoctoral research fellowship. The promise of success in research is also statistically low with few individuals receiving independent research funding to support continued careers in research. So, even if you decide to make sacrifices to participate in a postdoctoral research fellowship, you may not be able to continue in research even with the most valiant efforts and 80-hour work weeks. Thus, most people decide other careers, or research in other areas like pharmaceutical industries that can provide reasonable salaries and benefits, and the potential for advancement and continued careers in research.

Existing NIH policies, programs, or resources

1. Ensure adequate salaries and adjust to costs of living
2. Ensure adequate health insurance and other benefits (including long-term disability insurance)
3. Paid family and medical leave (my current program does not have paid family or medical leave so individuals serious about starting families are not going to complete the postdoctoral research fellowship; or if medical ailments occur then are likely to leave fellowship)
4. More funding for conferences and travel to participate in these (currently, our fellowship provides up to $1000 per year for educational and conference expenses which is not enough to even attend one conference (registration fees, travel, hotel expenses exceed $1000)
5. Create system to routinely review current postdoctoral research fellowships (even if low-resource review such as individuals submitting annual surveys anonymously to an NIH workgroup for postdoctoral fellowships)

Proven or promising external resources or approaches

Without adequate salaries and benefits, most individuals (unless from privileged backgrounds +/— adequate financial supports) will not pursue these training opportunities, no matter how passionate they are about research. So, first step is to make sure that institutions with T32 grants are actually providing reasonable salaries for trainees to live on in their respective region. This would mean less outside work and more time for research, and ultimately better quality of life for trainees. Additionally, as a current NIH LRP awardee, there are improvements that could be made to this program. The amount awarded is considered earned income, and although NIH pays the IRS federal taxes on this amount, the awardee is still responsible for the state and city taxes along with potentially moving into a higher tax bracket without the actual "earned income" to save for estimated taxes. So individuals then must come up with additional monies, i.e., work more, to even maintain the NIH LRP and balance costs. Even though this award is meant to encourage research and keep individuals from underserved backgrounds in research, it ultimately means more outside work, less time for research, and possibility of not being able to pay overall taxes in highly taxed cities. This could be changed by making it that all taxes are covered by NIH LRP OR that some of this funding is directly transferred to the awardee (not just Loan Server) so that they can save these monies for taxes from this "earned income."

Response 1675

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

For postdocs living in big metropolitan areas te cost of living is such that rent easily repetresents 50% of our net income. Salaries should be supplemented in order to decrease rent burden.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1676

Perspectives on the postdoc roles and responsibilities

I completed by postdoc several months ago, and my postdoc lasted about 2 years (in a T32 program). I saw that time as an opportunity to prepare myself to be a strong candidate for an academic tenure track career, publish my dissertation papers, work on new research, and to increase my first-authored publications. I also viewed it as a time to expand my network and refine which direction I wanted my research career to go in. I wanted to come up with my 5-to-10-year plan, and to find a niche for myself. I was able to find a postdoc specifically for underrepresented minority scientists, and I qualified because I have a long-standing disability. The post-doc experience was structured so that I would have a primary mentor, a secondary mentor, and a peer-mentor. It helped to have a lot of support, but ultimately, I felt like I was still left unprepared for securing independent funding and finding an academic position outside of the institution where I did my postdoc. There very also very limited options for faculty positions internally, and individuals with my skillset were not the priority. I worked on multiple specific-aims pages for potential funding ideas, but not seemed to be feasible for the type of funding provided to early career investigators and to facilitate the transition to a faculty position.

Fundamental issues and challenges

As a former postdoc, I think the biggest issue with NIH funded, extramural postdocs is the low stipends, and limited benefits/time-off. The stipend does not account for the differences in the cost of living across the country. The stipend doesn't go very far in places like NYC. RAs and program coordinators with only bachelors' or masters' degrees were making much more than I was with a PhD, while being part of the same research team, during my postdoc.

The postdoc was stressful, because there is a lot of uncertainty about where in the country, I would be able to find a job. There are very few openings in academia for public health social and behavioral researchers. Because of the uncertainty, low pay, and limited benefits, I couldn't afford to "start my adult life" . I had to delay having children. I had the option to extend my 2-year postdoc for at least another year, but I decided against it. Instead, I took a position in an administrative/analyst role at the NIH. While in the long run I won't get to do the type of research I wanted, I make nearly twice as much now. I was able to move, buy a house, and start a family. If the pay for the postdoc was better, and there was a higher probability of securing a permanent job in academia, I would have stayed. Staying would have been a better use of my skillset and would have been more intellectually fulfilling. If there were better funding mechanisms to transition from a postdoc to a tenure track faculty position, I would have also stayed. However, the K99/R01 mechanism is so competitive, the chance to get an award are low. I have seen colleagues rejected multiple times.

Existing NIH policies, programs, or resources

To enhance the postdoc experience, NIH needs to provider much larger stipends that are adjusted for the cost of living of the location where the postdoctoral training is taking place. There is a need for better sick leave, vacation days, and family leave benefits. Otherwise, postdoctoral fellows/scholars, especially those from low-income backgrounds, have little incentive to apply or to stay (be retained) in these postdoctoral programs. Otherwise, people with excellent training and high potential are going to leave academia. That

is why I left. There are also very few options to secure an academic tenure track position. Universities want to see that you will bring in funding, but there are very few NIH funding mechanisms that help facilitate the transition from a postdoc program in one institution to a faculty position in a different institution. The K99/R00 mechanism is super competitive and not a viable option for everyone. It can extend a postdoc longer than necessary.

There also need to be more centralized resources for helping doctoral students find postdoctoral training opportunities, especially for underrepresented scientists and individuals with disabilities. Programs should also be required to provide high quality mentorship. I am lucky that I had great mentors. I really appreciate that NIH has the T32 programs. I think it would be great if there were more T32 programs in U.S. and if the stipends were higher.

Proven or promising external resources or approaches

No response

Response 1677

Perspectives on the postdoc roles and responsibilities

To me, a postdoc means a short-term research position that provides further training in a particular field, and for individuals planning research careers in academia, government, or industry, the postdoc years can be an opportunity to develop independence, hone technical skills, and focus research interests. Postdoc is normally a bridge between completing a Ph.D. and pursuing a career in academia, but you can also do a PostDoc to gain further skills and training for other careers.

Fundamental issues and challenges

1. The National Research Service Awards (NRSA) stipend guide for specific National Institutes of Health (NIH) training programs such as T32s and F32s serves as a de facto minimum postdoc salary paid at most research institutions in the United States7. This salary scale ignores the staggering discrepancies in the cost of living in different geographical regions. For example, in a two-person employed household in Boston's Suffolk County, the annual living wage for a single individual has been estimated at $71,869 before taxes, which rises to $111,259 with one child and $148,148 with two children. These wages include only necessities such as housing, healthcare, childcare, transportation, food, and civil costs. Yet the NIH de facto postdoc stipend for someone starting a postdoc in 2022-2023 is $54,840 a year. The NIH must be aware of this issue, as it pays its own intramural postdocs more. The starting 2022-2023 salary for intramural postdocs is $57,400-$64,000.
2. Besides inadequate monetary compensation, the lack of support for childcare, housing, healthcare and matched retirement makes academic careers less sustainable for postdocs. As per the National Postdoctoral Association's institutional policy report for 2021, basic insurance plans are provided to most postdocs. However, other significant benefits such as matched retirement, tax-deferred retirement, flexible spending account, subsidized childcare and long-term disability are poor.
3. Limited job availability may discourage individuals from investing in low-paid postdoc training if the chances of obtaining full-time positions that reward this training are slim.

Existing NIH policies, programs, or resources

1. Raise postdoc salaries annually in line with inflation;
2. Revise postdoc salaries with a cost-of-living adjustment based on geographical regions; and
3. Reveal transparent policies for postdoc salaries and benefits in institutions and granting agencies.

Proven or promising external resources or approaches

1. Living wage calculation for Suffolk County, Massachusetts. Living Wage Calculator https://livingwage.mit.edu/counties/25025
2. Anonymous. Nature 600, 8 (2021).
3. Woolston, C. Nature 587, 505-508 (2020).
4. St. Jude Children's Research Hospital. Funding & benefits for postdocs. https://www.stjude.org/education-training/advanced-training/postdoctoral-fellows/fundingbenefits-for-postdocs.html

Response 1678

Perspectives on the postdoc roles and responsibilities

The post-doctoral position should serve as a way to transition from trainee to independent scientist ready to run their own lab or contribute to scientific work as a senior scientist

Fundamental issues and challenges

Postdoctoral positions are often used as a way to recruit skilled laborers at a cost which undervalues their technical and knowledge area expertise. Graduate students often won't choose postdoc positions when they can take jobs which pay them in line with their worth. In addition, the lack of job stability and uncertainty of advancement in the career means that it is less of an option. Also, many postdoc fellowships create issues financially due to the differences in taxation, and lack of full employment which often removes insurance and other benefits traditional jobs offer.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1679

Perspectives on the postdoc roles and responsibilities

There is actually very little need for American PhDs, who already have 5-7 years training, to do a post-doc for additional 'training' at all. This is especially true for those going on to industry, where the vast majority of PhDs will go. The only real reason for an academic post-doc is to get additional publications to be competitive for tenure-track positions.

The reliance on post-doctoral labor needs to be vastly reduced and replaced with long-term academic scientists. The post-doctoral positions that do exist should be reserved for PhDs looking to be academic-track researchers or faculty. The goal should be for as much autonomy and independence as possible. Faculty working closely with post-docs should be considered senior 'collaborators' not mentors. 'Mentorship' necessarily limits what the post-doc can intellectually take credit for and what projects they can take with them to future work. To allow for more independence it might be helpful for Universities to have shared lab spaces with general resources that *independent* post-docs and researchers can use for their work.

Perhaps someday in the future, it will be departments, not individual labs that will choose promising post-doc candidates, just as they would graduate students or faculty. This would mean that only the most-promising candidates are accepted, that they have the ability to move independently between labs and collaborators as they see fit, but they can have some protected time to develop their work as independent, autonomous individuals.

Fundamental issues and challenges

No one wants to be in a low-paid 'training' job all their life where they have very limited personal rights and autonomy! But, pay is actually only a fraction of the problem, as many of us love doing basic science in spite of not getting paid enough! Another major issue is that post-docs have no rights, autonomy or

system for independent review and problem-solving without severe career repercussions. Post-docs are forced to be in a powerless 'mentee' role whether they need it or not. The lab PI can determine literally everything about the personal and professional rights people in the lab have, who gets which opportunities, what sort of recommendations are written and who gets credit for what work. The tenure system further encourages this unequal dynamic as tenured professors bringing in money have the feeling they have earned the right to manage their lab however they see fit, appropriate or not. While graduate students at least have a committee to consult, post-docs have literally no one aside from their PI. It is hard for me to understand how this microcosm of feudalism can exist within a democratic country among scientists who value peer-review, debate and diverse expertise to make decisions on scientific papers, but not on people's individual rights, intellectual autonomy and careers!

Another key issue is how funding decisions are made based primarily on first-and senior authorship, which disincentivizes teamwork and collaboration, while encouraging intense interpersonal competition. This ultimately limits the quality of science that can be done, the diversity of people and ideas involved and creates a working environment that many of the most creative people are uncomfortable working in.

Existing NIH policies, programs, or resources

More high-level academic research scientists would mean higher quality work, more repeatability and people who are able to go after more difficult and involved problems rather than just low-hanging fruit, which is what I see all my new-R00 colleagues being forced to do. In order to replace the current overreliance on post-doc labor with research scientists, there need to be more funding mechanisms that are specific to this role.

Suggestions for better post-docs and more research scientists:

Replace the emphasis on 'training' with 'independence'. Move a large chunk of the postdoctoral 'training' funding (F and T) to be in the transitional K categories and create a new long-term category specifically for NON-tenure-track research scientists that tenure-track faculty are NOT allowed to apply for. Open up all of these funding mechanisms to anyone with a PhD, no post-doctoral experience required. Funding should be based on the merit of the candidate, quality of the proposal and likelihood of success. Training potential should account for only a small proportion of the K scores and *no* proportion of the non-tenure track research scores. 'Collaborators', but not 'mentors' should be required to fill experience gaps. This will encourage high quality PhDs to stay in academia without needing to be at the personal or intellectual mercy of a gatekeeper PI under the guise of unneeded mentorship.

Update what incentives are rewarded with funding. First or last authorship should not be the only names in the game; diverse, highly specialized and collaborative roles should also be highly rewarded. The PI should not automatically get senior authorship. Also, find ways to extend time limits on training awards if the PI or even scientific journals can verify that a.) a very difficult, high-impact problem was taken on or b.) extra effort was taken to verify repeatability.

Proven or promising external resources or approaches

1) STOP putting so much focus on mentoring and training. We are adults, we have had plenty of training and mentoring and this continued emphasis on training and mentoring actually exacerbates the unequal power dynamic between the post-doc and the PI. Put more focus on autonomy and independence. Post-docs should be able to apply for smaller funding opportunities that give them options—like exploring careers outside academia or switching to a new lab or topic of study.
2) Post-docs and staff-scientists need to have the right to be treated like adults, not being punished for expressing their feelings and beliefs or asserting their own personal boundaries. We need more autonomy to be self-funded, independent of a particular lab and not at the mercy of a particular lab head. The NIH or an unbiased industry partner needs to have in-place groups or mediators who have the power to influence labs, journals or even withhold funding which can help in a truly confidential, independent and unbiased way with conflict resolution and support of the personal and academic rights of research scientists, post-docs and graduate students to work in conditions that are fair, respectful and give proper credit to everyone involved in projects. Due to their own monetary interests, the Universities are not capable of providing such services.

Response 1680

Perspectives on the postdoc roles and responsibilities

It is unfortunate that doing a postdoc has become almost a prerequisite for competing successfully for an academic faculty job. The challenges of the position—uncertain length and outcome—make it such that persons who do postdoctoral fellowships are more likely to have the privilege and resources to "wait out" or "push through" until they land a job. That said, I valued the training and mentoring I got during my postdoc and ultimately it has made me a stronger researcher.

Fundamental issues and challenges

Most postdoc fellowship salaries are tied to the NIH minimums; however, there should be a cost-of-living adjustment, like the existing federal government (GS) scale. The low salaries of postdocs greatly contribute to the lack of diversity in the postdoc workforce and who is competitive for subsequent faculty jobs. The NIH should also support parental leave policies during postdoc training, including allowing grant funding to pause during parental leave.

These major issues of salary and parental leave are not unique to postdocs; they are serious issues for faculty and staff in academic environments too. However, the postdoc is by design a tenuous, temporary, and uncertain career stage, which makes these issues all the more important to improving the pipeline from PhD to postdoc to faculty.

With respect to increasing postdoc salaries, however, I recognize that increasing postdoc salaries will then often result in R-level grants being asked to cover larger portions of salary in order to hire competitive postdocs. After increasing postdoc salaries, it is imperative that the total size of R-level NIH grant budgets also be raised so that this change does not affect the "purchasing power" of the grant. It is my understanding that the grant budgets have not changed in >20 years; therefore, purchasing power of each grant has diminished substantially since then.

Existing NIH policies, programs, or resources

I have 2 suggestions:

1. Expand the number of career development awards that support postdocs (e.g., K99/R00 awards) to transition to a faculty position.
2. Expand the number of career-development awards that do not require substantial training components.

Successful K99/R00 grants seem to need to propose substantial training in new areas; however, there are fewer options for those who need

Proven or promising external resources or approaches

No response

Response 1681

Perspectives on the postdoc roles and responsibilities

To me, the academic postdoc provides an opportunity to learn a new area of your field while expanding on the skills and knowledge gained from a doctoral program. I see it as an opportunity to continue to develop as a researcher and move toward independence in achieving funding, publishing papers, and leading research. However, I have also heard from people outside academia that it is viewed as "another training position," or a "continuation of your PhD," and coupled with the relatively low pay, it can seem like a position that does not adequately value the skills and knowledge of a PhD. When comparing a short-term postdoc to a more stable position in industry or government, postdoc positions do not often seem like a logical choice.

Fundamental issues and challenges

One salient issue for me specifically is difficulty balancing personal circumstances with the demands of a postdoc. When thinking about relocating to another university for a postdoc, as is encouraged by the NIH to be competitive for funding, it is difficult to justify moving, having my partner leave their job, and find suitable housing in a new location given the current NIH postdoc salaries. The short-term, insecure nature

of a postdoc makes it difficult to consider moving during a time when we are considering having children. If there was more of a guaranteed pathway from a postdoctoral training position to a faculty position, it might make more sense to relocate, but the stress and burden of moving a family as it currently stands does not make sense. Ultimately, I have been deterred from a career in biomedical science because of a perceived inflexibility in the written policies or unwritten expectations for how a doctoral student should transition to a postdoc and then to a faculty position.

Existing NIH policies, programs, or resources

I would urge the NIH to reconsider their policies and expectations around pursuing postdoctoral training at different institutions from the candidate's doctoral institution. According to the National Science Foundation, the median age of a female PhD recipient in 2016 was 32 (https://www.nsf.gov/statistics/2018/nsf18304/report/age-at-doctorate-award-what-are-the-overall-trends-and-characteristics/characteristics-of-doctorate-recipients-sex.cfm), an age when many women consider having children. If women had the option to seek out postdoctoral training opportunities in different departments or labs at their doctoral institution and still be competitive for NIH funding, this could help address the "leaky pipeline" problem by allowing women and their spouses to have more agency over their geographical location and not have to relocate for a short-term program during a potentially stressful time of personal transition.

While I have reviewed the NIH policies on explaining reduced research productivity due to parental leave in biosketches, I wonder if there might be a better way to account for these issues without necessitating disclosure of deeply personal circumstances that may include infertility, pregnancy loss, or other similar issues. As it stands currently, women are being put in a position of having to explain why we are not equivalent to men. The policies should not make a man's career trajectory the default; rather, they should be modified to better accommodate the needs of a variety of career trajectories that take into account the unpredictability of life as a norm; not something that should be asked for as an accommodation.

Proven or promising external resources or approaches

Funding mechanisms that create a pathway from postdoc to assistant professor at the same location starting at a higher level of pay could incentivize individuals to relocate for such positions. In considering non-academic career options, the factors that stood out as selling points were: opportunities for advancement at the same company, clear policies for paid time off (including parental leave), salary potential, and remote work opportunities that would allow me to remain geographically stable. If some of those factors could be addressed through future postdoctoral funding opportunities, I believe postdoc recruitment and retention would improve.

Response 1682

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Fundamental issues leading to postdoctoral training are the extension of time to get to the post-doctoral position and funding opportunities after that. First, many graduate programs are looking for individuals with extensive training like post-bac positions or RA positions. This could be around 2-3 years time post-bach degree. Then we have the PhD, if you get in on the first applications cycle another 5-7 years. Then the first post-doc 2-6 years, followed by a potential second post-doc of 2-6 years. This means you are roughly 30 by the time you may have a permeant job and up until this time your are considered a trainee and you are not getting benefits like retirement, childcare, ect. This limits who can do a postdoc. Second, to secure funding, there are grants to help post-docs transition, however, many have age recruitments or time post-PhD. This does not align well with older individuals, individuals who take time for caretaking responsibilities, or individuals who needed to do a second post-doc to stay on and eventually go on the job hunt for a faculty position. Additionally, each of these steps will most likely require moving to a new institution. This is not feasible for everyone. THis puts trainees into debt, especially where most top-end sites are in large cities. Additionally, trainees shouldn't have to justify why the couldn't move. You can be a great scientist, and be location bound. But often, scientists are deducted points in grants for this.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1683

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a preparation step toward a career as a principal investigator or staff scientist. It is meant to expand your scientific and/or technical expertise and to develop a niche for your own independent scientific pursuits. In addition, it is a time to develop other PI skills including mentoring, grant writing, and lab management. A postdoc benefits the lab they are in by training and mentoring students and pushing forward lab projects.

Fundamental issues and challenges

Why start a postdoc when you could be making 2-3x the amount of money (+ better benefits) in industry? I've made a choice to stay in the academy because I want to become a PI at an academic institution, but this decision has come with a sacrifice that would not be possible if my partner did not make a decent salary. It is very difficult to follow the academic path without outside financial stability. how does this later impact the socioeconomic diversity of the academic system? Many postdocs are in their late 20's and early 30's—a time when many are trying to buy homes and start families. When push comes to shove, post-docs are humans who need to make enough money to support their lives and families.

Existing NIH policies, programs, or resources

NIH fellowships support some childcare expenses, these should be expanded.

Retirement benefits are generally not offered to graduate students or postdocs, meaning scientist must delay meaningful retirement saving for the first decade of their career. This is problematic.

The K99 award timeline works best for scientists who pursue projects that move quickly (prelim data available, cell-based). Longer projects (discovery, model-system based) are less likely to be completed within the 4 year timeline. More time might allow more diverse projects to get funding, which in turn will better help those scientists get academic positions.

Proven or promising external resources or approaches

No response

Response 1684

Perspectives on the postdoc roles and responsibilities

- An academic postdoc is a trained (but also in training) scientist; an established expert in a given field (that of your doctoral dissertation), but seeking to advance your scientific standing by deepening your scope within your subfield, or by shifting to a complementary subfield.
- You're an autonomous scientist, but still under the 'safety net' of an advisor/PI while you transition from graduate school to being able to support your research line independently.
- It's supposed to be a transient position during which the extra training/experience on top of your doctoral work is supposed to serve as a competitive advantage for your independent research career.

Fundamental issues and challenges

- Salary ranges are highly discrepant with job expectations and modern costs of living. Job expectations have evolved to a faculty-equivalency: expected independent/external salary support and research grants; participation in scholarly activities like peer-review/seminars/professional organizations; etc. However, salary rates are ~ 50% less than average research faculty positions. Annual updates in NIH postdoc salary ranges do not scale with education level nor economic inflation.
- The above HIGHLY influences postdoc recruitment/retention. Ironically, we are trained to be critical, rational thinkers. Yet, the current professional climate makes the pursuit of an scientific career in academic research irrational and unviable career path to support a family and future retirement.

Existing NIH policies, programs, or resources

NRSA fellowships: expand eligibility to doctoral students on track for successful dissertation defense, and expand the year limits under T/F32 funding. I submitted my first F32 application in the final semester of my doctoral program, but the fatal criticisms for my application were related to the fact I had yet to start my postdoc position upon applying. Alternatively, I was fortunate enough to be supported by a T32 fellowship at my postdoc institution. However, this creates a 'catch 22' situation where the time required to establish 'evidence' of a working relationship with my mentor is impeding on my eligibility for an F32. This dichotomy creates multiple negative implications: no incentive to be proactive and apply early; deterrence from T32 opportunities because that 'starts the clock' on your funding window; consequently, this leaves PIs to support postdocs financially in order to 'buy time' as the postdocs develops a competition NRSA application, which is counterintuitive to the 'pathway to independence' expectation of postdocs.

Proven or promising external resources or approaches

No response

Response 1685

Perspectives on the postdoc roles and responsibilities

Postdocs are the backbone of US research, the majority of which are immigrants. The way in which various institutions treat postdocs who are people in their late 20s and early 30s is frankly, horrific. Postdocs are the jack of all trades in the lab, capable of performing experiments, writing papers, writing and aiding with grants, training students, supervising PhDs and presenting research at conferences etc. At the same time we are chasing limited faculty positions, trying to define our own research area and continuing the research PIs have requested. The academic community has consistently belittled the value of postdocs in terms of salary, yet needs them to produce ground breaking data. The math simply doesn't add up. The new generation of postdocs is highly aware of the social injustices that are pervasive throughout academia and they will not stand for it. We know our value, industry jobs will pay us appropriately and recognizes our worth and provide a true HR department. Why am I not legally entitled to vacation? Why can't I afford a family? Why can't I have a pension or a quality of life similar to my peers not in academia? Why am I doing groundbreaking research on the edge of human knowledge but yet being classified as a "trainee"? When will academia and the NIH wake up? Why can we purchase equipment on the scale of $200k but I struggle to afford rent? Your "business" model is failing, and unless immediate change is made, US research will fall behind. The general stalemate between institutions and the NIH for salary increases is embarrassing and shameful. While you ponder and discuss the postdoc "crisis" has erupted. Truly this is an awakening not a crisis.

Fundamental issues and challenges

The reference of postdocs as trainees is misleading. Postdocs represent are some of the most highly educated and well trained individuals in the world, many of whom hit the ground running, making immediate impact in new labs post PhD. By characterizing them as trainees this often leaves them open to failing employment standards as they gain further "experience" reminiscent of lowly paid internships. PIs are able to have highly trained labour to produce data for grants, write papers and even edit grants whilst paying them a tupence. This role is in fact more similar to an assistant managerial role. For reference, assistant managers in fast food chains (e.g. Panda Express) on average make more than Postdocs (~$79,360/year in e.g. NYC, Glassdoor). Why are people who are pursuing fundamental questions about human life and existence not paid appropriately? We're not asking to be millionaires, but we should be

treated fairly and able to afford an acceptable quality of life. Inflation has essentially removed this for most postdocs in larger cities. Most PIs no longer perform experiments in the lab and likely haven't in years. If the current situation doesn't change you will essentially be left with a pool of middle management, incapable of actually performing the research.

Existing NIH policies, programs, or resources

Increase the salary. Reprimand PIs who don't respect postdocs (or others for that matter). Give us realistic expectations, legal entitlements, pension options, a good quality of life.

Proven or promising external resources or approaches

I implore you to look at the online discussions about this e.g., Twitter, the various nature papers describing the situation, the unionizing, the protests, the PIs who can't hire people, the money for grants not able to find people. I applaud the NIH for collecting this data with this survey and for having metrics, but if this turns out to be simply lip service you can likely say goodbye to the fantastic research the US has been known for. You don't really need this survey to be honest. The ivory tower is crumbling due to neglect of the key item which built and sustained it, postdocs. The entire system needs to be rebuilt and now is the time. Please take advantage of this moment and make real impacts on the backbone of research.

Response 1686

Perspectives on the postdoc roles and responsibilities

I've been directly told by junior faculty members and fellow postdocs that you don't do a postdoc unless you have to. You do it to gain the skills necessary to obtain your desired career. My goal is to be a staff scientist at NIH, thus I am a postdoctoral research fellow at NIH. Other than being a tenured faculty member or government employee, you don't have job security as a scientist. I worked in industry before graduate school and saw that they hired for specific projects and would promptly fire when it was completed or the project was canceled. Long-term job security is more important to me than an industry paycheck that may not be consistent, and it isn't reasonable to expect to obtain a faculty position anymore.

Fundamental issues and challenges

Students leave undergrad with tens to hundreds of thousands in student loan debt. On average, they take 2 years off before entering graduate school to be a competitive candidate for a top-tier institution (the degree alone is not enough). The avg time to degree in cell biology is over 6yrs, during which you are making enough to cover living expenses and could potentially support a family, but you must be savvy with money in order to save. People enter the postdoc at age 30, except now accruing interest on loans, making not much more than graduate students, may need/want to support a family, all while never have retirement benefits. The avg postdoc is 7yrs before obtaining a tenure-track faculty position, which are harder to obtain than ever as the number of tenure-track positions have not scaled with those obtaining PhDs, and non-tenure/adjunct positions have increased. Even if you're privileged to make it this far (had little/no student loans nor a family to support, successful graduate and postdoc careers), you are unable to financially plan for your future until your late 30s. Independently of that, native Canadian and European postdocs I know have avoided or partly regretted coming here, or try to leave if they can obtain a position outside of the US. They (somewhat colloquially) say they could be shot, have poor insurance to cover the medical expenses, and realistically have harder times starting families because pregnancy and birth are expensive, they lack social services provided by their home country for childcare, and do not have reasonable maternity leave.

The smartest people I went to graduate school with, the ones you want to be PIs leading independent research groups, went straight to industry because they couldn't afford to continue with the academic track.

Existing NIH policies, programs, or resources

1. Reduce the amount of NIH grant money spent on indirect costs, administration, and do not permit it to be used to pay student tuition. I took 4 classes in 6yrs at an R1 institution and TA'd, and my advisor still had to pay tuition.
2. Postdocs are inherently transient, therefore salary should be heavily increased as opposed to providing retirement benefits. People can then personally save more for retirement or start a family, purchase a home, pay off loans, etc.
3. Postdocs are a more valuable resource than graduate students, and staff scientists (even in academic labs) are even more valuable than postdocs because they are permanent/don't have training periods. Generate more staff scientist slots at NIH and incentivize/establish scientist roles in NIH-funded academic labs. Provide job security for people to remain in academia/government without being faculty members.
4. It is both disheartening and infuriating for postdocs to see the amount of administrative staff that support the intramural labs, and the significant difference in salary and benefits. Postdocs work incredibly hard and deserve to be paid equally.

Proven or promising external resources or approaches

It doesn't matter how "good" the environment is. If you can't afford to be a postdoc, you won't be a postdoc. It's that simple.

Response 1687

Perspectives on the postdoc roles and responsibilities

The postdoc is a time of advanced research training in which the postdoc gains experience that complements their doctoral study. The postdoc should gain more independence in directing their research and thinking of future research plans and funding. My postdoc was the most enjoyable part of my career.

Fundamental issues and challenges

Pay needs to be increased and long-term career opportunities need to be provided. The competitive academic job market discourages graduate students from even trying the academic career path. Graduate students have also been provided more extensive career training events for non-academic careers. A large percentage of our first year graduate students intend to go into consulting or venture capital at the time of matriculation.

The increasing emphasis on DEI and DEI statements in academic job applications, while encouraging to URM aspirants, probably reduces the number of white and Asian males who choose to pursue a career in academics. The net effect on postdoc numbers could be negative.

Existing NIH policies, programs, or resources

The NIH cannot increase the number of faculty positions, and that probably isn't desirable. I think the R50 program should be greatly expanded such that being a long-term research scientist becomes an attractive career option. These grants should offer generous salary ($100-$150K in current dollars) and good benefits and enable the awardee to switch labs. A funding percentage of 33% is a good objective. The awards should be competitive, but also abundant enough such that someone who stays on top of their field and publishes good work is able to have a stable career.

Proven or promising external resources or approaches

The French CNRS system is a good model, though the pay is somewhat low. They do offer stability, but their lifetime employment guarantee is probably a non-starter in the US.

Response 1688

Perspectives on the postdoc roles and responsibilities

It's a job that requires no experience that helps build skills and/or experience until you can land next much more rewarding job.

Fundamental issues and challenges

Pay is extremely low for the responsibilities and educational requirements. The training is nebulous if present at all, and amounts to day to day research equals training despite that grad school and other professional posts are the same in expectations. The experience is not unique in what it offers, but is still often required for both academic and industry research roles. Also not being paid as an employee on a W2 leads to institutional loopholes that are financially damaging to fellows who were competitive enough to secure funding. Not being on W2 changes benefits the postdoc is eligible for.

Existing NIH policies, programs, or resources

More money (like a lot more money). Pay on W2 no matter the funding source.

Proven or promising external resources or approaches

No response

Response 1689

Perspectives on the postdoc roles and responsibilities

For me, the postdoctoral position is an opportunity to continue growing in my scientific career. This provides the chance to explore other fields different from the one studied during the Ph.D. and also it can provide valuable information to see if academia is the right fit.

Fundamental issues and challenges

There are many things to improve. As an international scholar, I had a terrible experience with the department at the university and the international student office. Given that you have to do all your visa paperwork and the university is not investing in you, I felt that I was disposable and not valued by the institution. I wasn't a student but I wasn't also an employee so I had all the responsibilities required of me but none of the benefits the university grants to its students and staff. Now I am fortunate that I am in an institution that values me as a person. Not everywhere but I know that there are labs with ridiculous expectations in terms of the amount of time you have to spend in the lab. Also, the compensation for the work in some places is not reasonable for all the things a postdoc does. Yes, it is a privilege but we are also trained scientists that are providing value to the places where we work. Another issue is that there is often a conflict of interest between the advisor and the postdoc, especially in terms of what research the postdoc can use to start his or her own lab. I have witnessed how a PI was willing to take the work and grant submission from a postdoc to use it in her own research grant taking this postdoc's opportunity to start her independent career.

Existing NIH policies, programs, or resources

I'm not familiar with the policies and resources but I think that the policies are as effective as the way or method used to enforce them. I have seen many initiatives fall flat because one thing is what it is written in grants and applications and another one is what actually ends up happening.

Proven or promising external resources or approaches

I think PIs have an oversized influence on grad students and postdocs in their future careers. There are many conflicts of interest between the advisor and mentee, there should be a way to prevent this from happening. However, this approach takes time and PIs would not be willing to add one more task to the list. Another thing I have noticed is that in the totality of my scientific career, I was never taught many of the skills needed to be a PI. Being a PI is similar to being the CEO of a company minus the support and structure to build that CEO to a leadership position. This training has to start from the beginning of our training in our Ph.D. programs and it has to feel like a benefit and not a burdensome task.

Response 1690

Perspectives on the postdoc roles and responsibilities

I have trained almost 40 post-docs. The role of the mentor is to provide guidance (scientifically and personally) and to insure that the post-doc is getting the appropriate training in all aspects of science (rigor, ethics, etc.) while in training.

Fundamental issues and challenges

We are having a terribly time finding postdocs who are well trained US citizens or permanent residents. Most of these people are now going into biotech companies since they pay 2-3 times more.

A second problem is that the postdocs we are attracting are not as well-trained as in past years. This reflects a "dumbing down" of curriculum and expectations at all levels (including graduate school).

Existing NIH policies, programs, or resources

ALLOW NON-US CITIZENS TO BE ELIGIBLE FOR TRAINING PROGRAMS!

Proven or promising external resources or approaches

All of the above.

Response 1691

Perspectives on the postdoc roles and responsibilities

For me, the postdoctoral position represents an opportunity to deepen my academic and technical knowledge as a scientist by engaging in additional training, networking, and leading a scientific project. It also respresents an opportunity to gain insight into the administrative side of science (grant application, how to run a lab, how to set a minimal infrastructure for sustainable independent research) by aiding PIs on all of these duties. Finally, I also think a postdoc is an opportunity to refine transferable skills that can be useful in industry and the public sector (leadership, communication, decision-making, team work).

Fundamental issues and challenges

The fact that postdoc salaries are not being adjusted to inflation rates and local cost of living is making this stage of academic career unsustainable. I live with my spouse (who is not allowed to work on the US), and we barely make it to the end of the month. As an international recruit, I also had to lend money to move to the US, so I started my postdoc already around 8.000 dollars in debt. My wife has had to receive medical care a couple of times, and bills are so high that we need to cut down on groceries to pay for healthcare services. Because of this financial hardship, our relationship has been tense. It is no surprise that those with an offer from the industry do not think twice to leave their postdocs. Starting salaries in industry start 25.000 dollars above entry postdoc salaries, but sometimes can even double it.

Another issue is the poor prospect of career advancement. Most postdocs know it is virtually impossible to get a permanent position in the same institution where they work, so if you don't want to uproot yourself (yet again), you are forced to remain in financial hardship. For those who want to apply for professorships, the only option is to hope for an offer elsewhere in the US or the rest of the world. For those whose partners are unemployed this might be a possibility, but for those whose spouses are lucky to find a well-paid job, it is virtually impossible to follow this track. Some married postdocs will have to choose between a fair salary and their families.

Existing NIH policies, programs, or resources

I feel like a good portion of the postdoctoral community in the US is made up by international recruits, which means we are not familiarized with the NIH at all. In my particular case, this might be the first time I have read about the programs and resources (although I have been a postdoc for only 4 months). I would like to know more about these programs, but I have no knowledge or information of workshops and events by the NIH to introduce new recruits to such policies, programs and resources.

Proven or promising external resources or approaches

Postdoctoral researchers in European institutions have competitive salaries that match the reality of cost of living in local cities, on top of yearly holiday bonuses, high-quality healthcare programs and special benefits for married and with-children recruits. I think this is an effective way to make postdoctoral researchers feel valued, and would certainly favor retention and job satisfaction. I know it is not all about salaries and benefits, and that there are many other fronts for improvement. However, it is difficult to even think of more effective mentoring and training policies when the reality is that highly-trained and educated individuals in the US sometimes earn less and have fewer job benefits than any other non-qualified employee in the job in the market. If the pay scale for postdocs is not updated yearly to match inflation and cost of living, and if there are no benefits that make posdoctoral researchers feel valued,

more of us will likely migrate to industry once we have the chance because this seems to be the only way for us to have a fulfilled life as professionals. We love to do science, but we also want to live a decent and happy life.

Response 1692

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is intended to flesh out the skills and training I will need to be successful as an independent investigator. This entails development of professional networks, grant writing skills, laboratory skills, and mentorship from more senior researchers. I see it as the last year training is inherently built in and accountability for that training is held by both the postdoctoral fellow and mentor, but the goal is that the postdoc is able to move into an independent role as a next step.

Fundamental issues and challenges

Postdocs are significantly underpaid and therefore, undervalued. Often postdocs have been in training for over a decade and in places where research assistants are unionized to make a living wage, are being paid similarly, if not the same to research assistants. The low pay influences decisions about where a postdoc can live, which directly influence their quality of life. Pay also limits who can even feasibly consider taking a postdoc—individuals without familial or partner financial support cannot live on a postdoc wage alone in many large cities. On top of low pay, many postdocs require relocation, incurring moving costs that can easily be upwards of $10,000 for securing a apartment alone in a major city.

Existing NIH policies, programs, or resources

Raising the postdoc minimum salary to reflect a living wage, with cost of living adjustments based on location.

Proven or promising external resources or approaches

No response

Response 1693

Perspectives on the postdoc roles and responsibilities

Postdocs SHOULD be short-to-medium range positions which provide opportunity for additional training to individuals who are pursuing careers in science. This training can include things like research specific techniques or skills (wet lab, assaying, data analyses, etc), mentoring, grant writing, manuscript publication, teaching, and more. In addition, they should provide space for these individuals to build a foundational body of work to showcase their expertise and success in a given area to future employers.

Fundamental issues and challenges

Postdocs are the most abused, underappreciated, and discarded group of humans in science. The pay is terrible, especially when you consider all of the jobs that become available with a PhD. Many of the PIs who hire postdocs do not view it as a training opportunity, but rather a cheap source of expert labor to run their labs, train their other members, churn out papers, and do the majority of work without any tangible compensation. They abuse a power dynamic wherein their letters of rec and publications are the difference makers in a postdocs future career. International postdocs are even more frequently abused, being subject to immigration and work laws that tie their livelihoods even more pervasively to their PIs. This doesn't even cover the disgusting gender dynamics that force female postdocs who are frequently forced to choose between careers and families, the rampant racism against scientists of color, and other social dynamics that have kept old white men in positions of power well past ages of retirement. I honestly cannot think of a worse working structure for a group of highly educated individuals anywhere else in the world. It's laughable that the NIH even needs this survey to understand why postdocs are leaving and implies a certain willful ignorance if the PIs collecting this data are so shocked that a group of people are finally tired of being used and discarded, leaving positions with horrible mental health. As a former postdoc at the NIH who left because of a horrible PI, I tried to affect change by using the on-campus resources for support. But the position of a PI is so unassailable, that nothing changed. I hope PIs learn to live without postdocs, because they don't deserve them.

Existing NIH policies, programs, or resources

1. Pay more so that people can have a real living wage
2. Bolster the reporting and accountability resources so that PIs don't have such an insurmountable advantage when it comes to reporting problematic behavior

Proven or promising external resources or approaches

It's interesting that you ask for "proven" or "promising" external resources or approaches because it provides an easy way to dismiss ideas when you finally aggregate this feedback since it may not meet that high threshold. Especially because in science, things are almost never "proven".

Response 1694

Perspectives on the postdoc roles and responsibilities

The postdoc should be a time to explore and expand your scientific interests, picking up new skills while developing your research program. It's also a time to create collaborations, finish up remaining projects from graduate school, and define future career goals/trajectory.

Fundamental issues and challenges

I had a "prestigious" federal postdoc fellowship that paid the NIH minimum salary (54k in 2021). This fellowship didn't include funds for a raise or any benefits (healthcare, retirement, moving, etc) since you could either use the budget for research or benefits since the provided amount was also too low to do both. I did successfully win another grant to help offset research costs for a field season, but still do not have funds to extract or sequence my samples, resulting in a research bottleneck. I also paid out of thousands of dollars out of pocket to move to and from my postdoc institution, resulting in a large amount of credit card debt since both my graduate stipend and postdoc stipend barely covered the cost of living, even in low cost of living cities. As a women of color, I had to move to another city and establish new community in a department that largely didn't know (or care, frankly) that I had even joined it, and found the lack of racial and gender equity in the postdoc population jarring. Further, because I was independently funded, my PI was much more absent in helping me develop a feasible project using the new skills I was developing. While I would have loved to stay in research longer, when the opportunity for a permanent job at a livable wage emerged, I needed to take it for the sake of my financial and future familial wellbeing.

Existing NIH policies, programs, or resources

The NIH needs to significantly raise stipends at both the graduate student and postdoctoral levels, as well as provide supplemental funds for research and benefits. They should also hold universities more accountable for the treatment of postdoc trainees, as it's a very vulnerable early career position to be in if you're funded by your PI and/or an international student. At the minimum, having NIH staff to consult on taxes would be incredibly helpful, as NSF would never speak to us about how and what to characterize ourselves as.

Proven or promising external resources or approaches

The National Postdoctoral Association may have some resources, but I relied most heavily on the WoCinEEB slack community since it provided opportunities for peer mentoring.

Response 1695

Perspectives on the postdoc roles and responsibilities

Postdocs are purported to be a training position in which a recent graduate can learn new skills, apply for grants, and grow into their own as a full fledged researcher. What it has come to actually mean is a stagnating position you take when you can't get anything, yet are expected to work as a fully functional scientist with little to no actual training provided. For this "honor", you are paid basically nothing when industry pays twice as much and provides better benefits and better work life balance.

Fundamental issues and challenges

The pay is too low. In order for an academic post-doc to be competitive with jobs on the market today, they must offer pay equivalent to a Scientist 1-2 in industry, i.e. $75,000-125,000 depending on location. Yearly cost of living increases that keep up with inflation need to be provided. Better health insurance and 401k offerings must be provided. Wages must be taxed using a normal W2 so that people do not need to file quarterly taxes. There needs to be a clear path to promotion and the creation and highlighting of staff scientist positions commensurate with experience and equivalent industry level created.

Existing NIH policies, programs, or resources

The NIH pay rate and job benefits. People do not take post-docs because they get better jobs in industry. It is that simple.

Proven or promising external resources or approaches

Provide more money

Response 1696

Perspectives on the postdoc roles and responsibilities

I see the position as a way to become familiar with more aspects of my research interests, be it learning new practical skills for conducting experiments, or being introduced to new perspectives from which to view approach research questions. I also see it as an opportunity to explore my interests outside of my core expertise. Responsibilities should include, but not be limited to assisting with ongoing projects in the host lab, exploring novel directions for the lab which align with personal interests, and mentoring graduate students. In this context, authoring papers is expected, but I feel the focus on this aspect of science is detrimental to creativity and mental health of everyone involved. Therefore, I believe it is important to maintain a balance between producing quality research and fostering a healthy work environment.

Fundamental issues and challenges

Salary is by far the biggest issue inhibiting recruitment, retention and overall quality of life, amongst my peers, there is not a single individual who would disagree with that. It is also incredibly obvious from online discourse (i.e. on Twitter). Many studies point towards the inadequacy of a postdoc salary to maintain a reasonable standard of living, especially in areas with higher cost of living (e.g. New York, Bay area, etc.). Let us not even compare against many peers of postdoctoral researchers (calling them trainees is nothing short of degrading) who work in industry and receive significantly higher salary. I can accept that a for-profit industrial company is able to pay their employees more than an academic institution can pay a postdoc, but there is a limit to how little you can pay highly skilled workers who can see that they would be paid much more elsewhere.

In addition, many work environments in academia are far from healthy, with lab heads who have disproportionate power over ones career and oftentimes zero guardrails from the institution to ensure they do not actively exploit the researchers working in their labs. The concept of work-life-balance is nigh non-existent in some labs where working late hours and on weekends is expected, which only rubs salt into an already painful wound of being woefully underpaid.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1697

Perspectives on the postdoc roles and responsibilities

Postdoctoral position, to me, means independently investigating scientific topics of interest with the added benefit of an experienced mentor.

Fundamental issues and challenges

The primary challenge, time and again, is salary. PostDoc's are highly trained individuals whom have completed demanding PhD programs yet PostDoc's on average are paid ~55K$. This pay is absolutely insulting and it feels as though it is surrounded by an attitude that boils down to, "it was like this for me so it is fine that it remains this way." In most major cities this amount of pay is hovering around, or below, the poverty line. Individuals who are PostDocing are also thinking about other important things such as starting a family, trying to buy property, or in general, surviving life in an expensive city without falling into deep depression. The salary is pathetic and reflects a lack of value for postdocs that is absolutley inappropriate. The job itself is general very time consuming and you become responsible for more than just yourself as you find yourself mentoring other students, graduate students, or technicians while barely being able to scrape enough money together to afford rent, especially if god forbid you decide at an age of 30+ it may be time to love alone like an adult. This is a major, glaring issue with the academic post-doc system that if not addressed in a significant way will lead to a significant downturn in academic seeking professionals.

Existing NIH policies, programs, or resources

Provide more insight into how to run a lab independently, how to juggle grant writing with research, and how to tailor grants to increase your chances of success when applying. In addition to this, there should be programs to show postdocs and other academics what it would mean to transition to industry and what that world looks like. The overall ecosystem varies greatly based on which lab you are a part of but there should also be systems in place to be able to safely negotiate salaries both with your advisor and with the NIH as most institutions follow NIH guidelines for PostDoc pay. Lastly, there should be direct communication from the NIH to postdocs about their salaries and how they are able to live, in general, you would be surprised at how many postdocs are severely depressed because they cannot have flexible income.

Proven or promising external resources or approaches

No response

Response 1698

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is an opportunity for scholars to push themselves beyond the topics and techniques that they pursued in graduate education. For those interested in staying in academia, it's commonly regarded as the last non-independent phase of career training before establishing one's own research program. For these individuals, this position should involve getting prepared for/going on the job market, completing research projects, growing a network of mentors and peers, and gaining skills in mentorship and communication.

Fundamental issues and challenges

Postdocs are the forgotten group. There is rarely infrastructure for their personal and professional development like there is for graduate/faculty cohorts, and they are severely underpaid for their level of education and specialized training. International postdocs face further challenges like retaining their visas and living abroad without support networks. Many departments do not provide opportunities for postdocs to give departmental seminars/colloquia, and there are fewer funding opportunities and awards available compared to career stages that come before and after the postdoc period. Further, universities frequently punish postdocs that bring in their own external funding by cutting staff benefits such as health insurance, retirement funds, pay raises, etc.

Existing NIH policies, programs, or resources

NIH grants and fellowships for postdocs should entail stipulations that preclude universities from classifying recipients as anything other than how other postdocs are employed and compensated. This would help keep postdocs from being financially punished for their awards. Further, the extramural NIH minimum pay scale is routinely used by universities to justify under compensation, even when PIs want to increase postdoc salaries. The NIH should raise these minimums and standardize intramural/extramural salaries, especially in light of inflation and the exorbitant costs of living in many metropolitan locations across the US.

Proven or promising external resources or approaches

https://www.nature.com/nature-index/news-blog/how-institutions-can-better-support-their-postdoc-fellows

URM postdocs are disproportionately impacted by challenges in the pursuit of an academic career. Provide additional funding for networking opportunities, workshops, and resources that will enable them to succeed in academic spaces. Provide funding for PIs to undergo mentorship training specific to retaining and supporting their vulnerable postdocs.

Response 1699

Perspectives on the postdoc roles and responsibilities

Primary role should be individual training, and developing additional skills to be a successful independent scientist, regardless of the next career decision. The postdoctoral position means to me that this is a temporary position to benefit further training, be that a new system or field. The postdoctoral position should be independent, yet an advanced position in the lab and as such should be regarded as a competitive position with pay and benefits that reflect that. Similar to a senior scientist.

Fundamental issues and challenges

The main challenge for recruitment is the pay scale. Postdoctoral trainees often have between 5-10 if not more years of relevant laboratory experience. The current pay scale is very difficult to live off of with most city's cost of living. Further, there are no competitive incentives to take this career trajectory. Personally, I spent several thousand dollars just in moving and relocation costs, that I was told would not be covered. This bankrupted me prior to beginning this job. Further, this is a temporary position, and as such is unstable. It's difficult to invest in one's future if you don't know what jobs will be available in 3-5 years. The academic job market is not built to retain postdocs. It's difficult to invest and succeed with minimal pay, minimal PTO, limited healthcare, unaffordable parking, etc.; thus, the quality of life is poor compared with other jobs available. We are highly skilled individuals, and a position of a postdoctoral trainee does not offer enough value.

Existing NIH policies, programs, or resources

NIH postdoctoral payscale needs to be modified and increased to be competitive with industry positions, and to be a livable wage (ideally beyond a livable wage).

Proven or promising external resources or approaches

Training for research careers beyond academia. NIH has a good set of webinars and resources in place already. But people are not going to be recruited or retained as a postdoc under the illusion that there is an academic faculty position available to them.

Response 1700

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is typically viewed as training for subsequently assuming an independent research role in a variety of settings. While this is often accomplished by a good postdoc position, there are multiple competing demands placed upon the postdoctoral fellow's time and energy. The postdoc is typically responsible for doing the majority of the manual labor for a key portion of their mentor's research agenda. They are frequently tasked with orientation and training of other trainees, from junior postdocs all the way down to visiting high school students. Ultimately, the postdoc needs to publish high-impact research in order to be successful. If this does not occur after the first postdoc, further postdoc positions may be required before a transition to independence is possible, if at all.

Fundamental issues and challenges

The most important fundamental issue facing postdoctoral fellows is the difficulty obtaining independent research funding at the transition point to independence. The impact of this is even more severe than the obviously dire paylines would suggest, due to the deterrent effect: even those having success in their postdocs may be intimidated by a payline at the 89th percentile, and doubt their likelihood of success. Rising student loan debt and costs of living are not met by existing postdoc salaries, and while the LRP is

helpful, it too is competitive. Moreover, graduate school and postdoctoral fellowships are very stressful, taking a toll on physical and mental health, and often exacting a toll on fellows' personal lives and relationships. To be faced with equivalent or greater stressors at the transition to independence often seems to be too great a burden to shoulder. Faced with uncertain prospects in academia, and often having been personally witness to the travails of junior faculty at their institutions, it is not surprising that less perilous roles in industry or other private sector employers have significant appeal.

It should also be noted that the scarce funding climate creates perverse incentives regarding the choice of research agendas and areas of investigation. While many individuals go into science intending to break new ground on a pioneering area of investigation, they are quickly taught by participation in the grants process that this is no way to get funding. Any truly innovative idea is sure to be identified by at least one reviewer as "unlikely to succeed". While some disillusionment is inevitable with increasing familiarity with any endeavor, this has attained to high levels in science, and is discouraging to postdocs.

Existing NIH policies, programs, or resources

The scarce funding climate drives trainees to seek roles with the most prominent investigator they can find, in order to better their own likelihood of impactful publication and subsequent funding. Junior investigators therefore suffer from a dearth of good postdoc applicants. This dynamic also functions at the level of the institution, with smaller institutions struggling to recruit trainees, and larger institutions finding themselves awash in highly qualified individuals. For the latter, this feeds a perception of abundance even as the wider scientific labor market is in disarray. Postdocs themselves are aware of this dynamic, and may feel that they cannot be successful if they do not land a job at a "top" institution. NIH policies should be amended to avoid overconcentration of grant funding at institutions that already enjoy hundreds of millions of dollars of annual funding, and encourage new centers of expertise at other research-oriented institutions. NIH should cast a skeptical eye on the multiple concurrent R01s often held by senior investigators, as these same investigators often have access to funding through other avenues by virtue of their prominence, such as industry, private benefactors, university foundations, and intellectual property.

Proven or promising external resources or approaches

There is an increasing perception of the scientific workforce as a pyramid scheme: the actual work is mostly done by trainees, only a fraction of which will ultimately attain the role they are ostensibly training for. Accordingly, there should be increasing appreciation and funding for the technical scientific workforce, including an expansion of career pathway technical roles and staff scientists. The NIH must ensure that fellow stipends keep pace with costs of living and student loan burdens. And most importantly, there has to be a light at the end of the tunnel: if the only reward for years of relentless labor is a tenuous junior faculty role with poor likelihood of funding and success, then there will continue to be a withdrawal from this line of training, to the detriment of the scientific endeavor generally.

Response 1701

Perspectives on the postdoc roles and responsibilities

I decided to enter a postdoctoral research position in a top-ranked medical research institution following graduate school. I saw this position as an opportunity to learn additional research skills, improve my grant writing, and most importantly begin working on several projects I began developing while finishing graduate school. Initially I believed a postdoctoral position was the next natural step in becoming an independent research scientist. I was excited to begin working on independent projects after receiving great feedback from graduate mentors and my current postdoc mentor. I am fortunate to have a wonderful mentor (PI) and a supportive research environment. If I continue within my current position I am confident I will make notable contributions within my field of expertise. Additionally, I have been told for many years that a postdoc position may afford me the opportunity to eventually become an independent scientist. As part of my training I have also begun mentoring undergraduate students. However, after working as a postdoc for ~1 year I am developing serious reservations about eventual career progression. I have noted that many postdocs at my institution have been at the postdoc level for 7+ years without securing a tenure track position despite having excellent publication and grant funding records. Although I am fortunate to have found an excellent mentor at a top-ranked institution and my research is progressing, I will not be able to continue as a postdoc for the number of years it takes to find a full-time academic position.

Fundamental issues and challenges

I believe the NIH has failed to make postdoctoral positions competitive and therefore recruitment and retention has suffered. I know a number of doctoral level scientists that obtained significant funding and high-level publications during their time in graduate school. Most have now left academic institutions and obtained industry positions following graduate school, or after a year of postdoctoral training. The primary drivers of this decision is tied to financial and quality of life issues. These issues are why I will not be able to stay in an academic postdoc for much longer. To be within commuting distance of my institution I must live in a high cost-of-living area. Yet, I am paid one-third of what my industry salary would be given my skill-set.The fact that in 2023 the NIH starts T32 postdocs at $55,224 is disgusting. The stipend provided by NIH is simply not livable and is so far from competitive it is disturbing. I, like most graduate students and postdoc, am a hard worker. I understand that there will be some long days. However, to remain competitive in my field I often work 10+ hour days and will do so without complaint. When I break down my salary per-hour I make less now than what I made as a full-time research assistant PRIOR to entering graduate school. Obviously the financial constraints have negatively impacted my quality of life. It is difficult to see other scientists who left for industry positions progress in non-career areas of their life when you are unable to because of your salary (i.e. unable to purchase car, a home, save for retirement, etc.).

Existing NIH policies, programs, or resources

To enhance the postdoctoral and academic research training ecosystem I believe it is imperative for NIH to increase stipends. This will encourage talented scientists to remain in the academic pipeline. Furthermore, it will help scientists from more humble financial backgrounds remain in the academic field. I have begun to notice that several postdoc researchers at my institution who have been able to remain in the academic 'waiting room' while they search for tenure track positions, have a significant other or other family member(s) that provides significant financial support. This is especially true of women I am working with that have small children. My research institution has no onsite or subsidized childcare. Therefore postdoc parents must somehow pay out of pocket for childcare. This is next to impossible in a high cost-of-living area. NIH should work with academic institutions to ensure there are childcare options for their researchers.

Proven or promising external resources or approaches

I believe NIH should better monitor the use of postdoc positions on research grants at academic institutions. Although I am fortunate to have a supportive mentor who is interested in advancing my career, I have seen other PIs at my academic institution treat postdocs like lab techs. For example, while researching postdoc labs in graduate school I noticed that many PI's had long lists of requirements you must have prior to applying for a postdoc position in their lab. I suppose this is to ensure the postdoc could begin working on current projects immediately. Many requirements included newer and difficult techniques (i.e. in vivo miniscope imaging during awake-behaving animal behavior). For this reason I was not able to even apply to several labs that I initially thought would be a good scientific fit given my research interests. I can understand if PI's want a few select working lab skills when hiring a new postdoc but this is still considered a training position. If someone must know all possible techniques before entering a lab what part of the position is training? I believe these PI's should instead be required to hire research scientists using their NIH funding. This would enhance the overall postdoc environment by ensuring that PIs actually provide training and input into a postdocs career, instead of just using them as over-educated and under paid lab technicians.

Response 1702

Perspectives on the postdoc roles and responsibilities

A post-doc typically has two roles, one is to apply the skills (conducting research, publishing etc) learned from their PhD to a new area. The other is to learn additional skills (preparing grants, managing people) that prepares them for an independent research career.

Fundamental issues and challenges

Post-Doc is an inherently unstable position. It is typically an annual contract in which it might be continued or not. This lack of stability means that some people might have to switch positions more frequently at the whim of funding.

Existing NIH policies, programs, or resources

Funding such as the K99/R00 is the only clear path which guarantees that a post-doc will become a faculty member. It ensures that an individual has some monetary investment that encourages departments to invest in a candidate and minimizes the perceived risk of a hire. Even other career awards (K01, K08 etc.) does not guarantee that an institution will offer a tenure-track faculty position and startup package. NIH should offer more K99/R00s. There should also be more opportunities of funding for international post-docs—especially the ones that train in the US for their PhD. And more opportunities for supplements to add a post-doc to a grant and would provide protected time for the post doc to develop their own direction separate from their PI's funding.

Proven or promising external resources or approaches

Frequent evaluation and re-evaluation of programs is important. Examination of the success rates of individuals from programs (k99, F32 etc) helps support the ones that are most important to invest in. They also help to indicate to departments which programs are more likely to generate a successful candidate.

Response 1703

Perspectives on the postdoc roles and responsibilities

A postdoctoral training in academia is a period where we prepare ourselves to become leaders of tomorrow. It is a transition period where our potentials grow exponentially and where we start to observe the significance of our role in our society and environment. It is a period where we make important decisions for our own personal and professional life.

Fundamental issues and challenges

The fundamental issues are numerous. The biggest challenge is poor fundings/low salary. NIH minimal bracket should be increased to pay well the postdocs they deserve. Many institutions just follow NIH's minimal salary wage and treat postdocs at a level way below administrative staff. The administrative staff (with Bachelor's degrees) make more salary than postdocs. At academic cancer centers, postdocs are treated inferior to clinicians (residents/fellows), so as the salary is different. The salary should be well enough for postdocs to have a comfortable living, who have dedicated their life to many years of school to make a difference in the society. The salary should be enough that postdocs need not worry what food they can afford, what they cannot afford, whether they can have babies, whether they can afford to buy a car etc.

Existing NIH policies, programs, or resources

The current system seems like the graduate schools are producing PhDs for industries, the retention rate in academia upon graduation is low. Should increase overall fundings, salary, etc

Proven or promising external resources or approaches

improving postdoctoral recruitment, training, working environment, mentoring, job satisfaction—these should all be improved.

Response 1704

Perspectives on the postdoc roles and responsibilities

Postdocs are supposed to be a time to be trained in a new skill set and potentially transition into an academic position if desired.

Fundamental issues and challenges

Postdocs typically start having families and want to buy a house around this time of life, but aren't paid enough to do that. Publishing in reputable journals is so difficult. It takes an immense amount of time and data and that process in itself can take years, leading postdocs to burn out. With a CNS paper, you are mostly doomed if you want to enter academia.

Existing NIH policies, programs, or resources

Postdocs should not be penalized if they are postdocs longer than 4-5 years. There should not be time limits on when you can apply for career transition grants. If you are trying to publish in a high quality journal, it often takes more than 5 years to do that. We need more resources, not less. Also, we need underrepresented-specific fellowships. It is not an even playing field so URMs need more help in boosting their chances for success. Also, grants proposals should be blinded. Given what we know about implicit bias, it is ridiculous that there is no effort to blind reviewers.

Proven or promising external resources or approaches

No response

Response 1705

Perspectives on the postdoc roles and responsibilities

Complete freedom to perform reproducible and exciting biomedical science. Allow for training in new technology, further the ability to write and present scientific data in a rigorous manner.
Independent of the needs of administrative tasks (or very limited) as to allow for the highest level of creativity.
Increase confidence in all aspects of science (as well as a person) to one can be successful in the next career.

Fundamental issues and challenges

salary—many PhD students feel the need to make quickly a higher salary often to pay down student loan debt.

They also see the long hours and struggle of academia in their advisors.

Existing NIH policies, programs, or resources

NIH needs to start to fund R01s and R35 at levels that are requested and allow to pay for salaries that postdocs need to feel confident to succeed. Any NIH R01 is cut by 20+% automatically reducing the salaries that can be paid. The module needs to be $50k and not $25k as it was in 1998!

NIGMS R35 need to be much larger and not require 50% commitment, which basically requires 50% of the funds of an NIGMS grant being spend on the faculty salary and not allowing for high quality postdoc and graduate student salaries. The NIH needs to stop supporting the universities but rather the faculty that perform the training of the future biomedical workforce in the US.

Proven or promising external resources or approaches

Provide large enough NIH grant that allow for $75-90k postdoc salaries; make the size of NIH grants large enough to allow for postdocs to attend meetings and to allow to pay for supplies and facilities. This will dramatically increase training and job satisfaction and provide plenty of mentoring opportunity.

Response 1706

Perspectives on the postdoc roles and responsibilities

This role has changed over the years. It is my opinion that a postdoctoral fellowship position is a time for a talented scientist to hone their skills to a state-of-the-art level, absorb knowledge and wisdom from their mentors, and learn how to be productive, impactful, and do so in an efficient manner. Self-aware during this career stage then enables the individual to chose a life of science that best suits their scientific skills and career goals whether they be in an academic, industrial, a government lab, and/or in some other area of science.

Fundamental issues and challenges

Career paths in Academics alone, as the only choice, have long past and funding agencies have to let this idea go. Secondly, limiting funding to only Green Card holders and U.S. citizens is short cited and severely limits finding the scientists who are most true to the above roles. Thirdly, career development beyond postdoctoral positions should be something that scientists are trained to do from an early stage in their career versus planning to "land and keep a job" for life. Until this is recognized, unrealistic outcomes are

quickly recognized by the younger scientists, which turns them away from science, which is something they may regret, particularly if they become trained and "miss out" on years of opportunity based a decision they made, which was based on unrealistic outcomes for a career.

Existing NIH policies, programs, or resources

1) Drop the U.S. citizenship/green card rule and choose candidates based on their abilities to do science and communicate to U.S. citizens.
2) Reward postdoctoral programs that do not "limit their success metrics" to having trainees go into academic science.
3) Track the careers of postdoctoral fellows, so outcomes and success can be monitored with real data.
4) Incorporate these "data collection exercises" into database entry methods, which would be part of NIH funding expectations on NIH progress reports.

Proven or promising external resources or approaches

Expand significantly the funding of training programs, so that >50% of the training grants are awarded, not based on anything else but their ability to recruit and train postdoctoral fellows with a simple set of criteria, per program, such that the trainees were funded by NIH-funded grants, and organized to learn, do, and present/train others to do NIH funded research. Have such training programs scale with the number of NIH funded investigators (not NIH funded grants). This would allow for better mentor to postdoctoral ratios and eliminate "large labs of competing postdocs within a single lab".

Response 1707

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a temporary training position preparing a biomedical scientist for an independent position.

Fundamental issues and challenges

The fact that postdocs on NIH fellowships cannot be university employees creates all kinds of problems for them (some lose access to benefits, retirement accounts, no W2 means that they have trouble applying for credit, etc.)

The NIH recommended stipends are difficult to live off of in many parts of the country (not just the biotech hubs on the east and west coast).

Wildly varying quality of mentoring results in some postdocs having great experiences while others have a really horrible time and sometimes drop out of biomedical sciences as a result.

Existing NIH policies, programs, or resources

More individual fellowship options, less reliance on T32s

Proven or promising external resources or approaches

CIMER mentor and mentee training resources, mechanism to share best practices

Response 1708

Perspectives on the postdoc roles and responsibilities

Turning the wheel of science with highly trained hands and minds.

Fundamental issues and challenges

Extremely low pay, bar none. My non-PhD scientist wife makes twice as much as I do in an entry level biotech/pharma position. How do you think that makes me, and others working as academic post-docs, feel about their value as highly skilled scientists???

Existing NIH policies, programs, or resources

Post-doc pay.

Proven or promising external resources or approaches

Increased post-doc pay.

Response 1709

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should be primarily working on your own independent projects and developing collaborations or relationships with other professionals. Postdocs should be responsibility for only their own independent and/or mentored projects. A postdoc should have the time, freedom, and flexibility to only work on projects that interest them and/or further their own line of research and careers.

Fundamental issues and challenges

Postdocs SHOULD NOT be research coordinators for a PI. Postdocs should not only work on their advisors projects. Postdocs SHOULD NOT have only one advisor/mentor. Postdocs need higher pay and full benefits equivalent to a full time research coordinator or professor. Adjust pay for cost of living/localities (as federal gov does). Increase professional support (money for training, workshops) and research (supplies, etc.).

Existing NIH policies, programs, or resources

Cost of living and/or locality salary increase. Research support funding increase. Ensure projects do not have a single mentor. Ensure postdoc projects are independent from advisors. Program officers should speak directly with postdocs.

Proven or promising external resources or approaches

Look at federal postdocs (veterans affairs) and how that compares to non-federal.

Response 1710

Perspectives on the postdoc roles and responsibilities

The postdoc position is a training position, but one with advanced knowledge and skills required. It is a stepping stone to other positions so so the postdocs own goals cannot be forgotten in order to advance those of their mentor.

Fundamental issues and challenges

Salary is a huge one. With my experience and in my area, I could go take an industry job and make double what I do now. This would also come with at least the potential of improved work-life balance. When I am worried about money and thinking about maybe having to do Doordash or Instacart on the side to make ends meet, that is not sustainable.

Existing NIH policies, programs, or resources

Enforcement of NIH policy compliance. Postdocs at my institution report that even though they are on a T32 they are not getting the yearly raise. They are also denied use of the childcare stipend because the university says it is not equitable for some to get that and some to not.

Proven or promising external resources or approaches

No response

Response 1711

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as the first real job in academia. In this position, the post doc has support from a department or senior faculty member as they develop their program of research, starting pilot trials, working on manuscripts, preparing grant submissions, and rounding out their training experiences to become an independent researcher.

I view the postdoctoral position as the entry point into the career I've been training to pursue for over the past 12 years. For me the post-doc is an opportunity to round out training experiences that may have not been addressed during my graduate work, and to become an independent clinical researcher, preparing to secure independent grant funding.

Fundamental issues and challenges

First and foremost is the salary! I'm frequently questioning my current commitment and likelihood of continuing on the academic research trajectory on a postdoctoral salary. I have friends and colleagues who have the exact same training and qualifications that I have who are earning 3x my current income. It's tough to continue down this career path knowing that I can make more and receive more benefits and support pursuing a career outside of academic research. As a single parent living in a major city with a high cost of living, it is difficult to feel motivated to continue on in academic research knowing that my qualifications and skills set is more valued elsewhere.

Existing NIH policies, programs, or resources

An other challenge is the post-doc to K to R pathway. There are several barriers on this pathway that contribute to making this a sustainable pathway, including developing a mentorship team, publishing manuscripts with the team to submit a competitive career development award,

Proven or promising external resources or approaches

a proven and promising approach to improving postdoctoral recruitment and job satisfaction, especially in the context of global inflation and cost of living, would be to increase post doctoral salary to be in line with the cost of living.

Response 1712

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is to address specific gaps in their own knowledge, qualifications, and experience towards application for academic jobs. This includes research, mentoring, networking, publishing, and presenting at conferences, as well as teaching and service as appropriate. The role of a postdoc is also to support the research of their mentor or team even when it does not help to address specific gaps in their own knowledge, qualifications, and experience. This may include all of the same activities listed, but typically involves skills or topics not pertinent to the postdoc, or excessive time spent relative to training value.

Fundamental issues and challenges

The short of it: It costs me $100,000 a year in lost compensation to be a postdoc.

The long of it: I get paid less on an hourly basis than the student researchers around me even before accounting for their tuition and health insurance both being paid. I can obtain health insurance through work, but I have to pay for it. I am not eligible to make retirement contributions through my employment. My institution is currently working on getting paid maternity leave for post-docs. Within a month of applying for jobs, I could be earning well over twice what I currently make with additional benefits (like a 401K, paid health insurance, and paid m/paternity leave). The only reason for me to be a postdoc under such circumstances is because I genuinely like my job more than the additional money I could be making in industry.

Note: I get paid in accordance with the NIH NRSA stipend levels, and my skills are highly quantitative.

Existing NIH policies, programs, or resources

The NIH has a lot of influence over my compensation. Tell me you value me by making it standard practice to compensate me. Everything else is well and truly besides the point when we're talking about $100,000 a year more I could be making elsewhere in wages and benefits.

Proven or promising external resources or approaches

No comment

Response 1713

Perspectives on the postdoc roles and responsibilities

Continue to develop scientific skills by independently carrying out a project (or projects) investigating a certain area of research. Mentor graduate students and undergraduate students, if applicable. Apply for grants (K awards, F awards, etc).

Fundamental issues and challenges

Low pay and low benefits (ex: health, childcare, etc). Not enough protections from predatory PIs. Long/multiple postdocs in part due to increased competitiveness amongst few open faculty spots. Longstanding issues within academia that are well-known but have not been sufficiently addressed (publishing & securing funding being the main two).

Existing NIH policies, programs, or resources

Increased protections for postdocs, similar to graduate students. Increased benefits for postdocs, similar to PIs.

Proven or promising external resources or approaches

No response

Response 1714

Perspectives on the postdoc roles and responsibilities

Development of project ideas and execution, Learning grant writing, presenting at meetings. Getting regular feedback from supervisors.

Fundamental issues and challenges

Poor salary makes it hard for individuals who with young Children to continue in academia due to increasing rent and childcare. A lot of the labs require long hours of work leading to exhaustion. Again individuals with young children faces challenges to continue in such environment.

Existing NIH policies, programs, or resources

Adjusting salary based on geographic location and cost of living.

Proven or promising external resources or approaches

Policy should be placed to practice work life balance. Restricting hours of work per week or day will be helpful. A lot of places only offer 14 or 15 days of sick leave plus vacation which could be increased

Response 1715

Perspectives on the postdoc roles and responsibilities

Academic postdoctoral positions should provide career counseling, networking, and skills development through immersive experiential training at job sites. The pay should be commensurate with the skills level.

Fundamental issues and challenges

Pay is too low. Both private industry and Federal employers can offer six figure salary training experiences. That is coupled with exposure to relevant skills training and networking.

There is also pressure to complete the academic post doc before you "age out of the system" at 5 years post degree. Combine this with the lack of stability and difficulty finding jobs after post-doctoral training, it becomes a very stressful trap.

Why would anyone do an academic postdoc? It is a dead end job that pays poorly.

Existing NIH policies, programs, or resources

Incentivize PIs or labs that create more permanent mid-level and non-PI laboratory pathways. If possible, a minimum number of senior scientist positions should be required in academic labs that apply for NIH grants.

NIH should not award grants to PIs who are known for exploiting foreign scientists. If everyone in the lab is on a J-1 visa, this is a major red flag. NIH should consider conducting site visits to labs like this to talk to trainees separately from the PI. Sanctions should be implemented to discourage this behavior from PIs.

Create incentives for PIs who actually support the career growth and development of their postdoctoral trainees. The five year time limit on postdoctoral training penalizes fellows, not PIs. There is extreme pressure to publish or get out. If your experiments fail, you aren't given many options to recover. Trainees sometimes publish sloppy research in low end journals to survive. This doesn't benefit anyone.

Proven or promising external resources or approaches

Partner with private industry and scientific Federal Agencies to openly advertise and support those career pathways. Pretending like we will get academic research positions is insulting.

Response 1716

Perspectives on the postdoc roles and responsibilities

Primary roles include running a project, writing and publishing manuscripts, obtaining funding, teaching and mentoring new lab members, and representing the lab at meetings. Depending on the lab, other roles often include troubleshooting equipment, lab maintenance, and monitoring student progress.

Fundamental issues and challenges

1. Salary levels are extremely low compared to what equally qualified individuals earn in industry jobs (usually industry is double the post-doc salary, other options can be more than triple).
2. Benefits (health insurance, retirement, dental, etc) are low
3. Many important grants (e.g. F32 and K99) are only available for short windows of time after receiving a PhD. This makes it difficult to plan time for pregnancy, child care, potential illness, taking care of aging family, or any other life events.

The combination of these three means that post-docs, who are usually in their 30's, feel unable to realistically plan for paying off student debt, having children, and owning a home, unless they have financial support from their parents or a partner with a better paying job. Therefore, being an academic post-doc is a luxury that many qualified and hard-working scientists cannot afford.

Existing NIH policies, programs, or resources

1. Increase budget for salaries
2. Improve inflation adjustments for minimum salary requirements
3. Adjust time-windows for important grants

Proven or promising external resources or approaches

No response

Response 1717

Perspectives on the postdoc roles and responsibilities

I don't really see a good layout of the roles **and responsibilities** of the postdoc. In general, I should run and design my own experiments, producing results and data at a faster pace than any graduate student. On top of that, I should be writing grants, mentoring other students and younger post-docs, and any other task that the PI doesn't have time for. I see postdocs as lab managers as well. We do everything to keep the lab running below writing R01s.

Fundamental issues and challenges

We are expected to get grants and fund ourselves but when we get these grants our benefits including retirement are reduced. I think a huge issue is pay, we came out of our PhDs making almost nothing (my PhD paid me $15000 a year), so I incurred a lot of interest on my student loan debt. I know academia cannot match industry in terms of pay that is why the benefits are so important but when we get NIH-funded fellowships we lose most of those benefits. The new childcare costs is nice but it only really covers a month or two of childcare costs, it feels like the NIH is out of touch with what it takes to live above poverty. Being a woman and a postdoc I really have to concern if I can stay in science because of the costs. I also have to try to pay back my student loans, which got more interest as I couldn't pay them by making next to nothing during my Ph.D. Also, the length of time as a postdoc before you can move into a research scientist position (if that's your next choice step) should be clarified. I'm told 5 years I have to stay at my postdoc before I can move into any type of position but at other universities, they only need 2 years. If pay needs to stay low there has to be other benefits and perks that keep postdocs, including more help with students loans, childcare, and retirement.

Existing NIH policies, programs, or resources

The loan repayment program should not just be for medical doctors. There should be options for basic scientist in every field. I had a postdoc friend who was able to get help with students loans in 2015 by being a basic neuroscientist, however, since then there has been nothing for those types of postdocs.

Proven or promising external resources or approaches

No response

Response 1718

Perspectives on the postdoc roles and responsibilities

I am currently a senior graduate student and am actively pursuing a postdoc position. To me, a postdoc is an opportunity to develop my own scientific identity and gain additional skills essential to ultimately setting up my own lab.

Fundamental issues and challenges

There are two primary issues. First, is the significant pay reduction relative to most entry-level positions in academia. Second, is the process of acquiring postdoc positions. It is informal and thus dependent on students directly approaching a potential advisor. A related consequence of this is that you need to be aware of the person you are contacting. If, instead, there was some kind of central location where positions were posted students and potential advisors would both have access to a wider range of possibilities.

Existing NIH policies, programs, or resources

Funding. Simply put, the NIH minimum has not kept up with the increase in inflation and cost of living. The other is the availability of retirement funds. Often, if you have an NIH-funded postdoc, as opposed to being funded directly by an institution, there are no retirement benefits. This disadvantages trainees in the future.

Proven or promising external resources or approaches

No response

Response 1719

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I did a Fogarty fellowship in Peru, interrupted surgical training and brought my one year. Would be more attractive to trainees if compensated adequately to not require going into debt (for travel, storage of possessions, etc.) in order to do the fellowship. While I would favor it not compensating well enough for

the compensation to be an incentive, right now the compensation limits accessibility for people without additional financial means or with children.

Existing NIH policies, programs, or resources

I would favor more experiences which require < 0.4 protected FTE for research—may improve the accessibility of the resources for clinician investigators who will have solid foundation in ensuring work is relevant to the field of interest.

Proven or promising external resources or approaches

No response

Response 1720

Perspectives on the postdoc roles and responsibilities

The postdoctoral training period is an important phase of academic training. It represents a phase in which individuals can hone their knowledge in specialized areas, gain new skills, and have protected time to develop their own research questions.

Fundamental issues and challenges

Cost of living has increased throughout the US over the past few years and postdoc salaries are not competitive. On top of this, R01 budgets have not increased nor kept up with inflation--making it very challenging for PIs to cover postdoc salaries. Increases in both of these would help with recruitment and retention. Secondly, for postdocs with career training awards (NRSA for example), universities/NIH are placing additional burdens on postdocs by not providing W2 tax forms (and instead giving 1099s). This should be addressed and changed.

Existing NIH policies, programs, or resources

The NIH policy of limiting to 4 training years for postdocs to apply for K99 awards is too restrictive. I appreciate the motivation (to help postdocs move efficiently into academic positions) but with the competitive funding environment this means that postdocs need to have a fully developed plan in their 2nd/3rd year. In particular, for postdocs who work with Nonhuman primates (NHPs), experimental timelines are much more extended. By year 3, it is not reasonable to expect postdocs working with NHPs to have a competitive academic record that is comparable to those working with model systems in which experimental timelines are much shorter (e.g. fruit flies, mice, c.elegans). Furthermore, the budget for the K99 phase is too small to cover most NHP work. This is cutting off opportunities for NIH to preserve the academic workforce working with NHPs, and will have far-reaching impacts in the next few decades.

Proven or promising external resources or approaches

No response

Response 1721

Perspectives on the postdoc roles and responsibilities

Great opportunity to grow as a scientist, acquire important skills, and develop as an academic.

Fundamental issues and challenges

The postdoctoral pay scale (NIH) is abysmal. I live paycheck to paycheck and am unable to save for retirement as a 30 year old. The only thing keeping me in academic research is my passion for research, but I see many of my colleagues do important research in industry and get paid double what I currently earn through my K award.

Existing NIH policies, programs, or resources

Improve postdoctoral pay.

Proven or promising external resources or approaches

No response

Response 1722

Perspectives on the postdoc roles and responsibilities

From the perspective of a graduate student, an academic postdoctoral position is a transitory one where you are able to fill in the gaps of your training before moving on to a faculty position. It seems like a highly competitive and rushed position as the number of postdocs far exceeds the number of available faculty positions within academia. As someone who intends to go into industry, an academic postdoc seems like a waste of time or a hindrance to me jumping into a full-time industry career.

Fundamental issues and challenges

I think the main thing preventing the recruitment and retention of postdoctoral trainees is the low stipend in comparison to the amount of work and expertise required for the position. Postdocs often take on the more risky projects within the lab and then may struggle to publish or get their name out to line up a faculty position.

Existing NIH policies, programs, or resources

I think training or exposure to other career options is crucial for both postdocs and for graduate students. Not every graduate student can pursue a postdoc and not every postdoc can pursue a faculty position. The expectation of everyone to stay in industry is unrealistic and causes lots of stress and competition. Funding should also be increased to reflect the position.

Proven or promising external resources or approaches

No response

Response 1723

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as similar to the old guild system.a graduate student is an ‘apprentice scientist’ while a postdoc is a ‘journeyman scientist’. In other words, they have more independence than a graduate student, but still work under the auspices of a ‘master scientist’. In that vein, a postdoc is still a training position-which is often used as an excuse to not pay postdocs very well.

Fundamental issues and challenges

Low pay is one of the most prominent challenges; after 8-10 years of post-secondary education, postdocs still barely make enough money to support themselves. This drives many potential postdoc candidates to other career paths (such as industry or consulting).

Existing NIH policies, programs, or resources

NIH sets the pay rate for most postdocs based on what they are willing to fund in grants. If the NIH decides that postdocs are worth more, then they could increase the amount allowed to fund postdoctoral salaries.

Proven or promising external resources or approaches

No response

Response 1724

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Lack of pay raises. Low starting salary for a demanding position. No guarantees on health insurance. Lack of any other benefits. No retirement savings. Competitiveness of job market—hard to compete for academic faculty positions without top papers that are hard to come by without dedicating 10+ hours per day including weekends. No compensation packages. No daycare assistance.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1725

Perspectives on the postdoc roles and responsibilities

In my view, a postdoc is an experienced and independent scientist acquiring additional training, usually in developing their own ideas, mentorship, and leading others, as these skills are necessary for many of the future careers a postdoc might undertake. While a graduate student should learn to be a discerning and careful scientist in a supportive and limited framework, a postdoc should have the freedom to explore and develop their own direction, mentor and train less experienced scientists, and learn about management in general. They should be more productive and require less help and guidance than a graduate student, often forming the core of the lab in both scientific progress and mentorship. However, they should still be mentored and supported by their PI who should take a special interest in helping them succeed in reaching their next goal, whether it be a faculty position or otherwise, rather than assuming that a postdoc will just figure out what they need to do without any real support or advice. If postdocs are just going to be expected to be completely independent and succeed without support, they might as well already be faculty/a research scientist/etc.

Fundamental issues and challenges

The main obstacle I see for postdocs is the salary. As we continue to extend the training periods before scientist get to "real" jobs (ie faculty, research scientist, etc) and as we expect postdocs to produce more , it is unreasonable to continue to pay them as if they are in a transient position that is fully a training role. Though postdocs should be receiving training and support, they are also already highly trained and productive, often being the major sources of scientific output of labs, and should be compensated as such. Jobs in industry requiring similar training (and providing similar or sometimes even more extensive mentorship and support) to that required of a postdoc often pay close to twice as much, highlighting how underpaid postdocs are for their work. More importantly, it is financially prohibitive for many people to become postdocs, especially if they have dependents or other financial responsibilities, which ultimately prevents those who lack the privilege to be able to "afford a postdoc" from pursuing this position. Another obstacle is the way that postdoc training is viewed by many PIs. In my experience, PIs often just see postdocs as workers who should drive the lab's research forward, get what they need to move to their next step, and then figure out how to do what they need to do in their next step on the job (probably because often this is what PIs themselves had to do). However, with applications for these next steps becoming more competitive and doing a postdoc becoming more necessary to succeed in these roles, it might be time to rethink this view and use the postdoc not only to get people to the next step but also train them in the skills they need to succeed once in that next step.

Existing NIH policies, programs, or resources

To address the major obstacle of pay, increasing the NIH postdoc salary would help immensely. Additionally, allowing for adjustment of salary based on a region's cost of living would also be very helpful. Though equal pay across the country is nice in theory because it allows for institutions in less favorable locations to have the benefit of better pay to cost of living ratios, this unfortunately unfairly pushes those with more difficult financial situations to have less choice while those with more privilege can "afford" to choose an institution/lab in whatever location they would like. To address the issue of updating postdoc training, the NIH could update or add to the trainings that NIH-supported PIs are required to take, adding information on the types of mentorship and support that PIs should provide. In my view, though postdocs are already highly trained and scientifically independent, there are other types of training and support that PIs should be providing, including actively teaching management and mentorship skills, providing career advice and facilitating networking connections in the relevant fields, and generally preparing postdocs for their next step.

Proven or promising external resources or approaches

No response

Response 1726

Perspectives on the postdoc roles and responsibilities

Build and diversify your research portfolio through increasing number of publications
Grow your collaborative research network
Learn to write competitive grant applications
Get experience writing grants

Fundamental issues and challenges

Student loan debt

Financial concerns

Existing NIH policies, programs, or resources

Increase the success rate of F and K awards (i.e., more funding for trainees)

Increase the research funds for F and K awards (i.e., funds are too low to become independent)

Proven or promising external resources or approaches

I am very happy with my postdoc training and my choice to pursue an academic career.

Response 1727

Perspectives on the postdoc roles and responsibilities

I believe the roles **and responsibilities** of academic postdocs are to support their PI or PI's research team for a portion of their time, but a majority of the postdoc's time should be devoted to developing themselves professionally. For example, a majority of my time as a postdoc was focused on developing and publishing manuscripts, which was important when going on the job market. Most postdoc timelines are approximately 2 years and the first year is the time that should be leveraged the most for writing considering that most job cycles open up in the fall, which would be the beginning of most postdoc's year 2. Additionally, my time as a postdoc helped me develop my research agenda and network without the commitment of coursework and administrative meetings.

Fundamental issues and challenges

I think there are a few issues **and challenges** that may influence the perspective of "postdoc life" and the benefits that may come from being a postdoc.

1. Salary and compensation. Postdoc may have moved from their graduate institution to a new position. I don't recall receiving a moving allowance and my salary made living in close proximity to my postdoc location hard.
2. Isolation. In my case, I was the only postdoc in my area and felt a bit isolated at times between graduate students and faculty. I felt like I didn't have others to share my experiences with and ask for advice on how to cope with certain things.
3. Pilot funding opportunities. Depending on the institution, most times postdocs are now eligible for the same pilot funding as graduate students and/or faculty. This is an institutional barrier, I feel, and more institutions should make pilot funding available to visiting postdoctoral trainees.

Existing NIH policies, programs, or resources

If a postdoc is funded via an NIH grant, their salary should be increased. Additionally, possibly pilot funds can be allocated so postdocs can implement a pilot study.

Proven or promising external resources or approaches

Grant workshops, statistically training workshops, postdoc associations at institutions where postdocs across departments can get to know each other and share resources, mentoring for postdoc that may report that their mentor is not providing adequate mentoring.

Response 1728

Perspectives on the postdoc roles and responsibilities

Postdocs are vital for contributing to the scientific enterprise. They help labs by bringing their expertise and different perspectives and they gain from the labs they go to—often by learning a new system, and getting exposed to different approaches, and getting additional skills (oral communication, writing, teaching/mentoring). In the best case scenario, they become collaborators and colleagues during their time in a lab and have the opportunity to develop independence. Some postdocs learn a critical skill set that enables them to get a certain type of job they want.

Fundamental issues and challenges

Several issues came up recently that affected retention: too little pay and the NIH payback rule for the individual fellowships. Some postdocs are single parents. They need affordable on site childcare and parking, both of which are lacking at my institution. The current supplement for childcare is totally inadequate. Many talented students are opting not to do postdocs at all. To some degree I think this is due to the market—they can immediately get high paying jobs.

Existing NIH policies, programs, or resources

Get rid of the payback agreement, raise both the fellowship amounts and grants for PIs supporting non-US postdocs who cannot get individual federal support. Make the fellowships minigrants with more research support to encourage postdocs to do truely independent work (look at USDA's approach). Stop being so conservative about the projects supported.

Proven or promising external resources or approaches

Develop a mechanism for rapid turnaround for supporting postdocs who might need some encouragement to go for an academic postdoc. Be more flexible about what the job entails (some people might want a part time postdoc if they have other family concerns). Place less emphasis on moving institutions—some postdocs need to be in a specific location. Pressure institutions to provide on site affordable childcare, support young parents (I had to convert my microscopy room into a make shift lactation room), free parking.

Response 1729

Perspectives on the postdoc roles and responsibilities

The current expectations for a postdoc are that you are in training for a faculty position and so are expected to act as a mentor to other lab members, manage multiple research projects, apply for grants and write manuscripts, while also still continuing in a research role for your own project. The current recruitment crisis has made balancing all the demands of a postdoc position even more difficult, as we are still expected to mentor and provide support for others in the lab but the ratio becomes skewed, and it comes at the detriment of our own work. I view it as a highly underpaid internship as a PI.

Fundamental issues and challenges

It is hard to justify from a career advancement, financial, and benefits perspective to take on a postdoc where you make half of what is possible in industry straight after completing your PhD, without retirement benefits and childcare benefits afforded to faculty and other research staff, while also maintaining the expectations of performing at a level equivalent to those same academic roles.

As a 2020 PhD graduate, I would have never chosen a postdoc as my path but industry wasn't hiring due to the pandemic, so academia has acted as a safety net in that way, but I have friends of the same age who have less education and make equivalent or higher salaries, plus benefits, so there are many days when it is difficult to justify the time and effort I put into my degree. The love of science does not outweigh the lifetime loss in earnings and other benefits.

Existing NIH policies, programs, or resources

The NIH minimum salary is a helpful policy when advocating for increased pay, but it is not competitive with industry. If salaries cannot be increased, there needs to be additional effort on the part of institutions to provide additional benefit support at no cost to postdocs, since they are not being compensated at a level equivalent to their qualifications.

Proven or promising external resources or approaches

The National Postdoc Association has assembled resources and information on benefits comparisons across institutions. There are enormous discrepancies across institutions, and there needs to be improved accountability in supporting those who are the backbone of productivity in academic labs.

Response 1730

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Funding. After graduate school many researchers are in debt and have been making essentially minimum wage for the past 4-6 years. The decision to take a postdoc position over an industry position comes with a significant pay cut. Many people are not in the position to be able to take that cut. Increase funding for postdocs and there may be an easier time recruiting and retaining them.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1731

Perspectives on the postdoc roles and responsibilities

When I entered gradate school in 2012, I wasn't sure if I would go on to do a postdoc. It seemed that doing a postdoc was necessary to attain an academic professorship, something I didn't plan on pursuing. There are several reasons for this—in the US, I have been told many times that to pursue a postdoc or academic position in the same university/state as my graduate work is career suicide. I went on to do a postdoc in the same state anyway because I value my local family, community, and neighborhoods more than chasing a career position I probably can't attain anyway. In addition, the lack of work-life balance I have viewed in my academic advisors is not something that is appealing to me. While my work and career is important to me, I have other responsibilities to family and interests of my own that I want to pursue. A postdoc, while not really necessary to me, allowed me extra time to figure out what direction I wanted to go outside academia and to hone some relevant skills.

Fundamental issues and challenges

I spent 5.5 years getting my PhD, during which I had no family support and lived near the poverty line, struggling at times to pay for groceries and other basic necessities. While my peers have been saving for retirement and purchasing houses, I am in my 30s with little savings. On a postdoc salary (starting for me at $48,000 starting out of grad school), it is impossible to catch up. While I wouldn't trade my graduate school accomplishments for anything, it is hard to see the worth of a postdoc when I plan to go into a non-academic job. Luckily, I do not have any dependents, but I cannot imagine the stress of caring for children on such a low salary.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Get rid of the postdoc job category entirely; we are fully trained scientists and should be paid a decent wage with decent benefits. At my university, I am not even considered a staff member and am not eligible for basic, tax-advantaged retirement accounts. Scientists with PhDs should be able to attain staff scientist roles with full staff/faculty retirement benefits and a livable wage. Academic PhD scientists need respect and decent compensation for our labor just like everyone else. This should not be that hard to figure out.

Response 1732

Perspectives on the postdoc roles and responsibilities

Postdoctoral training should be relatively short and intended as a transition role to get jobs as a group leader in industry or academia. It should not require the same amount of work and time as a PhD, which is how many postdoc roles now are.

Fundamental issues and challenges

If increasing diversity in the academic and scientific workforce is a priority (which it absolutely should be), then postdoctoral training must be well compensated and not stretch for many years. Otherwise, the academic pipeline will continue to select for privileged individuals

Existing NIH policies, programs, or resources

INCREASE THE MODULAR R01 BUDGET CAP NOW!

Proven or promising external resources or approaches

No response

Response 1733

Perspectives on the postdoc roles and responsibilities

I spent 10 years in various postdoc positions, eventually finding a niche that would ultimately lead to a coveted non-tenure track research faculty position. My first postdoc, I learned to write grants. My second, I learned to be innovative. My third, I learned what it is to be brave and have vision. My roles and responsibility widely varied across these positions, but each afforded me a skill set that is now unique and marketable. I have no regrets, but I wouldn't recommend this trajectory to a recent Ph.D. graduate. My journey in science is an adventure.but not a 'career' in the traditional sense. I've come to terms with this.

Fundamental issues and challenges

There were roughly three types of postdocs I encountered over a decade.and this is a broad generalization:

1. Those who had families and/or unique financial obligations;
2. Those who were either married to a higher income earner or from wealthy families; and
3. Those who were flying solo and had more leverage to make individual decisions about their trajectories. I was in the third category. I made a concerted decision to stay in interesting postdoc positions until I landed the type of job I wanted. I did this at the expense of my financial future. I will not be able to retire and I will likely face end of life with relatively few resources. The gravity of this long term decision has not quite set in, but the possibility of ending up in the wrong position and being 'stuck' somehow seems like a worse fate.

Existing NIH policies, programs, or resources

NIH funding hasn't changed in 25 years. This makes hiring Ph.D. level, postdoc-trained academic research scientists or research faculty virtually impossible. It also makes talented postdocs a cheap(er) source of expendable labor. Changing the funding line would create more academic positions for well-trained scientists, encourage more scientists to stay in academia, and make postdoc positions shorter and more fruitful in terms of a career trajectory.

Proven or promising external resources or approaches

There is currently a cultural issue around postdoc labor: these are generally financially vulnerable people (with some exceptions described above) who are often on visas and experiencing even greater vulnerability due to citizenship status. This power differential is a recipe for mistreatment. There needs to be more accountability to these individuals, but this would mean that the NIH would be required to face the realities of its structural and systemic issues which are truly baked in at this point.

Response 1734

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is meant to be a temporary training period to learn a new subset of skills and become more important as a scientist, such that the trainee can be more prepared to lead their own lab.

Fundamental issues and challenges

Postdocs are heavily exploited. Salaries are about a third of what the offers we constantly get recruited out to. Often winning fellowships and grants turns into a decrease in pay. Institutions show very clearly how little they care about postdocs. The expectation has started to become that postdocs will stay for 5-7 years instead of the 2-3 years it should be.

Existing NIH policies, programs, or resources

Increase minimum salaries. Make it so that earning a fellowship helps trainees. Push institutions to at least pretend to care.

Proven or promising external resources or approaches

I know very few people who want to stay as a postdoc. It’s a thankless role.

Response 1735

Perspectives on the postdoc roles and responsibilities

Opportunity to learn new skills/techniques and establish oneself as a leader in their field

Fundamental issues and challenges

Salary and benefits far below comparable early-career industry positions. Difficult to balance of grant-writing responsibilities with research and professional development.

Existing NIH policies, programs, or resources

Move away from 1-year appointments and guarantee positions for the duration of an average postdoctoral appointment. Allow postdocs to be listed as co-investigators on grants to reward time spent on grant writing. Implement area-adjusted salary scales and improve childcare benefits for working parents

Proven or promising external resources or approaches

No response

Response 1736

Perspectives on the postdoc roles and responsibilities

A postdoc position should be to provide a trainee with new training in a different research area and/or in different approaches to answering research questions.

It should not be a position where the trainee is continuing to work in the same area and same way as in their graduate training.

Fundamental issues and challenges

The low funding rates of NIH grants for years has led to a generation of newly minted PhD students running away from traditional postdoc positions in exchange for higher paid industry jobs or alternative science careers. They do not see an attractive future in academic research as a PI.

Existing NIH policies, programs, or resources

Improve K99/R00 paylines. Increase number of NIH Funding opportunities for NRSA fellowships.

Proven or promising external resources or approaches

No response

Response 1737

Perspectives on the postdoc roles and responsibilities

The postdoctoral position lends itself as a means in which to improve the scientific capabilities of the acting postdoc themselves, but also as a means of contributing great science to the overall scientific community.

Fundamental issues and challenges

The reason there are issues with recruitment, retention, and overall quality of life for postdoctoral trainees in academic research is because they are not paid enough. NIH grants have not increased in the amount of money they award, which affects the amount of money that PIs can pay their workers. If you increase the amount of money granted for research grants, the pay for postdoctoral trainees will increase, and then people will actually want to pursue this line of work. Until this happens you will be hit with this postdoc shortage. You have the means to fix this, try implementing it.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1738

Perspectives on the postdoc roles and responsibilities

I pursued a postdoc to prepare me for an Assistant Professor position in academia, government or non-profit institute. I am now applying for the jobs and can say that I have gotten great value out of getting to work on a distinct project from my graduate work so I can now start my lab at the nexus with a set of skills and expertise unique from my mentors. I got to experience a unique mentoring style as my graduate mentor did not collaborate much and I did not get this from my thesis committee. I had finished graduate school conflicted about what to do because I loved doing research, but could not imagine managing a group the way my mentor had. I gave it one last shot with my postdoc and specifically chose this lab because of the good mentor fit and the mentor having a very different style. This will be exceptionally useful in helping me be an inclusive mentor that creates a welcoming lab community for a diversity of trainees with a variety of career goals. The postdoc also allowed me protected time to develop my own research interests from scratch and establish preliminary data. This is also a time to build my network of peers who will be my key collaborators and build relationships with other PIs at my institute and beyond. I wish the postdoc did more to prepare me for managing a lab, essentially a small business. This is an opportunity to shape/train the next generation of the scientific community and induce needed changes, but only publication output is valued or taught.

Fundamental issues and challenges

Pay is far too low to compete with industry and more than 1 year of an academic postdoc is not financially or career beneficial if that postdoc then goes to industry. Academia pays in prestige and that’s insufficient as even associate professors are moving around more and transitioning in and out of industry. The promise of tenure is not valuable because you still need to get grants. Particularly international postdocs are also not provided any visa help and this can mean 3-5 years not seeing their families which is insane and also provides an incredible amount of stress as they try to begin their postdocs. Institutes and universities have very little department specific programming for postdocs and this would be super helpful in making the time more efficient and preparing postdocs better as well as creating a support community that would hugely benefit quality of life. Just providing mentoring committees, TRACKED by the dept and encouraged would help. Providing department community events for postdocs and research events would help. With postdocs arriving at all different times and different life stages and without the benefit of the structured community for grad students (and honestly the value and focus put on them), postdocs get isolated and have to keep reinventing solutions. For the amount of publication and grant productivity that postdocs provide to labs, departments and institutions they are WILDLY undervalued financially and organizationally.

Existing NIH policies, programs, or resources

The NIH standard payscale is quoted across the country and used for minimal postdoc salaries (if they are lucky and they probably need a union to achieve this). This pay is not a livable salary in many cities and a graded scale would help a lot. When postdocs are not recieving any structured training it is unfair and should be illegal to pay them below minimum wage. There needs to be guidelines for how to use the IDP effectively. Just writing goals and having the PI sign off does not provide the incremental feedback on how to break down long term goals and achieve them. Providing PIs with a generalized rubric for what postdocs need to achieve approximately at the end of each year for a variety of career goals would help and enforce equity in this process that often leaves less supported postdocs floundering, experiencing imposter syndrome and giving up and leaving academic research (speaking about people who want to stay). That said, industry should no longer be considered an 'alternative' career. The line between academia and industry is blurring and the emphasis on academia being the 'moral' reserach path is toxic and damaging. It also pushes recent PhD graduates into academic postdocs that do not help them financially and are not the right fit. Fewer postdocs with higher salaries and more focus from departments would be beneficial for all as long as it is accompanied by more graduate training towards industry and other research positions. The role of research scientists needs to be more highly valued financially and then could be emphasized as an additional career path as these experts and incredibly valuable in a labs success long term.

Proven or promising external resources or approaches

Postdoc mentoring committees.

Structured postdoc training for academic careers including how to manage a lab, budget and inclusive mentoring. The UW Future Faculty Fellows attempts some of this.

NIH K99, K22, and DP2 writing courses with faculty available to read specific aims and 'practice' score grants.

IDP with rubric for different skills needed by the time postdocs are applying to jobs. Incredibly important to improve equity with clear expectations.

Structured graduate training for industry careers and research scientist positions so that postdocs can get structured training for academia.

Response 1739

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The low postdoc salary is probably the largest barrier to recruiting and obtaining talented postdocs. People are instead leaving for industry where they will be paid at least 20K more.It is especially difficult to live on a postdoc salary in the current economy. This also makes it difficult to retain scientists from disadvantaged backgrounds who don't have family wealth to fall back on. Guaranteed paid family leave would also be incredibly helpful for postdocs.

Existing NIH policies, programs, or resources

Postdoc training should include skills necessary to succeed in industry and other non-academic jobs.

Proven or promising external resources or approaches

No response

Response 1740

Perspectives on the postdoc roles and responsibilities

In my experience, a postdoc is a very isolating experience. So far, I have been responsible for every aspect of my work, from conception of a project, planning the experiments, purchasing reagents, executing experiments, analyzing data, making presentations, and then beginning the cycle again. This cycle is endless. There is always another experiment to do, always cells to be taken care of. I'm not sure if

I just don't have what it takes to be a successful postdoc, or if not all postdocs feel as I do. However, it is difficult to maintain motivation to continue a project when many companies are telling me that I don't even need a publication to get a six-figure job with excellent benefits. It is hard to be the one doing 100% of the work on a project and keeping my head up when things inevitably fail.

Fundamental issues and challenges

For me, I am constantly thinking about how much more money, job security, and benefits I could be obtaining by leaving my postdoc and going into an industry position. Many industry positions don't require any publications during a postdoc, making the entire postdoc experience seem unnecessary unless you want to be a PI. I like that I have flexibility and freedom as a postdoc

Existing NIH policies, programs, or resources

I'm not really sure. I'm at the NIEHS and there isn't really a sense of community here. I have been a postdoc for nearly 2 years and don't even know how many people are in our department. Everyone's work is so distinct and schedules often don't overlap. I'm also the only trainee in my lab right now, so I am not getting much interaction with others at all.

Proven or promising external resources or approaches

The main issue that I see right now with the entire postdoc system (not just NIH) is that it simply isn't worth it for the vast majority of PhD holders. Most of us won't be PIs, and if industry will pay us twice as much as a postdoc while offering benefits and room for growth in a company, and if companies don't require a postdoc experience, it simply doesn't make sense for people to want to do a postdoc. In my opinion, it could potentially be more of a shortcoming if someone who doesn't want to be a PI does a long postdoc. In fact, I've been told this verbatim by industry professionals. The hiring individuals in industry don't care about papers, and a candidate with 5 years as a postdoc is going to want a higher starting salary than a fresh PhD. I worry a lot about whether I'm jeopardizing my career by staying in the postdoc position knowing I don't want to be a PI. Sure, you do learn some transferrable skills, but the reality is that most jobs for PhD level scientists don't require a postdoc, and there are not a lot of other incentives for the postdoc experience.

Response 1741

Perspectives on the postdoc roles and responsibilities

The academic postdoctoral position allows a researcher to improve their tool kit and resume while searching for an academic post. If the academic job market were better, meaning more potentially permanent positions were available, there would be no benefit to the postdoctoral position. Unfortunately, searches for tenure-track positions may take years and runaway selection has raised expectations of applicants for those positions. Hiring committees expect to see one or more postdoctoral experiences before hiring someone for what is an entry-level position (assistant professor). After graduate training, many researchers are financially depleted. Taking a brief, often abusive, low-paying position is not great. This is a time when many researchers walk away. This is a tragic loss of resources and talent.

Fundamental issues and challenges

Postdoctoral researchers must see the clear path to scientific independence. A training plan is essential. Postdocs should know their advisor's attitude about the role they will play in the career searches of the postdocs serving in their lab. Unfortunately, advisors are not often truthful about their commitment to seeing their postdocs move from their labs to scientific independence. Postdocs are often left to rely on the grapevine to understand what their professional relationship to their advisor will be, especially if the advisor is early in their career. A statistic similar to the H-index might help.

Existing NIH policies, programs, or resources

Postdoctoral training plans should be required. Postdocs should be informed in clear terms about the likelihood of progressing from their postdoctoral positions to scientific independence. Rigorous statistics on success in different fields should be common knowledge. It is as important as putting the cancer warning on the side of cigarette packs. Institutions that do not regularly place their funded postdocs into independent positions should be deprioritized for future funding for postdoctoral support.

Proven or promising external resources or approaches

Many sources of postdoctoral support expire. The F32, for example, is only available during a brief window. If a postdoctoral fellow completes an F32 fellowship but still hasn't found an independent position, there aren't many options left to them. Expiration dates for postdoctoral funding should be reconsidered. There is a downside to this because some researchers, if allowed, will postdoc forever. NIH should not enable that career path.

Response 1742

Perspectives on the postdoc roles and responsibilities

In my view, the postdoctoral role should be a position that transitions early career scholars into full scholarly independence. The years spent as a postdoc should certainly provide opportunities to continue building their skills as scientists, but also to become knowledge about the variety of career options after their postdoctoral education and the skills they will need to succeed in those roles. Postdoctoral scholars should not be assigned work that is more appropriate for lab techs or students. They should be visible within the academic community as scientists, with opportunities to present at conferences and publish.

Fundamental issues and challenges

As an administrator in a campus international office, I have too many stories of international postdocs being abused by PIs. In less egregious circumstances, I see postdocs running out of time on their visas and unable to secure the green cards they desire because they have not been publishing during their postdoctoral training. Even if outright abuse is not occurring every single day, negligence seems to be the normal state of affairs. Fundamental issues in my view include NIH grantmaking rules, low pay and perverse incentives in our science ecosystem. In the area of recruitment, postdoc pay is low when compared to the level of education these individuals have. I think that the culture of science and the academy more broadly is very compromised today—there is too much focus on getting today's science done and not enough on developing the next generation. The invisibility of postdocs is a huge problem. This invisibility coupled with the extreme stress to secure grants and publish that is ever present in academic departments creates the conditions that are ripe for abuse. I think that addressing these issues requires deep work at the individual faculty and departmental level, coupled with NIH policies that hold PIs and universities to account for mentoring postdocs and creating a positive work environment for everyone. Mandatory mentor training would be a good start, as would evaluating PIs on their mentorship. If NIH and universities insist on calling postdocs trainees, they need to get serious about training. T32 training grants should be made available to international postdocs—this argument about American taxpayer dollars ignores the fact that international graduate students and postdocs also pay U.S. taxes. There is no American science without international contributions. Finally, PIs with a pattern of abuse need their funding revoked.

Existing NIH policies, programs, or resources

The programs coordinated by the National Research Mentoring Network (NRMN) are outstanding and I think should be a mandatory precursor to being a PI on any NIH grant. I greatly appreciate Paula Stephan's work on postdoctoral issues, and was surprised to learn from this paper (https://www.nber.org/system/files/working_papers/w19687/w19687.pdf) that funding for graduate students and postdocs was once separate from research grants. This seems like a wise strategy to consider as it will help with right sizing the academic workforce and ensure that postdocs can leave toxic environments with their funding intact. I also think that IDPs need to be mandatory for postdocs, and that NIH should set a minimum number of hours per month that are dedicated to postdoctoral professional development outside the lab. There should also be an effort to standardize data collection on postdoctoral scholars nationally, with the goal of addressing some of the data limitations that were identified in the 2014 National Academies report. Demonstrating empirically how much the science training system needs to shrink in order for everyone to have viable career options is a must. Universities that receive NIH grants should also be required to offer a full scope of career development programs. Learning how to write grants and mentor is necessary professional development for aspiring faculty, but I would like to see more attention on the NIH side to broadening the frame of career development. For example, NSF funded programs like the National Science Foundation Research Traineeship (NRT) and the Center for the Integration of Research, Teaching and Learning (CIRTL) provide opportunities for graduate students to learn about interdisciplinary and community engaged scholarship, and evidence-based teaching and

learning. These experiences provide highly transferrable communication skills that postdocs can use whether they choose academic or non-academic careers.

Proven or promising external resources or approaches

In general, I think that NIH-funded researchers and people within NIH need to be more conversant with the vast (and growing) scholarship on graduate education and academic careers. Since I work on a campus with only health and human services professional schools, I'm very struck by the degree to which faculty on my campus have no idea about the innovations that have been taking place in graduate education and academic careers through NSF-funded initiatives, like NRT, CIRTL, ADVANCE, etc. There are things that biomedical sciences can learn from those programs, and there's a lot of publications that have come out of those initiatives. Finally, new tools like Project Callisto https://www.projectcallisto.org/ that have been developed to help combat serial sexual harassment and assault outside institutional Title IX processes seem very promising to also combat other forms of abuse. Knowing which PIs to avoid is a function of access to social networks that marginalized people are often excluded from—we need tools to level the playing field so that abusive people pay a price for their behavior.

Response 1743

Perspectives on the postdoc roles and responsibilities

The Postdoc I my opinion is a time period where I am learning, in a new environment, something completely different from my PhD and eventually is a steppingstone to become an independent PI.

Fundamental issues and challenges

- The academic path is now more than ever "high risk and low reward". If joining the "wrong" lab a recovery from this mistake is very difficult.
- Starting a family while being a Postdoc is very difficult
- Strong uncertainties regarding a future as an academic scientist
- Very low salary in comparison to industry
- There is no requirement for institutes to have a career development program

Existing NIH policies, programs, or resources

As a foreigner, I never received an introduction in the NIH ecosystem. I am basically expected to do my project, write grants for scholarships and figure everything out on my own.

Proven or promising external resources or approaches

No response

Response 1744

Perspectives on the postdoc roles and responsibilities

Unsure

Fundamental issues and challenges

Unsure

Existing NIH policies, programs, or resources

Unsure

Proven or promising external resources or approaches

Unsure

Response 1745

Perspectives on the postdoc roles and responsibilities

An academic postdoc should be leading a high-impact research project as they prepare to apply for tenure-track faculty positions. Postdocs should receive minimal technical training but be mentored extensively on paper-writing, grant-writing, and other managerial skills. PIs should only allow postdocs to work on projects they could take with them when they have independent tenure-track positions.

Fundamental issues and challenges

I believe the 3 biggest challenges are low salary, poor prospects of faculty positions, and lack of control over where you live. PhD graduates are hesitant to take ~2-3x lower salary for ~5 years and then only have a ~20% chance of finding a faculty position that makes sense for both their families and their career trajectory. This large financial & social sacrifice weeds out highly qualified candidates who don't have inherited wealth or have families (even w/o children).

Existing NIH policies, programs, or resources

1. K99/R00 awards should be awarded within the first 2 years of a postdoc. This way postdocs who have poor prospects of obtaining an independent faculty position can leave for higher paying positions at the end of year 2.
2. Create an award similar to the K99/R00 that requires the K99 and R00 funding portions to be used at the same institution. This would minimize the social costs of relocating during the postdoc-->faculty transition and incentivizes institutions to only hire postdocs if they would also be interested in hiring them for faculty positions.
3. Cost of living adjustments for recommended salary. Most academic institutions are in expensive cities and some PIs can use the NIH recommended salary as justification for massively underpaying postdocs. This issue is particularly rampant for PIs who wish to exploit international postdocs who do not have accurate knowledge of a city's cost-of-living prior to signing a contract.

Proven or promising external resources or approaches

Overall, there should be fewer postdocs and those who do elect to serve as postdocs should have higher salaries and more power in the faculty job market. For those who do wish to remain postdocs, this Yale science fellows program seems to have a good approach that balances location stability, development of a research portfolio, and salary https://apply.interfolio.com/108050. I would only consider applying for postdoctoral positions which are structured similarly.

Response 1746

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salary does not reflect the cost of living in NYC at all, not even close. No matter how exciting the science is, if the life outside of the lab is full of financial stress, then that's all we remember in the end.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1747

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1748

Perspectives on the postdoc roles and responsibilities

A position where I can use my expertise from PhD studies and learn new techniques to advance my career. Learn how I can progress in my career to become an independent investigator.

Fundamental issues and challenges

1) Below average salary. Where a MS or BS graduate can earn 70-90K in an industry settings, we are earning a wage that is not at per with our education and commitment. The salary is not ideal to have a sustainable life in an expensive city with family.
2) No clear path for career progression.
3) No transferable skills.
4) No job security. Working long hours but no clear path to find a job.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1749

Perspectives on the postdoc roles and responsibilities

The postdoctoral research position is a role were the person does part of PI's project, but is allow to have their own ideas to transition into a PI position. Postdoc should be a training experience.

Fundamental issues and challenges

My experience as postdoc is very bad. PI uses me has technician without allow me to work properly in her RO1 nor my own ideas. Funding is being not properly used for the project.

Existing NIH policies, programs, or resources

Postdocs in RO1 needs to be closer evaluated. I

Proven or promising external resources or approaches

Make a standar survey of postdoctoral training ecosystem in all lab with NIH funding.

Response 1750

Perspectives on the postdoc roles and responsibilities

The role provides the opportunity for protected time to research and publish, alongside the ability to obtain further mentoring and training. These skills are critical to my development as a scientist and the ability to obtain grant funding to support my research.

Fundamental issues and challenges

Challenges include the low pay of postdoctoral trainees, particularly when in high cost of living areas. I was a nurse practitioner earning >$100,000 in the midwest (low cost of living). I accepted a postdoc position in [redacted for anonymity] (high cost of living) with a stipend of ~$54,000—difficult to cover expenses and relocate a family on this salary level. In addition, I considered leaving the position due to the low pay—but then found out that I have to repay my salary if I leave early for a non-research position such as clinical practice. So, next, I considered working as a NP in addition to hours as a postdoc, however, I am limited by NIH rules to 10 hours per week or less outside of the postdoc. Moreover, working in clinical practice during postdoc would eliminate some of the benefits of the position (i.e., protected time for research and publication). Finally, postdocs are not considered faculty, they are temporary, and as such we are viewed as expendable and at times not provided with mentors that are committed to our development (i.e., lack the time). Unfortunately, once you accept and begin a postdoctoral position you can be 'stuck', as I now feel.

Existing NIH policies, programs, or resources

The repayment policy needs removed and pay needs increased.

Proven or promising external resources or approaches

No response

Response 1751

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

NIH should support more structured transition from postdoc to permanent researcher/scientist position within a university setting. Any person with a total postdoc experience of 3 years should automatically be hired in (a more secure and financially rewarding) scientist position.

Proven or promising external resources or approaches

- Better pay—match the salaries paid by national labs to postdocs
- More opportunities to earn independent funding for postdocs—these opportunities should not require US citizenship or PR
- Automatic switch to a permanent position at the university at the end of total 3 years of postdoc training

Response 1752

Perspectives on the postdoc roles and responsibilities

I view it as another step to get more research experience before starting a full-time job elsewhere.

Fundamental issues and challenges

Money. After 10 years in college, the current NIH pay scale is a bit insulting relative to a job in industry. I know it's more limited due to government spending vs money a company raises selling their products, but it's hard to sacrifice that after so many years earning even less as a PhD student.

Similarly, to still be considered a trainee after 10 years and still not yet be in a final job position is hard, especially as postdocs aren't necessarily being trained as much at this point, other than the training they are doing themselves.

It's also hard to move around a lot--between undergrad, grad school, post-doc, and career after the post-doc, that's a lot of moving, which makes it hard to make roots anywhere. This also isn't necessarily

feasible for those with families or wanting to start families. The cost of moving is also prohibitive as well, especially with the low pay.

As far as training for academic careers, postdoc positions weren't an absolute necessity before like they are now, and certainly not for the duration many are doing now. We're all just too exhausted from grad school to go through another 5 years of a postdoc position before getting a respectable job.

Existing NIH policies, programs, or resources

Higher NIH payscale, especially since many universities/programs base their pay on this.

Proven or promising external resources or approaches

No response

Response 1753

Perspectives on the postdoc roles and responsibilities

As it stands, the US postdoc system is nothing short of discriminating abuse of highly skilled labor. It is facilitated by exploitation of mostly international PhD holders who are kept hostage by a visa system that will negatively affect the US economy, US research community and US patients in the years to come.

Fundamental issues and challenges

Not enough funding is the major problem, closely followed by an unattractive visa system that re-directs highly skilled international PhD holders to other countries.

Existing NIH policies, programs, or resources

NIH grants that fund postdoctoral research have to be adjusted to reflect current cost of living. Local economic environments have to be considered. It is not contemporary to fund a postoc in e.g. Idaho at the same level as a postdoc e.g. in California as these 2 locale have significantly different cost of living requirements.

Proven or promising external resources or approaches

The department of housing and urban development publishes low-income limits for every locale in the USA. Postdoctoral funding should be adjusted to be AT LEAST 80% of the adjusted median income of an area for a 1 person household, i.e. low-income threshold.

You guys know exactly what the problem is: postdocs are not paid nearly enough. You get what you pay for and that goes both ways. Fork out more money are fall behind the global competition.

Response 1754

Perspectives on the postdoc roles and responsibilities

The postdoc is the first step to transition to a independent Faculty/Professor and Scientist. In fact, the training continues, but with more freedom and independence of the supervisor. It's time to transition from most of the bench work done in the PhD to more reading/analyzing/writing work. Also, start mentoring individuals in the lower timeline of academic career.

Fundamental issues and challenges

First of all, the salary. The housing prices and health insurance aren't affordable with the postdoc salary. Second, the absence of a supportive environment with good diversity and inclusion. Third, there are no positions for all the postdocs to have their lab; other career pathways must be evaluated. Fourth, academia as it is now it's not sustainable.

Existing NIH policies, programs, or resources

Include the non-citizen in almost all NIH grants. Most of the science in U.S is made by immigrant postdocs.

Proven or promising external resources or approaches

Lottery for postdocs and students anonymously evaluate their PI, lab, department and research institute.

Response 1755

Perspectives on the postdoc roles and responsibilities

After the PhD, which could be considered the first significant contribution to science one does, the typical next step for a scientist is often a postdoc position. It allows us to fully deploy our acquired abilities to contribute to and carry out research projects. From a career perspective, to me, a postdoc position should be well delimited in time, and allow one to build up CV and reputation to be able to become independent as a scientist.

Fundamental issues and challenges

As much as I enjoy academic work, it does not pay too well. Science and academia is complicated and competitive enough, financial burdens should not be an additional problem we face. If the stipend keeps being meager and does not keep up with inflation, one inevitably considers moving out of academia to find better options that also provide more reasonable work-life balances.

Existing NIH policies, programs, or resources

NIH salary guides should take into account the cost of living of each area, as in certain urban areas, the cost of living is not in line with the current guidelines. I would like to point to the following article: https://www.nature.com/articles/s41587-023-01656-4

Proven or promising external resources or approaches

I think to improve postdoctoral training, recruitment and carer development, NIH should recommend or mandate better incentives to hire and maintain postdocs. At the moment, the main issue is probably the minimum salary, which has not keep up with inflation and is not competitive. Increasing the number of paid holidays, and programs to support mental health will likely be welcomed. From my own experience and many of my colleages, being a postdoc is stressful, and this has a toll, in overall well being, relationships and even health.

Response 1756

Perspectives on the postdoc roles and responsibilities

Developing and sharpen the mindset for a relevant scientific problem

Fundamental issues and challenges

Lack of opportunities after postdoc

Financial low-paid job

Existing NIH policies, programs, or resources

Better opportunities to postdocs

Increase fellowship

Proven or promising external resources or approaches

No response

Response 1757

Perspectives on the postdoc roles and responsibilities

I view the academic postdoctoral position as a temporary training position that should be enriched with career development activities relevant to research. This is distinct from a staff scientist role, which is more permanent, does not have the same degree of career development training opportunities, and should be compensated with a higher salary (than post-docs). After 9 years of post-undergraduate training, a 4-year professional degree program (PharmD) and a 5-year PhD experience, I was willing to do a post-doc, despite the low stipend, only because I knew it would be temporary and that I would gaining experience that would ultimately make me a better academic researcher. In order to ensure, I would be entering a post-doc opportunity that was truly a temporary training experience, during my interviews, I specifically inquired about T32 programs and about the availability of open faculty positions (for after I completed the

fellowship) at each institution. I would not have pursued a post-doc if I believed that it would not be temporary and that I wouldn't learn.

Recommendation: I recommend that the NIH develop a clear list of eligibility requirements that define a post-doc (e.g., evidence that the post-doc is engaged in training opportunities, is attending national meetings, and has developed a career development plan) and only fund trainees at the post-doc stipend level who truly fit this definition.

Fundamental issues and challenges

As compensation for temporary career development training, NIH salary recommendations are sufficient for postdoctoral scholars in many regions of the country. However, in other areas of the US with high costs of living, an NIH postdoctoral trainee salary is a major hindrance to recruitment, retention, and overall quality of life in academic research. Thus, I agree that post-doc salaries should be increased in general, but not for everyone. My post-doctoral institution was based in the San Francisco bay area, which is one of the most expensive locations in the nation. Multiple data sources indicate that the cost of living in this region is double the national average. However, a post-doc in San Francisco, California receives the same stipend as a similarly experienced post-doc living in Manhattan, Kansas. This is not equitable.

Recommendation: I recommend that the NIH revise the current flat rate system for NIH stipends. Stipends should be adjusted based on regional cost of living.

Existing NIH policies, programs, or resources

The current T32 and F32 post-doctoral programs are excellent training opportunities because they require that the institution or PI of the trainee has developed an adequate career development plan. Applicants must provide evidence that a pathway to research independence for the post-doc is possible. I was fortunate enough to be funded by a T32 during my post-doctoral training. There is room for improvement, however, in these training programs. For example, some PIs still "cheat"the system with T32—and F32—trained fellows by not following through with the training opportunities that were promised in the grant proposal.

Recommendation: I recommend that these existing programs be modified so that yearly progress is scrutinized more carefully and more strongly tied to continued funding.

Proven or promising external resources or approaches

enhance the postdoctoral training ecosystem, because it enhances the diversity of the post-doc workforce in the country. As a PI, my lab would not survive without international post-docs, but without NIH-support, it is difficult to sustain them.

Recommendation: I recommend to expand NIH-funding to international post-doc scholars.

Response 1758

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as a time where I can develop my own independent research under the mentorship and support of a more established scientist.

Fundamental issues and challenges

At the end of the day, money is a large contributor to the 'leaky pipeline' in academic research tracks, as trainee stipends do not adequately support the demands that are placed upon them at a vulnerable stage of their career. I am currently ending my PhD program and cost of living versus postdoc salary limits where I would be able to go as the current sole provider for a family of 4. A postdoc salary in a small midwestern college town (where I'm currently living) is decent to live on, but the same salary is simply a joke when considering larger costal cities.

Existing NIH policies, programs, or resources

As I've talked with advisors and academics in the field, a common expectation among training grants (F and K awards specifically) is that upon completing their PhD, trainees need to uproot their lives and move to a new institution to receive adequate training. Constant instability is another contributor to the 'leaky pipeline' as trainees are forced to leave their support networks over and over at a vulnerable stage of their

careers. I would create a some sort of funding mechanism to support postdocs that are wanting to continue in a scientific career at the same institution from which they obtained their PhD.

Proven or promising external resources or approaches

No response

Response 1759

Perspectives on the postdoc roles and responsibilities

Our role is to be independent researchers, help train graduate students, and aid in grant writing.

Fundamental issues and challenges

Money. My graduate school stipend was $38,000 at WashU in St. Louis. After taxes as a postdoc in Massachusetts, I make $39,000, and the cost of living is higher, so my net profit is less then it was in graduate school. Why would I stay in this position that clearly doesn't value me any more then a graduate student. To be frank, it's embarrassing to have a doctorate and have to turn down social outings with friends because you can't afford it. Lack of money also prevents postdocs from starting families—so it feels like you have to choose between having a family, or finishing a postdoc. And this isn't far from the truth. By the time most people finish their postdocs, they will be an age where a pregnancy would be considered a "geriatric pregnancy." So, people need to have a child in their postdocs years, but can't afford it. So, increasing pay and childcare benefits would help retain postdocs, especially women who are dramatically underrepresented at the PI level.

Existing NIH policies, programs, or resources

Postdocs need retirement benefits and child care aid as well as a large increase in the minimum pay.

Proven or promising external resources or approaches

Recruitment, training, work environment and mentoring are all completely fine. Please do not let the outcome of this survey be classes or tutorials that postdocs have to complete. Just increase pay for postdocs.

Response 1760

Perspectives on the postdoc roles and responsibilities

While the postdoctoral experience is not entirely without value, the additional time of scientific experience is not well valued in industry, and how useful a postdoc is to that career track is highly variable. Indeed, postdocs even more than graduate school are so HUGELY varied in nature, it is challenging to evaluate what that experience phase contributed to each individual.

Fundamental issues and challenges

Quality of life is the number one reason for dropping out of the postdoctoral career track. The hurdles to academic success have become so enormous, that the long hours of work, painfully low pay, and risk of long-deferred reward for this suffering make it nearly untenable unless you have another source of financial support. This promotes inequity in the viability of an academic career (those without more significant financial resources are unlikely to be able to afford the being a postdoc, and this will track strongly with disproportionate impacts on underrepresented minorities), or forcing those who would otherwise be promising academics to choose between career and starting a family. This financial disparity is the most problematic in the areas of the country in which some of the most prestigious academic training institutions are located, exacerbating the financial struggles associated with a postdoc career.

Existing NIH policies, programs, or resources

More significant financial support, specifically for housing and childcare costs, would undoubtedly make a significant impact on the retention of individuals in postdoctoral training programs. When I transitioned from a postdoc to industry in the same geographic location, my salary nearly tripled. In addition, my working hours were about 1/3 less. The science in industry was extremely focused and practical, not only aimed at the next CNS-publication-worthy discovery that would be relatively impactless nonetheless, beyond a niche scientific sphere. It made me wonder why I spent such an insanely long time in academia

before making the transition, as the challenges of being a faculty member have also become enormous in recent years. I've watched many extraordinarily talented colleagues and friends struggle intensely to succeed in academia, with no guarantee of success.

Proven or promising external resources or approaches

No response

Response 1761

Perspectives on the postdoc roles and responsibilities

The post-doc is something that is critical for a scientific career although many are not able to complete one due to financial and personal reasons.

Fundamental issues and challenges

Financial constraints are one of the biggest challenges with the post-doctoral fellowship. The very low salary and the restrictions on working to earn additional money were one the primary reasons I and many of my colleagues were not able to complete a post-doc. The salary is not a livable salary even for one person, let alone those who might have children or dependents in their care. This is a major proponent of disparities in who can and who cannot afford to complete a post doc. In today's world, many people have to work while completing degrees unless you are fortunate enough to have come from a privileged background, or you married someone with a lot of money, or you have a person who is giving you money to support daily expenses. Therefore, anyone from a lower SES or who is self-supporting (or has a family to support) cannot participate in a post-doc, widening the disparity gap between SES (all races and ethnicities), races (e.g., non white), ethnicities (e.g., non-latinx), and genders (women). The traditional academic viewpoint that you cannot work while completing coursework or pursuing a research career is antiquated and continues to be a major proponent of these issues and continues to support rich white persons who already have many advantages. This is hindering the diversity in our science and thought. This is also widening the gender gap and significantly limits the future scientific career of many bright and well-deserving scientists.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

One approach to inform is to connect with individuals who did not complete or were not able to consider a postdoctoral fellowship as a viable option. Understanding the reasons why Ph.D. prepared scientists did not complete a post-doc would give great insight into the issues from the perspective of the target group. Perhaps a national survey that could be facilitated by academic institutions would be a consideration.

Response 1762

Perspectives on the postdoc roles and responsibilities

I see postdoctoral studies primarily as a way for graduate students to obtain the additional research experience and training needed to succeed as an independent investigator in an academic/NIH R—grant situation. I don't think postdocs are needed in industry where a Staff Scientist position is more appropriate.

The roles and responsibilities of an academic postdoc are:

1. Lead a project under the supervision of a PI;
2. Mentor undergraduate and graduate students;
3. Develop an independent project that is distinct (although) related to their PIs funded work;
4. Write a K-award with mentorship and guidance from the supervisor and the institution;
5. Receive training in laboratory management, personnel management, scientific ethics, and academic interviewing with the goal of applying for and obtaining an independent academic position.

Fundamental issues and challenges

Fundamental challenges are:

1. Competition for NIH funding for postdoctoral K-awards and subsequently R—awards is high and is often seen as a barrier that many postdocs decide is not worth the effort.
2. Salaries and benefits in the private sector are often significantly higher than postdoctoral stipends in academia. Many PhDs see academia as a risky choice for their financial well-being and are able to find well-paying jobs outside of academia.
3. The success rate for postdoc-to-faculty transition is low and always has been.
4. Postdoctoral positions in many Universities are treated as temporary employment with annual reappointments being dependent on available funding—this job insecurity can be very stressful. Almost all postdoctoral positions within academic institutions are funded on 'soft' money where the PI and not the institution has to provide the guarantee of continued employment (most PIs feel like struggling small business owners that are trying to run a franchise!). As a consequence most postdoctoral positions in academia do not come with any retirement benefits. Many postdocs feel they are non-entities within the administrative environment of a large academic center.

Existing NIH policies, programs, or resources

1. Link the F&A and indirect costs paid on R-awards to Universities to their commitment to supporting postdoctoral benefits.
2. Expand the K-99/R00 programs, but cut the K-22 awards. The rationale being that no one should spend longer than 5 years in a postdoctoral position (K22 provide funding for those up to 8 years after their PhD).
3. Leverage R-awards by asking for institutional commitments to supporting postdoctoral trainees if budgeted. An institutional commitment might be provision of negotiated health care, inclusion within retirement benefits programs, provision of training with guaranteed time provided to undertake such training (grant writing, pedagogical training, personnel management etc), provision of affordable postdoctoral housing, etc).
4. Increasing the NIH-mandated stipend levels for postdocs such that they are competitive with the private sector OR provide more access to LRP for postdocs.
5. Increase the modular budgets of R-awards and the budget limits for non-modular budgets to allow postdoctoral scientists to be paid at higher stipend levels.

Proven or promising external resources or approaches

No response

Response 1763

Perspectives on the postdoc roles and responsibilities

As a researcher in the field of cognitive neuroscience, the postdoctoral training period is an invaluable time for people early in their career to gain additional skills, bolster their CVs with publications, and hopefully carve the way forward to launch themselves into an independent career. Having seen the CVs of people who have either skipped postdoctoral training, or who had extremely short postdoctoral periods (< 1 year), these people are at an extreme disadvantage relative to those with 2+ years of postdoctoral experience under their belts when applying for federal grants, faculty positions, etc.

Fundamental issues and challenges

When someone graduates with their PhD, their student loans come out of deferment shortly thereafter and those payments can be enormous. I had relatively few loans from my time in graduate school (~$3k per year for 5 years to cover my fees), but I also had loans for my time as an undergraduate (~$32k total in principal taken out over 4 years). By the time I finished my schooling, my loans exceeded $60k with interest, and the payment was an astronomical portion of my small postdoctoral salary ($42.5k annually), and I didn't qualify for IDR repayment plans because my husbands income pushed us just over the edge of eligibility.

Aside from loan repayment, as a woman in academia, child bearing was a difficult journey. I was pregnant when starting my first postdoctoral fellowship and had no paid leave time (not even sick time) when I left for maternity leave. Even though I was suffering postpartum depression and was still dealing with my physical recovery after delivery (I had some post-delivery complications), I had to return to work after 6 weeks of unpaid leave because my family honestly could not afford for me to take any more time off. I nearly quit in that period because I was so unsupported by my work, and I was truly struggling mentally, physically, and emotionally.

Existing NIH policies, programs, or resources

Parents, not just mothers, NEED paid leave time as part of the NIH policy, plain and simple. Mothers need time to heal and recover, and fathers need time to be equal partners and contribute fairly to care responsibilities.

The Loan Repayment Program is wonderful for alleviating the burden of student loans, but it is extremely competitive and takes quite some time just to review, let alone get funded. I know many scholars apply multiple times before getting funding. There should be additional considerations for loan repayment/forgiveness for postdoctoral scholars, and/or higher pay to accommodate the debts that so many face when exiting graduate school, which is a notoriously low-paid period.

Proven or promising external resources or approaches

The loan repayment program is an outstanding resource that should be publicized to a greater degree, and should probably have greater funding to allow more scholars to take advantage of the program. Quality of life improved for people across the US when student loans were frozen in 2020.

Professional conferences/meetings have started adopting parent-friendly policies like offering care grants, or having childcare resources on site at the meeting. Having parent-forward policies increases participation and creates more equitable environments for people of all backgrounds and extramural responsibilities to continue progressing their careers.

The US broadly needs better parental leave policies. Having adequate PAID and PROTECTED parental leave improves job satisfaction, fosters healthier children, and improves participation in the workforce among women.

Response 1764

Perspectives on the postdoc roles and responsibilities

A training for me to learn multiple techniques, communication skills, and independent thinking, and to obtain opportunities to learn how to write grands, how to run a laboratory.

Fundamental issues and challenges

A lot of reach field have extremely limited funding sources. It looks like the distribution of grand leasing is too political, rather than scientific. In my postdoctoral trading, sometimes I need some financial support based on the city I live from my parents.

Existing NIH policies, programs, or resources

Limited grand sources, poor salaries for postdoctoral researchers, citizen bias.

Proven or promising external resources or approaches

Money is the core point. The level of fundings for academic from organizations or governments and the financial support for industrial research and development from their own are hugely different, as a result, postdoctoral researchers earn less money than employees in industries. The unfair salary for postdoctoral researchers is a direct cause for them to choose an industrial job.

Response 1765

Perspectives on the postdoc roles and responsibilities

I am expecting to acquire new competences and be mentored.

It is often mistaken that we as postdocs shouldn’t be training and learning.

Fundamental issues and challenges

Housing in NYC is a real issue impacting the quality of life, and should be treated as so.

Academic institutions should either increase the compensation or find appropriate housing with rents below the market.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1766

Perspectives on the postdoc roles and responsibilities

My understanding is that a postdoc prepares the person to become an independent scientist. Postdocs are supposed to publish as many papers as possible so they are competitive.

Fundamental issues and challenges

I am choosing not to do a postdoc because why would I waste another 2-3 years of my life with low pay just to enter academia which also has low pay. Why would I waste my time doing a postdoc if positions in academia are so competitive? What if I don't get tenure? Entering academia is not worth it. You don't have job security, you are paid a low salary, you have to deal with the outdated culture and politics in academia, and you work so hard that your job consumes you. It's not worth it. I would rather get a decent paying job with my PhD than continue to rot in academia.

Existing NIH policies, programs, or resources

Pay postdocs a livable wage. 50-60k (sometimes 40k) is not enough. A highly educated, competent, and driven individual does not deserve to get paid so lowly. Also, stop giving NIH funding to old tired professors that need to retire. There are too many candidates for academia and not enough positions in the U.S.

Proven or promising external resources or approaches

The culture has to change from within, starting with the people who have power. If they don't change (e.g., stop being racist, sexist, transphobic) then replace them with more empathetic and informed people. You can't just recruit more "diverse" postdocs and expect the culture to magically change. Put people from historically-excluded groups in positions of power. Enact policies that protect people who aren't in positions of power. I think graduate students and postdocs are the bread and butter of academia. Our PIs would be nothing without us, and it's time we get some respect. We need good pay, vacations, parental leave, benefits, and excellent insurance that doesn't exclude teeth and eyes. I want the academic institution to start treating its postdocs like the intelligent and capable individuals they are, by giving them incentives to stay in academia, rather than continuing to exploit them. Otherwise, people like me will continue leaving academia in droves.

Response 1767

Perspectives on the postdoc roles and responsibilities

Training for new skills or advancing the phd training

Fundamental issues and challenges

Bad pay; expectation to be autonomous with no support (postdoc by definition is trainiee position so we do need "training"); expectation to relocate to job location when the salary is so low (cant uproot our families for this)

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1768

Perspectives on the postdoc roles and responsibilities

post-docs are the driving force behind a lot of the research done in labs. They serve as both a tutor for graduate students while they have the memory of grad school fresh in their minds, as well as a more direct equal to the lab PI to more rigorously pursue research projects.

Fundamental issues and challenges

The pay of a post-doc is the main concern that's causing me to consider a position in industry rather than academia post-grad.

Existing NIH policies, programs, or resources

Increase base pay for post-docs. Potentially increase ease of access to NIH resources for more opportunities for collaboration/to expand the potential for post-doctoral research into translational science for those working in labs focussed on "basic" science. Access to patient samples, etc. It's the wealth of resources available in industry that's also tempting for young researchers.

Proven or promising external resources or approaches

Increase funding for post-doctoral training activities i.e. increasing subsidization of post-doc travel to NIH organized symposia and training events. Create more of these events. This way one will not have to join a well funded lab to be able to attend additional conferences or gain access to all the resources they might want or require for their research and training.

Response 1769

Perspectives on the postdoc roles and responsibilities

The last training step to be able to conduct research as a leader.

Fundamental issues and challenges

The stress to do well is constant. Not only for your future, but also the present (being able to financially support family, housing, health, etc.). In addition, there is the stress of getting a position of interest in the futurre.

Existing NIH policies, programs, or resources

There should be a review/evaluation of the Principal Investigator by his/her students and postdoc in an anonymous and protected way. This would be a great way to be aware of PIs that are not treating the subordinates fairly.

Proven or promising external resources or approaches

First is being able to provide a descent salary (this can vary according to location cost of living). Second, as mentioned before, 360 degrees evaluation is needed.

Response 1770

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Pay remains an important consideration, perhaps especially for physician trainees. At my institution, the mandated salary scale for physician trainees vastly exceeds the NIH-provided stipend for T32 trainees, creating a very large salary gap that needs to be covered by other intramural means. This creates important challenges to the viability of T32 programs.

Existing NIH policies, programs, or resources

Mentoring is another ongoing, critical challenge. Within the aging research community, the NIA-funded Clin-STAR program has played an important role in addressing this issue, but it's the tip of the iceberg. Mandatory trainings or requirements are unlikely to be effective, but providing more robust resources to help program directors and postdocs understand how best to work with mentors, develop and implement individual development plans (IDPs), and create guardrails to optimize the mentoring experience would be very valuable.

Proven or promising external resources or approaches

See comment about regarding the Clin-STAR program. UCSF has some excellent resources around postdoc mentoring and resources such as model IDPs—see https://career.ucsf.edu/welcome

Response 1771

Perspectives on the postdoc roles and responsibilities

Postodoc position for me is about professional and scientific growth and an opportunity to hone current skills and develop new ones

Fundamental issues and challenges

The biggest challenge for me was getting funding. So many funds are available for 'Early Career Investigators,' but only some allow postdocs to apply as Principle Investigators. Postdocs are at the career stage where they need maximum support to grow and continue in academia. This includes but is not limited to grant writing seminars/workshops, conferences, and meetings specifically emphasizing travel grants for postdocs to present scientific findings. Apart from this, more NIH-funded awards/training should be available to and reserved for postdocs only. I firmly believe that without this support system, postdocs will not be able to survive in Academia, and Academia will loose talent.

Existing NIH policies, programs, or resources

Make small grants such as R03, and R21 eligible for postdocs to apply as Principal Investigators.

Proven or promising external resources or approaches

No response

Response 1772

Perspectives on the postdoc roles and responsibilities

I strongly believe that the postdoctoral phase is a critical period for professional and personal growth as a scientist, where individuals can develop their independence and maturity. However, it is important to acknowledge that this is also a transient position, and postdocs need support to ensure they can successfully transition into their next career stage.

To ensure that postdocs are supported and have equal opportunities for professional growth, it is imperative that measures be put in place to prevent any unfair practices or exploitation. The best possible solution is to assign anyone that is paid by the NIH funding a mentoring team to provide them with guidance and support outside of their direct supervisor.

They should require early stage scientists from all levels that are paid for 6 months or more in anyone's lab should always be reported to the NIH and the NIH should enforce PIs especially if they want those tax payer dollars that they need to also have to support trainees and not just say it but the NIH should mandate all trainees have a mentoring team in place. This will create a transparent and healthy environment where everyone is checked through their trainings. I bet that this will avoid all kinds of messed up ethical issues that cost the NIH billions a year on wasted labs from all the fabrication [redacted] that they pull. It will also give the PI another pair of eyes that are so looking at them so that they don't pull anything shady.

Fundamental issues and challenges

For starters, the pay is terrible, absolutely horrible! It is impossible for anyone with a family to live off it, unless you can supplement it with welfare or EBT money. Why would anyone want to work and be poor for

the rest of their lives? This is especially true for minority trainees who usually do not have any generational wealth but have many family members to take care of.

It is not possible to survive on a postdoc salary. So, why subject yourself to unnecessary poverty? What is the point? On top of that, the PI mistreats you, and when you complain to the Chair, you get a [redacted] answer. Especially if the PIs have multiple R01s, which means they are bringing in millions of dollars in indirect costs. The Chair and deans will then of course will look the other way.

Existing NIH policies, programs, or resources

The NIH bears a lot of responsibility for perpetuating this toxic culture. The issue of potential competition between postdocs and their bosses is also a serious concern that needs to be addressed promptly. The prevailing mentality is that postdocs need to do something different from their bosses for the R00, but why? Instead, why not promote a collaborative and supportive mentoring environment that allows scientists to evolve and flourish organically? This approach would encourage discovery. No one discovers anything by themself!!!! It is crucial to establish a workplace where postdocs can collaborate with their supervisors. The NIH should actively encourage this approach instead of promoting the R00, which encourages postdocs to differentiate themselves from their PI. This is not a competition. Such attitudes only contribute to burnout.

The NIH has to promote a healthy environment a collaborative one, one in where if you do continue to work with your mentor that it is rewarded this way PI would be encouraged to work with their postdocs and postdocs don’t have to do side hustle experiments that they need to propose differently for the R00 without the PI knowing. Everyone I know does this. They all have to sneak experiments for their K99 applications to be competitive.

Proven or promising external resources or approaches

The NIH needs to provide childcare expenses. A system should be in place where trainees can submit receipts for daycare expenses and receive reimbursement or a stipend.

There should be a system in place that allows trainees to provide feedback about their PIs and R1 institutions. A separate survey or grading system should be filled out by trainees to evaluate the training environment at their institution. This approach would give the NIH an idea of how supportive institutions are towards their trainees. To maintain their R1 status, institutions should receive a passing grade, and if the grade falls below a C, the NIH should not provide funding for that institution in the following fiscal year. This approach would encourage institutions to address issues such as unethical practices and toxic training environments. No institution wants to be publicly known as a toxic place, as it could negatively affect their reputation and donations.

The promotion of mentoring teams for trainees should be mandatory and should not be limited to the same approachable faculty members.This places an undue burden on them. Instead, the NIH should mandate that all PIs be on a mentoring team.If you receive funding, you should also give back.This would require everyone to sign up, not just the few who always volunteer to help out. It is frustrating to see PIs who have the luxury of focusing solely on their research while others struggle to help out trainees and early-stage faculty.

Fortunately for me, what worked was that I had to form, or was encouraged to form, a mentoring team for my transitional grant. This helped me tremendously because it was highly encouraged, and my PI did not become paranoid since it was a requirement.He knew that if he wanted me to pay myself off his grant, he would have to be supportive.

Response 1773

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is an opportunity to publish one’s own research, with support of an established lab, to test and prove both interest and competency in the research profession.

Fundamental issues and challenges

I fielded responses from friends and colleagues who did not enter in academia: these views also reflect my own

1. Poor job market: sense that more PhDs are produced than academic jobs available
2. Low pay and opportunity cost in taking postdoc positions relative to other career choices
3. Changing landscape of academic culture: off-putting identity-centered culture—explicit yet illegal identity-based hiring practices and discriminatory rhetoric by university officials discourages many from remaining in academia

Existing NIH policies, programs, or resources

1) EXPAND: Information of job market and hiring outlooks for industries and professions with potential forecasting to help students make informed career choices (other career resources provided by NIH are clear and helpful, but actual market data would be a definitive help)
    a) e.g. A real-time heatmap of collated academic job postings across US (a student could have a visual idea of how many jobs are available at a given time and where they are available)
2) IMPROVE: More competitive funding for student stipends
3) MODIFY: Perhaps have mentoring new researchers as a component of NIH grants for academically-inclined postdocs—many graduate students complain about poor mentorship from PIs, but do many take mentoring seriously in their academic training?

NOTE: The NIH's diversity guidelines and definitions are clearly defined and thoughtfully laid out, giving concerned persons of various backgrounds confidence in fair assessments.

Proven or promising external resources or approaches

No response

Response 1774

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as an opportunity to continue training for someone who wants to lead their own research group. Additional training in a new system, new techniques, getting preliminary data that would be basis of starting one's own group. More mentoring and teaching opportunities as well. I had the sense that historically it was optional, but slowly came to be the norm for those wanting their own group (mainly due to competition). I had the sense that these were typically 2 years, versus now the close to 5 year for some.

Fundamental issues and challenges

For those that at one point consider wanting to lead their own research group, the competition for jobs is daunting and exhausting and may not pan out. This reality is discussed more openly now at the graduate level so many are carefully considering their career moves with this in mind. Also, there are more industry jobs and bioinformatic jobs then before, and I feel there are many who go there. Some are juggling partners and young families and moving somewhere for a couple of years, in some cases with support only guaranteed year to year, is hard. Support in starting a family or raising young children varies widely not only institution to institution, but PI by PI. Just work-life balance in general—some PIs can be very balanced, but some can pressure PDs to work around the clock to produce data. I hear pay can be an issue, but that varies widely geographically. 10 years ago when I was first a post-doc, I remember feeling I had completed an advanced degree and still was getting paid just over $32,000. I justified it as this was more "training", but really PIs were using the "training" to having skilled hands at low cost. Some of this is grant driven with only so much money, but it felt like why get a PhD?

Existing NIH policies, programs, or resources

So much has been done for the better in the last 5-7 years I feel, but some of those feel initiated by my own institution. There is a center for post-docs and they run workshops on resumes/CV, teaching modules, ways to find jobs outside of academia, a confidential way to report abuse, etc. Increases in pay, but there seems to be stories out there about institution (university/department) red tape. Sometimes a PI wants to

pay more or offer a contract longer than a single year, but rules prevent that. I've been happy to see more conversations at the graduate level, so those that go into a post-doc know the purpose and end goal. Those not interested in running their own lab shouldn't start a post-doc.

Proven or promising external resources or approaches

I just want to put in a plug for creating and normalizing a staff scientist position within a research group. I do not want to run my own group, but I love bench work. I bring expertise to my group, and help the PI with training of students and providing continuity in the lab. At my institution, after some time as a post-doc you are automatically elevated to research associate. However, our grant can't always cover the minimum compensation level so we've had to get creative. So many labs and individuals would benefit from this structure. You wouldn't have as many graduate students (but again, there are not enough academic jobs for them all anyway) and the personnel costs would be higher, but academia was built on the backs of the students for so long that it needs to change.

Response 1775

Perspectives on the postdoc roles and responsibilities

publishing work, conducting science in a more independent way, mentoring and training students as needed, training opportunity to build independence and skills in grant writing before transitioning to faculty position. opportunity to broaden scientific background and skillset before establishing own lab.

Fundamental issues and challenges

MONEY. Postdoctoral trainees do not make livable wages, especially when compared to industry positions, and particularly in regions of the US where top institutions are located (California, New York, etc.). Timeline of training. Doing 5-7 years of a PhD and then 5-7 more years of a postdoc places individuals well into their adult life and delays personal decisions like buying a home or having children. Academic barriers. IE, seeing junior faculty struggle and how difficult it can be do get grants and manage all of the responsibilities with minimal training in managing conflict, budgets, etc. Competition. It is becoming more and more difficult to land grants and jobs and the bar continues to climb higher. If you aren't willing to sacrifice then it is unlikely you will succeed and many aren't willing to make this sacrifice. Climate and equity. There are still discrimination issues within academia, and these can accumulate and become unbearable, particularly amongst marginalized groups. NIH needs to hold faculty accountable for creating equitable spaces. It is unclear to me why faculty with a proven trackrecord of sexism, harassment, etc. would continue to receive NIH support and maintain an ability to mentor students and postdocs. There has to be a money motivator to promote "good behavior." Work life balance. It feels impossible to maintain cutting edge status in science while also enjoying a personal life.

Existing NIH policies, programs, or resources

Provide more funding opportunities for postdocs, even short term grants or partial salary. Increase the NIH payline for postdocs, particularly in regions with higher cost of living. DEI programs and faculty training for interacting with postdocs and diverse individuals. Hold faculty accountable for providing mentorship in equitable ways to postdocs. Increase funding going to junior faculty and toward transition grants so that young PIs can establish themselves. Decrease funding going toward inactive labs with faculty of retirement age, perhaps by monitoring spending and productivity more closely for PIs with multiple grants, centers, etc.

Proven or promising external resources or approaches

No response

Response 1776

Perspectives on the postdoc roles and responsibilities

In the culture of the united states, as compared to the Netherlands, treats both graduate school and postdoc as training positions. However, the nature of the work, and the expectations of what it takes to get these positions, has changed drastically in recent decades to the point where both positions are decidedly employment positions despite the appearance of flexibility. Post docs are expected to produce scientific products at a rate that is equal to or greater than a tenured professor. They do get some training

and support, but this training and support is roughly equivalent to a mid-level manager, or senior-mid-level manager in industry. Often they are fully responsible for desiging and executing studies with minimal oversight. They mentor and train in a way that is hardly distinguishable from assistant professors, and often more involved in day-to-day lab activities than tenured professors (obviously, there is variability). In other words, it is no longer a training position; it is a collaborative research position with some on-the-job training.

Fundamental issues and challenges

Research budgets must expand to provide postdocs with competitive salaries and benefits. In my understanding this must come from congress. Moving expenses, or remote-work options must be provided. Training and support for transitioning to non-academic positions must be provided. Finally, post-doc supervisors must be accountable for exploitation and mistreatment. This is not perfect anywhere, but the current model of what is essentially a principal investigator's feudal fiefdom leads to extreme vulnerability for post-docs. PIs may essentially control a post-docs career prospects.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1777

Perspectives on the postdoc roles and responsibilities

Training position to learn how to apply knowledge in new environment and expand skills necessary to succeed in either academics o industry or other field. Time to expand horizons, whether that's new technical skills, writing grants and papers, net-working, etc.

Fundamental issues and challenges

Few well qualified applicants since so many other higher paying opportunities.

Usually stay once see value in experience, so retention is not as much of an issue.

Work/life balance is considered, but it's hard to offer high enough salary in big cities

Existing NIH policies, programs, or resources

Higher budget for postdoc, and therefor grants.

More opportunities for networking, presentation, etc and carrots that value this so applicants see the value in the training.

Proven or promising external resources or approaches

Have complemented with industry CRA's to help fund and provide added exposure

Response 1778

Perspectives on the postdoc roles and responsibilities

My postdoc term is an opportunity for me to explore challenging scientific problems using the experience gathered during my Ph.D. It also offers an opportunity to collaborate, mentor, and engage with the scientific community. I also consider it a transitory period toward my career as an independent investigator.

Fundamental issues and challenges

Firstly, increased salary, which is the basic and most urgent change in the current system of postdocs. The annual increase of a postdoc salary is very marginal and does not account for the growing inflation and the high cost of living, especially in bigger cities in the US.

Secondly, social security benefits like retirement 401(k), child care, and paid maternity leave really make working in academia an unsustainable choice. This is especially relevant as many postdocs around the

ages 27-35 yrs think of starting a family during these crucial years and without the benefits, it becomes really difficult to make ends meet. A lot of us look for other high-paying alternative career choices just because we feel overworked and underpaid. Thirdly, for postdocs on a visa, the opportunities for grant application and awards are limited (due to the application criteria).

Existing NIH policies, programs, or resources

It would be great to have an increased salary. This will also help to incentivize postdocs and hopefully retain them in academia afterward (as PIs). There has been an increasing trend of postdocs or even grad students seeking job opportunities in the industry or other high-paying sectors because they feel undervalued and underpaid for the time and efforts they put towards academic research.

The postdoc fellowships can be made available to postdocs on a visa.

Proven or promising external resources or approaches

No response

Response 1779

Perspectives on the postdoc roles and responsibilities

Postdocs are in training to gain additional scientific and mentoring skills to allow them to pursue either academic or industry scientist positions.

Fundamental issues and challenges

Postdoc pay is a major factor currently, particularly in high cost of living areas such as Seattle, where I am located. Many grad students are going straight to industry because they do not want or can’t afford to live on a postdocs salary. Particularly if they have children, it is very difficult.

In Washington, we have a new minimum wage law where minimum for salaried (exempt) employees where current Y1 postdoc salaries are over $65,000. In 2-3 years, that will need to be $90K per state law. While that is great for postdocs trying to live in an expensive area. That is very hard on your R01s to cover those salaries. Perhaps the NIH could make modular R01s up to 500K and then have itemized budgets over that.

Existing NIH policies, programs, or resources

NIH postdoc salary scale needs to be adjusted upwards or be tied to cost of living of the area. Easy to access funds for postdoc childcare as supplements to F32s or for their PIs R01s.

In Washington, we have a new minimum wage law where minimum for salaried (exempt) employees where current Y1 postdoc salaries are over $65,000. In 2-3 years, that will need to be $90K per state law. While that is great for postdocs trying to live in an expensive area. That is very hard on your R01s to cover those salaries. Perhaps the NIH could make modular R01s up to 500K and then have itemized budgets over that.

It is also very difficult now for us to supplement the stipend of postdocs on F32 or T32 grants since their salaries are well over the NIH scale in WA, but we need to supplement with non-federal money. Why can’t we supplement with federal money. Many of us don’t have access to much non-federal money for these purposes.

Another very important issue is that postdocs on F32s are not allowed to be employees of our institution by NIH policy. This makes it a penalty for postdocs to be on an F32--they lose their retirement benefits at a time when this is key. We also have to have a very complicated workaround for postdocs to keep their health insurance and other insurance policies even though they become non-employees, creating administrative headaches. They also lose access to state FMLA, which is important for unforeseen medical issues or for parental leave after birth or adoption, because they aren’t paying into the system as non-emloyees. WA state FMLA is very generous.

Proven or promising external resources or approaches

1) Allow postdocs on F32s to remain employees (and pay indirects on F32 grants).
2) Increase the salary scale or have the salary scale vary by cost of living of the area.
3) Childcare supplements
4) Allow F32s to be more than 3 years, particularly for postdocs who want to stay in academics. K99 or K01 or K22 awards are very hard to get. Or just have more K awards available for postdocs to allow them a few extra years. It takes a 5-6 year postdoc to get a good academic job. But PIs can't always support a postdoc for that long.

Response 1780

Perspectives on the postdoc roles and responsibilities

To perform semi independent research with oversight by mentor with knowledge of the literature and incorporation of new ideas. Mentor responsibilities include training of post-doc in presentation skills, analysis of data and visualization, writing manuscripts, fellowship application, critical review of papers. Mentor can provide career advice or referral to relevant persons, opportunities to supervise other personnel, and importantly, support and encouragement.

Fundamental issues and challenges

The availability of qualified individuals seeking academic post-docs have plummeted in recent years. This is likely due in part to the COVID-19 pandemic which has limited travel and the desire to be away from family. However, I think the difficulty of an academic position in terms of funding and lack of job security has had a huge impact on the field. Retention is affected by availability of jobs in biotech paying much higher salaries or a desire to move to a non-research based trajectory.

Existing NIH policies, programs, or resources

The biggest thing the NIH can do to make academic post-doc positions more appealing is to pay higher salaries. This also impacts the ability of faculty to fund post-docs because the NIH salary limits don't cover the actual salary of post-docs. For example in WA State, post-docs are now required to be paid a minimum of over $65K per year, not including fringe. Thus, our grants are not covering full salary and it may mean we are unable to hire enough staff for the proposed work.

Proven or promising external resources or approaches

Required training for investigators requesting funding for post-docs on grants that defines training and mentoring requirements and instructs investigators on how to foster a supportive work environment. This could be part of the JIT materials. There may also be a way to require institutions that accept NIH funding to require this for all investigators to cover post-docs that are paid through non-NIH funds.

Response 1781

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a very important transition position between PhD completion and independent research leadership. It the best period to acquire a deeper knowledge and training on biological background, biology and techniques for developing a research project, explore new perspectives. However, it's also the moment to learn additional skills fundamental for a future PI, such us student supervision, grant writing or networking.

Fundamental issues and challenges

Postdoctoral positions require high levels of training, effort, dedication, and resiliency. A so demanding position with these requirement is generally well appreciated and compensated in other professional fields. However, postdoctoral researchers in academia are incredibly underpaid. Salaries are ridiculously low comparing similar positions for similarly trained people in industry. First-class academic research institutions are generally located in big and expensive cities. Therefore, low salaries became an issue from the very beginning of the postdoctoral period. Moreover, these difficulties increase exponentially if the person has dependents or comes from a foreign country, what adds more obstacles like visa processing.

Academic institutions do not provide enough mobility, housing or dependent care solutions. In addition, many postdoctoral researches suffer a toxic working environment with never-ending schedules, inexistent holidays or vacation days and disrespectful supervisors. With these unattractive job conditions, PhD graduates look for other alternatives in science after their PhD training, and postdocs look for well paid jobs in industry or move to other countries.

Existing NIH policies, programs, or resources

Increase salary tables, including a percentage of correction for expensive states/cities. This is something already implemented in European Union funding for postdocs like the MSCA fellowships where a country correcting is applied.

Proven or promising external resources or approaches

Force institutions to increase salary, compensate experience, provide housing and dependent care solutions, promote healthy work environment, provide protection against toxic PIs.

Response 1782

Perspectives on the postdoc roles and responsibilities

Its a good platform to try and develop new protocols and venture new research avenues and to be more independent.

Fundamental issues and challenges

Funding issues which affects the visa and other requirements makes it stressful, especially with contract renewal.

A stable employment position with a 3years or 5 years fixed position at the University with employee status would help.

Transitioning to young faculty could be made easier with special programs or facilities

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1783

Perspectives on the postdoc roles and responsibilities

A postdoc holds a senior position in a lab, and is responsible for both research as well as assisting in the training of graduate students. In my experience, postdocs may act as a direct mentor for a graduate student if their research areas overlap significantly, but more often postdocs act as experts on specific techniques on an as-needed basis.

Fundamental issues and challenges

Both money and negative experiences in academia are major factors that come up in my conversations with fellow grad students about the decision to pursue other options over postdoctoral positions. Jobs outside of academia can offer salaries that give financial security, whereas many postdocs only receive enough to live on fairly comfortably (~$55,000 is not uncommon), but not enough to feel secure. Since graduate school requires students to live on a very limited budget for 3-7+ years, with PIs who may require them to work 7 days a week/10 hours a day, many feel like they have reached a point in their life where they need to start being properly valued for their time and expertise. Especially given as postdocs may also be required to work extremely long hours and be expected to do things above and beyond their pay scale. I think that academia asks people to sacrifice a lot of things in the name of their passion for their research area, and people are getting so burnt out in their PhD that that sacrifice doesn’t seem worth it anymore. Especially when they receive reviewer comments that show that those sacrifices are still not good enough, and may never be good enough. Almost every journal club I’ve attended has had PIs ripping apart published papers and disparaging the conclusions. I think that to be seen as “productive enough” in

academia, you have to give up a good portion of your life, but the pandemic has shown us that the time we have with our loved ones is precious. You can't just put your life on pause until you one day become tenured, you have to be able to live your life now. That means that you need to have both free time and money.

Existing NIH policies, programs, or resources

NIH review sections could be better regulated so that reviewers who regularly are overly harsh in their feedback are no longer put into review sections. Especially when it is clear that the reviewer did not read the proposal.

Proven or promising external resources or approaches

No response

Response 1784

Perspectives on the postdoc roles and responsibilities

An academic postdoctoral position is effectively a research scientist job. My job is to work with the PI to conceive of and design experiments that advance the interests and scientific contributions of the laboratory, then carry out said experiments. Additionally, I mentor and manage graduate students, undergraduates, and other laboratory personnel as appropriate.

Fundamental issues and challenges

Salary to cost of living ratios are the root of most problems related to recruitment, retention, and life quality. This is particularly true in the light of what equivalent industry positions are able to offer. While it is not necessarily expected that academic salaries would ever match those of private sector equivalents, most of my colleagues that went straight from graduate school to industry are making double what the NIH standard salary is. Much of this also stems from broader laboratory/scientific funding (particularly large governmental grants such as RO1s) being entirely stagnant for decades. Without increased laboratory funding to keep up with general scientific and cost of living increases, the possibility of increased postdoctoral salary, or job security, is next to impossible. Similarly, few fellowships have stipends/salaries and supply cost allowances that match the actual cost of living and doing rigorous science, respectively, in most parts of the U.S.

Personally I also didn't consider applying to several postdoctoral positions at several prestigious labs in my field due to the cities these labs were in having a cost of living that was so outrageously higher than potential salary.

Existing NIH policies, programs, or resources

Again, scientific funding at the laboratory and fellowship levels seem to have largely stagnated for decades and is entirely uncoordinated with the US economy, local costs of living, and general cost of scientific expenses.

Proven or promising external resources or approaches

No response

Response 1785

Perspectives on the postdoc roles and responsibilities

I view the post doc as a transitional position where the goal is to be trained as a independent scientist. A post doc should be responsible for driving the project forward with minimal supervision from the PI.

Fundamental issues and challenges

The major challenge is the expectation of constant productivity driven by grant deadlines. The other issue is being compared to extremely old "permadocs" or really fresh post docs who have just trained in the " technique of the week". For example more emphasis is currently being given to post docs who have trained with computational techniques or high throughput ones such as mass spec. There is also an increased need for doing second post docs so that people can apply for faculty position. Also, grant

deadlines make it impossible for most people to try and fail. Results are expected immediately, reproducibly and accurately. To me this is most important issue leading to scientific misconduct.

Existing NIH policies, programs, or resources

A post doc position is temporary. There should be a hard deadline for post docs. The ones wishing to stay on in a similar role should be given a distinct title rather than associate or assistant and paid fairly. There should also be a hard deadline on faculty position like there is for most government jobs. This is create more opportunities for junior scientists to be promoted and not spend additional time looking for additional positions. The most important issue is that the individuals who are currently looking for post docs did not have to go through the same rigor and requirements that the current post docs have to face and this demoralizes most people on this "temporary job" market.

Proven or promising external resources or approaches

A post doc mentoring committee should be required for all NIH post docs.

Mental health counseling should be mandatory

Response 1786

Perspectives on the postdoc roles and responsibilities

Academic postdoc training allows advanced research training with graduated responsibilities, including increased independence, opportunities for leadership and mentorship, and increased exposure to the roles and responsibilities of next-level job opportunities in academia or industry. This time allows for building a portfolio of scientific and leadership strengths that are typically beyond the scope of a typical graduate student. Thus the postdoc is a transitory training role that may include protected opportunities to pursue high-risk projects with supervision. Interestingly, the importance of the postdoc has evolved with time, arguably in large part in response to market factors (e.g. inadequate faculty positions) without (to my knowledge) consensus codification of its role in the scientific enterprise, or deliberate organizational planning of its intended training role.

Fundamental issues and challenges

The destinations and paths of scientists post-PhD have changed dramatically. Incomplete understanding of these changes severely impairs academic PIs from effectively staffing labs and maintaining critical basic research, as well as effectively mentoring postdoc trainees. Certainly salary is a huge challenge, where compensation has traditionally been not commensurate with the level of specialization and expertise. Comparable remuneration of postdocs and mid-level technicians in academia does not support value. Altering this structure is highly challenging given the limitations of grant budgets. Competition by speculatively funded industry entities further challenges recruitment and retention of postdocs. It should also be recognized that postdocs are often at an age where they are contemplating starting families, which is further challenged by academic postdoc salaries. Cultural factors also hinder recruitment, including contemporary ideas of work-life balance. Overall, recruitment and retention of postdocs has become excessively challenging, and I believe that failure of the academic enterprise to address this adequately with a satisfactory long-term view will cripple US dominance in the biomedical sector.

Existing NIH policies, programs, or resources

Grant budgets need to reflect needs, especially to remain competitive internationally. We need a strategy that is sustainable.

Proven or promising external resources or approaches

No response

Response 1787

Perspectives on the postdoc roles and responsibilities

As director of a T32 training program, I see postdocs as future faculty in training. They are both employees doing work and in training at the same time. The same can be said of junior faculty with career development awards.

Fundamental issues and challenges

1) Postdoc salaries do not provide a living wage.
2) Paylines for T32 programs are not reported by all institutes and are overall too low (too restrictive). Postdocs are the lifeblood of future research capitol—we should encourage them rather than stifling them with poor paylines.

Existing NIH policies, programs, or resources

Postdoc salaries need to be increased to a living wage.

Proven or promising external resources or approaches

No response

Response 1788

Perspectives on the postdoc roles and responsibilities

The postdoc experience, as I understand it, is designed to allow individuals to

1. acquire additional skillsets beyond their graduate training,
2. master and utilize their existing skillsets to generate novel data in support of a K99/R00, and
3. function as the final step on the path toward independence.

Fundamental issues and challenges

The biggest issue that I see is the pay gap between the postdoc salary and positions the same individual would qualify for outside of academia. The entry level salary for an individual with a PhD is roughly 100k/year, effectively doubling the postdoc salary with no prior experience apart from the terminal degree. This problem is especially prescient now given that individuals are starting graduate school later in life and often take a year or two to work as a research specialist/technician, or in a postbac type of role, to gain the experience necessary to even enter graduate school (as the bar to entry is ever increasing). Furthermore, postdoc positions are routinely lasting for 5yrs before transitioning to a faculty position. The scenario presented above could be managed as a calculated risk, if the postdoc knew for certain that their time, effort, and financial sacrifice in pursuit of a research faculty position would be granted if the "recipe" were followed. But we know this is not the case. It appears that, at best, only 20% of postdocs will enter into a tenure-track position following their postdoctoral training. When presented with this scenario, why would a highly trained individual say, "yes, this sounds like a reasonable." We are scientists, we take calculated risks. I would assume that an R01 requesting 10yrs of funding with a projected 80% failure rate wouldn't even make it to study section.yet here we are as postdocs still fighting the good fight? The math here doesn't quite add up when you lay it out.

Existing NIH policies, programs, or resources

Clearly, the base pay is the greatest issue facing postdocs currently. Many postdocs are in their early/mid thirties and would ideally like to start a family at this time. However, this is a costly endeavor and, quite frankly, the postdoc position is a huge roadblock to this major life goal for MANY people. So, people are giving up one of the greatest joys in life for poor pay and no real guarantee of success in securing a faculty position.

While I would love to see competitive wages between industry and postdoc positions, I realize this would be a difficult task. However, blanket insurance policies for a spouse and dependents would help allow postdocs to actually start a life outside the lab. For example, base pay is currently 54k/year, which equates to roughly 4,250k/month after taxes/SS. At my current institution, health insurance through BCBS is $750/month for spouse+child (health and vision, NO DENTAL). Thus, take home pay ends up around 3,400. Now the current price to rent a home, as most individuals are forced to because they have not had the opportunity to save enough for a downpayment during graduate school, is roughly 2000/month. Thus, we are left with $1400 to cover utilities, groceries, gas, and internet for the month. It is quite literally just enough to make ends meet, but leaves no room for error. The take home message here is that a policy enabling health insurance (including vision and dental) to be covered for a spouse/dependents would allow the postdoc to keep a substantial amount of their salary and enable a family to live a healthy life.

Proven or promising external resources or approaches

No response

Response 1789

Perspectives on the postdoc roles and responsibilities

A temporary training opportunity before transitioning to a true career position. Depending on the individual's ultimate career goal, it may or may not be necessary.

Fundamental issues and challenges

Many issues that I'm aware of are tied to the visa challenges for many international scholars—PI's feel abusive with threats to fire and therefore end work-tied visas. Retention is less of a concern from my experience—the opposite is almost more concerning as some PI's try to force postdoctoral trainees to stay longer than necessary to ensure continued productivity for the lab (and to the benefit of the PI, rather than the benefit of the trainee).

Existing NIH policies, programs, or resources

Yes—frequently, the NIH established minimum for postdoctoral salary is seen as the guideline. Resources are also underutilized by PI's.

Proven or promising external resources or approaches

No response

Response 1790

Perspectives on the postdoc roles and responsibilities

Since graduate school teaches you one set of biomedical protocols and techniques, postdoc should be a stage where you learn at least one other set of techniques used in biomedical sciences so that you don't become a "one-trick pony", so to speak.

Fundamental issues and challenges

Poor funding

High pressure

Lack of clear hiring process

The general sense of "have to get to megalab to get tenure-track"

Have to know the PI to get the position (but networking isn't a forte for many academics)

Existing NIH policies, programs, or resources

Clear hiring process

More centralised training grant processes

Proven or promising external resources or approaches

No response

Response 1791

Perspectives on the postdoc roles and responsibilities

In my view, the postdoctoral position is a time to bolster skills that were not required during graduate training. I see graduate training as a time to learn how to read and be critical of scientific publications, how to design experiments, think of how to get around pitfalls, and a time to learn to communicate your work effectively. As a postdoctoral researcher, it is now a time to learn how to manage multiple projects and execute experiments and write publications effectively. This is also a time to learn how to manage and run your own lab if this what you seek to do after your postdoc—managing lab teammates, networking

with others, being active at conferences, learning the financial responsibilities of running a lab such as grant writing and having someone be transparent with the costs of the lab. All of these skills could also be applied to working in an industry position, particularly the skills of teamwork and collaboration. Ideally, during this time, I believe the communication with the postdoctoral advisor should be more of a collegial partnership rather than a superior/subordinate relationship. Giving a postdoc the freedom to figure things out for themselves is essential for the growth of the postdoctoral trainee.

Fundamental issues and challenges

Inhibiting recruitment: I believe that this issue begins during the graduate training period. During this time a graduate student joins a laboratory where the graduate advisor plays a pivotal role framing the future of this student. If this relationship is strained, it will also strain the viewpoint of the graduate student on academia in general. The way a graduate advisor mentors a student during difficult times (such as grant rejections, paper rejections, failed hypothesis) is of utmost importance. If this experience is poor, so will the outlook of academia be for this particular student.

Retention: The inability to retain postdoctoral trainees is a multifaceted issue. First, many postdoctoral trainees are also at a time where they are forming families and the cost of growing a family is higher than ever. It is more appealing to begin making money in the workforce than delaying earning potential for a few more years. Secondly, visualizing a future in academia is exceptionally daunting. Science is becoming increasingly collaborative and team-oriented so first-author publications have become harder to publish. There are webinars describing how to apply for government grant funding but the acceptance rates are extremely low and application numbers seem to be increasing, making the overall outlook seem poor. Also, there is a lack of diverse role models in academia, people from differing, genders, ethnicities, and also from differing circumstances—someone who struggled to get where they were, who had poor mentors or a lack of publications but have still defied the odds and are great researchers.

Quality of life: I think this is highly dependent on your postdoctoral advisor. Some advisors have a very open mind and allow the postdoc freedom to have a work/life balance and others do not believe this at all, manufacturing urgency, inducing anxiety, or threatening termination of visas.

Existing NIH policies, programs, or resources

I think the NIH could offer more training for academic advisors to be better mentors for graduate students, fostering curiosity and optimism for a future in academia. It would be important to take generational attitudes of graduate students into account.

The salary could be reviewed for postdoctoral trainees, as costs are rising, postdoctoral trainees are at a pivotal time in life—starting families, or just being more competitive with other jobs that are available

I think that the mindset of the academic gatekeepers needs to shift to be more open minded in determining who a “good” academic is. For example, not everyone has an exceedingly high amount of first-author publications but is an exceptional scientist, curious about the world, and can still contribute greatly to academia. This should not intimidate nor hinder this individual from continuing their journey to be an academic researcher. Having diversity in advisors who look like and have experienced similar hardships to their students is essential for inspiring students to believe they have a place in academia

Proven or promising external resources or approaches

The T32 program seems to be a great program—having another advisor to advocate for your success.

Response 1792

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are highly skilled and independent employees. They benefit their labs by bringing the conceptual and technical skills and perspectives from their PhD training, enabling them to rapidly start projects and work independently. In theory, postdocs acquire additional training, beyond what was available during their PhD, which enables them to start their own lab with fully independent projects.

Fundamental issues and challenges

1) Salary. Incentives for fair wages that recognize a postdoc's skillset, or at a minimum living wages, are nonexistent. Many universities use the NIH salary minimum as a maximum instead. Salaries do not keep pace with inflation. Housing and childcare costs have particularly outpaced salaries.
    a) Some universities punish trainees for winning fellowships. They reduce the trainee's salary to the value of the award, rather than continuing to pay them at previous levels. They cut their benefits, transferring them from status as a salaried trainee to an unpaid trainee. They put the full amount of their institutional allowance towards university expenses without informing the trainee.
    b) Employment contracts forbid trainees from taking second jobs, even as they can't afford to live on a postdoc salary.
2) Status as trainees. Postdocs are simultaneously students and employees, whichever is most convenient for the university to maximally deny benefits. Trainee status is used to deny childcare and retirement benefits granted to other employees their age. They often fill many PI roles on behalf of their advisors, writing the advisor's grants, mentoring the advisor's graduate and undergraduate students, and writing papers with minimal input from the advisor. PIs get credit for this effort and postdocs are, by definition of their employment contract, prevented from receiving credit.
3) Lack of training and mentorship. The lack of structure, as exists in PhD programs, creates low quality training. Moreover, a postdoc's quality of life and success in their field relies almost entirely on their advisor, a person whom they've only had one day of interviews to assess.
4) International postdocs. International postdocs are particularly vulnerable, as they often have no local support system when they arrive and can face deportation if they need to leave their lab. They are also unfairly unable to apply for most US-based funding mechanisms.

Existing NIH policies, programs, or resources

Restructure R mechanism grants to recognize mentorship:

Mentoring trainees is the main task of PIs, but R mechanism grants do not consider this element. Instead, the burden is placed on trainees, who must write training and mentorship plans for F and K mechanism grants. Mentor statements are in theory written by the mentors, but in practice are written by trainees. R mechanism grants could be scored on mentorship, just as F and K grants are, by requiring the following:

1) Evidence of experience mentoring the level of trainees funded by the grant as a component of the biosketch. Outcomes of former trainees, participation of the PI in diversity initiatives, and actions or training taken by the PI to improve lab culture and their mentorship abilities.
2) Plan for how the PI will mentor the funded trainees. How mentorship will evolve over the project as the trainee gains independence, the PI's specific role at each project stage, and what elements of the project they anticipate postdocs will be able to take with them to their own lab.
3) Including funded trainees as key personnel.
4) Increase and protect pay:
    1) Increase salary minimums. Salary minimums should be location-based to account for cost-of-living differences. The most effective way to accomplish this would be to increase the size of the modular budget by limiting the total funds or grants that can be held by a single lab. There are diminishing returns on each additional grant. The gender and racial gaps at the faculty level are exacerbated when examining recipients of multiple grants.
    2) Add language to fellowships (or require an institutional commitment letter) stating that, if funded, the university cannot reduce the trainee's salary, existing benefits must be maintained, and the institutional allowance should be reserved for research costs at the discretion of the trainee.

Proven or promising external resources or approaches

Re-imagine the postdoc as a staff scientist position:

Eliminating the postdoctoral role and replacing it with a restructured staff scientist role would be a boon for PhD holders and the labs that employ them. Such positions would be treated as employees in pay and benefits, improving recruitment and retention. Salary would be commensurate with experience, starting higher than current postdoctoral salary levels and with the opportunity to seek promotion. Staff scientists

could choose to remain in a lab, being promoted as they gain experience, thus offering a more viable option for scientists who wish to remain in academia without operating their own lab. These scientists would support the institutional knowledge of the lab and could act as the "vice-PI" . Such a role should also be accompanied by credit to recognize their independent contributions, including co-PI position on grant applications and corresponding authorship on papers.

Assemble a training resource library:

NIH could assemble a powerhouse training library for postdocs. Existing NIH training resources only scratch the surface of what postdocs need to learn. Rather than relying on each university to adequately train their postdocs, enable universities can share their existing workshops and courses nationally. Additionally, fund the creation of publicly accessible training academies, similar to Neuromatch Academy. Critical topics to incorporate include: grant writing, mentorship, teaching, applying for academic and non-academic jobs.

Additional recommendations:

1) Create a training resource about how to evaluate a postdoc lab environment before accepting an offer.
2) Return the K99 eligibility window to 5 or 6 years. This window punishes postdocs for taking risks, which may fail to produce results within the eligibility window.
3) Extend F fellowship eligibility to non-citizens.

Response 1793

Perspectives on the postdoc roles and responsibilities

I feel postdoc position gives the opportunities to explore the research idea more deeply and independently.

Fundamental issues and challenges

Postdocs are getting least salary compared to other job positions and work load, specially in academia. During this tenure we are always live in insecurity of sudden project funding discontinuation. Although after few years of postdoctoral research there is very low chance to get absorbed by academic positions.

Existing NIH policies, programs, or resources

NIH should increase postdoc salary and fund security to support postdoctoral training.

Proven or promising external resources or approaches

No response

Response 1794

Perspectives on the postdoc roles and responsibilities

For me postdocs should lead independent projects and help PIs to write grants and manuscripts for better career develpment. Postdocs also need to coordinate and coorporate with other coworkers to improve the social skills.

Fundamental issues and challenges

Low salary and job insecurity are the main problems right now for most of the postdocs. There's no good course for postdoc to learn how to write grants and there's also little opportunity for international postdocs to apply for grants. That makes it hard for international postdocs to get job security.

Existing NIH policies, programs, or resources

Make more courses and seminars about how to write and apply grants for postdocs, especially international postdocs. There's little information about how to write grants and what kind of grants is suitable for individual postdocs to apply.

Proven or promising external resources or approaches

Nothing

Response 1795

Perspectives on the postdoc roles and responsibilities

I view it as a role where I can independently do research—learn to form hypotheses and test them using the techniques available to me. It also helps me learn to manage time as I serve in multiple roles as an academic researcher. I also see myself as a team member who can brainstorm with a PI on their research ideas.

Fundamental issues and challenges

I don't know for sure. Lower payscale is a big factor for why postdocs tend to choose leave their research positions. Mentors may or may not be accountable to anyone for their role in training a postdoc.

Existing NIH policies, programs, or resources

Not sure.

Proven or promising external resources or approaches

None

Response 1796

Perspectives on the postdoc roles and responsibilities

As a PI I take the role of postdoc as a training period seriously. I make sure postdocs have independent projects and training opportunities and not burdened with administrative tasks or random research tasks. I learned this from my postdoc advisor.

Fundamental issues and challenges

For many, the PIs do not take the training and mentoring role seriously. Other than that, the pay and uncertainty are very difficult, especially if they have children or other dependents.

Existing NIH policies, programs, or resources

Higher stipend, ability to use T32/F32 institutional award for childcare, increased childcare allowance, instituting mandatory 12 week parental leave policies for T32/F32 and/or all NIH grants (I understand now it must be consistent with general institution policy), explicitly allowing expenses for partner travel/breastmilk shipping to NIH fellowships and grants

Proven or promising external resources or approaches

funding postdoc offices to support the postdoc community and training/development is helpful

Response 1797

Perspectives on the postdoc roles and responsibilities

The postdoc position is where scientists can gain various experience in broadening scientific vision, learning new techniques, supervising students, forming long-term collaboration, determining career path.

Fundamental issues and challenges

I'm an international postdoc. Therefore, my perspectives are more from the vulnerable group.

1) Visa issue—postdocs are particularly vulnerable because PIs can threat to terminate the visa and postdocs have to leave the country. This is extremely difficult for postdocs with a family.
2) Postdocs are invisible to the university. There are not built in mechanisms to support postdocs even at the department wide. Most postdocs are so restricted to the lab. If the lab is toxic, the postdocs life will be miserable.
3) PIs are toxic, selfish, and not helpful.
4) Many postdoc grants are only eligible for US citizens or permanent residents. This precludes international postdocs from low-income families.

Existing NIH policies, programs, or resources

Extend K99 eligibility from 4 years to 6 years.

Extend the diversity grants from US citizens to various visa holders.

Proven or promising external resources or approaches

Increase postdoc salary.

Response 1798

Perspectives on the postdoc roles and responsibilities

Postdoctoral trainees are a terrific source of enthusiasm and and bright ideas that challenge and invigorate my research program.

Fundamental issues and challenges

Few US-born trainees (and applicants) due to low salaries. Industry jobs have picked up in recent years, which has helped the pipeline. However, trainees perceive the NIH grant funding ladder has pretty bleak. The touted 20-25% success rate for grants = 75-80% failure rate.

Existing NIH policies, programs, or resources

Boost support to T32 and individual training grants. Put additional funds into K to R transition grants.

Proven or promising external resources or approaches

Need to train MD post-docs and PhD post-docs, preferably in the same programs. There are many opportunities in team science.

Response 1799

Perspectives on the postdoc roles and responsibilities

I think the postdoctoral position is an essential milestone for graduate students to move on to a higher position.

Fundamental issues and challenges

The career pathway is difficult to plan because it varies among disciplines, research topics, universities, funding opportunities, etc. Additionally, positions are very competitive.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1800

Perspectives on the postdoc roles and responsibilities

Academic postdocs play an important role in training and mentoring graduate and undergraduate students, performing experiments and troubleshooting, running the lab/acting as lab managers, writing papers and grants. We’re highly skilled and capable scientists, but often feel overlooked and ignored by academic management. We’re exploited as cheap, disposable labor. Don’t like the low pay and working conditions? Then academia isn’t your passion, just quit and go to industry, there will be someone to replace you.

I love my research, I love my job, the people I work with are fantastic and my mentor is incredibly positive and supportive. But I constantly feel like I’m being pushed out of academia by a broken system—incompetent bureaucratic university management, financially exploitative conditions, few job openings beyond the postdoc stage in an academic setting (lack of permanent staff scientist/project scientist

positions), failure of university HR to discipline or remove faculty who engage in sexual and/or research misconduct.

Fundamental issues and challenges

The NIH minimum postdoc salary scale is a joke. It is insulting how low you think we should be paid based on how much experience, training, and expertise postdocs have. The minimum salary for Step 0 is below the poverty line for many high cost of living cities. Many postdocs who don't have generational wealth can't afford to take these positions. This is an equity issue—how can you recruit and retain individuals from diverse backgrounds when you're only enabling those with a financial support system to take these positions? As a postdoc I'm struggling more financially than I was as a grad student because I chose to take a position in a high cost of living city because it was the best opportunity for me. This significantly diminishes my quality of life. These struggles are even more severe for postdocs with dependents, especially since childcare support is basically nonexistent.

Existing NIH policies, programs, or resources

Would like more career support for postdocs that would like to be staff scientists (not aiming to become PIs or tenure track professor). The NIH should support and encourage more long-term, permanent staff scientist positions at universities, can could provide more grant support for these research faculty track positions. I don't feel like I qualify for many NIH postdoc fellowships because I'm not interested in a tenure track faculty position.

Supporting a Safe and Respectful Work Environment: You could hold toxic and abusive PIs accountable for their actions. Universities are clearly not willing or capable of enforcing positive work environments and are happy to protect the abuser if they continue to bring in big grants. Require universities to disclose allegations of misconduct (sexual, research, etc) to funding agencies and put them on probation from receiving grants if found guilty.

Proven or promising external resources or approaches

The problem isn't with scientific training or recruitment, it's the salary and benefits (or lack thereof). Even with the best of mentors and job satisfaction, we're underpaid and overworked compared to industry standards. Increase the salary scale, or require universities to give top ups. They're taking massive overhead off of PI grants, but that money isn't coming back to lab workers.

Response 1801

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be a place where one can receive further training on techniques that one has not yet learned It is presented as a step between graduate school and becoming a PI. Being a postdoc means that you have learned how to conduct solid scientific experiments, and that you now should be able to design and conduct your own experiments. It should be a place where you can openly discuss your career goals and your strategy to get there with your PI. Mentoring junior members of the lab should be part of this position, but you shouldn't be a substitute for the PI. Postdocs are a fundamentally important part of the lab because they can help to set up new techniques and protocols. Postdocs also bring a lot of new ideas to an existing lab

Fundamental issues and challenges

Many PIs treat postdocs like cheap labor who are there to advance the PI's career and they only care about your career goals in order to string you along. In a prior postdoc position I was treated as a lab tech and not allowed to do any of my own experiments, was just shoved in a corner to breed animals, ship packages, and manage the chaos of a lab where no one had any planning skills. Postdocs are supposed to show independent thought from their mentor and yet they are not allowed to envision or execute any of their own experiments, and are left doing pointless administrative work and training everyone in the lab for the PI. In reality postdocs don't get much time to do independent thinking or even to learn the things that they want to unless they work through the weekend. Especially depressing is that mentees of famous or established PIs are handed academic positions without even knowing what they are doing. Coming from a prestigious line of Ivy league schools or labs does not equal the ability to handle leading a lab. Many people with the right skills and personalities are sidelined or never make it there, especially those from minority groups. Pay is insulting for completing so many years of education and having specialized skills.

NIH and universities need to do a better job at making sure that PIs know how to mentor and lead a lab. Some of the tenured professors are the worst offenders and will verbally abuse you and micromanage every aspect of your time. If someone has a high rate of turnover, it is probably a bad environment and regardless of how much grant money they are able to get, they should be retrained to better handle personnel or fired.

Existing NIH policies, programs, or resources

It would be great to either be compensated better, and to expand programs in which student loans can be paid off without us having to pay tax on that as if it is income. I considered applying for the program where up to 50,000 of loans could be paid off per year; however I do not make enough money to realistically be able to afford the taxes on that. Making sure that F32s do not have such a strict time limit would also be a good improvement. I was in a terrible lab and missed out on that opportunity even though I was explicit when I interviewed that I wanted to apply for an F32. Postdocs also shouldn't have to have pay cuts for getting fellowship grants. There should be more training that is readily available to postdocs on subjects of interest that doesn't cost $3000+. Diversity initiatives need to be expanded. It is problematic that there are so few black PIs, and that they are less likely to receive funding. Something needs to be done about that. People with children often cannot afford daycare fees on a postdoc salary and that is not even taken into consideration. Universities should provide childcare as a benefit for employees and should build reasonably-sized, well-staffed daycares to accommodate this need. Payments should still have to be made, but it shouldn't be exhorbitant. It is unrealistic to tell women that they must wait until their 40s to have children and expect them to stay around. Universities shouldn't require you to relinquish the postdoc position after 3-4 years. It creates undue stress of moving and makes this career path inaccessible for many. NIH policies should change to reflect this. Postdocs should have moving expenses paid for.

Proven or promising external resources or approaches

Having a contract that the postdoc signs with a PI when they join that delineates more than just salary, but also a mentoring plan, funds for independent experiments, funds for attending training and conferences would drastically improve the position, especially if a neutral party evaluated this and made sure that all promises made were delivered. PIs that are reported to have a bad environment should have less of an ability to recruit postdocs. Paid moving expenses and child daycare are a must. Actually receiving mentoring and having regular meetings should also be included. More grants that postdocs can apply to as independent PIs would be ideal. These grants should not render postdocs ineligible for K99 if the funds are greater than $100,000 per year. It would be more satisfying to be able to get paid more for having such a sought after and specialized skill set. The low wages are one of the biggest reasons why postdocs are leaving academia in droves. That and the postdoctoral phase keeps getting longer and longer over time. Living paycheck to paycheck until your 40s is not something that most people are willing to do and it requires an exceptional amount of pre-existing privilege to do so. Universities should be required to match employees contribution to retirement fund and provide social security credits for all postdoc positions.

Response 1802

Perspectives on the postdoc roles and responsibilities

The academic postdoc is an intermediate temporary position meant to prove oneself as a scientist and to develop an independent research program. It is very fun to do research driven by one's own curiosity, and psychologically rewarding to make new discoveries. However, postdoc positions also come with a heavy psychological price (explained further below), so that every postdoc should try to move on as fast as possible.

Fundamental issues and challenges

To experience the quality of life, do thought experiment and maybe a real experiment, where you put yourself in the shoes of a postdoc in a high cost-of-living area. Imagine a role-play with the following set of rules:

1) Your role is a family of two adults with a child. Many postdocs are in their late 20s to early 30s, so this is realistic. Player 2 is not working and chooses to take care of the child (worth a $3000 monthly salary), or has no work permit yet due to their foreign visitor status.
2) Open a separate bank account and fund it with the typical postdoc salary as recommended by NIH ($ 56,484 / 12 months) or by several universities ($ 65,000 / 12 months).
3) From your role-play "salary", deduct health insurance ($700-$800 / month) and taxes (20%). This should leave a monthly $3150 (NIH) or $3700 (some universities).
4) Look for apartments in a high cost-of-living area such as Boston. For a family of three, one would ideally look for a 1-2 bedroom apartment and not a single room in shared housing. A 2-bedroom would cost about $3000 ([redacted for anonymity]) to $3300 ([redacted for anonymity]). While below market rate, this already blows the budget (point 3), so a 1 bedroom apartment as a minimum is more appropriate ($2400—$2700).
5) This leaves $450 (NIH) or $1000 (some universities). Using these funds, the goal of the role-play is to survive for 2-3 months.

Ultimately, one has net negative cashflow and consumes their savings. Since salaries reflect the worth of an individual in the eyes of an employer, the message set by NIH seems clear: postdocs are worthless work slaves and are not supposed to live like human beings. This leads to self-doubt and sleepless nights, which ultimately also impact productivity and stint the research enterprise.

Existing NIH policies, programs, or resources

1) Possible sustainable solutions:
    a) Pay a subsistence wage that accounts for the local cost of living or
    b) At least provide affordable housing that is not inflated by the 2-5x larger salaries in biotech. A tool that you could use: https://livingwage.mit.edu. Further sources: https://www.nature.com/articles/d41586-023-00332-6, https://arxiv.org/abs/2205.12892, https://www.nature.com/articles/d41586-020-03191-7, https://www.nature.com/articles/d41586-022-02781-x.
2) One small step forward would be to educate faculty about inflation and equity. Many seem to still live in the 80s, with a corrupted mindset that they weren't rich either so the current generation should not have it any better. Stop criticizing postdocs and the young generation. It is not greedy to try and simply survive paycheck to paycheck.
3) Visas/work permits for longer than a year would be great.
4) If you are looking for small band-aids, then you could create a program that educates postdocs about cashback credit cards. Some faculty try to "solve" the survivability problem by suggesting that postdocs and graduate students apply for subsidized housing and food. Some faculty suggest that one should think twice before marrying and getting children. To make the point obvious: This suggestion is preposterous and stupid. Moreover, the second "strategy" is a burden on the taxpayer and creates problems with the stipulations of many visa types. Yet the current salaries already violate visa stipulations if they are not sufficient to pay for the cost-of-living, so maybe you do not even care. Given that instead of making cost-of-living adjustments you would rather waste taxpayer money for even more bureaucracy overhead (more than 50% of the salary already at some universities), advisor fees, program costs, and resources that have no use other than waste time, my bet is on the latter. Small hint: at least I, and postdocs that have not lost their mojo, like to spend time actually working and not doing useless stuff.

Proven or promising external resources or approaches

https://livingwage.mit.edu

Response 1803

Perspectives on the postdoc roles and responsibilities

The postdoc position is a training position that should facilitate the transition between a graduating PhD student and whatever comes next—tenure track faculty, senior position in industry, etc.

Fundamental issues and challenges

I believe in the past the training part of the postdoc was viewed by many (including myself at the time) as an investment in my future. I was willing to accept lower pay in exchange for better job prospects as a tenure track faculty candidate, which worked out as advertised for me. One issue that I see is that the pay-off at the end of the postdoc has become devalued—good faculty jobs are harder to get and many faculty seem unhappy in their positions. This makes the deal harder for postdocs to accept—should they invest a few years of lower pay for a possible shot at a job they might not get, and that people who have it are often unhappy with? When this combines with the emergence of other better alternatives it's a hard choice to make to stick with the postdoc system.

Existing NIH policies, programs, or resources

Everyone would like postdocs to be paid more, so that the "investment in your future" I described above is not such an extreme ask. Asking someone to sacrifice 5 years of $50K lower wages than they would obtain elsewhere is huge investment, especially if there's a chance they will emerge with a job they could have gotten right out of their PhD. So I think higher pay would help lower this "investment" cost. Also finding ways to deliver value to the postdoc beyond the big payoff at the end if they are fortunate enough to get their dream job (ie: adding more explicit training).

In terms of NIH policies, I think one main tension resides in the fact that many postdocs are paid from research grants, and not training grants. But the postdoc position is a mix of research and training. So many postdocs are hired to complete research goals of a grant, which the faculty needs accomplished for their own careers, grant renewals, etc. But this can conflict with training and career development goals of the postdoc, which creates a tension where the postdoc feels like they are being treated as an under-paid employee of the lab, while the faculty feels like the postdoc is focusing on too many training or career development activities that are not what they were hired to do. I'd like NIH to find a way to clarify the balance of training vs. work on research grants that postdocs are expected to engage in, which might require increasing the budget for fellowships and training grants so it's clear what effort a postdoc should spend on working on funded research projects vs. training for their own future careers.

Proven or promising external resources or approaches

Sorry I don't know anything proven here.

Response 1804

Perspectives on the postdoc roles and responsibilities

Academic postdoc was a great experience for me to expand my knowledge scope, improve my critical thinking and independent research, and learn how to collaborate for the purpose of my study.

Fundamental issues and challenges

The discrepancy of the salary with getting an industry job after graduate school study and that with being a postdoc is huge. Many PhD students may choose to go to industry in stead of becoming a postdoc.

The other reason might be the funding limit that some labs face. PI needs more funding to support a postdoc's salary and research activity. Even more importantly, when a postdoc needs to become an independent PI and look for academic jobs, the PI still can support him/her even he/she has lower working load in the lab.

Existing NIH policies, programs, or resources

Increase funding to academic labs and more importantly to young PIs.

Proven or promising external resources or approaches

Increase funding used for training of postdocs, including postdoc fellowships, postdoc career development, postdoc skill trainings, and postdoc working environment.

Response 1805

Perspectives on the postdoc roles and responsibilities

My view of a postdoctoral scientist is laid upon a hierarchy in a traditional laboratory dynamic. They're on nearly equivalent playing field's as their researching P.I. may be, but haven't crossed the great divide that profoundly separates the responsibilities involved in the latter role's position related to the overall dynamic of a research lab.

Fundamental issues and challenges

Tuition reimbursement benefits as a more, immediately accessible—even if that's to limit it's activation to begin at the end of one's hiring company's "probationary period. For WashU., this is 9mnths after one's starting date. A generalized list of suggestionsto improve are as follows: The general lack of active recruitment is prevalent throughout academia. The little that does happen is constricted by H.R. "standard's," which are listed in the job outline of any particular role. Evaluations are based only off of a candidate's professional paper trail.They should reflect an individual's overall background, what they've done in their absence from academia (wherever/whenever this question would be applicable)??? Why do you want to return to science (a whole new world of present day's laboratory standards) for a candidatelike me, such as: how we tend to use a mechanized approach to image gels nowadays. Instead of how I was trained to use a light-board and some simple software programs. We've made the processes safer for the involved researchers, but in doing so, we've added another hurdle for a candidate like me to jump over in my re-entry to what makes me feel challenged in a stimulating environment. Ultimately gifting me with the necessary challenges to derive greater purpose in being gifted the opportunity to be part of something much greater than my own ambition. Ensuring candidates meet a one size fits all model of requirements doesn't allow for innovative thinking by people's w/o said requirements, but could easily be brought up to speed within the first 2-5 month's of beginning work in a new laboratory. Who's willing to invest the time is the nitty-gritty question? Or would the university extend initiatives for outreach programs to accomplish similar goal's in order to enhance their workforce and increase their overall abilities???

Existing NIH policies, programs, or resources

Their initial investment of taking a chance outside of the listed requirements will come full-circle, so that I'll meet the requirements put forth by higher administration's than the hiring lab-P.I., but allowing them the leeway to take a calculated chance on applicants who may not already meet the required qualifications for a specific job opening, B/C it's not helping anyone but the hiring parties involved. Extend educational incentives, initiatives for community out-reach, centralize a hub so that the proverbial left hand talks to it's counterpart; and ensures nothing is lost in translation betwixt H.R. and hiring managers.The practice of being exclusive doesn't breed a creative, critical problem solving set of skills as a researcher. What it does do is cause a divide in status equality amongst a lab's member's. Undermining the fact that each role's a necessary one and shouldn't be valued more or less than another. The only time the traditional hierarchy should be a tool we use, is during disciplinary actions we're obligated to report and/or enforce if the problem and/or actions necessary are within our control. Otherwise, appropriate applause should be given more often and providing constructive criticisms to applicants who a hiring manager's moved beyond, is only professionalism at it's finest. Practicing it with promising scientists who can't meet requirements yet, means alot more than it may be thought of as, because it assures the applicants expert advice to improve if they're choosing to move forward and letting nothing stop them from achieving their goal's. Scientific enrichment isn't only for the workplace. Alot of it happens outside of one's workplace.

Proven or promising external resources or approaches

I'd normally recommend specific talent acquisition company's like Randstand Scientific, but have seen how often these services can misrepresent or cause additional issues during a hiring process. And more often than not, they're not equipped to handle interviewing laboratory researchers on any level. The only way I can perceive it done with justice is to implement "working interviews." If a hiring manager is looking to fulfill a specific role and a candidate passes pre-screening with an invitation into lab, show them where

essential reagents are kept, utilize a set of data that's already been logged, and have them run through the process in front of the interviewing party -starting and stopping at any points the hiring team requests, so nothing's used/wasted that's not expendable. The correct data is already present and logged for the hiring manager's review and feedback at the end of an interviewing process. Invite them into a conversation rather than an interviewing questionnaire, if/once they've reached this point. Finalize by doing a secondary re-evaluation, after seeing hiring candidates go to work in front of you, to provide the best feedback for real progress to be made in the future. It'll also be a more comprehensive interviewing technique for prospective new-hires.

Response 1806

Perspectives on the postdoc roles and responsibilities

The position is in part training and in part independent. The balance of these two components, and the nature of the 'training', varies over time. The quality of the 'training' is also varied and dependent on the mentor. To me, the postdoc position is meant to learn the skills for the desired next career step. These skills included independently leading research, including starting and finishing a project, mentoring, written and oral communication skills, budgeting.

Fundamental issues and challenges

1. Salary and job uncertainty. Why would I accept lower pay than I know I can get in industry (or consulting or data science or whatever) to gamble on landing an independent academic position? Especially when this academic position comes with the permanent stress of funding.
2. Lack of benefits and retirement. Between graduate school and postdoc, I have missed out on an employer match for retirement for >12 years, at the point where these dollars have the most time to grow.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1807

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should be a period of time in which a recent PhD graduate learns to start their own, independent research program. Postdocs should no longer be considered trainees, but rather scientists transition to independence. It should be viewed as a protected period of time during which a scientist can develop their research plans and apply for early stage funding mechanisms that will foster their transition to faculty.

Fundamental issues and challenges

The largest issue is financial. Asking individuals who just endured 5-7 years of underpaid and undervalued work as a PhD student to continue that work is challenging, particularly when these people tend to be in the stage of life where they might want to start a family and establish "roots". Beyond just low stipend pay, you are asking postdocs to give up many benefits that a person working in industry has had for the last 5-7 years—eg. 401k, other retirement savings, insurance benefits, etc. Now not only are postdocs being paid less each month, but the longer they stay in this academic position, the worse off their retirement outlook is. In today's current climate that is just too much to ask of a lot of people. This culture of treating postdocs like trainees is also disheartening. I don't feel like a valued member of my research community because of the benefits that were taken away from me when I became an NIH sponsored postdoc (T32 program).

Existing NIH policies, programs, or resources

I don't think the NIH is doing enough to protect postdocs from being taken advantage of. There should be stricter limits on postdoc length and increased stipends. While the stipend levels may just be a guide for

what universities can pay (the NIH itself pays above these levels, likely because they know its not a livable, competitive wage), every university I know uses these as an excuse to underpay their postdocs. Listing stipend ranges up to 7 years encourages unnecessarily long postdocs. We also need to increase benefits available. As a graduate student, the money in my F31 NRSA budget which was supposed to pay for my health insurance was actually taken by my university, so I continued to pay insurance out of pocket. We need to ensure the funds granted by the NIH are being used properly. In addition to money for insurance, I think the NIH should set guidelines on allowing postdoctoral fellows the ability to save for retirement. If we are not eligible through university retirement plans because institutions claim we are employees of the NIH when on fellowship, there should be an option for NIH retirement plans.

Proven or promising external resources or approaches

I believe the most progressive and competitive postdoc program available comes from St. Jude (https://www.stjude.org/education-training/advanced-training/postdoctoral-fellows/funding-benefits-for-postdocs.html). Beyond a substantial stipend increase, they offer sign on bonus, paid leave, insurance benefits, retirement plans, and relocation assistance. These benefits would go a long way in helping ease the transition to postdoc and retaining researchers.

There are also several universities offering postdocs with transition tracks to faculty. This would help alleviate some job insecurity. If NIH fellowships came with some guarantee of transitioning to faculty or at least assistance in finding faculty positions. Right now we are left up to our own to research, earn grant funding, and find a faculty position at the same time.

Response 1808

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

I believe support mechanisms should exist at the institutional level for an undergraduate university to house a diversified post-doctoral work force whose purpose is to bridge the gap between RO1 institutions and research and R15 institutions. Undergraduate universities have too transient of a work force to make significant contributions to the knowledge able given the emerging pace of new knowledge and service and teaching loads most faculty face. A dual mentorship between a RO1 faculty member and a R15 department with a dedicated R15 faculty mentor, would allow for development of early career individuals in a more supported setting. Typically the transition from post doc to early faculty member at an R15 institution is too abrupt. Often they don’t know what the expectations and capacity is really like. This would allow them to perhaps teach a single course, while truly establishing their project in a new space, and still maintaining ties with a larger institution where resources are likely more plentiful.

Proven or promising external resources or approaches

No response

Response 1809

Perspectives on the postdoc roles and responsibilities

Role of preparing me for success ideally as academic physician

Fundamental issues and challenges

Difficulties with family life versus demands of clinical time and academics

Pay is poor, especially with child care becoming so expensive

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1810

Perspectives on the postdoc roles and responsibilities

Design and conduct experiments, analyze data, write manuscripts.

Fundamental issues and challenges

Job insecurity—most positions have only a year or two of guaranteed funding, with uncertain prospects after completion.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1811

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I believe postdocs should have less restrictions on what funding they can apply for as a PI. I think fellows should be eligible to apply for R-series grants.

Existing NIH policies, programs, or resources

I believe postdocs should have less restrictions on what funding they can apply for as a PI. I think fellows should be eligible to apply for R-series grants.

Proven or promising external resources or approaches

No response

Response 1812

Perspectives on the postdoc roles and responsibilities

Extra training and/or multi-disciplinary/interdisciplinary training and a good transition between being a graduate student and becoming an independent faculty member; the ability to apply and practice the foundational knowledge obtained in graduate school to the research process and gain experience seeing how research projects work from start to finish; an opportunity to focus all or most effort to research, including an opportunity/time to get manuscripts published which can increase your competitiveness on the academic job market; professional development.

Fundamental issues and challenges

First and foremost—the pay. Postdoctorates are EXTREMELY underpaid and most postdoc salaries (even those not funded by federal or governmental funds/grants) use the NIH Fellowship and Training Stipend Levels to set salaries. This creates a major source of inequity in training. If I was single (i.e., not married) and did not have a multi-income household, I do not believe I could financially support myself on a postdoc annual salary, and I live somewhere that would be considered a lower cost of living (i.e., not Los Angeles, New York, San Francisco, etc.). Why would someone take a drastically lower pay as a postdoc if they could be receiving the salary of a junior faculty member, even if completing extra training as a postdoc would ultimately help them in their career? Furthermore, unless a postdoc is in a T32 program or on an F32 or something, they get basically no research funds of their own or stipends to travel to conferences, publish in open-access journals, etc. Postdoc pay should be similar to or only slightly below that of a junior faculty member (not $25,000-$50,000/year lower). Second, postdocs are often asked to

basically manage entire projects on their own (sometimes more than one at a time) with only a little supervision or necessary input by PIs, and therefore creates an unrealistic and overwhelming workload, especially for such little pay. I believe these issues can contribute to some serious mental health challenges for trainees. In my opinion, these are the two largest issues impacting the recruitment, retention, and overall quality of life of postdoctoral trainees.

Existing NIH policies, programs, or resources

First, please raise NIH Fellowship and Training Stipend Levels to a liveable and fair wage for trainees. Second, make the review process much shorter for those applying for training grants (e.g., F32, K99/R00). Because several, if not most, trainees applying for training grants are already in some type of trainee/postdoc position (i.e., temporary positions), it is completely unrealistic to have a 9 to 18-month turnaround time for training grant funding. For training grant resubmissions especially, there needs to be a quicker turnaround. Most people are only guaranteed postdoc funding for 2 or possibly 3 years, especially those in behavioral and social sciences, so an 18-month timeline for funding (assuming a resubmission is needed first) would mean that a postdoc would have had to submit a training grant within the first 6 months of their new position—that means 6 months to put the entire grant together, including the training and research sections, on top of acclimating to a new job and possibly new institution or department. It doesn't make sense that training grants should be on the same timeline as much larger grants. It's not realistic.

Proven or promising external resources or approaches

pay increase, quicker turnaround time for career development awards or training awards, and possibly requiring some type of training for PIs overseeing a postdoc to understand workload, role distinctions, equity, mentorship, etc.

Response 1813

Perspectives on the postdoc roles and responsibilities

Postdocs are the workhorses of the lab in my field (neuroscience). We have the tools necessary to run projects independently and our training mostly focuses on learning how to run projects, manage personnel, and write more advanced grants (along with maybe picking up one or two more techniques). We are supposed to blend our past experience with our current lab's culture and procedures to both drive projects forward and teach more junior lab members new techniques and expertise. The roles of postdocs are very diverse and lab dependent but it seems like we get saddled with a lot of the heavy lifting in whatever our areas of expertise are.

Fundamental issues and challenges

It seems like the overarching guiding principle of academia is that if you want it bad enough, you'll put up with anything. But the raise of industry alternatives combined with the relatively low success rate of landing a tenured position and generational shifts in attitudes towards work-life balance make it really hard to stay motivated to continue on career paths in academia.

It has also been my experience that many PIs are extremely ill-equipped to manage teams of scientists and universities do not take trainee complaints seriously. It's wild to me that senior people know their colleagues are terrible to their trainees and have track records of being miserable advisors and yet there aren't more serious attempts to correct their behavior.

What is the incentive to stay in this system if my future job prospects within academia are bad, my pay is garbage relative to people of my age and skill set, and PIs are often allowed to treat us however they please with impunity? I love my work more than almost anything and do not want to leave academia but I am not going to stick around in the current environment.

Existing NIH policies, programs, or resources

There are some great programs like the T32 training grants that provide opportunities to have larger advisory groups and distribute the power dynamics governing a trainee's life to many professors rather than one. However, the issues are far to systemic for simply expanding existing programs. Pay may have kept up with cost of living generally (at least for postdocs) but it has not kept up with our actual workload or to pay outside of academia.

Programs have popped up to promote equity but power dynamics remain extremely imbalanced. It is great that science is diversifying from a bunch of old white dudes running everything but there's clearly massive conflict between old school and young scientists that is not being resolved.

The best thing the NIH can do at this point, in my opinion, is support/allow/not resist the unionization of graduate students and postdocs to allow us to directly advocate for ourselves because our institutions failed for too long. Alternatively/in combination increasing funding for trainee salaries generally would be a huge help for retention. Lastly, increasing the availability of non-Associate Professor positions (i.e., staff scientists, research professors) via funding would provide some hope for alternative careers within academia.

Proven or promising external resources or approaches

Unions

Response 1814

Perspectives on the postdoc roles and responsibilities

The academic postdoc is akin to an indentured servant.

Fundamental issues and challenges

Although I was successful in publishing and people management during my PhD experience, I found my postdoc experiences to be miserable and unproductive. The postdoc position puts young people who are vulnerable financially and in their careers in a dangerous position. The role carries with is an intrinsic unfair power dynamic between the post doc and the PI. While it appears that the PI needs to treat the postdoc fairly in order to publish, in reality it turns into a stick-and-carrot scenario and there are no repercussions for the PI. I personally was reprimanded by my PI for going to an ombudsman at my state institution and during an interview at another flagship state U I was asked if I was married and told that I would be more likely to get the position if I did not have any dependents for health insurance. At the time, my family was being threatened and retained a restraining order; when my PI noticed I was upset they told me to leave those feelings at home, instead of giving support or suggesting I take time off. I was denied a meeting with HR for about a month while my PI gathered information against me on my personal computer. I was not given either the learning opportunities I had been promised nor the equipment and tools I needed to work. There was no recourse for me, when I was strong-armed into quitting. Being a post doc, NOT a PhD student, was the worst period of my life in terms of mental and physical health to the point where other adults not in the field could not believe how things were being run.

Existing NIH policies, programs, or resources

Post docs should be in charge of the funds that they are paid out of and which their research budget comes from. There needs to be more transparency. PIs need to be held responsible and need EXTRA HR training as many of them think that their positions exempts them from making racist statements, making sexual advances on students, and demanding long hours without weekend breaks.

There are no sick days given for post docs or sick day guidelines. There are no vacation days nor vacation guidelines. Post docs fall through the cracks in the worst possible way. Those who survive are jaded and want to punish those who come after them; those who do not have no savings and are OVER qualified for many non-academic jobs.

Proven or promising external resources or approaches

Institutions should keep track of post doc job satisfaction and should be required to make that data public. PIs should be made to take training on how to manage people and how to manage funds. There need to be rules in place so that post docs are not punished for "taking time away from work" to go to things like job skills seminars.

Response 1815

Perspectives on the postdoc roles and responsibilities

Gain valuable experience into the role of research, both specific to the field of study (biology, physics, etc) and with the role of science and research in society and institutions as a whole

Fundamental issues and challenges

Number one reason is funding and compensation. I earn more money as an industry clinical scientist right out of undergrad than someone with a PhD and years in a post doc.

Appreciation and general perspective of post doc scholars. The expectations and traditions of academia are not compatible with a young, driven, and knowledgeable group of future scientists who know how to be treated and appreciation. In other words, potential post doctoral scholars are going into areas where they are respected and appreciated, and many traditional post doc environments do not fit the bill.

Existing NIH policies, programs, or resources

More centralized and modern training by NIH on how to leverage resources to better support post docs, and training on how future post docs want to be treated and what role they will play in contemporary research science

Proven or promising external resources or approaches

See above, and encouraging appreciation and understanding of the post doc role for all individuals in a research lab setting

Also working with potential industry partners to create "post doc to career"pipelines that allow academia like training with industry compensation

—[redacted for anonymity]

Response 1816

Perspectives on the postdoc roles and responsibilities

When I started it was more to gain experience and extend my academic abilities to be a future researcher or an academician. But after four years, it feels like an academic cage where with no external and internal solid support. My career is depending on PI mercy even for the justified academic credit and salary way lesser than the NIH scale (no questions).

I personally feel, authorities should be more vigilant on postdoctoral fellow progress. We have IPD however, no one wants to fill it. Even if you filled it out, no one has time to look at your goal.

What changes do I feel that should be incorporated into postdoctoral training—

1. Review committee for IDPs
2. Drop box facilities for postdocs where they can put their complaint.
3. Timely review of salaries.
4. Other facilities.

Fundamental issues and challenges

It is very well known that the quality of postdocs' life is not so good. I started my postdoc carrier in late 2018 with defined goals and ambitions. However, after four years, specifically, after the pandemic things have changed a lot. There is a lot of pressure from the academic and personal front, which is not compensated by fellowships. As fellowships are not getting raised, it is still the same amount as earlier. Even the living cost becomes double.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1817

Perspectives on the postdoc roles and responsibilities

Postdoc should last a few years after obtaining a PhD and then moving on to the next job. Try to as much quality research as you can, but also enjoy life, build a family.

Fundamental issues and challenges

They pay is very low, the hours expected from a typical postdoc are long, and most are expected to come in the weekend. Limited vacation days (general US problem) and if you are sick you feel guilty for staying home. Why would people continue to pursue a postdoc when they can work in industry for set amount of hours and make more money?

Postdocs just came out of PhD in which they had to work a lot, now it is time to work regular hours I think and start a family. Or, if you are child free like me, just enjoy your life while you can and you are still young!

Work to live, not live to work. However, because most of the PIs are so very old, and they used to work hard during their postdocs and ignored family they expect the same from you and it gets propagated.

It is a very unhealthy system.

Existing NIH policies, programs, or resources

Improve pay, make it equal across the NIH institutes, NICHD alway pays postdoc the bare minimum and minimum increase.

Increase vacation days for postdocs and visiting fellows and give them sick days.

Institute and communicate that coming in in the weekends should not be the norm

Proven or promising external resources or approaches

No response

Response 1818

Perspectives on the postdoc roles and responsibilities

I love being a postdoctoral researcher and I love academia. Being a postdoc provides us with the intellection freedom to explore important and interesting scientific questions, learn from the previous generation of scientists, and advance human knowledge.

Fundamental issues and challenges

In cities with high cost of living and rising inflation, the NIH minimum for postdoctoral salaries is not nearly enough. This is a huge problem for retention, with more and more individuals opting for private industries instead of academic career paths. Childcare in Boston alone is around $50k per year, creating a barrier for women seeking to pursue careers in research. This is a huge problem for retention of postdocs. In the long term, I worry quality of academic research in this country will suffer tremendously.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1819

Perspectives on the postdoc roles and responsibilities

It is a period in which the professional will develop new skill sets if working in a different area from grad school, as well as a period to improve communication, mentorship, leadership and teaching skill, besides understanding how to navigate the grant cycles if staying in academia, or to develop necessary skill to prepare the individual to launch an industry job or a startup company and so on.

Fundamental issues and challenges

It is hard to navigate the system alone as an international postdoctoral, since usually local academic researchers don't know about opportunities international postdoctoral scholar can use to advance their own research careers. Usually, the majority of opportunities are restricted to US citizens, and we are not allowed to participate in specific training programs that would allow us to be independent researchers in a near future. Basically, we are left behind.

Existing NIH policies, programs, or resources

One of the main modifications could be implementing online courses in platforms as Edx to be offered to every student for skills development as leadership, communication, grant writing, project management, statistics, as well specific courses directed for students that would like to prepare themselves to become a future PI, as mentorship, laboratory management, student recruitment. This set of courses could be offered to every student, independent of their background, US citizen or non-US citizen. This type of program would benefit students that would like to stay in academia or leave it, since they are basic skills for jobs outside academia as well. They could be offered in a package for everyone, graduate students and postdoctoral trainees at no cost or with a small cost.

Proven or promising external resources or approaches

The PALS program Succeeding as a postdoc it is interesting, since it helps postdoctoral scholars to build a community around them to improve their educational experience. Another programs for minorities recruitment that were launched in some universities as Cornell, are also interesting if everyone is included, independent of being citizen or not. The postdoctoral need close mentorship to transition successfully, besides a salary that really cover their life costs, and not only a research project to produce papers. For an independent path, they need to be aware of opportunities, and allowed to take the opportunities. A guide with opportunities for both, academic scholars that are citizens and non-citizens, should be compile at NIH and should be distributed by every university to improve experience to everyone, with contents as their rights, obligations, where to go for help if problems with PI appear, as being aware of the human resources department, NIH grant workshops, how the grant cycles work, opportunities of fellowships for everyone, when to start applying, opportunities of leadership or courses offered by NIH, general guidelines of whom could apply for recurrent opportunities. It does not take a lot of effort to do it, and the benefits will be immense for both, graduate students and postdoctoral. We really need guidance, and we usually don't receive it. That's why the majority prefers industry, easy to navigate, clear paths and rules, instead of a black box created by academia. A 10-30min of mentorship per week as modus operant in the majority of the laboratories will never fix the problem, and students will be always frustrated about their experience. We really expect more in our overall experience, and our expectations are high for an agency so well-known through the world, besides the American universities training experience.

Response 1820

Perspectives on the postdoc roles and responsibilities

A critical part of the research workforce. Invaluable to research projects

Fundamental issues and challenges

Hard to entice postdocs to the lab when a. the pay is so low that they do not want to move to a big expensive city and b. if they do move, the biotech companies close by can pay way more and they lure the postdocs away. Pay and benefits and potentially other perks need to come a long with being a postdoc.

Existing NIH policies, programs, or resources

NIH stipends should not be equal across the board—more expensive places to live should get a higher living wage. Access to more federal programs that all postdocs can access—training, career development, etc. that are not dependent on different institutions.

Proven or promising external resources or approaches

No response

Response 1821

Perspectives on the postdoc roles and responsibilities

The postdoctoral position, to me, is a training position and opportunity to explore career options. While a postdoc is technically a training position, postdocs have many roles and responsibilities in the lab and university that are more similar to faculty responsibilities. Postdocs are often the main mentors in labs and often help with all of the students and projects in the lab. They also often have teaching responsibilities. So, while the postdoc is called a training position, the responsibilities and expectations often exceed that title.

Fundamental issues and challenges

The main issues I see with recruitment, retention, and overall quality of the lives of academic postdocs is low pay and lack of information and respect regarding the status of the role. We are somewhere between faculty and employee, but pay and benefits do not reflect this. And the lack of information on the role of the postdoc (institution-wise) causes postdocs to fall between the cracks and go unnoticed. For example, at my current university the entire provost's office and research affairs were unaware of any issues brought up by postdocs. We had to have a direct meeting with them, and many canceled last minute, making it seem like postdocs are not a priority outside of the research departments. It is exactly the opposite. Postdocs generate most of the data that goes into grant applications, such as R01s, that directly impact the university. The majority of labs would NOT function without postdocs.

Most postdocs end up going into industry, where there is significantly higher pay, a path to a career, and better treatment which stems partly from defined roles and expectations, which would alleviate mistreatment and overworking of some postdocs. It is obvious to see why so many postdocs are leaving academia.

Existing NIH policies, programs, or resources

The main and obvious change that could be made is higher pay.

Proven or promising external resources or approaches

It would be important to look at where all of the postdocs are going, and what they are choosing over academia. Look at industry and biotech postdoc positions and try to make an academic position look more reasonable.

Response 1822

Perspectives on the postdoc roles and responsibilities

To learn about new research directions or skills you did not have the opportunity to explore during your PhD or only learned about during your PhD. To gain additional experience before launching an independent career

Fundamental issues and challenges

The postdoc salary is too low, especially in high-cost-of-living cities. Postdocs cannot apply to independent funding mechanisms only mentored positions

Existing NIH policies, programs, or resources

Modify the payscales and increase the number of grants postdocs can apply to

Proven or promising external resources or approaches

Improving postdoc pay

Response 1823

Perspectives on the postdoc roles and responsibilities

The role of a postdoctoral scholar is to supplement their PhD training to propel them into successful research and teaching career. With respect to research, their responsibilities should include engagement in development of research questions, research studies, forming of clear hypotheses and expanding on data

management/quantitative analytic skills. With respect to teaching, their responsibilities include mentorship and management of scholars and dissemination of their knowledge in the form of developmental and conference presentations and publications.

Fundamental issues and challenges

First and foremost, financial. I received a postdoctoral fellowship that

a) does not meet cost-of-living in the area where the university is located,

b) my university does not cover my insurance and so all $11,950.00 of my institutional allowance that was budgeted for publication cost, research travel, equipment has gone to my university insurance payments and

c) the merit raises are no existent and is demoralizing as the starting salary is equivalent to a the salary of research coordinator which I was one minus 8 years of experience.

Second, devaluation of postdoctoral scholars. For every university that I have talked to postdoctoral scholars (five in total, three of which are top-10 universities) all agree that the departments value graduate students more than postdoctoral researchers. While labs can respect and value postdoctoral scholars, the universities do not show an investment to care.

Third, limited job prospects. Multiple senior faculty have agreed that postdoctoral positions have turned into 'holding patterns' and the no longer serve the purpose that they did: funding and experience bridge to faculty positions. Universities are simply graduating too many PhDs and universities have far fewer openings. Then, faculty are simply not incentivized to retire which further creates a generational backlog.

Fourth, I am a first generation immigrant, first generation college student, received free lunch during K-12 and grew up in low-SES neighborhoods. This type of background is underrepresented in academic circles and so it is quite difficult to relate to people that have the resources and support.

Existing NIH policies, programs, or resources

NIH has a disadvantage/underrepresented program in place but it remains to be seen how much this will improve things. It throws money (which see above, 53k/yr stipend) at a problem and tells the universities and/or labs "Here, help these students succeed". What if the universities and/labs are not set up to facilitate this?

Proven or promising external resources or approaches

No response

Response 1824

Perspectives on the postdoc roles and responsibilities

It is a job. I conduct research with input on the overall goal from my mentor but I decide on the experimental approach and data interpretation. Mentoring undergraduates and graduate students in the lab is another large part of my role. I also contribute significantly to preparing figures for and writing grants. I see myself as a senior scientist in the lab. This is a time for me to acquire new skills, build my curriculum vitae with more publications, and begin formulating what my own independent lab will eventually work on.

Fundamental issues and challenges

Salary and career prospects are the major deterrents to doing a postdoc. My peers in industry jobs make two to three times my salary without the pressures of academic science. Knowing that only the top ~10% of scientists get the majority of the opportunities (i.e. tenure track faculty positions and grants) combined with low pay and the impermanence of a postdoc position render this job unappealing. Financially, it is very difficult to make living in a city work, especially if you have a family, without a great deal of privilege like a high income spouse or support from family. With all of these challenges, unless you have a near-perfect relationship with your mentor and a healthy lab environment, staying in a postdoc is just not worth it. Many of my peers have abandoned academic ambitions because they cannot afford to live and/or experience unhealthy toxic work environments.

Existing NIH policies, programs, or resources

Higher salaries for fellows. Especially the F32 since this is the pay scale most universities adhere to. Adding benefits like retirement, paid maternity leave, ect for fellows would also go a long way. We often have to choose between what is good for our careers and what is good for our lives/families when considering an NIH fellowship.

Proven or promising external resources or approaches

No response

Response 1825

Perspectives on the postdoc roles and responsibilities

I completed postdoctoral research training in the setting of medical fellowship training. I am MD-PhD trained, did a pediatrics residency, and then did fellowship where 2 years of my 3 year fellowship were spent doing research. This research period was critical to my success as a physician scientist with K08 and R01 funding.

Fundamental issues and challenges

Within my niche area of pediatric infectious diseases, the number of fellows pursuing basic and translational research during fellowship is decreasing. Oftentimes fellowship has to be extended by a year in order to allow additional protected research time before a person can get a K award and be hired as a physician scientist with a start up package needed to support a research lab. Our specialty is the lowest paid medical specialty, and we are paid less than general pediatricians who do not do fellowship, so there is a financial disincentive to both complete peds ID fellowship and extend fellowship by a year to get a K award.

Existing NIH policies, programs, or resources

The loan repayment program is really important for time. The period between the end of fellowship and when a person is awarded a K award is a huge cliff where people leave academic research—a program that offers salary support for this year with 75% protected time would be really helpful. Increasing the number of K12 grants awarded to institutions would help.

Proven or promising external resources or approaches

No response

Response 1826

Perspectives on the postdoc roles and responsibilities

A Postdoctoral Scientist has the responsibility to plan and conduct experiments, train students and technicians, write projects proposals and scientific articles, while learning how to lead a group and obtain funding to become an independent researcher.

Fundamental issues and challenges

Salary and difficulties to achieve work/personal life balance. Is a role that requires more time commitment than others, with a lower salary. Is also stressful for foreign Postdocs that don’t have many funding opportunities which will also limit their chances to get a Faculty position.

Existing NIH policies, programs, or resources

Include more funding opportunities for foreign Postdoctoral scientists and support for career transition. It would be very helpful to have proper orientation and financial support for immigration/visa procedures.

Proven or promising external resources or approaches

No response

Response 1827

Perspectives on the postdoc roles and responsibilities

Post doc training means a lot to me , early investigation is a journey to future inventions which would be a breakthrough for humanity. It’s a initial step , I may be allowed as international visiting fellow

Fundamental issues and challenges

Difficulty To seek a PI for post doctoral training as a beginner as international visiting fellow non resident us citizen , there is no proper way to access this. Difficult to reach out . Please make the process simpler.

Existing NIH policies, programs, or resources

Still waiting to be initiated for the training program

Proven or promising external resources or approaches

There us need to look into the process of selecting PI and application submission process. .

Response 1828

Perspectives on the postdoc roles and responsibilities

It is a continuation of development to build the skill set/specific interest to move to the full professional stage in ones career. Expanding career network and exploring career next steps and opportunities.

Fundamental issues and challenges

The salary entering an academic position. Lack of available positions.

Low salary for postdoc positions especially when cost of living increases rapidly and the salary does not quite correlate to cost of living (especially in the DC region).

Industry post docs have more competitive wages and benefits.

Existing NIH policies, programs, or resources

[redacted for anonymity] post doc perspective--offer the following

Full benefits (retirement, 401k while training)

Increased wages

if required to be in the DC area-affordable housing options or flexible with commute if having to live in a long-distance location to afford to be in the area

Assistance with taxes (big issue)

Being able to apply for student loan repayment during [redacted for anonymity] postdoc experience or offering ways to repay loans through research or service.

Proven or promising external resources or approaches

No response

Response 1829

Perspectives on the postdoc roles and responsibilities

I started a postdoctoral position thinking it would be fundamental for developing my scientific independence and research ideas. After several years in this position, I realized that, basically a postdoc position is more about doing your PIs ideas and following their line of research. I think that the requirement of doing postdoctoral training to become a independent researcher is totally unnecessary.

Fundamental issues and challenges

Postdoc salaries are absurdly low, with minimal benefits. Postdoc salaries should start close to $100,000. Less than that is just cheap labor and undermines postdocs’ expertise.

Existing NIH policies, programs, or resources

Set an unprecedented national and universal example by increasing salaries substantially.

Stop saying that doing so is impossible. People are tired of such excuses. The money is there, and if it is not, find it.

Proven or promising external resources or approaches

Increase substantially postdoc salary scale range and do not fund research institutions that do not comply with NIH guidelines in salary range.

Response 1830

Perspectives on the postdoc roles and responsibilities

The postdoc should be viewed as a transition position from dependence as a graduate student on mentor guidance, to scaffolding of the independence gained in a faculty position. An opportunity to gain new skills and test the waters of academia while still supported (financially and intellectually) by a more established researcher.

Fundamental issues and challenges

The challenges with recruiting and keeping postdoctoral trainees has a lot to do with a lack of faculty positions available for them to transition to—and a significant underfunding for their skill and education level. PhDs are incredibly well-trained and valuable but they are underpaid and overworked with little hopes of transitioning to a full time position. That lifestyle is not desirable to many new PhDs who have been paid minimally for 4-8 years or who have already held a post-doctoral position for several years with little success on the academic job market.

Existing NIH policies, programs, or resources

Salary caps for both graduate students and post-doctoral researchers should be raised—I understand the need for maximums but requiring that trainees who are highly skilled and would be desirable in the private sector make so little is a disservice to the scientific community and diminishes the number of individuals from disadvantaged backgrounds who may be able to survive on those wages. Faculty over a certain age or career duration should also be prioritized for funding—those individuals often simply employ a small army of trainees and coast on their reputations rather than contribute meaningfully themselves.

Proven or promising external resources or approaches

I am not familiar with any proven or promising external resources or approaches that could help with these problems at this time.

Response 1831

Perspectives on the postdoc roles and responsibilities

The academic postdoc position presents an opportunity for the trainee to expand and present ideas in a situation where they can direct research ideas in to potential future opportunities beyond what their lab may focus uniquely on. I view it as a stepping stone to the next position whether that is academic, government, or industry. As much as the position presents for growth and advancement of skills I would not say that it is currently viewed as a lucrative or important position unless you wish to go into academia. The low comparative pay versus what your skill level would entice makes the position one in which you are sacrificing known value versus future value.

Fundamental issues and challenges

The postdoctoral position is currently viewed as a step back in research. The ability to advance in academia to a Professorship position is not straightforward and many graduate student trainees see the postdoc step as wasted time. If the end goal is to move to industry or government and you already have the skills necessary, you are potentially taking a $40k+ pay cut for postdoctoral training. With the current base pay of postdocs in the ~$50k range and no employee matching for retirement it’s a giant struggle for research interest versus well being and financial stability. With the current pay rates a graduate student that chooses to go and do a postdoc is sacrificing up to 12 years of their life for a wage far below their

expertise. Paying graduate students and postdocs a liveable wage that can keep pace with inflation should be addressed. As it stands, there isn't an incentive to stay in academia and we stand at the edge of "brain drain" for individuals that are interested in academic pursuits.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Payscale. You're asking grad students to go from a woefully underpaid wage to a postdoc where we get slightly more money but are still severely underpaid. It's not a mystery why someone would choose a ~$100K+ job for their skills versus a ~$50K job. Until salary reflects the time investment that we put in, grad students will continually choose more lucrative options. Academic research and the freedom is enticing, but we need a salary to justifying the cost/benefit equation.

Response 1832

Perspectives on the postdoc roles and responsibilities

When I entered my postdoc, I viewed it as an opportunity to

1. gain new and additional expertise that will contribute to my ability to conduct the independent research I wish to do, and
2. publish more manuscripts and attain k-level grant funding, both for the purpose of making me a more competitive applicant to extremely limited and competitive faculty positions.

This is still how I view what it should be, but it has not been my experience.

Fundamental issues and challenges

1. Salary and benefits. Pay needs to be commensurate with education, experience and cost of living. It also needs to include guaranteed maternity/paternity leave, good healthcare, and retirement fund options. I've heard the argument that one's willingness to endure the postdoc salary is a "weeding out"process, suggesting that one is not dedicated to research if they aren't willing to be paid inadequately to pursue that research. This is not so different from telling a woman who is being paid less than man that she's clearly not as dedicated as him if she's complaining about her salary. Moreover, the truth of the situation is actually the opposite. The current system is exploitative and explicitly relies on the passion and self-sacrifice of people who are deeply dedicated to solving this country's problems (for me, chronic pain and opioid addiction) and to promoting a more just and well society.
2. Time and labor. There need to be pre-defined limits to the extent to which postdocs can be used as laborers to complete things like running participant assessments for a PI's study. While this is, in part, a negotiation between a postdoc and a PI, the power hierarchy in that situation prevents a postdoc from successfully advocating for themselves and NIH has the ability to protect the postdoctoral experience from morphing into labor for a PI.
3. Grant cycle timelines. If I submit a Cycle 2 K-award application, I'm locked into another year as a postdoc just waiting to hear if it gets funded. If it doesn't get funded, the next feasible cycle to submit my revised application is cycle 1—but I again won't know if it's funded until 1-4 months into the next academic year. So, I'm once again locked into another year of postdoc, waiting to hear if my grant got funded.

Existing NIH policies, programs, or resources

1. R01 funding needs to be high enough to support the entire team needed to conduct the study. This is relevant to issues of both salary and labor for postdocs. Without question, the R01 needs to be large enough to support a higher postdoc salary. It also needs to be large enough to support adequate salaries for CRCs, research assistants and associates, etc. alongside higher postdoc salaries, so that postdocs don't get saddled with the responsibilities that theoretically belong to those other roles. The roles **and responsibilities** of a postdoc also need to be clearly defined by NIH for PIs. Postdoc time should be protected for learning new skills, analyzing data, writing manuscripts, and taking the steps necessary to advance to the desired next stage of one's career.

2. Postdocs should get immediate acceptance into the student loan forgiveness program. And if this doesn't happen, postdocs should at least not be penalized for their mentor's funding status. The salary sacrifice of a postdoc—even if the salary is raised in the future—should be curtailed by guaranteed support for repaying student loans from our many years of education.
3. Several changes need to be made in the context of postdocs agreeing to work with early-stage investigators. It is not possible for a postdoc to get the same mentoring from an ESI as they would from a more senior PI, which disincentivizes postdocs from joining new labs run by ESIs. But ESIs need postdocs to join their labs so that they can establish a track record of training postdocs to go on to establish independent careers. This catch-22 is made worse by the fact that postdocs who do join new labs really don't get the best mentoring, thereby making it harder to go on to establish an independent career. Solutions for this are in the next section.

Proven or promising external resources or approaches

Continuing from last section:

1. Every ESI should be paired with a senior faculty member who is immediately assigned as a co-mentor to incoming postdocs. Any postdoc joining a new lab should expect to be co-mentored from the start, without having to
    a) seek out their own additional mentoring for adequate expertise and
    b) navigate asking a new, personally identified co-mentor for things (grant feedback, career advice, etc) the ESI primary mentor should theoretically be providing.
2. Postdocs should receive some sort of incentive to join newly established labs with ESIs as primary mentors. Some ideas could be extra salary support (for both the postdoc and ESI), protected funding for travel to conferences and meetings that doesn't depend on the PI, directed funding for open access publications that doesn't depend on the PI, and variable grant reviewer expectations for applicants in new vs. established labs. A postdoc coming from a lab whose PI just finished an R00 and is trying to get an R01 has access to substantially less data and fewer resources (and thus also opportunities for manuscripts) than a postdoc coming from a lab whose PI is about to retire.

There should also be some sort of protective system for postdocs competing for career development awards that faculty are also applying for (eg, k01, k23), similar to the protections for ESIs competing with more established faculty for R01 funding.

Response 1833

Perspectives on the postdoc roles and responsibilities

It feels like a glorified graduate student.

Fundamental issues and challenges

The salary is way to low.

Existing NIH policies, programs, or resources

Increase the salary and provide unionization.

Proven or promising external resources or approaches

Working environment

Mentoring

Response 1834

Perspectives on the postdoc roles and responsibilities

What I would like it to be: training to become an independent researcher. What it actually is: a cheap way to produce data from someone else. Often very low autonomy, little skills development—eg not learning to write your own grants, manage your own budgets etc, but instead being a glorified experiment robot for an established PI.

Fundamental issues and challenges

Not being able to start your life until after potentially 10+ years. Low job security, moving location = not being able to settle with a partner / have stable friends / start a family. Long hours, lack of clear career progression.

Existing NIH policies, programs, or resources

I am not familiar enough with these to answer this question. I am currently a graduate student in the UK and although I would love to do postdoctoral research with the fantastic institutions in the US, this is unlikely for me given the lack of pay, job security, work culture, etc etc, that are particularly problematic in the US.

Proven or promising external resources or approaches

Shorter postdoc periods. Eg awarding less PhDs, or more faculty jobs, or setting a low max duration for becoming faculty (making allowances for starting a family, illness, etc)—so that this period is only say 5 years instead of indefinite. Better support and structuring into alternate careers.

Response 1835

Perspectives on the postdoc roles and responsibilities

As a scientist we lay down building blocks of scientific research. We work hard to make new discoveries for the development of nation and mankind as well.

Fundamental issues and challenges

The postdoctoral scientist are treated as skilled labours with the minimum salary. The salary barely meets the basic requirements rather than to meet certain lifestyle. The struggle to balance emotional and financial wellbeing has become an integral part of a postdoc. Hence industries pharma and other options seems more attractive than acadmia.

Existing NIH policies, programs, or resources

A huge upgrade of salary is the dire need of the postdocs to carry a successful research career. Relaxation in the immigration rules could also play a significant role in shaping the mindsets of researchers. The salary must be upgraded to at least 80K to begin with. This will ensure a comfortable career option for an individual to pursue a career in science.

Proven or promising external resources or approaches

One of the most difficult thing is to maintain work and personal wellbeing as a postdoc researcher. The postdocs work hard upto 12-14 hrs including weekends without any extra benefits makes their personal life down to nothing. Financial stability is the foremost requirement of a postdoc in current situations. Handsome salaries are being payed by industry and other jobs with several perks for doing extra or overtime works. Thus it become worth putting extra effort if one is getting payed for it. But this aspect us missing in a postdoc job. There in no comparison for the amount of effort put by a postdoc fellow as compared to a 9-5 job. But there is a huge difference in the payroll. To sum up now it is a high time to consider a huge upgrade in the postdoctoral salary and other benifits.

Response 1836

Perspectives on the postdoc roles and responsibilities

Performing significant contribution to the lab’s output, trouble shooting, producing new research ideas and projects, mentoring graduate and undergraduate students, supporting the PI in grant applications and administrative duties

Fundamental issues and challenges

Currently the biggest issue for postdocs is salary. Living expenses have been increased a lot lately while salaries are not. And despite the NIH guidelines for stipends, universities don’t stick to them. The general feeling among postdocs that I observe in social media is anger and frustration. Having a family, which one usually wants to start at that age and paying for daycare is just not possible when both parents are postdocs.

Existing NIH policies, programs, or resources

Child care vouchers, fully paid maternity leave, funds to sustain a family

Proven or promising external resources or approaches

No response

Response 1837

Perspectives on the postdoc roles and responsibilities

I would say that the academic postdoc is a transitional position between learning how to be an independent scientist as a PhD student and learning to run a research program or group as a PI or group leader in industry. Postdocs are key people in the running of successful labs, bringing experience and helping develop more junior trainees while being very productive themselves. Over time, senior postdocs should have the skills, experience, and publications to move on to higher positions in academia/industry.

Fundamental issues and challenges

There are so many. First, the poor stipend/salary is extremely difficult to swallow for highly educated scientists who have succeeded throughout their lives and are often at or near their thirties and interested in buying house, starting families etc. It is really difficult to argue they should stay in academia when

1. industry often pays twice as much or more,
2. there is no guarantee or even good chance of become a PI following a postdoc,
3. the senior scientist academic position for those who do not get a PI position have generally poor job security and poor pay, and
4. the time as a postdoc is often at least 5 years. it is very challenging to recruit postdocs with these challenges, and when you combine that with the increasingly overwhelming expectations of many journals and PIs, it is often looked upon like you get a PhD only to spend another PhD's worth of time killing yourself for a low percentage chance of another relatively low paying job.

It is very discouraging, especially for the US citizen or permanent resident PhDs who often have lots of other options.

Existing NIH policies, programs, or resources

Obviously increasing the pay is a start, but causes secondary problems related to not enough money to go around. I think that on the other end the NIH ought to cap Investigator direct costs at something reasonable (maybe $1M) to open up part of the pie for paying postdocs more. Separately, if the NIH was able to take a more active role in publishing, focusing on getting all of the data produced by taxpayer dollars published, and secondarily, not wasting billions of taxpayer dollars paying publishing companies that make massive profits off of our work and taxpayer dollars, this could save a ton of money that could be reinvested in paying postdocs better. A second area that could easily be changed is to really push that postdoctoral fellowships are public service. In truth, they are, but rarely do you hear anyone say this, and it should be a more prominent focus to make sure that postdocs feel like they are providing a service to the country/world by making scientific discoveries and sharing them with all. Finally, finding ways for senior scientists (e.g., postdocs who do not become PIs) to better earn their own funding would be very helpful, as there are plenty of wonderful scientists who do not want to lead a lab. Having a clear career path for these scientists would make the prospect of a postdoc less bleak.

Proven or promising external resources or approaches

No response

Response 1838

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salaries are way too low!

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1839

Perspectives on the postdoc roles and responsibilities

Performing quality research and gaining knowledge about unexplored areas in the field of interest.

Fundamental issues and challenges

Most fundamental issue:

1. The salary of a postdoc is very low, its hard to maintain a family and do any kind of saving. Since we are in a phase of life where we want some kind of stability, we must be secure on the financial aspect of our lives.
2. It's hard to sustain in academia because of the limited number of faculty positions. Specially if you are not a US citizens or a green card holder.
3. Quality of life is represented by the pay scales as well. We request to increase the salary of a postdoc fellow since the industries are paying decent amount of money for the same qualifications.

Existing NIH policies, programs, or resources

Please introduce more grants and funding opportunities for non US citizen or permanent residents.

Proven or promising external resources or approaches

1. Hike in the salary.
2. International work environment.
3. Freedom to work.

Response 1840

Perspectives on the postdoc roles and responsibilities

Roles and responsibilities as an academic postdoc involve starting a risk system and publish a paper.

Fundamental issues and challenges

Postdoctoral trainees feel abused. Postdoctoral training is not structured and supported as the graduate studies. Academic toxicity, discrimination, the importance of being the best in the lab, no job security. Postdocs start the project from scratch and are being given to help the career of other folks, letter of recommendation, evaluation system (papers and grants) to get the job. Risk projects can take longer than 4 year deadline of K99.

Existing NIH policies, programs, or resources

Remove K99 restrictions, Bring more fellowships for internationals

Proven or promising external resources or approaches

Restructure postdoctoral training with checkpoints, Bring more funding for international postdocs

Response 1841

Perspectives on the postdoc roles and responsibilities

I think that it is a poor return on investment.

Fundamental issues and challenges

Low pay, poor benefits, poor work conditions, low job security, position dependent on grant funds

Existing NIH policies, programs, or resources

Higher pay with better benefits and job security. Better training for jobs outside basic science research

Proven or promising external resources or approaches

Complete restructuring of what a post doc is

Response 1842

Perspectives on the postdoc roles and responsibilities

It means a chance to take charge of the type of experiments to be done and design an optimal workflow

Fundamental issues and challenges

Salary does not invest in our future (retirement) or peur present (too little to sustain a family). Current salary only allows people who have working partners to continue a postdoc and often there is no salary growth

Existing NIH policies, programs, or resources

Improve pay band. Allow for retirement package contributions and require salaries increase to allow a decent life

Proven or promising external resources or approaches

Improve work environment and work incentives. Other jobs get bonuses, pay raises, paid holidays, childcare etc. Do better! Post docs are humans who also want to build families and a worthy life

Response 1843

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The fundamental issues challenging recruitment and retention of postdoctoral trainees into academia include, primarily, financial incentive and job prospects. Many individuals coming out of graduate school don’t want to submit to 2-7 years of making $50,000/year, especially as most of us are at an age at which we have families to support. Furthermore, after we finish our fellowships, there is no guarantee that we will get a job in an academic setting or that our jobs will be secure (i.e., not adjunct or teaching positions only). Industry positions that do not require a postdoctoral fellowship are available, all but guaranteeing long-term job security, and offer more money than most early career faculty make. Unless you are someone whose research area of interest is highly specialized/niche and therefore not of interest to pharma/biotech companies, industry jobs are better paying and more secure, and there are more of them than there are available academic positions.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Remove salary caps on NIH-sponsored F32 and T32 fellowships (make them salary minimums) so salary depends on the funding of the institution/researcher and is dependent on cost of living (e.g., $50k in Iowa is different than $50k in NYC). Introduce fellow-to-faculty pipelines as part of the receipt of F/T awards,

wherein the host institution agrees to hire fellows in good standing who receive independent funding (i.e., K award or other) in early career, tenure-track positions. Provide incentive (e.g., subsidies/tax credits?) for academic institutions to increase the number of early career, tenure-track positions to keep researchers in academia.

Response 1844

Perspectives on the postdoc roles and responsibilities

The post-doc training should include several components including research, independence, and professionalization. (RESEARCH: This should be an opportunity for just phds to attain additional skills, which will synergize with the ones developed during the phd that will allow them to build a niche they can bring to their careers) (INDEPENDENCE: phds should attain grant writing, paper writing, and leadership skills, which they will need when starting a lab) (PROFESSIONALIZATION: This training is on how to prepare persuasive talks, improve writing quality, behave in academic contexts as a faculty.)

Fundamental issues and challenges

All of the problems in postdoc recruitment, retention, and quality of life revolve around a dearth of mentorship by investigators that at every opportunity extract from trainees without fulfilling their obligations as mentors.

Lack of mentorship in RESEARCH:

1. Labs often over rely on post-docs for research, and hire them for what they know already because they do not require training furthermore, there is little thought into what is next for their trainee.

INDEPENDENCE:

1. Labs increasingly just rely on postdocs, as such, there are no students for the postdocs can help mentor and this means that they do not attain mentorship skills
2. Grant writing involvement is kept at a paragraph level, figure and doing menial tasks that do not enrich the postdoc. Additionally, post-docs are typically not included as key personnel, which would help their ability to attain an independent position.
3. Post-docs (and grad students) rarely give talks at conferences. Instead, they give poster presentations. While this approach leads to better conference programming; it also implies that trainees enter the job market with little experience and presentation skills.

PROFESSIONALIZATON: oftentimes trainees are hidden when guests come to labs, and they are just there to be subservient to the PI. The goal should be to make independent investigators, as such, they should be given a seat at the table, included in professional dinners, and PIs should work to help them develop the networking/introduce them to a network.

The above sounds like a lot for a postdoc. However, many (including me) are turning down 6 figure jobs to take a 50k dollar job for the promise of an academic career. The pay cut should imply mentorship and a path towards this is part of the deal. Finally, we need to make more academic jobs available.

Existing NIH policies, programs, or resources

1. Stop calling employees ‘trainees’ to pay them less. We should rely on research from institutions and not academic ones. These would ideally hire FULLTIME researchers with fair pay.
2. Help academic institutions train:Provide more training grants whose sole purpose is to create an educated workforce. Include funding opportunities where half is research approach the other half explaining how this research will train students to be the best. These trainees can then be employed by the research institutes.
3. Tie funding to pell-grant recipients:The overfunded institutions have less than 10% pell grant recipients and about 30-40% of students receive pell grants. This means that public funds serve a small number of already over-resourced individuals. Since we are using public funds, we should refuse to fund them unless they train a proportion of pell-grant recipients that is commensurate with our population. In other words, if a faculty wants public funding, they should serve the public. If the PI’s institution does not serve the public, then, we should encourage them to move to one that does.

4. As a POC and URM.PLEASE STOP these merely symbolic DEI efforts. The symbolic DEI efforts are generating a culture of resentment, and at the same time are not changing anything. I just came back from a conference, where I was the only POC who is also a URM faculty. People are not inviting me to give talks or collaborate because they want a more diverse pool of participants. Instead, the number of microagressions have increased where people complain about DEI. However, there are no actual material DEI efforts, just symbolic overtures to 'diversity.' The costs of symbolic DEI is material though, since those who are in power and complaining about DEI are the ones who will be voting on my tenure case in a few years.

Proven or promising external resources or approaches

Mentoring: Tie supplemental funds to mentoring opportunities. Some institutes force supplement awardees to apply for fellowship funding as part of their contract. To be frank, a requirement like this one is the reason I have a faculty job. My 'mentor' was forced to help me apply for funding, and I received what I needed to succeed.

Job satisfaction: Post-docs (and trainees in general) need more job opportunities. We need to make sure our undergraduates are not just labeling data, graduate students conducting experiments, and postdocs brining expertise to labs. Grant mechanisms should have an approach like section that involves describing how each activity will enrich the trainees that they put in their budgets. Furthermore, an environment metric should include quotas at academic levels of trainees that make sense. In other words, a lab with 4 postdocs and a grad student means that the faculty is helping 4 trainees get faculty jobs. However, there is only one student to be mentored. Also, realistically are there 4 faculty jobs out there going to one faculty group? Note: The post-doc is a position where people expect to get a faculty job afterwards).

Response 1845

Perspectives on the postdoc roles and responsibilities

The postdoc seems unnecessary for the vast majority of people. Really, only useful for people who want to gain new expertise, who really care about changing fields, or people who want to pursue academic aspirations. It seems though like academia relies on postdocs too heavily and thus isn't fully honest about this, and lead people to do postdocs unnecessarily. Now more people seem to be realizing this and are opting to not to do a postdoc because it is not necessary and under the current system heavily exploits you.

Fundamental issues and challenges

Pay is poor relative to other Job prospects. Job prospects that justify a postdoc training experience are not plentiful and/or desirable. Further academic jobs that do exist are in a system that is not keeping up with the times. For example, ro1 funding rate decline, ro1 grant size not changing in 20 years despite the cost of almost everything increasing.

Existing NIH policies, programs, or resources

Make academic career tracks more desirable. Increase grant sizes, increase funding lines. Increase postdoc pay. Provide more PhD to postdoc transition awards.

Proven or promising external resources or approaches

No response

Response 1846

Perspectives on the postdoc roles and responsibilities

Professional development needed to achieve independence. A PhD provides in depth training in a specific topic, postdoctoral training provides broader training to equip you for independence.

Fundamental issues and challenges

The pay and location constraints are the biggest issues. $50k starting salary as an NIH postdoc vs a 6 figure industry position is becoming more and more disparate. Plus, moving to a new city, commonly with

no support, during child bearing ages should not be the normal expectation. That is not common in any other field.

Existing NIH policies, programs, or resources

Increase pay, better child care/family leave support, provide remote training when appropriate (not always feasible).

Proven or promising external resources or approaches

No response

Response 1847

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a time for young scientists to apply their research skills to work independently, in preparation for their career either as an academic scientist, in industry, or serving other sectors such as government. I view the postdoctoral role as one in which the postdoc already has the scientific skills needed for a science career at a very high level, but could use some additional training in soft skills that they may not have gained in their graduate or undergraduate study. Science communication or SciComm should ideally be part of scientists' coursework before the postdoc, but since it is not, I am writing to suggest that it be included in the postdoctoral training. Explaining science is part of a scientist's job, whether it's to fellow scientists, scientists outside of the field, important stakeholders in industry and government, and/or the general public—even just talking to friends and family at Christmas dinner.

I believe formal science communication coursework should be an integral part of any training grants for junior scientists [whether for training (T), fellowship (F), or the career development awards (K)]. Training grant funds could be used, for example, to expand existing Science Communication courses or setting up new programs to help improve junior scientist communication skills.

These recommendations are supported by the just-released 2023 Research!America poll that found: "There is robust bipartisan agreement that scientists' job should include communicating their research to the public (86% of Democrats, 77% of Republicans, and 77% of independents say "yes")." Trust, credibility, and funding for scientists all depend on good SciComm skills—and it is critical that junior scientists become very good at talking to the diverse public(s) who need to hear their messages.

Fundamental issues and challenges

Improving science communication curriculum as a postdoctoral trainee can create new opportunities, breaking research silos and helping postdocs interface more productively with various stakeholders, including but not limited to: their supervisors, potential employers, members of the general public, and so on.

Existing NIH policies, programs, or resources

NIH could create a science communications requirement for the postdoc which could be completed via various means, such as blogging about science, taking a seminar, or via attending various lectures. It doesn't have to be complicated. I recognize that postdocs already work a lot and have a lot on their plate; however, a small amount of communications training will go a long way and is worth the effort invested

Proven or promising external resources or approaches

Fancy Comma, LLC, is my science communications company. We are part of a much larger ecosystem of scientists, science communicators, communications professionals outside of science, science journalists, and more, who are dedicated to developing a science communication training program for junior scientists (and people studying science at any level in higher education). We would love to be a partner and work with NIH to help build a SciComm ecosystem in science to improve the conversation between science and society, help make science more inclusive, and for many other reasons. You can learn more about us at www.fancycomma.com.

Response 1848

Perspectives on the postdoc roles and responsibilities

As a former NIH intramural postdoc, faculty member, and Principal Investigator of an NLM T15 training program, I have seen both the promise and the peril of the academic postdoc model. Much of the difficulty with academic postodcs stems from differing perspectives on the definition of the roles and responsibilities of the position. To some, the role of the postdoc is to be a productive researcher—the engine of a lab's research. I believe this role is unsustainable and inappropriate.

The primary role and responsibility of a postdoc should be to grow their own career. In most cases, this will be consistent with the goal of the mentor and the lab to conduct productive research and to publish papers. However, the timeline is critical: the postdoc should be starting their position with the goal of finishing, charting a path that will lead not only to published papers but independent grant submissions—ideally for K-flavored grants, within a period of no more than 5 years.

Fundamental issues and challenges

It is abundantly clear that the most fundamental challenge facing postdocs is compensation. Recent research has clearly shown that stipends are not sufficient for postdocs to make ends meet, particularly at a time of life when many are having children and facing significant family-related expenses. Although compensation is a national issue, it is likely a particularly difficult problem in more expensive cities where major biomedical research institutions tend to cluster.

The impact of low stipend-levels is a problem that may be felt differently across fields. In my field—biomedical informatics—we routinely recruit undergraduates with degrees in computer science and related fields. These students bring expertise that has often been in high-demand. Asking them to spend 5 years of graduate training and 3 years of postdoctoral training at stipends that are 1/3 or less than those that they might make in industry is not particularly sustainable. Perceptions of poor career prospects present related challenges. Graduate students and postdocs are well-aware of both the limited prospects for being hired in faculty positions and in the significant demands of working in these roles. To attract more qualified postdocs and to improve their quality of life, we must show that there are real prospects for satisfying careers ahead.

Existing NIH policies, programs, or resources

There are several changes that NIH might make:

1. Postdoc stipends should be raised to levels appropriate for raising families in locations where biomedical research labs are found. These changes should be made without jeopardizing the spending power of current or future grants. Specifically, any dollars that are added to stipends for current or future grants should be provided through overall increases to existing (or future) budgets, not be shrinking the dollars available for the rest of the grant.
2. Postdoctoral training programs should be structured to emphasize the importance of appropriate career development, with a range of rewarded outcomes that are aligned to the realities of employment prospects. Specifically, NIH must recognize that many postdocs will not go on to be research faculty: "alternative" options such as faculty roles at teaching institutions, senior research scientist positions, or industry positions should be considered "first-class" outcomes and successes of post-doctoral training. Incentivizing training program directors to encourage postdocs to explore a broad spectrum of possible careers will help these programs more honestly attract postdocs and more realistically prepare them for likely career outcomes.
3. NIH should work to establish accountability from faculty and to ensure that postdocs are treated well. Tales of postdocs who are abused by PIs who don't wish to lose valuable personnel or ideas are rampant. To protect postdocs, and therefore to make positions more desirable, NIH should explore ways of tracking postdoc careers, measuring lengths of time as postdocs, and even tracking the performance of individual faculty members in mentoring postdocs. This may be very difficult to do without creating a paperwork nightmare: NIH should work to develop methods that track these key details without creating burdensome paperwork requirements. However, good data on who succeeds, how, and why would be very helpful.

Proven or promising external resources or approaches

Listen to the postdocs. NIH must systematically engage current and recent postdocs—including those who have left academia—to understand their concerns and needs.

Response 1849

Perspectives on the postdoc roles and responsibilities

I view it as a time to further my training with more autonomy than in graduate school and with the ability to learn new skills/techniques

Fundamental issues and challenges

Not paid enough to live in the cities where the best research is happening. I have been a postdoc now for over 7 years and my salary hasn't changed substantially. But this is also happening during a time when I've had 2 kids, so now my costs have gone up.

Existing NIH policies, programs, or resources

I think increasing the time for ESI status is imperative. Things just take longer to get published, which is the currency for our work. And higher pay would be amazing.

Proven or promising external resources or approaches

No response

Response 1850

Perspectives on the postdoc roles and responsibilities

I feel that without long term prospects and some benefits, postdocs are a waste of time after finishing the PhD. Within a month of starting mine, I regretted it. I took a job in industry and never looked back.

Fundamental issues and challenges

Post docs produce incredibly high level work for insulting pay and job security, as well as long term career prospects. If there is a shortage, maybe learn from this.

Existing NIH policies, programs, or resources

Make the position a full time position with benefits and long term career prospects.

Proven or promising external resources or approaches

Make it like any other job. I really do not think this is a complicated or difficult issue to understand. Unless one is independently wealthy, there are very few benefits for any person wanting to build a life. No benefits, can't buy a house, it's shameful.

Response 1851

Perspectives on the postdoc roles and responsibilities

My perspective on the academic postdoc was that my responsibilities were to

1. Expand my technical skillset to improve my capability to approach scientific questions in diverse ways;
2. Assume more responsibilities so to be viewed as an independent scientist that can succeed outside of your PhD institution and without your PhD advisor's guidance; and
3. Gain mentorship and networking opportunities to transition to an academic position, or if desired, a non-academic position The academic postdoc is meant to be a time to discover and test your ability to act and think independently of the confines of your dissertation work, but with sufficient guidance and support from your postdoc advisor and institution to ease the transition into an investigator or industry scientist role where you will be operating with increased ownership and responsibility of your work.

Fundamental issues and challenges

1. The flat payscale for postdoctoral fellowships needs some tinkering—as someone that postdoc'ed in a high cost of living area, my colleagues postdoc'ing in lower cost of living areas faced significantly less burdens than I did, which I hardly find equitable. This will doubtlessly aid in recruitment, as my postdoctoral mentor has have had difficulty convincing prospects to join despite the institution's reputation due to high cost of living. Thus a cost adjusted scale may be helpful.
2. Regarding retention, without academic positions at the investigator level available, there may be less motivation for any trainee to enter postdoctoral training at an academic institution as industry can offer more competitive pay and more assurance that the training experience can be utilized to transition into a role at a company, at the site of training or elsewhere.
3. I think it's fantastic to have exposure to various levels of grant security/insecurity during training to see the reality of academic life, but I think federal postdoctoral funding likely needs to increase somewhat outside of stipend and institution support, and into the ability to purchase limited scientific equipment/reagents so a postdoctoral fellow can gain independence and test their scientific abilities earlier. As a previous K99/R00 recipient, I thought even the limited amount of spending money for research supplies made me feel far more independent than when I was on my postdoctoral T32.
4. I think if postdoctoral trainees are not seeking a professorship and wants to be an academic project scientist or similar, a defined pathway should be clearer so the individual can exit their training period and gain more financial stability and compensation earlier.

Existing NIH policies, programs, or resources

I think the existing policies and programs offered by NIH are (broadly) sufficient, and the postdoctoral training ecosystem is often significantly shaped by the postdoctoral mentor and home institution, and thus is unique and difficult to apply broadly.

Proven or promising external resources or approaches

I believe NPA's 2023 survey regarding postdoctoral barriers is sufficient for informing the obvious issues that need to be addressed.

As an aside, if there is anything that could enhance the academic postdoctoral training ecosystem, it is not necessarily a guarantee of an academic job at the end of the training, but to encourage and retain the romanticism, inventiveness, and idealism of scientific inquiry. I don't believe it's appropriate to compare all metrics of the academic postdoc to industry or government postdocs, as what is offered by the experience of the academic postdoc are wholly different. It is also not to say that all three sectors cannot have some opportunities for cross-disciplinary collaboration (as appropriate) so there's flexibility that the postdoctoral training experience in one sector does not preclude the ability to succeed in the other.

I think it would be preferable if another RFI is offered regarding the academic system as a whole, as I believe difficulties in postdoctoral recruitment and tenure-level academics leaving are part and parcel and there's far greater issues that need to be addressed for the sustainability of the academic ecosystem.

Response 1852

Perspectives on the postdoc roles and responsibilities

For me, a postdoctoral position is an important position to enhance my knowledge and understanding of research. It helps me improve myself as a scientist.

Fundamental issues and challenges

The main challenge postdoctoral trainees face is economic, especially when they have to support their families.

Existing NIH policies, programs, or resources

The salary hike would be great to help them focus on their work.

Proven or promising external resources or approaches

No response

Response 1853

Perspectives on the postdoc roles and responsibilities

I consider it like a medical residency equivalent. You're independent and fully trained, are able to produce efficiently, bud also are still learning some about how to get grants or run a lab.

Fundamental issues and challenges

The pay!!! I'm telling you, if academic post docs got paid more many would stay. Industry jobs pay two times as much, and even if someone loves working in academia they have to leave for that difference in pay.

Existing NIH policies, programs, or resources

Increased pay scales or allowing PIs to pay whatever they want with NIH funds

Proven or promising external resources or approaches

Job satisfaction and sustainability with increased pay

Response 1854

Perspectives on the postdoc roles and responsibilities

The Postdoctoral position gives a researcher the time to

a) Assess if academia or industry suits them better
b) Wrap up PhD publications
c) Lean how to mentor students
d) Learn how to write applications for funding and generate narratives around novel ideas
e) Learn how to teach
f) Learn how to run a research group.
g) Extend a professional network
h) Become independent

This all depends on the mentor and length of funding.

Fundamental issues and challenges

The NIH salary minimums are so low, I have recent graduates (no graduate degree) earning more for similar, but much junior positions.

I work in AI in medicine and industry offers 3-4 times as much. It's impossible to retain postdocs under those conditions.

At the same time, postdocs want to move on to industry or academia asap, and I'm seeing too many getting positions when they aren't ready. The training is important but junior researchers are desperate to skip the postdoc years. I'm not seeing strong applicants for faculty positions, even at the most prestigious universities. This leads to superficial research. It seems the training element of a postdoc is missing.

Existing NIH policies, programs, or resources

The minimum salary should be field specific and raised. (I know it's a minimum, but many universities take it as a maximum in the interests of 'equity'. While this is noble, and ib would love to see us all paid the same for the same work, it ignores the realities and means certain fields cannot hire good talent. It's a free market and we have to respond to those pressures.

Proven or promising external resources or approaches

Coupling doctoral positions as a ramp to faculty positions at year 3-5 depending on progress, with a joint mentorship team between the host institution, one external institution, and a program officer.

Response 1855

Perspectives on the postdoc roles and responsibilities

My own postdoctoral experience was completely worthless, provided me with plenty of opportunities for developing severe mental illness and hones my skills as an extreme individualist, none of which helped me in my (successful) career in industry. It was a requisite for a higher title than associate.

Fundamental issues and challenges

Pay, rampant mental abuse by PIs and other faculty, survival of which is considered a badge of honor. Worthless skill sets are emphasized, lack of funding in labs mean sharing out of date equipment, data forgery and manipulation is rewarded with higher positions in academia.

Existing NIH policies, programs, or resources

Industry should be carrying post doctoral research for the foreseeable future, while the absolutely foul and unaccountable university-led system in the US is canceled completely. Paying highly qualified people $40,000 whilst working them to near suicide is shameful.

Proven or promising external resources or approaches

The Genentech postdoctoral program is outstanding as I have witnessed first hand. There is camaraderie and at least avenues for young trainees to support each other, should their (still unfortunately not-wholly accountable) mentorship go awry.

Response 1856

Perspectives on the postdoc roles and responsibilities

I view my role as a postdoc as both an independent scientist and a trainee. I am still in training to become a PI by learning more about how to conduct research, run a lab, mentor other trainees, and apply for funding. However, postdocs also have Ph.D.'s and are experts in our fields, and should be given freedom to pursue independent research projects. I also see my role as a mentor to graduate students and other trainees in my lab. I also see my position as an opportunity to build a research program, since I am working on something related to but independent from my PI's main work, and would like to continue this line of research as an independent PI someday. Lastly, I see it as an opportunity to become more competitive for a faculty position by publishing more papers and acquiring funding.

Fundamental issues and challenges

My postdoc pay is livable, but not competitive with alternative career options such as a career in industry. I did not look into industry careers myself, but anecdotally I hear a lot of postdocs leaving academia because they can get a job in biotech or a related field and get paid much more. I also think there tend to be fewer benefits for postdocs compared to other jobs that scientists with Ph.D.s are qualified for (e.g., parental leave, retirement matching). There is also less job stability as a postdoc, since contracts are often year-to-year and depend on PI funding. Many postdocs are in our late twenties or early thirties, or older, and are therefore at a life stage where we are thinking about starting families, saving for retirement, etc. However, it is difficult to do this at the postdoc stage since you know you will likely move again at least one more time in the near future, but you don't know when. Also, depending on where you live, the postdoc salary may not be enough to support the cost of living and raising a family. I also think seeing other postdocs struggling on the job market is discouraging and makes it stressful to be a postdoc. While I am enjoying being a postdoc for now, I know it is a temporary position and I would like to get a faculty job someday. Seeing highly qualified postdocs (e.g., K99/R00 awards, great publication records, DEI and outreach work) unable to get faculty jobs is very discouraging since I think the main goal of many postdocs is to become competitive for a faculty position.

Existing NIH policies, programs, or resources

Expanding multi-year funding, both by giving more awards such as F32s or K99s to more postdocs, and by incorporating this into PI's grants. I am not sure what is typical, but having multi-year positions for postdocs incorporated into things like R01 budgets would be helpful, and incentivizing PI's to invest in the training of an individual postdoc. I have had a positive postdoc experience so far, largely because my PI has been supportive, has found ways to fund me and keep me in the lab past my original 1 year contract,

and is generally invested in training me and supporting my career. Some PIs are just better about this than others, but I think if R01s and other major grants were structured to incentivize this kind of longer term commitment to training an individual postdoc, it would improve the postdoc experience for a lot of people. Also, increasing postdoc pay and providing benefits such as parental leave and funding for childcare, for both postdocs on fellowships and being funded through their PI's grants.

Proven or promising external resources or approaches

Not sure

Response 1857

Perspectives on the postdoc roles and responsibilities

I strongly believe that postdoc position should be eliminated. People are underpaid and overworked. Less than 1% of postdocs have chance to get academic position, meaning that majority of postdocs will enter industry. Industry does not see postdoc position as work experience, resulting in low position. Same person entering in industry after graduation will spend same years as postdoc, but actually having job experience, also being paid as worker, not "trainee" . So, someone who graduated and went to industry will have chance in 5 years to be a labhead, while someone graduated same time, but spent 5 years being postdoc, will only have junior position. This is extremely unfair

Fundamental issues and challenges

Stop calling this position "trainee" and pay well. Postdocs are working late into night, weekends, also working on the computer in the evenings at home. Postdocs are main driving force for academic research and should be seen and appreciated as workers, not trainees

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1858

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are responsible for a research project. That responsibility includes working jointly with the PI on experimental design, carrying out experiments, interpreting data, and writing manuscripts (and fellowship applications). Senior postdocs may also take on responsibility for training undergraduates and graduate students. Most importantly, the postdoc should invest 100% of themselves into research. Without that intrinsic motivation and drive for discovery, successful transition to an academic or industry research position is unlikely.

Fundamental issues and challenges

Postdoctoral training is just that—training. It is not a career path unto itself. My responsibility as a mentor is to provide in-depth interaction and feedback related to the postdoc's chosen area of research. I always tell potential trainees "It is not my job to respect your boundaries; it is my job to help you push past them." Unfortunately recent NIH policy changes has made that approach more difficult.

As an African-American female faculty member, I am routinely viewed through the 'loud Black woman' lens, including by trainees. The change in policy surrounding 'bullying' sent shivers down my spine. Accusations of 'bullying' can be valid, especially in the context of racial and sexual harassment. However, 'bullying' is also an allegation frequently thrown at faculty who are perceived incompetent due to racial and gender stereotypes. Issues of this importance should not be left to university HR departments, but that is what NIH has effectively done.

Existing NIH policies, programs, or resources

Postdocs deserve to be paid a living wage, especially in parts of the country with higher cost of living. But with the ever-increasing salary recommendations, and expansion of postdoctoral benefits packages,

something has to give. A faculty member with a modular R01 in 2008 (when I started my postdoc) could hire (3) postdocs, while I would be unable to hire more than 1 on a modular budget today. NIH should increase the amount of a modular budget and/or require that universities subsidize benefits (that exceed recommended NRSA stipend levels) from indirect costs.

Proven or promising external resources or approaches

As I see it, NIH has created (2) major points of contention between postdocs and their potential mentors. First, the increase in postdoc stipends and benefits is coming from the same pot of money (direct costs) as research funding. As a result, faculty are forced to choose between supporting a postdoc's leave of absence or maintaining progress on NIH-funded research. This is unsustainable, and universities should offset certain expenses from indirect costs. The second issue primarily affects underrepresented and female faculty; namely, the increasing weight given to trainee sensitivities places us at increased risk of career-ending accusations of 'bullying.' This issue cannot be left to HR departments and university administrators. The standard of evidence for non-sexual, non-racial harassment and bullying should be much higher to avoid spurious allegations.

Response 1859

Perspectives on the postdoc roles and responsibilities

While the postdoc is theoretically a training position, I view it more as a "Scientist" position. I think its interesting to ask what it means to be a trainee vs. a scientist. There will be some amount of learning in any new position, whether one is a trainee or not (ie, new methods, new analyses, etc). So what makes the postdoc position a training position, vs. a scientist position? I do not feel like a trainee even though I am doing many new things in my postdoc. I haven't felt like a trainee since mid-PhD. While I do learn new things, the foundational knowledge/skills that I use are not new. The fact that most scientific research in this country is performed by "trainees" is really telling—that should be an oxymoron. I'm not sure what it would take to turn the postdoc position back into a training position. Probably to shorten the PhD and postdoc periods. But to do that, the 'bar' for completion of each of those phases would need to be lowered (which would make sense! The current bar is too high and results in people being beyond the training period when they graduate & are postdocs). That seems very difficult though—it seems that the 'bar' at each stage is set by the 'bar' at the next higher stage, so then PhD and postdoc training is heavily influenced by how difficult it is to get grants, and get faculty positions. (Of course it is much much less difficult to get industry positions, which is great. And in fact, when I was in grad school, students who were only interested in industry positions were 'enabled' to graduate earlier since everyone knew that they didn't need such glitzy papers to be successful in their chosen path)

Fundamental issues and challenges

The main issue with recruitment, retention, and quality of life for postdoctoral "trainees" in academic research is the fact that we are paid very very poorly relative to our level of education and life stage. Sure, some postdocs work way too many hours, but if they were compensated appropriately that wouldn't be too bad. Why would someone enter a job that is expected to last 5-6 years with a salary that they probably cannot afford a moderately nice place to live, childcare, travel somewhere cool every now and then, when they could easily get a job that DOES enable them to do those things? Sure there are issues with bad mentorship and exploitation, but again, the PRIMARY issue that everyone likes to ignore is that postdocs are not paid well. (And called 'trainees' on top of that, despite often being the people that really drive the research forward). If my partner didn't have a job making lots of money, I probably would strongly consider leaving my postdoc soon, now that I have a kid and will need to pay 3/4 or more of my stipend for her childcare. Imagine if I was a single parent! It would be LITERALLY impossible. Of course, the NIH will need to get more money from congress to fix this problem, or the total number of postdocs will need to significantly decrease. Both seem unlikely, but I think those are the only real solutions here.

Existing NIH policies, programs, or resources

Pay postdocs more money. Thats the main thing. I could go on about other resources that could be helpful for mentorship, reporting bad advisors, enabling collaboration, etc etc. But the thing that will have the largest impact on the current and future lives of postdocs will be to make more money.

Proven or promising external resources or approaches

One thing I will say that has been excellent about my postdoc is that I have had 1-2 research assistants. Therefore I have my own mini-lab within the lab. This has provided me with valuable experience in mentorship and management. These are important skills for leading a lab that most postdocs don't get any experience with. I think postdocs should be required to have experience with mentorship, management, budgeting, fundraising, and other skills that are essential for their next position. This would also help turn the postdoc period back into a training period.

Response 1860

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are a mixed bag. I love having protected time to do work that is meaningful to me, have opportunities that I might otherwise be unable to take advantage of (that are paid for!), and have the flexibility of an academic schedule. I also have access to a series of amazing mentors, who will go above and beyond to make sure I get the experiences I need to reach my future goals. However, it seems like postdoctoral positions have become a necessary evil for most anyone graduating in my discipline with a Ph.D, especially if you want to pursue an academic position of any kind. While postdoctoral positions can be wonderful training opportunities, and allow fellows to gain skills they might not have gained during their doctoral training, it kind of feels like postdocs are a bit of a holding pattern. It feels like it's delaying being a "real" adult for a bit longer, and that general attitude makes it easy to devalue postdocs.

One major issue I have is the perspective of postdocs as still being "trainees." While post-docs are still getting additional training, they are not "trainees," at least in the same sense as graduate students are trainees. Postdoctoral positions are often viewed as Grad School 2.0, and as such funders, PIs, and other supervisors believe they can treat postdocs as unfairly as graduate students are treated. Postdocs are not treated as adults with jobs, but as students who should be grateful to have the opportunities that they have and should be expected to be compensated less in the name of "experience." While postdocs are often temporary training positions, it would be great to see the culture surrounding postdocs are trainess, who can be devalued and mistreated, change.

Fundamental issues and challenges

Financial challenges are absolutely the most fundamental issue for postdoctoral fellows. In many places, the standard salary of ~ $55k is not enough to live with a decent quality of life, much less begin to save to pay off debt or purchase a house. Especially with the skyrocketing inflation and landlords raising rents to astronomical levels, it's becoming harder and harder to live. I cannot stress how much being paid more can help in reducing stress, increasing quality of life, and improving work quality. Once you have that burden of "can I afford groceries this month?" off your shoulders, amazingly, you can focus on doing quality science and working to improve our society.

Postdocs are grown adults with Ph.Ds, NOT students. While post-docs may still be "training" to some extent, it is unreasonable and belittling to expect these highly trained scientists should accept less compensation in the name of training, or that they should just suck it up and live with four other roommates to just survive. Many people I know have put off reaching traditional life milestones, such as buying a home, getting married, or having children, because they simply cannot afford it. People pursue Ph.Ds for better opportunities and better pay, and to not receive adequate compesation after years of toil is ridiculous.

Moreover, lowballing post-docs on their salaries makes it okay for university departments to lowball faculty members on their salaries. After all, once you've been paid so little, any increase seems like a massive improvement (even if the improvement still isn't sufficient). The NIH has the power to set new standards for postdoctoral pay and training, and be at the forefront of improving the quality of life for all academics.

Existing NIH policies, programs, or resources

Make it easier for folks to access loan repayment. People have taken out hundreds of thousands of dollars in pursuit of a degree they thought would make them an adequate salary, only to find that academia and other corporations are not paying them what they are worth.

Proven or promising external resources or approaches

No response

Response 1861

Perspectives on the postdoc roles and responsibilities

An academic postdoc is a transition and training period to prepare PhDs for one of several types of career outcomes: academic, industry, government, or many others. It should be calibrated to best meet the goals and needs of the postdoc and the lab. For those bound for academia, the goal should be to build an independent research program and build a CV necessary for the job market. For those who have different ultimate goals, they may want to build skills in management, writing, particular marketable skills, etc. There needs to be a detailed discussion between the postdoc and PI to figure this out.

Fundamental issues and challenges

The low pay rate is a huge issue, especially in locations with high costs of living and/or for postdocs with childcare costs. Even for motivated trainees, it is often financially prohibitive to pursue a postdoc unless they can rely on the financial stability of family. These issues have become even more exacerbated during times of high inflation, when postdoc pay has not remotely kept pace with rising costs nationwide. Moreover, many postdocs are geographically restricted due to family obligations, dual-career complications, or the expansion of laws restricting the rights of women, minorities, and LGBT scientists in many parts of the country, so the option to move out of expensive regions is not available to everyone.

A second fundamental issue is the lack of career stability for postdocs. While this is intended to be a transition period, postdocs often have high uncertainty over whether/how long their funding will continue. Given the degree of randomness in the job market for academia and other fields, postdocs frequently 'time out' and have to pursue non-scientific careers merely because they didn't have an additional year of funding. This is represents a huge loss of training and talent.

Existing NIH policies, programs, or resources

Most importantly: increase the NIH minimum rates for postdoc compensation (and increase grant or fellowship budgets to accommodate this change). Many institutions use these rates as default postdoc salaries, and it is difficult to impossible to argue with HR or with NIH study section to justify raising postdoc salaries on a case-by-case basis. Ideally this increase should be tied to nationwide inflation rates and/or local costs of living to ensure keeping pace in the future.

Second, it would be great if NIH made a year-long fellowship specifically to support postdocs while they are on the job market, academic or otherwise. These job searches take up an enormous amount of time, during which little research can be done. But they are essential for postdoc retention in the scientific community long term, and should therefore be supported.

Third, a more ambitious change would be to adjust NIH rules to change where postdoc funding comes from, switching from the majority of postdocs paid by R01s to a majority being paid from training grants or fellowships. By tying the funding to the postdoc and allowing the money to move with them, this would give them more stability, more opportunity to move labs if their PI is exploitative, etc.

Proven or promising external resources or approaches

No response

Response 1862

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions in US lost any appeal to me over the 4 years of my PhD. I am an international student from Europe and prior to coming for PhD I anticipated doing at least one post doc here in the states. Not anymore. Seeing scientists with doctoral degrees and years of postgrad experience being called trainees and paid 50k for the enormous amount of work they do is simply ridiculous. I am also aware that almost no americans are interested in these positions anymore. us postdoc is becoming low paid position for foreigners in which they are very likely to be exploited (tied by work permit and lack of finances). I will not put myswlf in that position. The US taxpayer money that was spent on my PhD will likely go to waste.

Fundamental issues and challenges

See previous comment. No 30+ yo with PhD wants to be underpaid, called a trainee and required to move around the country with 0 financial contribution from the institution. Also, what is the path for posdocs that wont become professors?

Existing NIH policies, programs, or resources

Pay for relocation, pay competitive salaries, more respect. People in waste management make more money than postdocs. also, no other industry calls people trainees for decades.

Proven or promising external resources or approaches

Honestly everyone in academia is making jokes about your little survey with comments like "lol, they KNOW what is the problem" . You look like you will do anything else rather than pay money and give respect.

Response 1863

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is one that helps an early career clinician scientist/scientist obtain a faculty position. They are able to train with a mentor, lab or program that provides insights and experience into faculty positions and best ways to obtain funding (NIH, industry, etc.). You also begin to become a more independent researcher, and the time can help you decide the correct career path. Postdocs are also highly educated and trained and provide important services/duties for their labs or departments (whether clinical, clinical research, basic science, etc. responsibilities), and it is often done at a lower cost because we are not yet permanent faculty members.

Fundamental issues and challenges

The low salary is the number one issue (to me) for recruitment, retention, and overall quality of life. I understand it is a training position but ~$54,000 is not enough support for a doctoral level position; it also makes it difficult to support a family if the postdoc has children/dependents. This salary is just above my institution's salary for a research coordinator, which I find to be unacceptable given my education and level of training.

Existing NIH policies, programs, or resources

There should be more emphasis on how to obtain external funding since that is how faculty members keep their jobs in "soft money" positions. It would also be helpful if there were other avenues for early career funding, outside of the K99/K23 routine, since it is difficult to secure that funding. The funding in general at NIH seems more difficult to secure, based on anecdotal information I've received from other colleagues and mentors at my institution. This experience/information has made me consider positions outside of academia so I can start my career and make a good salary. I also don't agree with the payback policy that a postdoc must payback their stipend if they don't go into an academic position. There are many factors that contribute to a job decision and some of these may be out of the postdoc's control (e.g., securing funding for a K23; their department's funding, etc.). It is not fair to penalize someone for wanting to make a decent living, or if they decide to change their career plans (away from academia) to best support their wellbeing.

Proven or promising external resources or approaches

I'm not sure of helpful external resources.

Response 1864

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be a temporary, transitional role that bridges the gap between graduate school and a first career position. It should be a training position, with a focus on learning appropriate skills for the desired future career. It should not be a 'cheaper' version of a research scientist with full-time research responsibilities and very limited training resources.

Fundamental issues and challenges

Postdoctoral positions are billed as 'training' positions, but often the only training is work experience. However, similar to graduate students, the 'training' status of postdoctoral researches is used to justify working conditions that would otherwise be unacceptable. Salaries are below what most graduates with an undergraduate degree command, much less someone with a doctorate. Retirement benefits are typically non-existent. Long hours and limited time off (incl weekends) are common. In other fields, work experience for new graduates is gathered in a fully compensated entry-level position. Postdoctoral researchers should either be compensated according to the value they unquestionably bring to the research enterprise, or receive legitimate training as part of their position that is not just work experience and the occasional seminar. Regardless of all of this, postdoctoral salaries need to be adjusted for cost of living, and protections should be introduced to prevent exploitation of postdocs who depend on their mentor's recommendation, and possibly visa support. Limits on hours or overtime pay and minimum PTO should be considered.

Existing NIH policies, programs, or resources

See also above. Protections for postdoctoral researchers from exploitative PIs. Improved benefits. Cost-of-living adjustments. Limits on worked hours. True training requirements.

Proven or promising external resources or approaches

Unions help

Response 1865

Perspectives on the postdoc roles and responsibilities

Developing projects, organizing lab, training students and postdocs, disseminating data, research

Fundamental issues and challenges

Pay is less than half of what someone with a PhD can make in the industry. At [redacted for anonymity], it's impossible to pay for daycare and live as a postdoc.

Existing NIH policies, programs, or resources

Cover daycare costs, increase salary

Proven or promising external resources or approaches

No response

Response 1866

Perspectives on the postdoc roles and responsibilities

Academic postdocs are the primary workforce driving the most challenging research projects in the US. Postdocs design, execute, and analyze experiments, as well as organize data in presentable forms to write grants and manuscripts. They also train grad students and technicians. In short, they work both on and off the bench. Additionally, international postdocs are required to perform a lot of paperwork that relates to their visa to continue to have valid work status.

Fundamental issues and challenges

First is poor pay. Academic postdocs find it very difficult to maintain their basic expenses, and it compounds manyfold if they have a family. Second, is affordable childcare options. Third, is lack of mentoring when it comes to pursuing their future goals.

Existing NIH policies, programs, or resources

NIH needs to come up with policies that ensure better pay of the postdocs across the US. Secondly, dedicated mentoring programs for postdocs who are looking for a career in academia.

Proven or promising external resources or approaches

No response

Response 1867

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1. Not enough financial support for trainees (e.g., funding for research coordinators/assistants, my K23 only covers 1/3 of a RAs salary).
2. Some trainees do not have extra time allocated for their research.

Existing NIH policies, programs, or resources

1. Each of the institutes should standardize support for K trainees (e.g. they range from 3-5 years, research support ranges from $25,000-$50,000/yr)

Proven or promising external resources or approaches

1. Free grant writing courses.
2. Free manuscript preparation courses.

Response 1868

Perspectives on the postdoc roles and responsibilities

I view my postdoc years as protected time to launch a career as an independent investigator. I am in a T32 funded position and have been able to use my postdoc years to

1. Focus on publishing my dissertation research,
2. Develop and write grant applications,
3. Support ongoing research through mentored research projects, and
4. Collect pilot/formative data for future research projects. This protected time has been enormously helpful, especially in having dedicated time for grant development and writing.

Fundamental issues and challenges

The primary challenge is salary. While the NIH provides minimum guidelines, my institution strictly adheres to them and offers no negotiation in that. Even when applying for other grants, for example the K99 which funds up to $100K in salary, my institution would only let me budget based on the NIH postdoc salary guidelines. Compared to industry and other fields, these salaries are simply not competitive and this alone has made me consider exploring non-academic careers. The student loan pause over the last few years was one of the only reasons that I was able to live somewhat comfortably with this salary.

Existing NIH policies, programs, or resources

Consider shortened timelines for applying for grants like the K99 or K22. The time to review made planning for these submissions difficult and significantly more stressful in conjunction with having to simultaneously start a job search in the event that the grant was not funded. Moreover, given that it may take several submission rounds until these grants are funded one might end up staying in a low paying postdoctoral position for longer than necessary as many institutions seem to expect one of these grants to even be considered for a faculty position. Had this been my situation, I almost certainly would have begun to apply for jobs outside of academia.

Additionally, consider making changes to the LRP program so that it is easier for postdocs to apply. I was able to apply this year, but would have loved to be able to previously. Student loans combined with low salary are a big challenge for many postdocs and the eligibility for the LRP and materials needed make it difficult to competitively apply for the award in the first year of a postdoc position (unless you are at the same institution where you completed your doctoral work).

Proven or promising external resources or approaches

No response

Response 1869

Perspectives on the postdoc roles and responsibilities

As a current postdoctoral researcher, I view the postdoc position as essential to my career progression, not because I could not be successful in an academic position immediately after completing my doctoral studies, but because the academic system is designed to support the established researchers rather than building for the future with supporting early-career researchers. I view the role of an academic postdoc as being biased towards the privileged US Citizen. I am privileged enough to be able to float in this transitional, temporary, and insecure position for a few years, but these conditions are eliminating many highly-skilled, highly-motivated scholars from pursuing research careers in academia. What should be a great opportunity to elevate research training through a structured path to independence, is filled with uncertainty, rising costs, and yet another costly transition to a new position.

Fundamental issues and challenges

The educational system has lost sight of its primary role: education. Academic institutions are now run as businesses where profits must increase and the majority of those profits must go to the elite few who sit atop its hierarchical structure (e.g., university presidents, football coaches, other male-dominated positions).

Almost all of these responses will likely discuss salaries not being representative of someone with a PhD, which I agree with, so I will focus on other problems. Cost of living differs vastly by area of the country, as well as by family status. As a father with two children, I can't live in an apartment with five other people to make rent affordable. Moving is also expensive and restrictive, yet there is no accounting of moving expenses in the transition to a postdoc position.

In addition to funding mechanisms being severely limited, most are also exclusive to US Citizens. Non-US citizens not being eligible for career training/fellowship/development awards is a poor system for building good scientists generating good science. Non-US citizens already have immensely greater costs with visa and travel requirements that restricting their ability to receive training and conduct research is making an already difficult, transitory time of life more complicated. NIH has perpetuated a negative stereotype of non-US Citizen scholars not contributing to society by making these important people ineligible for most funding mechanisms.

Existing NIH policies, programs, or resources

To control the PIs who manipulate and abuse postdocs through excessive workloads and unreasonable expectations, whether intentionally or unintentionally, PIs who accept postdocs into their labs should be monitored and reviewed. Are the PIs providing adequate meeting time with postdocs? Are PI's expecting reasonable working hours? Are the PIs helping postdocs transition into their careers or holding them back for their own benefits? If the PIs reviews are poor, should this PI be allowed to continue to accept postdocs? It is unreasonable for trainees to have to protect themselves under these power imbalances and conflicts of interest.

To encourage participation in training experiences, additional funds and/or waived expenses should be considered. Conference registration fees could be waived. Publications costs could be waived. Manuscript reviews could be paid. If there are additional students in the lab, mentoring efforts could be paid. These are valuable training experiences for postdocs who are filling a trainee role.

Proven or promising external resources or approaches

No response

Response 1870

Perspectives on the postdoc roles and responsibilities

The role of a postdoc varies too greatly. Some labs treat postdocs as independent researchers and expect them to get 100% of their own funding. Some treat them like they're still a graduate student and only "let" them work on the PI's R01. Some are somewhere in-between, which is how it should be in my opinion.

Fundamental issues and challenges

Money and work/life balance are the two biggest issues. The only real reasons I considered leaving academia were lack of support for postpartum (8 week maternity leave is shameful) and not making sufficient money to justify staying. It was REALLY hard to justify staying in such a low paying position when I had children to pay for. I know that many postdocs are in their peak childbearing years (if not beyond it thanks to grad school) and this is a huge concern for almost all of my friends and colleagues.

Existing NIH policies, programs, or resources

Extend parental leave (and extend the clock on grants dependent on time from graduation accordingly) and raise the minimum salary. In addition to minimum pay scales, there should be minimum requirements for additional benefits (healthcare, dental, parental leave, etc)

Proven or promising external resources or approaches

provide strong, mandatory verbiage in job contracts for postdocs funded from NIH grants around the required mentoring for a postdoc (I know most people wont use it still, but if its mandated that a PI help students with job application materials, protect 30% of time for their independent projects, etc then at least some will care).

Response 1871

Perspectives on the postdoc roles and responsibilities

Training position that needs the space to experiment with riskier and newer problems that will allow the postdoc to carve out a niche for themselves.

Fundamental issues and challenges

Postdoc salaries are not competitive with what the industry can offer. Just increasing postdoc and graduate student salary is not a solution if it is not accompanied with increases in grant budgets. Good quality postdocs often tend to chose very senior and established labs causing a bias of a lot of postdocs in just a few labs and no postdocs in all other labs. I do not think it is a bad thing for grad students and postdocs increasingly choosing industry vs academic positions, since that is proportional to the academic jobs available. However, in the face of a shrinking workforce, it is important to revisit what the expectations of productivity should be.

Existing NIH policies, programs, or resources

Grant mechanisms for riskier postdoc research projects. And postdocs who choose to join new PI labs should not be penalized for their courage and boldness when submitting fellowship applications if they have other institutional support and mentoring available. International postdocs working in US labs should be eligible for NIH postdoc fellowships. Excluding them is to remove 3/4ths of the actual academic postdoc pool and creates a huge financial burden on labs running on single R01 budgets.

Proven or promising external resources or approaches

No response

Response 1872

Perspectives on the postdoc roles and responsibilities

A postdoc is for training in a new field (3 year maximum) different than your PhD. It is not an extension of a PhD in the same field for >3 years. Responsibilities include training, conducting research, mentorship, and potentially teaching.

Fundamental issues and challenges

I cannot stress this enough--PAY POSTDOCS A WAGE COMPENSATORY WITH THEIR MARKET VALUE. And I mean retirement, maternity leave, health insurance, life insurance, dental insurance, vision insurance *in addition* to salary. Basic necessities for being a skilled worker in the US!! So many of my colleagues are rejecting a career in academia or a postdoc (myself included) because of this. Many PIs would also love to do this but are prevented by the current NIH salary caps when budgeting in grant applications.

Existing NIH policies, programs, or resources

Respectfully, I don't work for the NIH so I won't do your work for you :)

Proven or promising external resources or approaches

Respectfully, I don't work for the NIH so I won't do your work for you :)

Response 1873

Perspectives on the postdoc roles and responsibilities

The role of the academic postdoc is to provide semi-autonomous experience for a scientist to learn how to strategize and execute a coherent line of inquiry that will lead to actionable (that is, publishable) data symbolizing a meaningful contribution to science.

Fundamental issues and challenges

The goals, as outline above, are not explicitly stated with clear goals, objective, and timelines. Therefore, it seems more of a "black box" or "right of passage" that is successfully completed by those in well-funded laboratories. In addition, the life of a young investigator is often fraught with not enough research money, not enough administrative support (such as the availability of project management), makes the prospect of the finish line not particularly enticing.

Existing NIH policies, programs, or resources

1. Increase the salary of postdoctoral students
2. Do not call them "students" but rather something on a pre-professional track. An equivalent to medicine's "resident". It is an apprenticeship like a residency.
3. Clarify the skills that will be obtained. These are skills that are felt to be necessary lead a successful laboratory and lead a successful line of research inquiry.
4. Provide program management support for early faculty.
5. Increase the salary for young investigators/assistant professors
6. Provide information/guidance on industry: what industry scientists do, how to collaborate, how to recognize the benefits associated with academic/gov't institutions.
7. Encourage institutions to add courses on budgets and program management and make them required.

Proven or promising external resources or approaches

1. Increase the salary of postdoctoral students
2. Do not call them "students" but rather something on a pre-professional track. An equivalent to medicine's "resident". It is an apprenticeship like a residency.
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6. Provide information/guidance on industry: what industry scientists do, how to collaborate, how to recognize the benefits associated with academic/gov't institutions.
7. Encourage institutions to add courses on budgets and program management and make them required.

Response 1874

Perspectives on the postdoc roles and responsibilities

I see this to be a pathway to becoming an independent researcher. Essentially going through intense training.

Fundamental issues and challenges

Single most important problem these days is the salary. People are not interested in taking the jobs when they see the offer letters and what they could get in industry.

Existing NIH policies, programs, or resources

Minimum postdoc salaries must be increased otherwise the system will most certainly fall. People are loosing interest in taking academic positions just because of meager salary. Even if the salaries aren't exactly competitive with the industry there must be a fair increase every year considering the inflation and cost of living. If this is not fixed we as academicians are doing an injustice to our system.

Proven or promising external resources or approaches

Having an unclear career path. What after postdoc is a big question to everyone. Some aren't prepared to write grants forever. Some students I know think that applying for grants essentially is scientific begging. This attitude must change and it can only be done from the top level.

Response 1875

Perspectives on the postdoc roles and responsibilities

Postdoctoral position help me to understand the research in depth and at the same time it allows me to enter scientific community.

Fundamental issues and challenges

The main fundamentals of inhibiting the retention in academic research is not paying enough wages according to current situation.

Existing NIH policies, programs, or resources

Existing NIH system is good enough for the programs and resources at some extent.

Proven or promising external resources or approaches

No response

Response 1876

Perspectives on the postdoc roles and responsibilities

As a postdoc, you aim to acquire and solidify skills that you will need as an independent investigator. Thus, you will likely have to invest a good deal of time into learning and not necessarily into data collection.

Fundamental issues and challenges

The postdoc salary is a major issue for retention. Many people leave postdoc positions for industry positions since this is often the phase of life when families are being started and money can become tight (true of men and women).

Existing NIH policies, programs, or resources

Extend K99 eligibility to allow experiments centered around slow models (e.g., genetically engineered mouse models, patient samples) to produce the necessary compelling data. This extension would also give the trainee more time to learn some of the skills necessary better increase their independence (e.g., learn to code) or develop tools needed to study their models.

Proven or promising external resources or approaches

No response

Response 1877

Perspectives on the postdoc roles and responsibilities

This postdoctoral position was intended for me to obtain experience with treatment and developmentally-oriented research. However, I have found it to be that I am running a project without a leader because the

PIs do not know how to conduct the analyses (whereas I do) and are too busy with other grants they have. I feel that I am getting paid miserably (despite being an adult and having a longstanding history of being paid horribly as a graduate student) while working hard and providing significant intellectual contribution to a project that I will have no significant acknowledgment for on my CV, while my PIs (whose salaries are bloated and spend their time on activities outside of this grant) get all the credit.

Fundamental issues and challenges

You are paying adults (who have been underpaid throughout their early careers as graduate students) below the national median income, during a time of economic insecurity and exponential increases in inflation. Postdoc positions do not feel like they are providing job or economic security. I feel like I am overworked, underpaid, and undervalued. The research enterprise takes advantage of how little it pays junior investigators. And you wonder why historically disadvantaged and minoritized groups aren't better represented in academia.

Existing NIH policies, programs, or resources

Pay your postdocs a minimum of 70,000 per year. Postdocs who are part of grants should be formally recognized in NIH grant repositories to avoid PIs getting credit/reputational benefits for their grants.

Proven or promising external resources or approaches

I cannot emphasize enough how important it is to pay us a respectable salary.

Response 1878

Perspectives on the postdoc roles and responsibilities

Manage projects and perform experiments with little assistance and constant pressure.

Fundamental issues and challenges

Low salary, poor work-life balance, low career trajectory and perpetual "trainee status" used to justify poor benefits (including retirement) and indefinite length.

Existing NIH policies, programs, or resources

Trash the postdoc status and mandate actual jobs with competitive salaries. Form a national union for labor rights.

Proven or promising external resources or approaches

MANDATE LABOR REFORMS.

Response 1879

Perspectives on the postdoc roles and responsibilities

Training and step to be an early investigator

Fundamental issues and challenges

Salary, few chances to continue in the area

Existing NIH policies, programs, or resources

Training for other important functions as an early investigator and professor

Proven or promising external resources or approaches

Mentoring, Better recruitment

Response 1880

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral fellowship as a means to facilitate a transition into independence. The postdoctoral fellowship has allowed me to develop my own line of research while still having the support and infrastructure of a mentor. This time period also allows for further refinement of skills that will be needed to ensure independence at the next career stage. Such as grantsmanship, mentorship of other students and postdocs in the lab, oversight of research projects (implementation, data collection and analysis), and productivity through both presentations and manuscripts.

Fundamental issues and challenges

What I have found most challenging about being a postdoc is twofold. First and foremost, it is extremely challenging to be a postdoc from a financial standpoint. We often serve a large role in helping to maintain labs and it doesn't feel like the pay is commensurate with our experience or value. Beyond the salary, this is an extremely important period of transition when we need to be attending conferences for professional development and networking. My NIH grant, while I am grateful for the funding, only comes with $1000/yr for conference travel and this is barely enough to cover the cost of one conference. Typically, a PI would be able to apply for multiple grants to help offset some of these costs, but as a postdoc you are a bit limited in your effort (especially if you are on a fellowship that provides 75% protected time). I have had to pay thousands of dollars out of pocket to attend conferences which has furthered the financial strain. The second challenge of being a postdoc is feeling like you don't really have community or protections. We are in a weird transition zone where we aren't quite faculty but also aren't grad students anymore and it feels like at a institution level at least, there is uncertainty as to where we fit in. For example, I have a NIH grant where I am PI but at my institution, I am technically cannot be listed as a PI on my own grant and my mentor must do so. Overall, it just feels like we are underpaid and undervalued and it is hard to stay motivated when this is the case.

Existing NIH policies, programs, or resources

As mentioned, I have a NIH fellowship and while I am not sure how all fellowships work, this one in particular only helps cover $4000 in research costs and $1000 in travel per year. Yet, I feel the expectations of the grant was to have a highly rigorous project and training plan. This is hard to accomplish without adequate resources and supports for research. I think the existing fellowship programs should be closely examined to understand if more support can be given to those of us at this career stage. Even for those of us being supported by a mentor, it is difficult to ask them to cover all of the necessary costs that come with doing research at this level. Given that some of the K training grants at the early faculty level cover significantly more, it doesn't make sense that there is such a wide discrepancy between the support offered at that level and one step removed (postdoc level).

Proven or promising external resources or approaches

Something that has been helpful for the fellowship grant I am currently on is that we have monthly peer group meetings with other individuals that have the same grant. It has been tremendously helpful for fitting in and for having an inbuilt peer support system to discuss some of these issues and shortcomings and troubleshoot solutions. Not sure if this is a part of all of NIHs existing programs, but I think having more opportunities to build out these support networks (especially in person opportunities) is tremendously helpful for morale and to not feel so isolated and alone as a postdoc.

Response 1881

Perspectives on the postdoc roles and responsibilities

The postdoc position is one of training. It's in a weird limbo between being a fresh graduate but not quite experienced enough to be a faculty member. It should be a time of immense growth where a person is exposed to all sorts of new techniques, concepts and professional networks.

Fundamental issues and challenges

PIs disguising handing off responsibilities as "training" and loading a postdoc with so many responsibilities they barely have time to breathe.

Existing NIH policies, programs, or resources

Strict limits on what a postdoc can and cannot do e.g. not allowed to ghost write peer reviews (postdoc must receive credit), the number of students a postdoc is tasked to supervise, the amount of teaching or course development they are supposed to do etc

Proven or promising external resources or approaches

Mentoring. Having access to a senior PI that is not the postdoc's primary PI would be helpful.

Response 1882

Perspectives on the postdoc roles and responsibilities

I personally view it as an extension of graduate training, with more responsibilities but less structure, and the potential to one day apply for academic positions if the postdoctoral work goes well.

Fundamental issues and challenges

Compensation and the limited career opportunities following a postdoctoral position, which places you at risk of huge losses in potential earnings during the postdoctoral period with limited hope of eventual payoff.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increased emphasis and acceptance of non-academic tracks.

Response 1883

Perspectives on the postdoc roles and responsibilities

I feel I have many responsibilities and I do enjoy the work and challenges, but I do not think I am fairly compensated for my work. I have many friends working less hours for higher salaries in other fields. I have considered leaving academia for this exact reason.

Fundamental issues and challenges

I think the culture of science still isn't the most welcoming to non-white males, which could absolutely improve. I've encountered multiple older professors who don't seem to value DEI initiatives that younger generations are leading. I also think the main currency in academia is still publications and teaching/mentoring or outreach is second rate.

Existing NIH policies, programs, or resources

Increased salaries! I know my skillset is worth more than what I am paid.

Proven or promising external resources or approaches

No response

Response 1884

Perspectives on the postdoc roles and responsibilities

An academic postdoc is a period of additional experience and training. Time to produce publications in an additional area of research separate from these of predoctoral training. Responsibilities include producing data for the PI, supporting graduate and undergraduate students, and developing their own research ideas.

Fundamental issues and challenges

Inadequate salaries and no retirement benefits are the biggest challenges that make this trajectory unappealing. Having no financial stability is a huge stressor that reduces overall quality of life and progress.

Existing NIH policies, programs, or resources

Raising the national standards of pay for postdocs.

Proven or promising external resources or approaches

No response

Response 1885

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions seem like required positions the long term goal of working in academia and/or as a professor, but does not seem to guarantee a position in academic. Being an academic postdoc seems like a lonely position in labs without other postdocs. Postdocs also do not have the social structure of classes with other graduate students or responsibilities that bring faculty members together. I'm not sure what responsibilities postdocs have, other than advancing the research efforts of their lab's PI, for slightly more benefits than a graduate student but still not much.

Fundamental issues and challenges

In a way, the academic postdoc position seems to have a serious PR issue. It doesn't seem like a net positive benefit for a graduate student as people may need multiple postdocs before getting an academic position, and people are older or have families but continue to earn few benefits for an unequal amount of work and effort. There are better financial and work-life balance opportunities in other sectors outside of academic research, so those who are able to do postdocs for academic research tend to have the privilege of a more financially stable partner or family members.

Existing NIH policies, programs, or resources

NIH does not seem to support my research field, as language research was removed from the NIDCD's strategic plan. If large federal organizations de-incentivize future career pathways like what has already transpired, I don't feel like academia or postdoctoral positions are welcoming for me. As a member of multiple minority groups and a researcher without financial privilege, I don't feel incentivized by the NIH to make multiple sacrifices for the chance at a few postdoc positions and meager benefits, in addition to the future uphill battle for an academic position if I am to pursue a postdoc and academic research career.

Proven or promising external resources or approaches

Improving the number of postdoctoral positions and work benefits, as well as offering more financial support for institutions to increase PhD student stipends and offer sustained support.

Response 1886

Perspectives on the postdoc roles and responsibilities

An academic post doc is a training position and the time should be spent learning and growing in preparation for an independent career.

Fundamental issues and challenges

Being a post doc feels like sitting in the waiting room between finishing a PhD and securing a faculty job. More and more people are getting PhDs, and there are fewer and fewer continuing academic jobs, so the waiting lines are getting longer. During my post doc interviews, I was told a typical post doc is now 4-5 years. To continue being a scientist, we need to secure independent funding or an academic job, and both require a solid letter from our post doc mentor. This sets up an environment where the mentor can exploit the post doc, using the post doc's time and talent to complete the mentor's projects and mentor our mentor's students, at the expense of the post docs training progression. We are told to prioritize our mentor's agenda above our own career progression. Enduring this environment may have been worth it in the past, when a post doc was 2 years and then you could go into a flexible and autonomous long term position. Nowadays, it just means taking less pay and being undervalued for an ever-increasing number of years with dwindling job prospects. This is not trivial and has a massive impact on wellbeing. Post docs are postponing their lives (not having children, not buying a house, not starting to save for retirement, having to move every few years away from family and friends).

Existing NIH policies, programs, or resources

5 years of guaranteed salary and benefits for each post doc that is not tied to a specific lab.

Proven or promising external resources or approaches

No response

Response 1887

Perspectives on the postdoc roles and responsibilities

Transitory step to an academic faculty position or the industry.

Gain new skills and expand knowledge.

Opportunity to make new collaborations.

Advance research.

Fundamental issues and challenges

High competition: Competition with peers who have established research programs in the US, particularly in positions at good universities.

Life instability because the contract is annually, particularly when there is a family and kids.

Time runs out to build a robust research program and advance an academic career.

Existing NIH policies, programs, or resources

I do not have enough knowledge to answer this question.

Proven or promising external resources or approaches

I do not have enough knowledge to answer this question.

Response 1888

Perspectives on the postdoc roles and responsibilities

Transition to faculty position while training in the science and techniques.

Fundamental issues and challenges

Very poor salary. Should be at least 50% more. Lack of retirement plan benefits.

Existing NIH policies, programs, or resources

The academic industry follows NIH standard for postdoc salary. If NiH raises the standard, the academia will follow.

Proven or promising external resources or approaches

No response

Response 1889

Perspectives on the postdoc roles and responsibilities

The postdoc position should not exist. Period. Many humanities PhDs secure faculty positions after graduate school. So should we. The postdoc to PI track at some unis are nice but I was never aware of any as a grad student. Never.

The postdoc position is set up for PIs to create abusive, toxic environments that perpetuate favoritism and gaslighting.

When colleagues say that their postdoc years were the best of their lives I often feel like I am living in an alternate universe looking in in a more evolved and harmonious one than my own.

Because the postdoc years SHOULD be the best time of you career. You don't have a thesis to tame, classes to take or teach. All you get to do is research, write papers and grants. I mean that's the best—in theory—but hardly in practice.

Fundamental issues and challenges

Toxic PIs, low pay, unrealistic expectations. I had a PI that fired me because I didn't learn and master ex vivo slice electrophysiology (from start to generating publishable date) in 4 weeks. It takes most people 6 months—1 year. The rig was 85% built and there was no one in the lab to train me.

Another toxic PI constantly compared me to a fellow postdoc in the lab. This person had done their PhD in the lab and was in the lab as a postdoc for about two years when I arrived. The PI would ask me why I didn't have as much data as the other postdoc and that this person was so efficient, productive and otherwise great. It got to a point that during my meetings with the PI they talked more about the other postdoc than my projects and ideas.

Existing NIH policies, programs, or resources

Get rid of the postdoc position! No amount of stringent policies will make toxic PIs shape up and act nice. No amount. It'll be easier to navigate these difficult people through being fellow faculty members that I have to be on a committee with or who are just one vote in a tenure and promotions committee. No research, monetary or any other ties that bind our sole academic fate to theirs would be awesome.

Proven or promising external resources or approaches

Abolish the postdoc position. Even postdoc affairs offices are mainly populated with faculty who, at the end of the day, look out for each other and not postdocs. Even unions preserve the viability of the union and not the postdoc person.

Response 1890

Perspectives on the postdoc roles and responsibilities

The postdoctoral position to me is a chance to gain more independence as a researcher before obtaining a faculty position. It should be a protected time to get grants in the pipeline while working on active research projects that can help establish a research portfolio. Its also an important time for mentorship and finding one's path in research.

Fundamental issues and challenges

As someone entering the postdoctoral search, salary and benefits are the main issue. Coming out of a doctoral program, I can go into industry and immediately make double what is being offered to me with the postdoctoral salary. This is paired with a second issue, that some PIs take advantage of the postdoctoral role and do not protect time for the postdoctoral fellows to write their own grants and establish themselves separately. Thus, some postdocs I've observed are doing the same amount of work as those in industry and being paid half. I think third, I would say perceived quality of life of postdocs varies by field and institution, but some postdocs do not feel they have sufficient work life balance, especially since this fellowship is meant to be a training opportunity. They often feel like they can't rest and have to keep publishing or keep studies going because otherwise they will not find successful faculty positions. Lastly, I have briefly heard a concern about the number of faculty positions and this may deter people from taking postdoctoral fellowships.

Existing NIH policies, programs, or resources

Unfortunately, I'm apprehensive about regulations to grant documents or NIH stipulations that ultimately come down to the PI or Institution being diligent. What the NIH can do is increased salary stipend and introduce regulations protecting time off to have a family or for medical reasons.

Proven or promising external resources or approaches

No response

Response 1891

Perspectives on the postdoc roles and responsibilities

I have always viewed the academic postdoc by its traditional definition as "a temporary and defined period of advanced training designed to prepare an individual for an independent research career." A postdoc should be building independence and intellectual rigor that would allow them to run a research group, usually (not always) in academia or industry. Doctoral level scientists who wish to pursue research-related careers (editing, policy, etc.) can benefit from postdoctoral training, but these individuals would be best served to limit the number of years spent in postdoctoral fellowships.

Fundamental issues and challenges

Its become widely understood by prospective undergraduates and graduate students that the quality of life and career outlook for doctoral students and, particularly, for postdoctoral fellows is low due to a number of factors, including: long hours, low stipends, no retirement, widespread poor mentorship, and unpleasant work environments. The central problem is the lack of viable positions at the end of the postdoc: the very purpose of the postdoc position (research independence) isn't supported by the job market.

Existing NIH policies, programs, or resources

Policies that work: funding opportunities for early funding stage investigators; funding flexibility for life circumstances (parenthood, illness, COVID delays on research); policies that attempt to achieve pay parity and equity. Training grants that require a detailed mentoring plan and environment (schools exaggerate the quality of their training environments). I want to add one thing here: NIH has passed some very well-meaning policies and requirements on research grants, training grants, etc. but academic institutions do not always take them seriously and they DO look for ways to cheat and game the system, and I have seen first-hand a willingness of sr. academic admin and faculty to not value their postdocs (I worked in academic postdoc admin; I saw it with my own eyes.) If there is a decline in postdoc numbers, it's in no small part due to the the environment and values these schools have built their research labor force upon.

Proven or promising external resources or approaches

The mentoring role of the PI should be better. No one should be doing a postdoc without retirement benefits--and certainly not for 5 or 8 years. If the job market doesn't need this many postdocs, maybe the "perceived decrease" [we need more real data on this observation] isn't a bad thing. I have consistently observed a significant number of postdocs not actually working as trainees, but rather as "staff" fulfilling the scientific mission of the PI. Perhaps re-envisioning the composition of the biomedical workforce is the better way: provide more opportunities to be professional staff scientists with retirement benefits--this would perhaps be a more honest and ethical position for many "trainees" who are in reality receiving no training or mentoring from their PIs anyway.

Response 1892

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is the final phase of training in becoming an independent investigator/lab leader. It is a ~5 year position for a highly qualified person to perform full-time lab research while also gaining training in mentorship, teaching, and grant writing. This is often work that takes >40 hours per week yet is among the most poorly paid per level of qualification and work/effort. In order to retain and train the next generation of independent investigators, postdoc salaries and benefits need to increase significantly, or we will lose them to other careers. Postdoc-level research is also what keeps current labs afloat and full of exciting and new science. Without the postdoc workforce, current scientific research will inevitably decline. This is highly undesirable.

Fundamental issues and challenges

Stipends are too low; the majority of graduate students in my lab are looking at industry for their next step because the postdoc route seems too poorly paid. Quality of life for postdocs is too low, especially in major cities where costs of living are ever increasing. I recently had a postdoc candidate turn down my offer to work in my lab because she was worried about the high cost of living in the DC metro area.

Existing NIH policies, programs, or resources

increased stipends; more flexible timelines and visa rules

Proven or promising external resources or approaches

look at the benefits and working environment perks and benefits offered in the private sector for PhD-level scientists.

Response 1893

Perspectives on the postdoc roles and responsibilities

My job requires proficiencies in three computational languages, manuscript preparation, applying for funding, mentoring students, conferences and training, and guest lecturing. With this diverse job description post-docs are GROSSLY underpaid. In addition, I have to beg to get work-related costs paid and reimbursed. When I have discussions with my mentor, he also complains that PIs don't get paid a lot of money, but they are getting paid over 2x more than us. Postdoctoral positions are a cemented step toward becoming a PI with the promise of intellectual freedom. However, most people are finding this position is NOT worth it. It's one of the largest abuses in the system.

Fundamental issues and challenges

Post-docs are SO UNDERVALUED. As a highly skilled bioinformatician, I get paid less than my spouse who is a kindergarten teacher (which is a field also underpaid). Post-docs make less than graduate students per hour and don't have tuition remission. My institution does not contribute to retirement, and my medical/dental/benefits are five times more expensive than as a graduate student. Institutions are trying to employ post-docs for cheap labor, and people are finally realizing it. Thus, most people are skipping post-docs or trying to get out as soon as possible. Comparable positions are 80k-125k while I'm being paid 54k.

Existing NIH policies, programs, or resources

The pay is ridiculous. I was told I couldn't negotiate my salary because the medical school goes by the NIH pay scale. There is no federal standard for or retirement benefits.

Proven or promising external resources or approaches

No response

Response 1894

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is one where you gain independence for an independent research career in academia or industry. It is a unique period where you are not solely responsible for your salary support, yet have the resources of an entire lab.

Fundamental issues and challenges

The major issue is salary caps and inability to supplement trainee incomes with grants. For example, NRSA stipend should be able to supplemented from other NIH grant sources, not strictly sundries. In order to recruit and retain, the salary structure must be figured out. In a high-cost city, the salary support is not enough, especially if you have a family. Due to this reason many, many leave academia for higher paying jobs.

Existing NIH policies, programs, or resources

As above, the major issue is salary caps and inability to supplement trainee incomes with grants. The total number of postdocs may decrease, however, they will be happier and healthier.

Proven or promising external resources or approaches

As above, limiting the sources of salary support and supplementation.

Response 1895

Perspectives on the postdoc roles and responsibilities

The postdoctoral fellowship is a path to independence in some way. This position should continue to teach you to ask scientific questions, draft manuscripts, design experiments, mentor, teach, and learn independently.

Fundamental issues and challenges

The current postdoctoral fellowship is not sustainable. The salary is pitiful and cannot sustain a family that many postdocs would like to have. This should NOT be a way for PIs to get cheap, well-trained lab labor. While I was doing my postdoctoral training, my research associates (first position right out of college) were making nearly as much as me after my 6 years of training in a PhD program. The postdoc program training scope is too narrow. Most are designed to train you for a career in academia as a PI and to make you feel guilty if you do not want this position. A postdoc should truly be to learn a new field or something entirely new instead of continuing in the same field as a PhD. More individuals should go to a staff scientist position if they would like to continue to do benchwork in a similar field to PhD. Currently, the length of a postdoc can be ridiculous. I did a four year post doc, but some people go as long as 6-8 years which is extensive for how poorly paid you are.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1896

Perspectives on the postdoc roles and responsibilities

Postdocs are the driving force behind the progression of science and technology. Postdocs train grads and undergrads, bring ideas to the lab, and design and execute experiments to address tough scientific questions.

Fundamental issues and challenges

After getting a Ph.D. postdoc still have to face a significant struggle in postdoctoral studies, and transition into the next level of his/her carrier. In the postdocs journey, not only a person but he/she must have a family and children with them, and the suffering will go all those as well. The Payscale is so insufficient that a postdoc can’t afford a proper meal and lifestyle despite doing a challenging job with a higher degree. A university or organization has to think about and ensure these issues that a postdoc has to face at the work level, mental level, and financial level in day-to-day life. Training is there but has to ensure the presence of postdocs must be there, many times PI don’t want them to attain talk series or training for the improvements of their carrier. NIH should bring Posdocs into the NIH or can come to the institute to train postdocs that are required for their carrier enhancement. Need to monitor, in university the Postdocs who are not working more, doing overtime and getting exhausted, and getting very less money and appreciation.

Existing NIH policies, programs, or resources

Resources have to increase, and programs and policies need to reach every postdoc.

Proven or promising external resources or approaches

Yes, Need to improve Postdoctoral recruitment, Training should reach every postdoc, work environment need to be monitored along with the universities or research institution. The work environment is critical, this should be taken care of very seriously. Highly ambitious PI and the very supporting institutional behavior of those PI can be the reason behind the exploitation of postdocs at the work and mental levels. Mentoring should be not only from the PI but also from the universities and Agencies like NIH that are needed for transition. If a postdoc enjoys his duties with full of pocket and fewer worries there will be job satisfaction

Response 1897

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a training period for researcher to earn more expertise for their future research career. This is a good chance for achieving new experiences and trainings.

Fundamental issues and challenges

The Fundamental issues and challenges inhibiting our experience include not-receiving proper information for training and opportunities, lack of support from our Principle Investigator for training, Low paid salary in an expensive city (such as , New York), lack of health insurance support from our university, lack of housing opportunities from the university, expensive rent in university housing, misuse of our visa category by our PI, micromanaging etc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1898

Perspectives on the postdoc roles and responsibilities

Time to gain additional and new experiences and skillsets, consider different career paths (academic, industry), and learn more about processes for becoming a scientist or professor in academia. I view it as an additional transitional period that extends training beyond post-bac and PhD periods.

Fundamental issues and challenges

While quite variable, NIH postdoc pay is 1/8-2/3 of what could be earned from skipping a postdoc and retuning skills for industry or other non-academic careers that also provide significantly more stable career paths both in terms of career trajectory and stability of location. NIH postdoc salaries have increased below rates of inflation for decades. This is endemic throughout academia (i.e. salaries of assistant/associate/tenured professors), but salary prospects of professorship are still less than an entry level industry scientist positions (that do not require postdocs).

Anecdotal, but in my cohort, peers are exhausted with the amount of training before obtaining a stable, "real" job (e.g. 1-3 years postbac to build CV and research experience, 5-7 years PhD, 2-4 years postdoc). There is relatively little oversight of postdoc supervisors, resulting in variable work hours and expectations. Grant writing is increasingly complex with new additional requirements every 1-2 grant cycles, the review process seems too long, and awards are not guaranteed; the nature of risk aversion makes alternative careers more attractive.

Existing NIH policies, programs, or resources

Increased salaries for postdocs (150% of NIH scale at least) would make them more attractive. Expanding budgets for K awards that focus specifically on transitioning postdocs to next steps in research careers are important. Though K award rates are higher than R grants, those who might otherwise consider academic careers are going to weigh the gain/loss potential and lose interest if K awards rates are low. Trimming requirements on grant writing would also work to reduce administrative burden in submitting grant applications.

Unless budgets are radically expanded, reducing the size of PhD cohorts and postdoc programs may alleviate part of this issue. There are too few academic positions as-is, which may be increasing competition for these spots as the overall number of PhD holders continues to grow. Unless NIH increases salaries and opportunities for postdocs significantly, one option may be to reduce the number of postdoc positions and increase salaries.

Proven or promising external resources or approaches

Ongoing surveys of job satisfaction and mentoring for postdocs may be helpful to improve accountability of postdoc supervision, both for institutions and on a national scale.

Response 1899

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be a "stepping stone" between a PhD and full dependence in a faculty role. Given that there are few tenure-track faculty positions available these days, the academic postdoc should still offer training for careers outside of academia, in terms of leadership skills, career and professional development skills, budgeting and management experience.

Fundamental issues and challenges

The most important issue at hand is the lack of "livable" wages and benefits as a postdoc. Quality of life is naturally decreased when postdocs still have to worry about how to pay rent, child care, and medical bills (especially because ~$50-60k before taxes will not go a long way in a high cost of living area, which is also where many universities and institutions are located). Paired with this is the lack of benefits, including many postdoc positions not allowing you to save for retirement in a 403(b) or 401(k), and even if they do, most universities will not match their funds. This, paired with little to no savings during a PhD, sets back postdocs by around 10 years.

It may have previously been accepted that you will "suffer" a bit during your PhD and postdoc in order to land the "big" professor position. Given that these faculty openings are slim due to many reasons (university level decisions, inflation, etc), paired with the fact that starting assistant professor salaries are not even that much higher than a postdoc salary, this is not a sustainable model and is entirely different than, for example, a medical doctor's residency / fellowship training (where they make ~$60k for a few years but then make $200k+ in their first year after fellowship).

Additionally, there are few actual formal routes for training for postdocs. There is no requirement or incentive for a PI to formally mentor a postdoc. There are some opportunities through NIH for example for training workshops which are appreciated, but there is really a massive missing hole here where there is no onus on the PI to actually *train* a *trainee*.

Existing NIH policies, programs, or resources

The current NRSA F32 training grant is a great experience for postdocs to learn how to formally write their own mostly independent grant. However, there is another major missing link where many postdocs are then pulled off of their university funding to be funded by the F32, which means no benefits (I had to stop contributions to my 403b retirement due to going onto NRSA funding), and taxes are an entire mess with extremely little oversight or assistance.

More formal training resources should exist for postdocs, but also for PIs on how to mentor, would help this system survive. Unless there is a mandatory requirement at a PI level, PIs should not be able to hire postdocs. Often PIs are not made aware that postdocs on NRSA have to relinquish their retirement benefits and also have to pay estimated taxes individually on their stipend; education for PIs at what postdocs will "take on" should be made explicit anytime a PI agrees to sign on as a sponsor for a grant.

Given so few faculty positions available, maybe it is ok that postdocs are decreasing. Then, postdoc fellowship stipends should increase. An alternative is to provide postdocs on fellowships the option to use the institutional allowance as a flexible fund that can instead be used for stipend or to retain medical or retirement benefits.

There should a push to make a remote postdoc an option; with increasing computational positions this should be an option that NIH can advertise to allow postdocs the option to not uproot their lives yet again for a postdoc. NIH can help to not judge harshly a postdoc submitting an NRSA who has stayed at the same university or city, and instead encourage reviewers on study sections to view this as a positive to encourage a rich scientific *community*.

Proven or promising external resources or approaches

I truly think that one of the only things that will help improve postdoc recruitment and retention is to pay them more and ensure equal benefits that reflect what a person around, on average, age 26-35, would need to thrive (retirement, transportation, child care, salary, medical insurance) in any town or city across the country. The postdoc experience will not get better until this is improved upon. NIH can use examples from current universities raising postdoc salaries (I've seen closer to $75-80k raised at a few universities recently) to increase postdoc stipent funding, as well as to push the NIH to encourage universities also

individually raise their postdoc pay rate. Universities won't budge until NIH demands / requires that they do so.

Response 1900

Perspectives on the postdoc roles and responsibilities

The postdoc role is (what should be) a short term training position where individuals hone research interests, gain new technical skills, and establish a unique research program. While in theory the position is a training position, postdocs are the largest generators of data within research laboratories and bring a unique level of expertise and experience to labs. Postdocs serve as mentors to graduate students, undergraduates, and technicians—a role which spans issues related to technical understanding, foundational knowledge, navigating academia, and interpersonal relationships. As a postdoc, I am a key personnel and my contributions advance many parts of the lab.

Fundamental issues and challenges

There are many issues currently facing postdocs, particularly those living in larger cities. First, pay is abysmal. Not only is our pay not commensurate with similar jobs outside of academia, but also we are told that this position is simply a temporary training position that is going to set us up to be a faculty member at an R1. This is simply untrue. Postdocs are getting longer and the % of postdocs getting faculty positions is getting smaller. If you consider postdocs a training position for academia then the training program is a failure. Second, we have few to no benefits. At the [redacted for anonymity], we are offered no options for retirement, limited health insurance, no transportation/living/childcare allowance. When you consider the years that we are dedicating to this position, we are losing out on a huge amount in addition to our lack of pay. Many postdocs have to make the decision between starting a family and continuing their career. Third, we have no stability. The one year contract allows for PIs to have all of the power and international postdocs are particularly at risk. This structure reduces the chance that postdocs will speak up against unfair conditions as we are vulnerable to lose our job.

Existing NIH policies, programs, or resources

Increase the postdoc minimum pay! If universities are asking for more overhead due to the high cost of the area—then why aren't postdocs being compensated higher as well! Reduce overhead costs! Allocate funds toward postdocs—it is better to have fewer, better paid postdocs than the current structure.

Require benefits for postdoc be covered. GIVE US RETIREMENT! GIVE US HEALTH INSURANCE!

At many institutions, postdocs are punished for bringing in outside funding. This is insane.

Proven or promising external resources or approaches

No response

Response 1901

Perspectives on the postdoc roles and responsibilities

As a current MD-PhD student, the postdoctoral position presents an additional hurdle for establishing a R01 funded laboratory. While PSTP programs may equip certain physician-scientists to run their own lab, post-doc positions add additional time/experience to an already long path. The postdoc position is for future investigators to begin running independent research projects, while under the supervision and funding of a PI. While finding a postdoc position is not standardized, the specific roles/responsibilities of the post-docs I have worked with are even less standardized. At times, postdocs function as adjunct faculty (running independent projects under the PI's department), while at other times they function as glorified technicians/staff scientists (keeping the PI's projects moving forward).

Fundamental issues and challenges

From a MSTP perspective, time is the biggest challenge. It seems easier to begin a clinical practice at an academic medical center, then transition into basic science research (compared to a postdoc position). Additionally, finding an open postdoc position that will prepare me for the research I want to pursue with a PI who will give the right balance of independence and mentorship seems extremely challenging.

Existing NIH policies, programs, or resources

A physician-scientist oriented postdoc pathway would be incredibly valuable. Especially if it were focused on establishing a lab—like a dual postdoc/R01 position over 2-3 years.

Proven or promising external resources or approaches

No response

Response 1902

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salary level of postdoctoral fellows is way lower than what they deserve. A considerable number of postdoctoral fellows have families and children, and the extremely low wage income is inconsistent with their professional knowledge. Due to the pressure of living costs, quite a lot of them have given up their initial plan and then entered the industry. At the same time, more and more Ph.D. candidates no longer seek postdoctoral training programs, but directly entered the industry after graduation.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1903

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are the backbone of biomedical research.

Fundamental issues and challenges

Low salary. Not following the guidelines of salary. Too much pressure to generate data.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1904

Perspectives on the postdoc roles and responsibilities

Make me more capable and to build up my ability to be a scientist.

Fundamental issues and challenges

The supervisor’s character and ability.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1905

Perspectives on the postdoc roles and responsibilities

An opportunity to explore new research fields and learn new techniques;

Develop skills (lab management, personnel recruitment and training etc.—these skills are very important but often neglected during Predoctoral training) and build connections (also very hard during graduate school) for an independent PI position;

Generate preliminary data for future research programs and possibly secure funding before transitioning to faculty (research funding mechanisms available to pre-doctoral students are way too few)

Fundamental issues and challenges

Salary and benefits are way below industrial positions and often times cannot cover basic living costs.

As a result, many PIs tend to forget that postdocs are seeking for training, but instead hire us as skilled technicians.

The nature of scientific research often prohibits postdocs to take vacations and requires us to work way overtime. But we are never compensated for the extra hours we have spent. We are paid for 40 hours a week but it is extremely rare to find a postdoc who do not spend over 50 hours per week. Further, many PIs do not allow or discourage long vacations, even if it does not exceed the number of vacation days allowed in our contract.

All these factors make postdocs not get enough respect or reward for the amount of time and effort we have spent in the past to earn our degree, nor does it match what we need to do to excel as a postdoc.

Even when we do sacrifice a lot of time for personal and family life, and give up on the potentially high salary we could have got if we were to take an industrial position, there are too few faculty position openings for us to transition to our next career stage. Many junior faculties nowadays have to spend almost 10 years as a postdoc/instructor to finally start their own lab.

Visa and political issues are also making it more and more difficult to hire international postdocs.

Existing NIH policies, programs, or resources

Make salary guidelines match the qualifications and efforts of postdocs—we have undergone many years of trainings and are working almost 24/7 to get our job done

Extramural and intramural postdocs should have the same salary/benefit guidelines

Increase the numbers of transitional grants like K99/R00

Set a new investigator Payline (like the current R01) for other NIH funding mechanisms

Proven or promising external resources or approaches

Many institutions have raised their minimal salary amount for postdocs. NIH should follow this trend and release new guidelines ASAP.

Response 1906

Perspectives on the postdoc roles and responsibilities

The Post doctoral training is an opportunity for me to do something different from what I did during my PhD. That’s the reason why I switched field from evolutionary genetics to long non coding RNA biology.

It also gives as the required training to get skilled for future prospects in academics or industry.

Fundamental issues and challenges

Following are the fundamental issues in my view:

1. Insufficient pay: the post docs all across the US have meager payment. It’s not sufficient enough tho sustain a family of two.
2. Mad rush for papers and not enough focus on skilled training.
3. Lack of opportunities in academics after finishing post doctoral training.

Existing NIH policies, programs, or resources

1. Pay structure: The pay should definitely be improved.
2. More focus on skilled training and mentorship.

Proven or promising external resources or approaches

No response

Response 1907

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Lack of well defined track for postdoc training.

Lengthy track of postdoc training in some disciplines.

Low salary of postdocs

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1908

Perspectives on the postdoc roles and responsibilities

1. Academic science—it's a workhorse of academic science, pursuing academic science projects
2. Training opportunity for scientists—it's an opportunity to train in a specific discipline of interest

Fundamental issues and challenges

1. Salary payment is severely below industry and almost poverty in certain locations—it's non-viable for some scientists w/ families, financial responsibilities etc

Existing NIH policies, programs, or resources

minimal salary policies from NIH were not followed during my postdoc years, despite being on NIH funded projects. enforcement of these policies or better awareness promotion for postdocs should be better.

Proven or promising external resources or approaches

funding for postdoc associations and postdoc groups within each institution is helpful for helping postdocs obtain better satisfaction with work environment.

Response 1909

Perspectives on the postdoc roles and responsibilities

I view a good postdoctoral position as a "PI with training wheels." It is a role with increased independence, in which I can demonstrate that I am capable of gaining funding and amassing publications while also designing, directing, and executing research, analyzing and visualizing data, and taking a leadership role in the lab, all while under the mentorship, supervision, and support of an existing lab head. It is also a chance to gain additional skill sets and expertise in technical and academic specialties, to improve "soft skills," and to broaden one's professional network across multiple institutions and possibly disciplines or fields.

As a postdoc at a different R1 than the one where I earned my PhD, I currently hold 2 simultaneous postdoctoral fellowships and an LRP award, and I have also been recognized for my teaching, mentorship,

and DEI-promoting activism. I presented at four conferences last year, and I am leading the production of 2 manuscripts at present, with more as a middle author. I am, by most metrics I am aware of, the kind of postdoc the NIH wants to keep in academia, and I would like to stay. However, I strongly believe that a postdoctoral position must be sustainable; it is not another trial to be endured while hoping for a professorship. If I had not found a like-minded postdoctoral mentor, I would not be here.

Fundamental issues and challenges

I am still in academia because:

a) I am interested in the research question, and enjoy the autonomy I found here,

b) My advisor has my career development in mind as well as her own success; she supports me regardless of whether or not I start my own lab, and her expectations for me are both clear and reasonable,

c) I like the location and I can afford (barely) to live here,

d) My lab-mates are good people and create a healthy, supportive environment where we can do good, rigorous, team-based science,

e) I am receiving professional development opportunities that help me grow in directions I want to, and

f) I am not planning on becoming pregnant or ever being able to buy my own house.

Many postdoctoral roles do not satisfy A-D, either because of a toxic environment or an unlivable stipend. PhD students spent our entire scientific careers being reminded that, in spite of our qualifications, we may not be able to find a professorial role. It therefore did not make sense to me to spend years of my life in an unpleasant environment, living hand-to-mouth, or with poor work-life balance, on the chance that I might land that role. Thus, I developed points A-D as hallmarks of a "good" role for myself. If I hadn't found a postdoctoral position that met those criteria, I would have left academia. I admit I was unaware as a grad student that point E would be important, but I got lucky. Point F gives me a measure of freedom and the ability to take a lower paying job; however, if I suddenly need to support family members, I will have to transition to industry (for the record, this is why you lose so many first-generation and/or female trainees).

Existing NIH policies, programs, or resources

The NIH IRACDA program (my primary fellowship) provides regular professional development opportunities (grant-writing workshops, teaching and mentoring workshops, an academic lab management and leadership symposium, public speaking workshops, etc.) as well as exposure to other professors and their labs, which broadens my professional network. Further, it offers a 'cohort' of incoming postdoctoral fellows not unlike those found in graduate school, which helps offset the isolation many postdocs feel. Finally, it offers four years of funding, meaning after getting this award I was able to focus on my research rather than worrying where my salary was going to come from.

The other key NIH program has been the NIH Loan Repayment Program, which helps me pay down my considerable undergraduate debt. I mentally consider this to be part of my income, meaning that my "bar" is set higher as far as salaries for industry jobs go, and I am less likely to leave.

Proven or promising external resources or approaches

This question is unclear. However, improving structure is frequently helpful, particularly to trainees from nontraditional backgrounds, as are various methods of cluster-hiring, such as those found at the graduate and faculty levels. Another key component of success as a postdoctoral fellow is a supportive mentor, yet we hear many stories of mentors that consider postdocs to be more like workhorses than colleagues. Having a secondary mentor to turn to (in the same way a graduate student has a committee) could improve working environments.

Finally, given that the NIH pays its own postdoctoral researchers well above their stated minimum, I assume they are aware that said salary minimum is woefully inadequate for professionals with advanced degrees in our late 20's or early 30's. This is particularly true given the lack of a geographical salary adjustment. As an illustration: a postdoc needs a higher salary to afford a 1-bedroom apartment in California or Massachusetts than in Wisconsin or Missouri.

However, given that increasing salaries would require increasing grant sizes, which may be unlikely, the NIH could also consider requiring grantee institutions to offer benefits, such as a certain amount of maternal leave, child/dependent-care, or paid time off (the UCs offer 24 days/year, plus sick and holiday, which is better than most American companies). Basically, if you're not going to offer a competitive salary, the job had better be really, really attractive for other reasons.

Response 1910

Perspectives on the postdoc roles and responsibilities

It is an opportunity to further strengthen our knowledge in the subject and gain expertise in data analysis, manuscript and grant writing. It should also provide a platform for us to mentor students and learn leadership skills

Fundamental issues and challenges

Delay in response from PIs hiring postdocs; salary paid and benefits for postdocs are reasonably low which makes people get into jobs than do postdocs.

Existing NIH policies, programs, or resources

Encouraging more postdocs to apply for career transition and broader training for career pathways. Also, a system for the international postdocs to continue or switch jobs, smoother visa renewal through NIH if possible

Proven or promising external resources or approaches

Need to improve recruitment and job satisfaction. Working environment would be dependent on the university and mentor. If more postdocs are hired, the work pressure comes down and they can focus on personal and career development.

Response 1911

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1912

Perspectives on the postdoc roles and responsibilities

They are the power source and forms the frontline of breakthrough scientific discoveries.

Fundamental issues and challenges

Limited salary incomparable to what the industry pays makes recruiting and retaining talented postdocs difficult. And there is a big career barrier for tensioning from postdoc to the next academic level.

Existing NIH policies, programs, or resources

Elevate the salary cap for postdoc;

Elevate the funding cap for each NIH mechanism so that PIs have the room to pay postdoc more;

Provide more opportunities like K99/R00.

Proven or promising external resources or approaches

Not sure whether my personal thoughts are feasible or not, as I am not familiar with how NIH runs. But for the long-term in my opinion, NIH should try to convince Congress to allocate more resources to NIH.

Response 1913

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is an opportunity to fill in potential training gaps left at the end of your doctoral program and to began forming a career plan as an independent investigator under expert guidance (i.e., when to apply for funding, publication and presentation goals).

Fundamental issues and challenges

Pay. Postdoctoral fellows are not paid well enough, especially in areas of the country with higher costs of living.

Existing NIH policies, programs, or resources

There really should be more opportunities for pre-doctoral international students to help fund their studies. Not necessarily expanding the current options, but providing a new option that is explicitly option for international pre-doctoral (and potentially post-doctoral) students who need experience competing for research and opportunities to fund their studies (reducing all potential need of student loans and alternative funding).

Proven or promising external resources or approaches

No response

Response 1914

Perspectives on the postdoc roles and responsibilities

First, let me give you the demographic of my perspective to contextualize my comments and give some weight to my responses. I just completed my postdoc a view months ago. I served in the role for 3 years. The first 6 months were in person and the next 2 and half years through COVID times. I was promoted after receiving a K award from an NIH institution. During my postdoc, I published 27 papers, 2 in Nature, and 7 others in top journals in my field (11 first authors). Given my ability to secure independent funding and publish effectively, I would say I am a recent example of a "successful postdoc perspective", though I know others could be more successful than I have been.

Given that background, I strongly feel that a postdoc position has three essential roles in a lab. First, postdocs are the engineers that make labs run. PI's typically have broader ideas about what to do, but manifesting their ideas almost always requires expertise in technical areas they have not been trained in. Second, Postdocs must develop their own careers. This means finding unique skills to leverage in applying for funding and making relationships with others outside of your lab, even though many PI's are loathe to allow you too much time outside the lab (note: my mentors were fantastic and this was never an issue for me). Third, postdocs are writers and editors. I spend more of my time dealing with journal and publishing than I do getting to use my Ph.D.

Finally, in all these things, postdocs are supposed to receive training. Unfortunately, given the explosion of technology and academia's slow growth toward complexity, hard skills training is typically from other postdocs, workshops, or the internet. PI's fill out more soft knowledge sets and networking.

Fundamental issues and challenges

I think the main issue is that there are better options for highly skilled individuals. I will break that down into three areas here and then below I will parallel those three areas with some potential solutions.

First and most obviously, pay. Postdocs do not make the same money as what anyone else would pay for a an advanced doctoral degree. In terms of specific barriers, pay equity rules and grant limitations still exist even when the money is there.

Second, the scope of projects in academia is becoming more limited. Industry positions can offer more data, adequate statistical power, protected time, and better equipment. Further, the main "scope" of

academia is publication, with many promising manuscripts getting drowned out in the sea of competitiveness, there is little time, resources, or samples to build a project that impacts the world.

Third, too much external control. I want to say it again, I had fantastic PI's. My PI's had very little influence over my projects after they went into review. They had very little influence over my K and how others in the department treated me. Let me illuminate this with experience, in order to handle the onslaught of comments the postdocs here have a saying: "assume your reviewers are going through a divorce". Given the massive uptick in publication expectancies in recent years, this mean that the perverse incentive to publish a lot of low quality work is running against constant non-constructive and toxic criticism from editors and peer-reviewers. Handling criticism is not the problem, the onslaught of criticism given by modern competitive standards is a drain on mental health. We are having trouble finding postdocs because we are literally chasing them out by refusing to change anything except incremental increases in our publishing requirements.

Existing NIH policies, programs, or resources

For NIH policies, we can address these three issues above in three ways.

First, pay postdocs more. You will hear it a lot but it is the number one thing you can do.

Second, expand the scope of postdoctoral training by encouraging more long term positions with adequate pay. For example, if someone is trying to create an animal colony but it will take 3 years instead of 2, let them but also increase their pay as they continue. Further, you could allow postdocs more time in their positions as long as the pay increases. If a postdoc has been working for 5 years in their position and they apply for funding to maintain an important line of work, let them. As long as the pay increases they can continue to collect data and focus on projects of higher scope. The end all of our careers does not need to be independence.

Third, expand training options to include broader networks of collaborators. Funding consortiums, animal breeding programs, and centers that employ postdocs is a necessary first step. Further, ensure that those centers have funds to send the postdocs to training and give them dedicated time to build the scientific pipelines they learn above, rather than force postdocs to focus on the next publication their entire career. I'll talk more about decentralization of academia in the next post, but this is how NIH has historically created projects of big scope with direct management of postdocs, if we also allow these positions to serve as feedback for postdocs, and we know the PI's receiving these funds are non-toxic, it can reduce the external pressure postdocs may feel.

Proven or promising external resources or approaches

So breaking from my nice structure above, there is really one thing that you need to do. Stop the narrow academic pipeline and create jobs outside the narrow scope of existing academic careers. Many scientific academic jobs are given little pay, respect, or job security, but in the modern scientific world they are completely necessary. For example, maintaining large scale studies or data like UKB or All of Us, or working on GWAS consortium as an analyst supporting PIs are incredibly important to maintain stable high impact biomedical work. Despite the skill sets needed and these jobs necessity the current academic system disincentivizes individuals from taking these jobs. Worse still, these jobs change hands frequently because we label postdoc as a low pay temporary career and do not give any opportunity for the work we have done on these projects to be long term, increasing error and time to train. Meanwhile, false positives propagate the field while a few PI's gorge their labs on the rotating door of postdocs to produce low quality work. So change the views of the types of careers that are good for science. Allow necessary jobs stability and adequate pay.

Finally, decentralizing academia means changing your standards of a "good scientist". Stop letting toxic peer reviewers and for profit journals decide what is good work. NIH should set its own standards, otherwise private interests will continue to decimate scientific goals. I had "academic success" in my postdoc. I never feel like I had scientific success or made a real breakthrough. I was constantly and almost daily frustrated by for profit interests and toxic personas. NIH has a responsibility to create an alternative, or others will see the writing on the wall and avoid a postdoc for the promises of another career.

Response 1915

Perspectives on the postdoc roles and responsibilities

Postdoc position gave me the opportunity to move to another country and challege myself in multiple aspect. I learnt to navigate a different system, I learnt different jobs.

Fundamental issues and challenges

The postdoc life is drastically unbalanced: very few days of vacation, which are often perceved as a reward for extra work instead of rights.

The uncertainty of the work, added to the visa related issues (hence mobility towars the homecountry, health care etc) and the rigitiy of the administrative machine, make impossible to pursue academic and personal goals without, unecessary and out of proportion, stress, that is not even matched by the salary. Specially compared to industry.

Moreover the tasks that are requested to postdoc often lie outside the jobs itself.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1916

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Pay scales are low. Lack of benefits. Investigators tend to use postdocs as technical support rather than providing mentorship needed to get their trainees to the next stage of there career. Job opportunities in academia for new investigators having recently completed their postdoc are too few.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1917

Perspectives on the postdoc roles and responsibilities

Help needed to postdocs:

- To make clear instructions on requirements and opportunities to be promoted to a faculty position after postdoc.
- To increase postdoc salary, with increase of a yearly increase, too. Make it higher than of lab technicians.

Fundamental issues and challenges

- To help with employment of spouses of intnl postdocs (institution could hire them to technical jobs or provide short courses helping to find any job), since it is difficult to live on 1 postdoc salary only especially with kids.
- To allow to live in postdoc housing until the end of their postdocs.

Existing NIH policies, programs, or resources

- To provide more support for postdoc's families and children especially: fitness facility, extracurricular activities, sports.
- To make more events involving children of postdocs.

Proven or promising external resources or approaches

- To increase grant and promotional opportunities to non-resident international postdocs (w/o green card).
- To allow postdocs with both PhD and MD degrees to skip the instructor step and go straight to assistant professor position during promotion.
- To give opportunities to postdocs to earn more money, maybe give additional paid administrative, teaching assignments, etc.

Response 1918

Perspectives on the postdoc roles and responsibilities

Postdoc is a training-focused position that is equipping me with knowledge and skills. It is a stepping stone that is preparing me with a professional experience for a career in academia or industry. In particular, I hope to gain independence, and technical skills for a scientific career, where I hope to transfer the acquired new ideas and skills.

Fundamental issues and challenges

Family life is a major challenge for most postdoc, most of whom are of the age of starting families. Most postdoc positions lack family support systems. This is more complicated for international postdocs who have to leave their country to start a postdoc in a foreign country. They particularly find it difficult to relocate their dependents. Lack of family support also make it difficult for postdocs with children. The postdoc salary is not enough to sustain a family in a foreign country. Job uncertainty and also lack of job security hampers productivity as the postdocs are worried of their next move. The visa status and having to worry about visa renewal limits international postdocs mobility into areas where they might be resourceful. Female postdocs are worried that taking a gap like in the case of maternity leave would cause them to lag behind their male counterparts in terns of promotion and career progression.

Existing NIH policies, programs, or resources

Funding postdoc research in their own countries would help postdoc to continue their research while taking care of their families and dependents in their familiar environment. To achieve their goals, such postdocs would need access to funds.

Proven or promising external resources or approaches

Sandwich programs where postdocs would spend some time doing research in an international lab and some time in their home country can make a difference in post-doc retention. Assigning postdoc mentors in their area of specialization. Structured career progression for postdocs.

Response 1919

Perspectives on the postdoc roles and responsibilities

I think it is exciting opportunity to do challenging research

Fundamental issues and challenges

The quality of life is horrible. Long working hours with below poverty pay and no appreciation of the work we do. The credit card bills are rising as salary can't pay bills.

Existing NIH policies, programs, or resources

Increase the pay

Proven or promising external resources or approaches

More pay would solve most problems

Response 1920

Perspectives on the postdoc roles and responsibilities

Post-doctoral position for me a transition between grad school and an independent investigator role. It should allow me to show my skills as well as learn independently (or with minimal supervision). It should allow opportunities for grant submissions, publish papers and preliminary data that can help me get to the next step.

Fundamental issues and challenges

It is as simple as this;

1. Much greater working hours and low pay in academia.
2. People in post doc positions are usually in their prime to get married, have families, so both the pay scale and working hours work against balancing this for us
3. Industries have valued people with similar skills at 2-3x greater pay scale. Naturally they offer everything academia doesn't so people leave academia or opt for industry right after phd

Existing NIH policies, programs, or resources

1. Higher pay scale please!
2. Allowing PIs to offer greater salaries and helping them endure the cost
3. More early career grants/fellowship for pre-post docs
4. Making policies that discourage PIs to use pre and postdocs for years and years as cheap labor

Proven or promising external resources or approaches

Not sure about this. I am sorry all of the above mentioned will enhance postdoctoral training ecosystem.

One key answer to this is; increased salary!

Response 1921

Perspectives on the postdoc roles and responsibilities

In practice it is working for a professor doing their vision of your project. Overtime work, research only, no time for further career development

Fundamental issues and challenges

Low pay long hours short contracts NO preparation for non academic jobs

Pyramid scheme

Imbalance of power between employee and employer

Existing NIH policies, programs, or resources

Raised Minimum wage, two career tracks (academic vs industry) with two different expectations and contracts for each, award most individuals with salary grants, so there is flexibility in moving to different lab if incompatible or abusive relationship forms with mentor

Proven or promising external resources or approaches

Award individuals with grants that cover their salary and benefits so we have autonomy in moving around

Co-mentorship by non faculty who approves project as being in employees best interest

Response 1922

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a necessary step of training to achieve an academic faculty position. It allows for development of research independence and training in several aspects necessary to run a successful academic research group, including research, time, and personnel management, expansion of laboratory techniques, mentoring, grant and manuscript writing, oral presentation, academic service, and networking. The postdoc allows for risk taking and learning under the support and safety net of established investigators, as well as time to establish a publication and funding record, preliminary data, and independent research direction.

Fundamental issues and challenges

Postdoctoral trainees are under considerable pressure to publish high impact manuscripts and attain independent funding in a relatively short amount of time. Postdocs, which typically range in age from late 20s to 40s, have already spent a considerable time gaining education and research training. They are often expected to move across the country (or world) multiple times between undergraduate training and faculty position. This can be a huge burden on those with partners and children, or who have other family obligations. This is especially difficult for international postdocs or postdocs coming from socioeconomically disadvantaged backgrounds. Aside from all the difficulties of moving, finding a partner a new job, and children new schools, there is also a huge financial burden. All aspects of the postdoc are financially burdensome. After receiving an incredibly small stipend throughout PhD training, most postdocs are unable to afford basic living expenses without financial support from a partner or having a roommate (and have high debt from student loans). Additionally, postdocs on training grants do not have taxes taken out of their paychecks (and are expected to pay estimated tax quarterly) and are not allowed to contribute to retirement (which puts them way behind in contributions). Additionally, postdocs are expected to maintain high research output for their mentors' projects while simultaneously developing an independent program, while balancing mentoring, teaching, and service activities and personal life (health and family obligations). Most postdocs work between 60-80 hours per week and are not appropriately compensated for the extra time. Many postdocs have to weigh career success against family success, and the lack of support for families during the postdoc causes many to put off or refrain from having children altogether. With postdocs in industry making substantially more money, it is no wonder academic postdocs are lacking.

Existing NIH policies, programs, or resources

Postdocs on training grants should be treated as employees when it comes to taxes and retirement contributions, so that taxes are appropriately being taken out of their paychecks and retirement contributions can begin as early as possible. Postdoc salary in academia should be equitable to industry postdoc positions and should take into consideration cost of living at each institution.

Proven or promising external resources or approaches

No response

Response 1923

Perspectives on the postdoc roles and responsibilities

The postdoctoral position serves as a transitional stage for aspiring principal investigators. It an opportunity to gain independence and demonstrate the ability to potentially lead novel research and manage a lab. Individuals with no aspirations to be principal investigators should not do a postdoc. If they want to stay in academia, they should transition directly into staff scientist positions. Of course this means more cost for the principal investigators.

Fundamental issues and challenges

Low and noncompetitive salary. I was only one of two individuals in my PhD cohort of around 20 who went on to do a postdoctoral fellowship. Compared to my PhD colleagues, my salary is extremely low. Additionally, compared to others with the same skill sets, particularly computational skill sets, my salary is also extremely low. As a URM and someone defined as coming from a 'Socioeconomic Disadvantaged' background using NIH criteria, I am aware of the cost of losing out on a large earning potential. This

makes it extremely difficult to continue staying within academia. I am not arguing that we should be paid the same as scientists in other industries, but we should be reasonably compensated.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

It would be interesting to determine the postdoctoral satisfication level between high and low earning postdocs.

Response 1924

Perspectives on the postdoc roles and responsibilities

Intermediate between grad student and supervisor. Lots of leadership roles relative to graduate school.

Fundamental issues and challenges

Low pay, no benefits such as retirement funding, treated as a staff scientist when it benefits the institution, but considered a trainee to reduce pay and benefits.

Existing NIH policies, programs, or resources

Add more funding of R01 grants, they need to slide upwards with inflation.

Proven or promising external resources or approaches

Add more funding of R01 grants, they need to slide upwards with inflation.

Response 1925

Perspectives on the postdoc roles and responsibilities

I see it as a bridge between the PhD and a full-time research position. I've assumed many responsibilities of a PI which include: mentoring students; managing the lab; designing experiments; analyzing data; writing manuscripts; and writing grants.

Fundamental issues and challenges

Where do I start. The pay is low. The benefits have not been great. Most critically, postdoc support seems geared for postdocs interested in the academic track, which is highly unattractive to me because it is not friendly to folks who need to be around their families and don't have generational wealth to rely on. I would appreciate more support for researchers interested in non-academic research. I've had to find many of these opportunities on my own through cold emails and extensive independent networking.

Existing NIH policies, programs, or resources

More support for non-academic researchers. Also higher pay to make postdoc positions competitive—most of the postdocs I know come from wealthy families, which exacerbates the income gap in academia.

Proven or promising external resources or approaches

No response

Response 1926

Perspectives on the postdoc roles and responsibilities

I viewed my time as a postdoc as a training step that would prepare me for an independent, tenure-track faculty position.

Fundamental issues and challenges

There are MANY challenges facing postdoctoral researchers, particularly those with families:

1. The pay is too low to support a family in many geographical areas.
2. There is poor support and oversight to ensure that we receive the training and support we need to transition to faculty.
3. There is an expectation that you will not have a healthy work/life balance, which makes it difficult to be psychologically healthy.
4. The career transition awards for late-stage postdoctoral fellows and research-track faculty are FAR too limited. How are we supposed to make the transition without funding? How are we supposed to get that funding if we had things that slowed our progress (e.g., parental leave and multiple postdoctoral positions)? Time allowances for parental leave are poor if present at all. There is no allowances if we had to leave our first postdoctoral position because it was unsuitable (e.g., lack of funding, lack of mentoring, discrimination, hostile work environment). These things happen all the time for postdocs, and we are punished for them. MDs have MANY more opportunities for career transition awards than PhDs, which further limits the advancement of PhD postdocs by giving MDs a double advantage for many faculty positions.
5. The issues stacked against us can make for an extremely frustrating, lonely time.
6. The lack of retirement benefits at many institutions during graduate school and postdoctoral training places an undue, lifelong burden on us.

Existing NIH policies, programs, or resources

1. Expand career transition awards for PhDs. Offer more of them across the timeline of training, not just early postdocs. There needs to be opportunities for K99/R00 funding for later-stage postdocs. The existing timeline does not work if you have ANY delay in progress due to family obligations or poor lab environment.
2. Having a formal mentoring committee for postdocs (like graduate students have) might help, especially if their mentor is not properly preparing and supporting their postdoc.
3. Improving resources and support for postdocs facing discrimination/harassment/hostile work environments.
4. Better support for postdocs with families: child care subsidies that actually make child care affordable, guaranteed parental leave (at least 3 months) with funding for technician support to prevent gaps in productivity, ways to ensure healthy work/life balance (e.g., allow postdocs to get funding for technicians to support their project).
5. Travel and registration awards for postdocs to attend scientific conferences. Many mentors are reluctant to pay, and so we have to pay out of pocket or skip these valuable networking opportunities entirely.
6. Improve postdoctoral salaries. We should not have to be impoverished to follow our careers. The myth of the scientist who devotes their entire life to science at the detriment to their financial stability needs to go away.

Proven or promising external resources or approaches

The [redacted for anonymity] has a postdoctoral union that has been working towards some of these things. Their efforts have helped postdocs but need to go much further.

Response 1927

Perspectives on the postdoc roles and responsibilities

The postdoc position was presented to me as a PhD student as the next necessary step toward obtaining a worthwhile faculty position. Now that I am a postdoc, I feel that the position was mischaracterized to me. I have fewer formal responsibilities but a much larger set of informal responsibilities, including learning new skills, networking, and managing things like healthcare and benefits. Furthermore, rather than having a “break” from academic stress, I feel as though I am now suffering from accumulated stress from graduate school.

On the surface, the postdoc position is meant to be a mentored training position where I expand my skillset as a researcher and contribute to meaningful research output. In practice, I have few opportunities

to pick up new skills while also attempting to publish as much work as possible in the very limited timeframe available to me.

Fundamental issues and challenges

Institutional support is either minimal or non-existent. The two postdoc office staff are overworked and unable to address even a fraction of postdoc concerns. There is no peer network either since most postdocs are so overworked that they are unable to engage socially. Our institution treats postdocs as pseudo-students or pseudo-staff, depending on what benefits the institution more. As such, we have no guidance for managing our benefits, no opportunities to pursue institutional funding for travel or research, and no opportunities to conduct our own research outside of our PIs' work. Furthermore, PIs are the ultimate decision-making figure for postdocs and have little guidance or oversight as to how they treat their postdocs. While some PIs are incredible and empathetic mentors, there are others that are actively harming their postdocs' career prospects and well-being. There is no recourse for postdocs either. Since the appointment is so short, any administrative action taken against a harmful PI will likely occur after the postdoc appointment. As such, postdocs are seen as disposable since "a new postdoc will always turn up".

Existing NIH policies, programs, or resources

The NIH needs to require institutions to develop oversight boards with federal regulatory connections that can systematically evaluate that institution's postdoc experiences, identify harmful PIs, recommend changes, and potentially ban a PI, department, and/or institution from recruiting postdocs due to problematic behavior.

Proven or promising external resources or approaches

The national postdoc association has great resources and recently published a report on the postdoc experience. [redacted for anonymity] postdoc office is also currently conducting research on the postdoc experience utilizing qualitative and quantitative methodologies that would be a useful template for broader research. [redacted for anonymity].

Response 1928

Perspectives on the postdoc roles and responsibilities

I see postdocs as an excellent opportunity that can potentially benefit both the trainee and senior investigators. It can benefit trainees in obvious ways—gaining access to senior investigators with skills to bring in funding, opportunities to publish using senior investigators' data, opportunities to network. Senior investigators can benefit by having extremely bright trainees bring in new energy and new ideas to their labs. But I feel it often turns out to benefit senior investigators more than the postdocs, who can be left feeling unsupported and trapped.

Fundamental issues and challenges

Postdocs can find themselves as "cheap labor", compelled to do work that benefits a senior investigator but not their own career progression, or being mistreated or harassed by a senior investigator. Because universities protect senior investigators who bring in significant funding, it is difficult for postdocs to refuse to do work that does not benefit their own career, or to make complaints about these investigators because postdocs likely need recommendations from the senior investigator, or may need their name to support their own applications for funding (e.g., as a mentor on a K application), or may need the senior investigator's data so they can build their publication record. When they do report mistreatment, it is often to other senior investigators who may not be willing to help the postdoc due to their own relationships with the perpetrator of the mistreatment. Postdocs can become trapped in a position with a senior investigator who is taking advantage of them or mistreating them in some way. Aside from the overwhelming amount of work many postdocs are required to do, this is the most stressful aspect of being a postdoc that I have observed among postdocs at my institution. I recently heard of a postdoc at my institution who turned down a K award because working with certain senior PIs was so problematic.

Existing NIH policies, programs, or resources

NIH policies should explicitly include bullying (e.g., forcing a postdoc to work unpaid/with no FTE on the investigator's project at the expense of the postdoc's own training plan). It is almost impossible for postdocs to feel comfortable in filing a complaint while they are still working under the problematic PI, as

once the university is notified of the complaint, it may be obvious to the PI who the complainant is, which can make the working situation even worse for the postdoc. NIH should institute a "exit interview" with all postdocs at the end of their training, which explicitly asks about bullying, harassment, and other ways the postdoc may have been taken advantage of.

Also, it takes so long between submission of a grant application and granting of awards that postdocs (and junior faculty) remain in a constant state of stress and uncertainty, sometimes spending a great deal of time resubmitting awards that are on the borderline just in case the first application doesn't get funded. The time between grant submission and award decision needs to be shortened.

Proven or promising external resources or approaches

Postdoc mentors who are on training grants funded by NIH may benefit from some sort of mentorship training that includes what NIH would see as appropriate/inappropriate behavior, e.g., it is appropriate for a postdoc to be doing work that helps them proceed towards their training goals, but it is misconduct to have them do unpaid/unacknowledged work on projects that do not align with training goals.

Perhaps an NIH hotline where postdocs could call or write and ask questions about situations in their postdocs anonymously might help NIH better see what issues are most problematic for postdocs, as right now in my experience, postdocs are suffering but scared to speak up about what is going on in their training experiences.

Support groups for postdocs would be very beneficial. Often they end up isolated in one lab without access to other postdocs, and they may think their experience is unique.

Response 1929

Perspectives on the postdoc roles and responsibilities

Postdocs are the backbone of academic research and the advancement of scientific research. One particularly crucial role that postdocs play is to bridge multidisciplinary collaborations between labs (e.g. from PhD lab to overlapping interests of postdoc lab)

Fundamental issues and challenges

- Postdocs who are awarded and accept NIH postdoc fellowships end up taking a financial blow to accept a NRSA award. For example in my scenario, I lost over $8,000 per year in health insurance and other benefits contributions from my institution when I accepted my F32. I was faced with the decision to pay $8,000 per year out of pocket or to decline this prestigious award that I believed would benefit my future career.
- I don't know the solution to this, its certainly a big problem and my scenario is not unique. Perhaps the NIH

Please, please, PLEASE require the institution to pay postdocs a MINIMUM of the published NIH NRSA stipend level as NRSA awardees. Do not decline a request for increase in salary to match the appropriate NRSA level based on the budget included at the time of submission of application. Our institutions will not input our salary to anything more than that which we currently have.

Existing NIH policies, programs, or resources

K99R00—childcare subsidy eligibility—I applaud the NIH for offering the $2500 childcare subsidy for postdoc fellows; however, as a K99R00 award recipient who is still in my postdoc fellowship training phase, I am ineligible to receive these childcare subsidies. Thus, my entire current NRSA level salary as a postdoc is going towards paying for childcare for my two children so that I can continue to work full time. Please help to bridge this gap for K99R00 postdoc award recipients by expanding the eligibility of childcare subsidies to include ALL NIH-funded postdoc fellows.

Proven or promising external resources or approaches

improve support for health insurance and childcare for postdoc fellows.

Response 1930

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an opportunity to gain additional scientific skills before starting an independent position, however, it seems necessary to have a high impact publication in order to secure a tenure track position. When working with mice such a project can take 5+ years making the post doc feel like another PhD project

Fundamental issues and challenges

Low pay has to be the single biggest factor. My classmates that went into industry following graduate school make at least 2x the salary I do. They can afford to buy homes and pay for childcare whereas I am putting off having children because I can't afford them right now. My institute provides no retirement contribution so not only am I making less money over my lifetime but I will also have to work longer because I will have less retirement funds

Existing NIH policies, programs, or resources

I was delighted to receive the NIH loan repayment program but unfortunately I had to turn it down because of the requirement to stay in a post doc position for two years or pay $50,000 penalty plus the money awarded back. When I initially applied for this program that seemed worth it but it was 9 months before I heard back on my application. In that time a parent was diagnosed with a fatal illness requiring medication that costs over $1500 per month. I needed to turn down the NIH LRP because I may need to switch career paths in the near future if my family needs financial help.

The NIH should also work with universities to make sure trainees receiving awards aren't penalized. My institute doesn't do this but some institutes reduce trainee benefits when they are on a fellowship.

I appreciate NIH fellowship institutional allowances, I don't know any other job where employees are required to provide their own lap top for work, without the NIH institutional allowance I would have had to buy a laptop out of pocket. Institutional allowances should be increased to match inflation. I also appreciate cohort-based fellowship programs, having that connection to other underrepresented minorities has been a life saver during my training

Proven or promising external resources or approaches

My institute pays me ~$5000 per year more because I received an outside fellowship. Putting the application for this fellowship together took many hours and this policy incentivizes post docs to take the time to apply and rewards us for being successful. Policies that don't allow post docs to make more than other post docs claim to be interested in maintaining equity but having the opportunity to be compensated more inspired me to work harder and makes me feel more valued. It is also worth it to consider if recruiting more postdocs is a valuable goal. What will these postdocs do after they finish their position? There aren't enough faculty positions for everyone. We need permanent positions and doing a post doc only to not receive a faculty position is not helpful for the trainee and causes long term financial hardship. It is clear that our academic system has come to rely on highly trained post docs to create the results labs publish and receive funding off of. We spend long hours in the lab for poor pay and poor benefits. We train graduate students and undergraduates and positively contribute to lab and institute environment but are often treated as disposable (e.g. my contract at my institute is at will so I could be fired at any moment and post docs only have access to specific health care plans that are worse than those available to other staff). Some ideas to improve working environment/ job satisfaction: higher salaries, opportunities for merit based raises, better benefits (e.g. retirement matching, improved mental health care access, child or elder care support), increased creation of permanent positions, more programs to fund research assistance for post docs, addressing racial funding disparities in NIH funding so we can see people who look like us be successful.

Response 1931

Perspectives on the postdoc roles and responsibilities

Training/mentoring graduate/undergraduate students

Independent project

Pursue independent funding

Fundamental issues and challenges

Low pay

Not really viewed as students or staff, just some weird in between that gets forgotten

Existing NIH policies, programs, or resources

Money to offset the cost of childcare

Proven or promising external resources or approaches

No response

Response 1932

Perspectives on the postdoc roles and responsibilities

management for mobile clinics in sub Saharan east Africa to areas that are politically negreted,due to HIV AIDS, nepotism, tribalism, revenge for political royalists verses opposition communities

Fundamental issues and challenges

Kenya among several other universities in Africa use outdated colonial standards of education.People from poor families get it difficulty to be awarded post doctorate degrees.Even Busuries and grants are issued to communities that voted for ruling party.

Existing NIH policies, programs, or resources

Colonial regime killed herbal and traditional African experts despite their roles in promoting healthcare for centuries. Currently corruption is witnessed in universities . I submitted 20 different important drugs entitled Effective affordable natural traditional drugs during my physical oral interview before being recognized as a herbal Doctor in accordance with healthcare policies .Instead of indicating all my submitted 20 different drugs,they only mentioned six drugs in my research report.

Proven or promising external resources or approaches

The world health organization is not able to rescue the talented traditional African experts despite having controling about almost two hundred member countries. traditional African drug discovery practitioner do research without receing government funding. In 2020 December recently I was among 15 selected harbal experts interviewed by a team from Kenya medical research institute which was responsible for developing a vaccine for COVID-19. To my surprise.Each of us interviewed was only given Kenya shillings one thousand equivalent to $8 dollars for issuing discovered herbal drugs for COVID-19 treatment. Compared to several millions given to our country for COVID-19 research I strongly know that it was and is unfair in this modern world.

Response 1933

Perspectives on the postdoc roles and responsibilities

A Postdoc is about gaining skills and experience to help you advance to the next stage of your carer. Postdocs do essential research to advance science and/or medicine.

Fundamental issues and challenges

Conflict resolution. When a Postdoc is being taken advantage of by their supervisor or has a dispute with their supervisor there are very few resources available to help them resolve the dispute. The supervisor knows that their threat of leaving a negative letter of recommendation holds the Postdocs future in their hands. This environment is intentionally left this way by Universities to allow the abusive behavior to continue and to discourage Postdocs from raising conduct issues.

Full time employment. Many Postdoc employees are considered “temporary” employees or something similar. This is a weak excuse by universities to provide terrible benefits to postdocs. This often leads them to be excluded from certain services as they are not employees and not students or outright forgotten as upper administration does not know they exist.

Facilitate long term employment. Postdocs mostly move up to tenure track faculty or make a large change in carer. The ability to continue to grow as an academic researcher without jumping to tenure track faculty would be useful.

Pay them more. Postdocs are grossly underpaid for their skill level and hard work they put in. Also the old thinking of "suck it up and work hard now and you will be rewarded with a good job later" is becoming more and more untrue. Pay them for the work they are doing not the potential that maybe for a small percent of them it will lead to a great position

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1934

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Funding of labs by R01 grants is leading to unhealthy competition between PIs and postdocs. Each project(/data from it) is a possibility to write an R01 grant for a PI/head of the lab. If a postdoc wants to get independent and e.g. write a K99/R00 with this data (generated by him/her) on his/her project, it leads to a situation where de facto, there is a conflict of interest over hundreds of thousands of dollars between the postdoc and PI/head of the lab, and this will not seldom result in PI not supporting or actively harming the postdoc (I have seen a situation like this). This is not only a great disadvantage for postdocs, but this also harms whole labs and science. Ambitious postdocs fighting for their right to achieve independence and keeping scientific ideas for themselves, but then finally leaving academia because of the lack of support, are a great loss of intellectual potential.

Existing NIH policies, programs, or resources

Introduce a special, exceptional possibility for postdocs to be Co-PI on R01, with their "separated part" (e.g. one of the Aims) having a K-similar aspect. Theoretically, postdocs at some institutions can be (Co)PIs on R grant applications, however, mostly, they don't get support for that. Making shared applications between mentor and postdoc attractive for both parties would strengthen the postdocs and science (because there will be more collaboration instead of competition between the researcher generations).

Proven or promising external resources or approaches

No response

Response 1935

Perspectives on the postdoc roles and responsibilities

A postdoc is an opportunity to gain more training in new scientific techniques, ideally mentoring students in the lab, and learning how to (further) write grants and run a lab.

It is a secondary training step before becoming a PI.

The time that a postdoc should last is extremely ambiguous and context dependent.

Fundamental issues and challenges

Salary is low given the amount of training and expertise postdocs have. At a time when some postdocs are considering starting their own families, low salaries put pressure on those to either leave academia to be able to support a family or to not have children given the lack of financial resources and time. This disproportionately affects women given the restrictions on age to conceive and bear children. This is part of the reason why retention of female postdocs is low, especially in academia.

On T32 slots for postdocs, there are no retirement benefits; this needs to be changed for multiple reasons, but specifically because given the stage of life many postdocs are at, it is not feasible to not be saving for retirement.

Right now, given the pandemic, there is a glut of eligible candidates for a limited number of professor positions, making the market the most competitive it has ever been.

Existing NIH policies, programs, or resources

The 4 year restriction for the K99-R00 is extremely difficult and only achievable in a best case scenario. Accomplishing writing a grant with preliminary data requires a supportive PI and science to go well and work (not always feasible, especially if you are in a wet lab and doing a lot of animal work). Writing this grant can sometimes be at odds with the goals the postdoc was hired to accomplish (doing the research on already funded grants from the PI), so that can limit time and resources. Furthermore, with a global pandemic, extensions, even still are needed as we recover from the major effects of shutting down laboratories for months at a time (which some labs enforced and others did not, so the perception that this extension is no longer applicable is inaccurate).

And again, if postdocs are debating to have families during this time, it essentially becomes a choice of generate data and write a grant or decrease your hours given the adjustment to having a newborn and forget about being able to submit this grant given the time restrictions, especially if you are a mom trying to breastfeed. I truly appreciate the 1 year extension that has been added. However, with the pandemic and giving birth, the time has not been enough. We have so much research documenting how important it is for the infant to have time with their parents in the first 3 years of life. Creating an environment that allows for healthier and better neurodevelopment of the infant, as well as several other beneficial outcomes for both parents and baby, is supposedly what the NIH is supposed to be all about. Let's provide the infrastructure to allow postdocs, especially females, to do academic research and have a family!

Proven or promising external resources or approaches

- Holding PI's accountable for training their postdocs and not just using them as workhorses.
- Incentivizing PI's to mentor their postdocs and support them in writing grants. Giving extensions to those postdocs who found themselves in a toxic lab environment and a PI who did not support writing a K99-R00 (or even F31 or F32's) because the research that needed to get done was what was already funded and left no time for someone else to pursue generating data for their own grant.

Response 1936

Perspectives on the postdoc roles and responsibilities

I saw my postdoc as an opportunity to train in new topics and techniques relative to my graduate work. Postdocs have many roles and responsibilities: produce novel research and prepare for a career as a scientist, supervise graduate students and lab technicians, assist the PI, and sometimes teaching.

Fundamental issues and challenges

Quality of life for a postdoc is generally pretty awful. I have not met a lot of happy postdocs. Pay is ridiculously low, many PIs are cruel and see postdocs as cheap skilled labor. Preparation for running one's own lab and getting an academic post is lacking. At least in my post (neuroscience) no one I knew got an academic post until they were a postdoc for 7 or 8 years. That is too long to be working 90 hours per week for 50k a year. As soon as I left my postdoc for industry my salary nearly doubled and I do not think that is unusual.

Existing NIH policies, programs, or resources

I was lucky enough to earn a NIH-NRSA during my postdoc. I think that program should incorporate more career development. All my PI cared about was that I collected data and analyzed it. THat fulfilled my grant obligations. If the NRSA training program was more broad and focused on all aspects of developing an academic career, it would be better. This may have changed since I completed my postdoc in 2016, but I am not certain. In addition, universities should be required to submit evidence of PI misconduct to the NIH. My postdoc PI was notorious for her mistreatment of postdocs and if the university had reported her she might not still be supervising unhappy postdocs.

Proven or promising external resources or approaches

Its simple. Postdocs should be paid more and PIs should be expected to treat them as humans that are there to learn, not provide cheap labor.

Response 1937

Perspectives on the postdoc roles and responsibilities

I view a post doc as an apprentice to the PI. Often working independently post docs learn to develop either their own research program, harnessing experimental, mentoring and writing skills. Alternatively those who do shorter post docs with the intention of leaving for industry use the position to learn new techniques and improve their scientific communication skills.

Fundamental issues and challenges

Post doctoral pay prohibits individuals who are not already in a financially privileged state from considering the position even if they originally wanted to stay in academia. Without a partner/spouse/family to assist with cost of living it is difficult to pay bills, student loan repayments, etc especially if you went straight from undergrad to grad school with no way of incurring savings. Unless post doctoral pay mirrors at of industry I understand who many leave academia after graduate school.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

More opportunities for structured post docs would be great. I am aware that there are some programs where a cohort comes in together and receives specific training in not only research but teaching. If there were options for a much more scaled back version of a graduate program where post docs have access to special seminars/training opportunities outside of just lab research based on various career interests I think that would appeal to a wider audience and attract more applicants

Response 1938

Perspectives on the postdoc roles and responsibilities

Speaking on behalf of [redacted for anonymity] certain aspects of an academic postdoc position should be flexible depending on the scientific needs and mentorship style of the PI. However, some aspects of a quality position should be uniform across labs and institutions. In particular, a post-doctoral position should always entail additional training that complements prior training and positions the post-doc to advance to a future career position, whether within academia or industry.

We are concerned that many current postdoc positions are limited in terms of career development. Examples include that of a "semi-permanent" staff scientist role or a laboratory manager leading multiple scientific projects. We observe that these positions support the PI's research agenda but do not facilitate a pathway to independence for the mentee.

We believe that an effective and quality postdoc position includes

a) an outline of scientific goals that enhances the postdoc's experience/expertise while simultaneously benefitting the PI,

b) a well-outlined career development plan that includes access and interaction with a diverse team of mentors [e.g., career coaches, content experts] and

c) a clear path toward independence in a timely manner.

PIs must demonstrate to the NIH that members in their laboratory deemed as "postdocs" are being trained as described above. Those who do not fit this definition of a postdoc (e.g., staff scientists) should be paid much higher than the NIH postdoc stipends. Currently, postdocs funded under T32s and F32s have training plans written in the grant, but there is no requirement for training plans for postdocs that are funded primarily from a PI's grant. With characteristics of a postdoc position better defined, qualified candidates will consider these positions more desirable as they pursue their career goals.

Fundamental issues and challenges

The primary challenge, especially in the San Francisco Bay area, is salary support. The cost of living (particularly in this area but for most urban regions in the US) is too high to permit a reasonable quality of life with a postdoc's salary. This leads qualified candidates to seek higher salaries (e.g., within industry) earlier in their careers, limiting the number of qualified candidates targeting careers within academia. We recommend that NIH salary scales for postdocs be adjusted country-wide based on the cost of living in a specific regional area. Accordingly, PI funding should be increased to accommodate postdoc salary increases. For example, the ceiling for modular R01 budgets has not changed in over 2 decades and should be increased.

As for increasing the quality of the post-doc experience, mentors should expand the opportunities that are provided. Specifically, by viewing their postdocs as future colleagues, they will advocate for their advancement, engage them in regular teaching activities and provide opportunities for increased responsibilities and leadership. Lastly, postdoc specific programs should include opportunities for postdocs to interact scientifically and socially with other postdocs in varied research areas that may range from fundamental discovery science to clinical research. For example, K awardees (career development awards) have a multitude of opportunities for scientific interactions and broad-reaching academic experiences; postdocs should be included in these activities as well.

Existing NIH policies, programs, or resources

Financial challenges: One existing program that the NIH has is the NRSA childcare support program (i.e., $2,500 yearly). This program could be expanded to cover additional childcare costs (>$2,500 yearly) and additional life expenses (e.g., moving expenses, commuter support for transportation/parking; at our institution in the Bay Area, parking is not guaranteed and is incredibly expensive). In addition, funding programs for K awardees include supplemental support in the case of critical life events (i.e., Administrative Supplements to Promote Research Continuity and Retention of NIH Mentored Career Development (K) Award Recipients and Scholars). Similar supplemental opportunities may be considered for postdocs.

Proven or promising external resources or approaches

NIH engagement of national (i.e., National Postdoc Association) and representative state postdoc associations can help inform the existing need and ecosystems across the country. A proven external approach that the NIH could adopt to enhance the postdoctoral training ecosystem relates to opportunities for international postdocs. Many foundational postdoctoral awards allow international scholars to be eligible for their awards. In our department, many highly qualified postdocs come to our programs from international settings. However, since they are not US citizens or permanent residents, they do not qualify for NIH postdoc support. A more inclusive policy should be considered by the NIH.

Response 1939

Perspectives on the postdoc roles and responsibilities

Traditionally, postdoc training has been seen as a pathway to an academic research career. But those opportunities are fairly few and the probability of success is low.

When we ask our best and brightest young PhD scientists effectively to put their lives on hold for 3 years (or more), they ought to know why and what realistically the outcome is likely to be; many hope for an academic faculty career, and many of those will be disappointed.

I contrast the career progression of the science postdoc with professional training for medicine, law, or even business or technology.

It's not all bad: the upside for postdocs is that, if they are successful, their work and lives will most of the time be meaningful, honest, and interesting; there aren't many careers where that can be said.

Fundamental issues and challenges

It's very clear that we need to increase the stipend substantially to increase recruitment, retention, and quality of life. We are asking our best scientists effectively to put their lives on hold for several years while training for a job that may never materialize.

When postdocs see few real academic jobs, and industry will pay them a lot more, retaining them in the academic research pool is difficult.

Existing NIH policies, programs, or resources

Policies and procedures that make it difficult to supplement postdoc salaries from other grants exacerbates the problem of low stipends.

Proven or promising external resources or approaches

Can we look at models in Europe? I'm not sure that the situation is any better, but my sense is that several European countries -—France (INSERM), Germany (Max Panck Institutes) for example -—have established public scientific research career models that don't require quite such a relentless individual competition for funds to conduct research and, incidentally, to provide food and shelter for one's family. I guess internal research careers at NIH might provide this security, but in academic research, if you don't have a tenure track faculty position, a biomedical research career is too precarious an option for many people to pursue.

Response 1940

Perspectives on the postdoc roles and responsibilities

Help in whatever ways needed for PI/professor to advance projects, secure grants, communicate research at meetings/symposiums, publish papers.

Provide input and argument that will guide direction of PI's research programs.

Complete experiments efficiently and with high quality within few iterative attempts.

Take care of the lab space and equipment, supervise graduate and undergraduate students as needed.

Organize and spearhead new research endeavors, leading others as needed, quickly assessing feasability.

Help foster and strengthen collaborations that will help your PI's lab, and build your own network.

Help recruit and interview new lab members.

Learn all that you can about running independent research program and lab management from all of the above points. This includes the inner workings of all steps of getting funding, publishing, dealing with politics.

Follow own ideas, read about areas of personal interest, and propose new projects, or, build idea portfolio for own future career.

Read the literature and talk about it with peers and faculty.

Fundamental issues and challenges

Postdocs are supposed to be temporary, training for advancement to a position in the future with greater independence and responsibility. Therefore, there is discomfort in confronting questions such as "how long will I be here," or, "how much of a contribution will be enough to graduate from this postdoc." Because there is no graduation date, you run the risk to becoming medium-term cheap labor for a PI for several years as an end in itself.

A postdoc is obviously helpful in building your career towards getting a tenure track faculty position. However, the ferocious competition for and statistical unlikelihood of landing one of those jobs makes the prospect of taking a postdoc position in pursuit of a tenured position seem like a waste of time. Additionally, It is not perceived as being helpful in getting an industry job, and as stated by some recruiters I've spoken with, it can count against you in many resume pools.

And money, probably. It is not a good feeling being in your 30's and earning less than someone in their early 20s who has less experience and education and works a less technically and temporally demanding job. Personally though, I am not bothered when looking at it from the view that the low pay is probably related to the nature of the sources of funds and also the low level of economic risk personally taken on by postdocs, and the low probability that your work will yield a high economic return in the short term.

Existing NIH policies, programs, or resources

A major goal of NIH-sponsored postdoc work should be to develop a given postdoc into a productive, independent scientist within a resonable timeframe (2-3 years). NIH policy and fundamental aims should reflect that to help shove postdocs out of the nest of dependence of their PI and more towards writing their own grants and pursuing and defending their own original ideas. Even if scaled down and broken up into smaller exercises of gradually-increasing risk. So, maybe a new model could be shorter appointment periods or limits, higher pay, but higher expectations and greater demand for demonstration of growth towards independence.

Limit politics.

Proven or promising external resources or approaches

Find and talk to the people who left academia after working as a postdoc.

Response 1941

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a necessary step to advance in an academic career, as well as some non-academic research careers. I feel that the learning that can occur in a postdoc is very valuable. However, the job is incredibly underpaid and my institution ([redacted for anonymity]) hires us (as T32 fellows) as 1099 contractors and requires that we pay tax on our own benefits, which leads to me being paid $61,500 and having an 30% tax rate—outrageous and untenable.

Fundamental issues and challenges

The **Fundamental issues and challenges**—at least at my institution—are

a) our status as 1099 contractors and being taxed on imputed income,

b) delays in pay up to 4-6mos on average—I know at least 10 fellows who have experienced this—at the start and/or renewal of our 12-mo contracts.

We have no choice but to work during these months w/o pay because if we delay our work we are only hurting ourselves. Postdocs are severely underpaid across institutions, have long hours, and oftentimes deal with toxic, abusive mentors who are unchecked and not held accountable. I have experienced this firsthand and witnessed this among countless fellows at my institution and have heard from countless other postdocs at other institutions.

Existing NIH policies, programs, or resources

NIH should

a) Increase pay for postdocs on NIH-funded grants (like the T32)—$70K in NYC would help a lot,

b) Require institutions hire postdocs as W-2 employees, not 1099,

c) Ensure we are not taxed on our health benefits, and really one of the most important things is—

d) Require that mentors have to be evaluated before they are allowed to receive grants and hire postdocs. There is rampant toxicity, harassment and abuse among postdoc mentors. These mentors take advantage of postdocs and severely impede their ability to advance in their careers. I have seen this across institutions—it is systemic and there are no evaluation systems, and no consequences for faculty's behavior—esp if they are tenured—leadership just pushes these things under the rug. I have opted out of a career in academic medicine given the toxicity.

Proven or promising external resources or approaches

NIH could provide external mentors for postdocs outside of the institution—I had a difficult time finding mentorship as everyone at my institution is very competitive, not collaborative, and took things personally if I asked for help from someone else. People were also untrustworthy. At the same time, I think given the fact that we're called "trainees" postdocs are also babied—there's all this talk about mentorship but we're not given proper mentorship (faculty have no time because they constantly have to write grants), and at the same time, we're not given the freedom to exert our own independence and develop our ideas. There were multiple times throughout my postdoc where I had ideas for projects that I think could have

facilitated my independence but the institution and my funding mechanism dictated that I needed a mentor—and I think this impeded my ability to progress in my career. More smaller grant opportunities for postdocs without the need to be mentored by faculty mentor (consultants would be fine) would help this.

Response 1942

Perspectives on the postdoc roles and responsibilities

It's a medium stage between graduate student and IP. You have developed the technical habilities to perform experiments, now you need to learn how to manage a team, develop projects, apply for funding a at the same time that you perform experiments to continue getting publications

Fundamental issues and challenges

Salary is very low compared with the industry or other similar jobs t. The NIH postdoc salary recomendation barely covers the cost of life in some states.

Difficulties to balance personal life and work

Diffiulties to continue the path in the academia. Lack of grants for non-US citizens

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

More mentory grants

More facilities for parenthood.

Salary

Response 1943

Perspectives on the postdoc roles and responsibilities

Not all academic postdocs have the end goal of becoming an independent PI, for me this is the main purpose but for those people my thoughts do not apply.

But this is tricky. People may think, postdoc is to put the cherry top of your training and boom you're ready to be a PI. Hence the creation of the baffling early K99 (>2 years of postdoc). Sadly good people find themselves in bad grad school labs and their training is lackluster. Meaning the training required at postdoc is much more substantial.

My view on a postdocs responsibilities are, that it is all your responsibility as a postdoc. It's YOUR project, YOUR career, YOUR independence.

Because of that being a postdoc is about so much more than just data generation. That is a technicians job and I wish PIs had a better appreciation of that.

Postdocs need to:

Generate data

Develop ideas

Network

Mentor and Lead

Write papers

Write grants

Stay on top of the literature

You cannot do all of these things at the bench 65 hours a week. Usually, mentoring and leadership suffers. Hence we have a population of PIs that don't know how to manage people or train people or lead a team and the people in those labs usually suffer. Also, time to stop and think about what you are actually doing

is also a good thing. I have seen people running around like headless chickens doing experiments that don't answer the question because they're so focused on having to be busy and producing something. Anything! Apparently, even if it is junk.

Fundamental issues and challenges

I watch a Youtube show about personal finances, it's fun and the guy yells at people for taking on silly credit card debt. But what shocks me is that 24 year olds with a bachelors and no experience are earning as much as me, a 6.5year academic postdoc. No matter how you shake it, we are vastly underpaid for the amount of training we have. People like to remind us that we are trainees and that is why we earn a trainee salary. I frankly think the language and ideology there is insulting. Of course we are trainees, and we are training to be world experts so it takes more time than other industries but it doesn't mean the money is right.

Money isn't everything, but there ultimately comes a time where you ask yourself is the juice worth the squeeze? Most postdocs ask themselves this three times a week. It's tough, we work our butts off, for poor pay and sometimes for PIs who take advantage. Submit our ideas as their grants. Don't support us in our path to independence and just use us as cheap(ish) labor. No wonder people don't stay.

I will say I love my job. But it's effing hard. There are good days and bad days. My wife and I are both postdocs, working hard, generating data, submitting grants. But we have had discussions about starting a family and don't see how we can right now. This is something that needs to be addressed. Silly time constraints on K99s and closing of viable pathways to independence based on time do not help.

All I want is a FAIR chance, give me that, get the hell out of my way and I can do this. I can become a brilliant independent scientist. But I need the chance.

Existing NIH policies, programs, or resources

This situation may be unique to my institute but my suspicion is that it isn't. 65-70% of our postdocs are international and are on visas. This makes a large proportion of the academic postdoc population unable to apply for the majority of NIH fellowships. As I mentioned in the barrier to success section, the lack of a viable path to success is a limiting factor in postdoc retention. But you are losing a large swathe of international postdocs, who either return home or simply feel like the NIH do not support them and say to hell with academia, if and when I get my green card I'll switch to industry.

Another area of concern is the time limits placed on K99 applications. Everyone is on a different timeline and pathway to independence. For me I changed field completely, so I had to almost retrain for the first 2 years of my postdoc. I'm lucky my PI was very supportive and patient, but I'm now ready to push for independence but I'm in my 6th (nearly 7th) year so the K99 route is no longer accessible, so instead I submitted an R01, which will obviously come with it's own challenges. Again, this all points back to a lack of a viable path to success.

Proven or promising external resources or approaches

Open paths to success.

This isn't strictly true, but is for the majority of top institutions;

To get an independent position, you need an R01.

To get an R01 you need an independent position, because track record. independence from mentor. etc

It feels like a closed shop.

Extend to K99 to 8 years, give people a chance to grow and develop at their time. Not some arbitrary number someone who went through this a generation ago thinks is an acceptable time. Training takes longer now, long gone are the days of a Nature figure being a couple of western blots. the K99 should reflect that.

Response 1944

Perspectives on the postdoc roles and responsibilities

I see a postdoc as a stepping stone to a faculty position. A time to gain additional mentored experience, build my network and develop the expertise in my program of research to be competitive for future positions. This should be time-limited, 2-3 years at the most.

Fundamental issues and challenges

- Low professional status (e.g., do not receive benefits of faculty, cannot apply for many grants as PI, cannot independently support research assistants or students)
- Unclear path to promotion, so much uncertainty in career trajectory. Difficult to manage with a family, and young children.
- Low pay for years of experience and academic attainment.
- Only 6 weeks of paid parental leave.
- Very competitive and stressful path to career stability (e.g., NIH K awards, pulling together multiple sources of funding)

Existing NIH policies, programs, or resources

- More $ for K awards
- More frequent submission deadlines for K awards (this would allow shorter turnaround for revisions)
- More structured post-doc to faculty pipelines

Proven or promising external resources or approaches

No response

Response 1945

Perspectives on the postdoc roles and responsibilities

Study and analyse research papers, perform independent research leading towards publication(s) at the end of every year.

Fundamental issues and challenges

Lack of proper interaction on research, counter-productive research groups, i.e., no scope to publish or perform computations.

Existing NIH policies, programs, or resources

Regular supervision of personal investigators, who have hired postdocs. Get research plan sent to NIH, evaluate both faculty mentor and postdoc every 6 months if things are according to plan. Check if faculty mentor is emotionally stable human being and is a situation to guide students.

Proven or promising external resources or approaches

Create metrics for academic faculty based on data obtained from past and present PhD and postdoc researchers.

Response 1946

Perspectives on the postdoc roles and responsibilities

PostDoc positions are often viewed as trainee positions. I disagree with that view and think it is used to apply exploitative labour practices. PostDocs are the worker backbone of the academic research enterprise. They perform experiments, train junior trainees, and in bigger effectively run research operations, because principal investigators often end up being too busy. PostDocs start their positions having completed extensive training, having received the most advanced degree that academic institutions can issue, a PhD, so to characterize them as trainees is absurd. I see PostDocs as qualified workers that deserve more respect. It serves as position to gain more independent experience in order to qualify

oneself for a future principal investigator position. However, gaining experience and getting trained in additional skills / techniques is the reality for non-trainee, stable jobs in other industries as well, so these aspects simply cannot serve as an excuse to classify PostDocs as trainees in order to underpay them.

Fundamental issues and challenges

The answer is simple: The pay is criminally low given the level of qualification **and responsibilities** that PostDocs have. Benefits are often minimal and saving for retirement usually is impossible. PostDocs tend to be at a stage in their lives where they'd like to start a family and most can simply not financially afford to do so, which is an absolute shameful reality. Any job, but particularly one of such importance for our society that involves such extensive training and advanced skills, NEEDS to pay enough for the worker to live a comfortable life and start a family. PhD graduates now find more and MUCH better paying alternatives than ever in the industry / biotech sector, where they feel less stressed about their future and more appreciated for their skills, so academic positions are simply too unattractive for most people after finishing graduate school. This is no rocket science, these issues have been ongoing for decades, and workers are finally expressing their dissatisfaction with consequences for those that have the power to change the status quo. Pay us more money! We deserve it.

Existing NIH policies, programs, or resources

NIH grants issued to principal investigators DESPERATELY need to increase! In order for PostDocs to be paid more, PIs need to be able to spend more. Universities need to reduce spending on administrative workers, which as blown up in recent years, and instead commit some of their enormous wealth to supporting workers supporting their core missions—educations and research.

Proven or promising external resources or approaches

Recent efforts by PostDocs to unionize in various academic institutions across the US (e.g. UC, Mount Sinai, Columbia U, University of Washington) can inform you about what PostDocs want: Higher pay, better benefits, safer working conditions and a desire to actually be seen and listened to.

Response 1947

Perspectives on the postdoc roles and responsibilities

For those interested in academia, a postdoc should help an investigator begin to develop their own line of work. This includes training in grant writing, new methodology, and publishing work in their field, but should focus on making someone independent by the end.

Fundamental issues and challenges

Money, inclusion in the workplace, and opportunities for independent funding.

Graduate stipends are already very low, and after spending ~5-6 years working towards a PhD, many cannot afford to do a postdoc. We need to raise stipends, especially if we want to recruit and retain those who may have families, want to raise children, or be taking care of other family members (work that predominately falls on women and those historically excluded from science). Additionally, we need to improve diversity, equity, and inclusion in all academic spaces, because all too often we are pushing out those historically excluded from science before they can really even consider if a postdoc is something they'd like to do. After suffering from systemic biases and microaggressions throughout graduate school, many people don't want to deal with it again for 3-6 more years, especially if they're not getting adequate pay. Funding agencies and universities must prioritize training and supporting those who are working to make science more inclusive for all. Finally, there need to be more sources of funding for postdoc projects. Relying on our PI's existing funding limits the experiments we can do that don't fall within their grants, forcing us to stay much longer completing their projects and working on our own preliminary data.

Existing NIH policies, programs, or resources

We should greatly expand the K programs to fund more young scientists and fund more of their own experiments. Additionally, we should require regular participation in DEI trainings for all NIH funded investigators.

Proven or promising external resources or approaches

No response

Response 1948

Perspectives on the postdoc roles and responsibilities

In my eyes the postdoc position is a critical part of the research process and we often serve as the "in the field" leaders of our groups and teams. We are often conducting research at the forefront of each field and will have both primary and supportive roles in most of the research being conducted in our area of expertise. This means we have the unique role of being simultaneously learning how to be better researchers and manage people, while also helping others learn their essential research skills.

Fundamental issues and challenges

I think the biggest issue is the underappreciation of the role. It is historically underpaid, particularly considering the amount of stress and quality of life aspects of the job. Since graduate school often requires pausing one's life, we postdocs are hoping to restart our lives and jump-start our careers, both of these goals are greatly hampered by the current system. At the current time, we are grossly underpaid, and therefore many cannot pursue postdocs (and therefore cannot pursue academia) as it would simply leave them too financially burdened.

Postdoc mental health is also worse than ever. In graduate school, one is just as likely to graduate as one is to develop a mental health disorder (such as anxiety, or depression), and when we become postdocs these mental health aspects do not just go away, but the support networks built by universities do go away, which can leave us marooned in a new high-stress job, in a new city, financially stressed. A perfect storm for mental health.

Additionally, the point of a postdoc is becoming increasingly opaque. The near stagnation of faculty positions, and hiring freezes in the cooperate sector are not compatible with the high turnover nature of a postdoc. It is becoming increasingly common for postdocs that would have only needed a year or two a decade ago to need 4 to 5 years, and for each postdoc year the opportunity cost only increases.

Existing NIH policies, programs, or resources

I think pay is the lowest-hanging fruit, followed by more universal standards for benefits and support. If we want postdoc positions to be competitive again we need them to be more desirable positions, with clear paths to success and other benefits. I do not think one or two changes can necessarily do that, but we need to stop thinking about postdocs as expendable researchers, and more as future faculty or future industry leaders.

Proven or promising external resources or approaches

Honestly look to countries without this problem, like the Europeans.

Response 1949

Perspectives on the postdoc roles and responsibilities

Bridge between faculty or industry position and gradaute training. An opportunity to acquire new skills, train for the next stage in career.

Fundamental issues and challenges

Inhibition of recruitment, retention and overall quality of life is directly related to payscale. increase pay and you will have more postdocs doing academic research. You can solve a lot of issues by throwing money at it.

Existing NIH policies, programs, or resources

1. NIH policies should consider increasing Fellowship and Training Stipend Levels taking into account the regions that most postdocs are concentrated in (west coast east coast and chicago) are very expensive to live in. Inflation should also be taken into account. The increase in pay in from one year to the next is barely $160/month.
2. NIH parental leave policy is outdated. 8 weeks of leave for a fellow on a F32 is unacceptable. It should at least be changed to 12 weeks paid leave.
3. NIH funding for F32—postdocs should also include health insurance coverage for the fellow as well as the dependents. By allowing institutions to do as they wish results in abuse of power where institutions refuse to pay dependent health insurance and make fellow pay out of pocket.

Proven or promising external resources or approaches

No response

Response 1950

Perspectives on the postdoc roles and responsibilities

Training position

Fundamental issues and challenges

Universities are having mandated increases in postdoctoral salaries, but NIH (nor the university) is not covering these increases through supplements to grants. Because of this, grant holders can't afford to hire additional personnel and/or perform experiments due to having to re-budget to cover the cost of these increases. This leads to postdoc dissatisfaction and potentially having to make the postdoc redundant due to an inability to cover salaries and benefits. In some instances, such increases may make paying for a postdoc cost-prohibitive, which then defeats the purpose of the entire system.

Existing NIH policies, programs, or resources

Additional career development awards

Proven or promising external resources or approaches

No response

Response 1951

Perspectives on the postdoc roles and responsibilities

I think a postdoc should be growth in skills required for a faculty position—ie grant writing, management of a lab, growth of scientific skills. It is a mechanism to improve your ability to get a faculty position. As it stands it labels who have a PhD as trainees which is in my view belittling and inaccurate. All desirable jobs involve training and have opportunities for advancement there is no reason to label postdocs as trainees except as a mechanism to justify the embarrassing wages which they are paid.

Fundamental issues and challenges

Postdocs are not paid enough. I can get a job in industry paying 5-10x more than a postdoc after my PhD. After spending 5+ years not contributing to my retirement it would be financially irresponsible for me to take a postdoctoral position. That is why I wont be applying to them and a serious issue with recruitment. To improve retention and quality of life obviously paying people closer to their value, but treating postdocs as closer to independent researchers and having them in environments where their goals align with that of whomsoever lab they are in also would help.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1952

Perspectives on the postdoc roles and responsibilities

To me it is a crucial experience where you can gather research experience, techniques and general management skills before pursuing a faculty position.

Fundamental issues and challenges

The only issue is salary. The compensation for the role is far too low. Most US citizens go to industry where they will be compensated fairly whereas the majority of postdoctoral trainees are becoming international. When I speak to others the international trainees often use the position to get a US residency card to move into industry. It is very difficult for an individual to survive alone on a postdoc salary let alone have a family or live comfortably.

Existing NIH policies, programs, or resources

Forced minimum salaries. The guidelines are often not met, particularly in high living cost areas as well as yearly increases do not exist.

Proven or promising external resources or approaches

Increase salary will improve every aspect of the position.

Response 1953

Perspectives on the postdoc roles and responsibilities

Postdocs are in a transitional stage. Many, particularly those that want academic postings, are aiming to be faculty. But they are really looking for experience beyond their PhD to figure out what their next steps are.

Fundamental issues and challenges

The job sort of sucks. I was a domestic PhD student looking at my postdoctoral options, and any kind of NIH-funded position was unappealing due to low pay. I ended up in a national laboratory, where my starting pay for a named postdoc was $89k. Now that I'm on the other side of the hiring equation, you see immediately that many of the candidates willing to work for the low pay that comes with an academic postdoc are from abroad, who are primarily driven by even lower pay back home. The job just isn't competitive when the hours are long, the pay isn't commensurate with educational attainment, and so potential postdocs that have alternative job opportunities take them in droves.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1954

Perspectives on the postdoc roles and responsibilities

Postdoc is an opportunity to fully develop one's independent scientific career under the mentorship and support of a funded researcher or organization.

Fundamental issues and challenges

There is a highly variable quality in postdocs that I interview. I have a perception that well-qualified postdocs tend to go to larger and more recognized labs. Retention in my lab has been reasonable. Covid aside, my perception is that trainees have a good quality of life as I don't demand specific hours or tasks of them. I don't believe my approach is particularly common though.

Existing NIH policies, programs, or resources

I think a big topic that NIH will have to grapple is what to do about equitable pay for postdocs. PDs are paid quite low relative to industry (my salary went down by almost 2/3 when I left industry for a postdoc), so there is little financial incentive for potential recruits. On the flip side, paying them competitive wages (which would likely exceed mine as a faculty member!) would very easily consume the majority of an R01.

Proven or promising external resources or approaches

I'm not sure what NIH is doing in terms of postdoctoral recruitment, but their efforts on the other topics (training, mentoring, work environment) are apparent.

Response 1955

Perspectives on the postdoc roles and responsibilities

With funding uncertainty I feel uncomfortable committing to hiring a postdoc who may expect to stay longer than the typical 5 years of an NIH grant.

Fundamental issues and challenges

Students see the issues faced by academic faculty and decide that industry is a more secure and better paid option. I also think that industry offers clearer guidelines on job expectations and more consideration to quality of life. I also hear that postdoctoral recruitment is hard at the moment, which discourages me from looking to hire.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1956

Perspectives on the postdoc roles and responsibilities

I am currently wrapping-up my PhD. My plan was to finish my PhD and find a job in industry. However the more I look the least qualify I feel for positions. I am considering a Postdoc as a way to generate new skills and become more marketable in industry. However the post-dock pay wage make this a hard commitment to make.

Fundamental issues and challenges

Pay wages. Most post docs pay between $70-80K/yr. This isn't competitive in CA. Industry jobs usually start around $100-110K/yr.

Existing NIH policies, programs, or resources

Create postdocs positions that would guarantee preparation for industry jobs. I find it scary to commit multiple years to not generate transferable, highly sought after skills.

Proven or promising external resources or approaches

No response

Response 1957

Perspectives on the postdoc roles and responsibilities

It should be a gate for exploring several aspects of being a successful researcher/PI. This may include teaching as well.

It should not only be viewed for the completion of PI's work but also needs to focus on how a PI more importantly successful PI's are groomed.

Fundamental issues and challenges

In an academic setting and based on personal experience, the benefit is pretty low compared to industrial ones. With a few exceptions, academic PI's are focused only on the completion of their grant work, rather than including them in professional development like involvement in grant writing/renewal, and helping in individual grant preparation.

Most international scholars, view it as a step toward getting their permanent residency before joining to industry. And the PI's exploit on this basis.

Existing NIH policies, programs, or resources

Please extend NIH policies to all the institutions too, to create an environment where postdoctoral training is also a respectable position.

Proven or promising external resources or approaches

No response

Response 1958

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1959

Perspectives on the postdoc roles and responsibilities

Ensure career development as whole. This comprises of creating your own niche in terms of research expertise along with providing proof that you can accomplish it by publishing meaningful science.

Fundamental issues and challenges

Payscale—The scale up from PhD to a postdoc position is not sufficient.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1960

Perspectives on the postdoc roles and responsibilities

A post doc is intended to be knowledgeable in all basic lab skills, and several advanced skills and material from previous lab. In post doc they should learn new techniques and expand knowledge into new area as well as have opportunities like networking and learning with a career related focus.

Fundamental issues and challenges

Post docs are at an age where they are buying houses and having children, so living off a low income as a post doc is not sustainable and many graduates may skip it due to salary. It is also hard to drag a spouse and family to a new location knowing that it is a temporary job.

Existing NIH policies, programs, or resources

Higher salaries are good but also funding poorer labs in more spread out areas allows for post docs to work more locally without uprooting their family will result in more overall post docs, or at least add a moving allowance to make it easier

Proven or promising external resources or approaches

The universities treat us as though we're disposable intern workers. We get worse health insurance than the faculty and students and receive less than $500 a year from the school to fund post doc events. No community amongst us. Higher salary and better treatment from universities will help

Response 1961

Perspectives on the postdoc roles and responsibilities

A postdoc position is in weird transitional space, where the postdoc is both an employee and an individual seeking out further training. I propose that a postdoctoral experience should be a protected time to allow for an individual to expand beyond their graduate training, gain experience with grant writing or teaching depending on career path, and conduct their own research. Although postdocs will be attached to labs; these attachments should fundamentally be symbiotic with both the lab and postdoc growing from the attachment. Additionally, all postdocs should have the financial stability required to engage in deep thinking and research without the burden of service or teaching. Postdocs need to be treated as junior faculty, engaging in the research activities required to establish their independent lines of research and national reputations.

Fundamental issues and challenges

There are two common and contradictory assumptions about postdocs that are hindering and damaging to academic postdocs:

a) a postdoc is a lab manager who does not need career development or their own research time and

b) a postdoc is "glorified doctoral student" who is too junior to assume responsibilities over their own time and research. If a postdoc is nothing more than a lab manager, then they should be paid and treated accordingly, i.e., competitive salary, retirement benefits, etc. If a postdoc is a "glorified doctoral student," then they should receive more protections, access to appropriate developmental resources, and their postdoctoral time should not count against their early stage investigator time.

These two assumptions highlight the fundamental issues for recruitment, retention, and quality of life. Both assumptions pay postdoctoral scholars too little, provide them little to no protections from abuse, bullying, or retaliation, undermine their ability to save for retirement, and instill barriers to adequate health care. These problems are exacerbated for women, trans-individuals, individuals with disabilities, people of color, parents, and visa-holders.

By placing postdocs, writ large, under the power of one PI who then decides what type of postdoctoral experience they want, we create the space for abuse of power.

Existing NIH policies, programs, or resources

Fundamentally, there is a culture change that needs to happen. This cultural change needs to affect the structural supports for postdocs, moving them away from being "someone's postdoc" and into a space of engaging in a "postdoctoral experience." Below are some actions that NIH could explore that are already in place.

1. Increase childcare support for postdocs with children
2. Require all PI and postdoctoral mentors to participate in training around the ethical treatment of people, such as Raising Resilient Scientists, and require continued refresher courses
3. Increase allowable vacation days to 35 (minimum; current max is 15)
4. Expand existing methods of reporting abuse and bullying, such that postdocs can report abuse and bullying to an outside party and then follow through on investigations by taking actions against the PI while ensuring the postdoc's privacy is maintained
5. Increase salary caps or provide alternative methods for increased compensation

Proven or promising external resources or approaches

Here are some additional approaches that should be explored,

1. Explore the possibility for visas to be held at the university level by a neutral party—not the PI
2. Allow postdocs to save for retirement without being penalized

Response 1962

Perspectives on the postdoc roles and responsibilities

Academic Postdocs are the most underpaid entity in the whole Accademia system. They are expected to work hard all the time sacrificing their own personal life. Even though they work so hard, there are still chances that they can get fired from their job any time. In short, there is no job security. So, in my view, the postdoc position is nothing more than a trainee position where expectations are high, stakes are high but its only one way. There is no way that the Postdocs are getting benefits also. Only the PI creates endless pressure to have their own benefits.

Fundamental issues and challenges

Visa issues, Lab environment, over expectations are the basic challenges a Postdoc experiences.

Existing NIH policies, programs, or resources

Salary should be increased definitely.

The advisor or PI should also get training about mentorship. They should learn how to train a postdoc.

This kind of review process (RFI) should be done frequently where the Postdocs can share their thoughts.

Proven or promising external resources or approaches

No response

Response 1963

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as a career path only seriously considered by someone who aspires to become faculty at an academic institution. It is an opportunity for a recent graduate to work under an established principal investigator at a respected university to learn how to run an academic research lab. The position has a lot more responsibilities than that of a graduate student because there is an expectation of scientific competency that was acquired during their graduate work.

Fundamental issues and challenges

Money. Postdoctoral positions in the United States are grossly underpaid for the skill required to obtain the job. Considering that the average salary for a postdoctoral position in the United States starts at ~$49k and industry positions can pay anywhere from double to triple that depending on the research area. Working as a postdoc in an academic lab often requires more the 40 hours a week for less money than you can make elsewhere. There is also no guaranteed of a faculty job upon completion a postdoctoral position either. Ultimately, qualified graduate students choose to not pursue postdoctoral positions because its extra years of their lives where they are unable to recoup the investment that they have made into their training and education.

Existing NIH policies, programs, or resources

I am not familiar with existing NIH policies, programs, or resourcesbecause I have not seriously considered pursuing a postdoctoral position for the reasons I have outlined in the fundamental issues.

Proven or promising external resources or approaches

Other than increasing the salary to be competitive with industrial positions there is no proven way for the NIH to be competitive for recruiting qualified scientist to work in postdoctoral position.

Response 1964

Perspectives on the postdoc roles and responsibilities

Primarily to participate in state of the art research

Fundamental issues and challenges

Resources of all kinds

Existing NIH policies, programs, or resources

Nor sure

Proven or promising external resources or approaches

Not sure

Response 1965

Perspectives on the postdoc roles and responsibilities

The postdoctoral training period is a special time to be a scientist. For those with ambitions in academia, it is the last time you will be in a fully mentored position and the last time that your main professional responsibility is research. That said, I think that postdoctoral training programs (and individual mentors) could do a much better job of training postdocs for all of the things an academic career will entail beyond the bench. To be competitive for independent academic careers, postdocs are told that they should be "well-rounded", which in my experience roughly translates to being connected and active in their broader scientific communities, developing effective mentoring and communication skills, and participating in initiatives to support graduate and postdoctoral training at their home institutions. However, as a postdoc, most funding sources only support research activities, meaning that there is an inherent bias such that only those who have access to support or resources outside of the meager postdoc salary will be able to participate in such "extracurricular" endeavors.

Fundamental issues and challenges

Postdocs are not paid a living wage. Most postdocs have to choose between their research and their personal lives, or are forced to leave academic research positions if they are not able to support their needs. The idea of a 2-3 year postdoc is antiquated.in the biological sciences, most "successful" postdocs remain postdocs for periods of time that are often longer than their time as PhD candidates. Recent doctoral graduates are not blind to this and are fully justified in seeking alternatives to postdoctoral positions.

Existing NIH policies, programs, or resources

EXPAND THE ESI ELIGIBILITY CRITERIA. Why should someone's time as a postdoctoral trainee count against them as they transition to an independent position in academia? The ESI period should start on the start date of one's independent academic position. The current system favors those who got "lucky" in their postdocs and were able to move on quickly to start their independent careers, but not all biomedical research moves quickly.

Proven or promising external resources or approaches

No response

Response 1966

Perspectives on the postdoc roles and responsibilities

I feel that postdocs really carry many research directions forward. I view this training opportunity very favorably because of my particular experience at my institution and under my PI. I know many are not as fortunate and I think that more equitable practices would be better for others. I'm not sure the best way to hold PIs accountable so that they behave with integrity. (I have heard horror stories or even seen friends, typically non-citizens, who are threatened with losing their role/position and thus visa status directly by their PI).

Fundamental issues and challenges

A major challenge for recruitment of postdoctoral fellows is that the high value placed on different training experiences often requires postdoctoral fellows to relocate to a new institution (many times in a different state). Yet very few, if any, universities provide relocation expenses to postdoctoral trainees. This means that a trainee coming from a PhD with a stipend that barely meets a living wage now has a multi-thousand dollar relocation expense in order to accept a competitive postdoc. This selectively disadvantages trainees with fewer resources at their disposal (either from family, spouse, etc.) or those who cannot relocate for personal reasons.

Existing NIH policies, programs, or resources

When I began my postdoc, I was supported on a IRACDA K12 training grant, which included benefits (insurance, retirement, employer match, etc.). My career goal is to become an independent investigator, which requires a track record of securing independent funding. This means applying to fellowships (e.g. NRSA/F32, foundation fellowships, etc.). Unfortunately, when I received my NRSA, I lost those benefits, which is inexcusable. Luckily, my department was able to support my health insurance, but I still lost retirement benefits/options. Many are unable to save for retirement during their PhD, leaving most postdocs in a situation where they have lost ~8-12 years of potential retirement savings, early in the career when these savings have the biggest impact! I understand that most fellowships do not include overhead that would cover these benefits, but the NIH should be able to require these institutions with multi-billion dollar endowments to adequately support their most vulnerable trainees, who are carrying out the research projects that bring in grant money.

Proven or promising external resources or approaches

I had an amazing experience as an IRACDA K12 postdoctoral fellow. I am a huge proponent of cohort based trainings and think that more cohort-based initiatives would enhance the postdoctoral training ecosystem. There are many training grants, etc that attempt this, but I think the value of the IRACDA program is that it brings together postdoctoral trainees from different cultural/societal background AND from different scientific backgrounds.

Response 1967

Perspectives on the postdoc roles and responsibilities

I view it as a temporary position (2-5 yrs) meant to train early stage scientists that want to gain expertise in a new area. They should be getting up to speed quickly and driving productivity that will positively impact their career trajectory. This is a make-or-break time in their career development.

Fundamental issues and challenges

Salary and mentoring. The salaries are not as competitive I would guess and with the re-assessments that are taking place throughout the workforce, they are looking for greener pastures that pay well. Academia cannot compete. As a PI, I can’t spend more on a post-doc salary with the restrictions on budgets for research grants. They have not grown so I cannot compete with a company. Post-doc salaries have increased through NIH standards, but it is probably still not competitive.

I think retention is also negatively impacted by the lack of formal mentoring. Postdocs are not getting the same attention as other trainees at different levels, and so it becomes highly variable from lab to lab. And some PIs view these trainees as data generators. They are not getting good training and there is often no formal committee to advise them or help them with their career development. It currently falls to the PI.

Existing NIH policies, programs, or resources

Implement similar standards for institutions to support post-doc mentoring and training. Training grants for post-docs can be encouraged to implement these better policies throughout institutions.

I am not sure how you change salary tbh. Without more funding, there may be less money to go around. Is the compression in post-doc number reflecting the lack of growth in NIH funding. We are supporting more labs, but is this a necessary compression on a system that has become too bloated?

Proven or promising external resources or approaches

Having institutions establish formal mentoring committees would be a great start. Resources that support post-doc mentoring would be great to make this more common throughout academia.

Whaat are industry partners doing? Is there a way to partner to create career development options?

Response 1968

Perspectives on the postdoc roles and responsibilities

Postdoctoral position (from my point of view) is an entry position to academic faculty jobs, since post docs are not mandatory for academia. In post doc the person is supposed to start developing semi-independent research in the lab the are affiliated to & with the mentor of the lab.

Fundamental issues and challenges

the most prominent problem by far is the pay gap between post docs position and industry jobs, there is even a huge pay gap between post doc positions in the industry and that in the academia. the low pay (not sure if we can call it a salary, it looks more like a glorified graduate student stipend) makes post doc jobs in the bottom of the job selection.

the second limitation is mentoring; while post doc is looked at as a "training", most PIs I know deal with post docs as a fully fledged person who does not need support (but they don't pay them as full time job). and in many cases I the PI brings a post doc to do something the PI don't know anything about.

third limitation would be the immigration issues facing international post docs due to many things. The narrow window allowed to move between positions without having to exit the US and re-enter with new visa makes it harder for international post docs to move easily between labs.

last but not least, I would like to shed light on how toxic the academic environment became. Every PhD graduate have experienced/ seen a fellow graduate student experiencing some level of toxic behavior by their PIs, and a lot of PhD graduates don't want to stay in academia for this exact reason. After what students experience in graduate training, the vast majority don't want to work in a training job nicknamed "grad school 2.0".

Existing NIH policies, programs, or resources

As an international post docs, I find it hard to find a postdoctoral fellowship here. the available training funds is very limited and that makes it overly competitive (imagine that ALL international graduates are competing on the SAME fellowship).

Salary policies need to be modified to better pay. If you think about it, it is unfair that a person with the "highest" attainable education level (PhD) is paid a salary below or at best cases equal to the "average" salary for their age group. Speaking of salaries, adjustment according to the expenses of living for the high-expense areas (ex, states of California and Massachusetts) must be mandatory. it is unfair to pay post doc 55K yearly stipend in a city where a studio apartment 20 miles away from his workplace will cost them 30K in rent/year.

Proven or promising external resources or approaches

No response

Response 1969

Perspectives on the postdoc roles and responsibilities

Opportunity to

1. pivot,
2. specialize,
3. bolster resume,
4. last chance to determine if academia is right for me.

Fundamental issues and challenges

Financial compensation for the quality and quantity of work is completely unfair. Many trainees realize this early on and leave academia for this reason. Postdoctoral training is much more stressful than being junior faculty, so the intensity of that experience is self-selecting people out.

Existing NIH policies, programs, or resources

Perhaps write synopses of the PARs in a more user-friendly manner (rather than as a government document). NIA has a blog written by program officers that breaks things down into understandable terms. The problem with the PARs as they are current written is that it reads like a legal document where all things are laid out, but you bury the lead.

The infographics for career paths are nice, but a more comprehensive, interactive, online tool may be more helpful.

Proven or promising external resources or approaches

European and Australian postdocs (and graduate students) seem to enjoy life more and get paid more. There could be some lessons gleaned from other systems.

Response 1970

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be an opportunity for the scholar to gain deeper training in their area of interest. This should not simply be a continuation of your work in graduate school, but build meaningfully on that training and endow you with the skills necessary for success in the next stage of your career. It should be supportive of trainees headed to research-intensive faculty positions at universities and colleges, but also of trainees headed to different areas including teaching, industry, and elsewhere. Postdocs should have more independence than graduate students, and be supported in developing specific interests particular in the second half of the postdoc (e.g. projects that will support independent research after the postdoc lab).

Fundamental issues and challenges

Pay. Postdoc salary can be hard financially (especially with kids), and hard to justify through the many years it takes for a successful postdoc in my area of research. This might have been more acute as a first-generation college student, but it also might be felt by most postdocs (but I remember my brother asking me, "If you have a PhD, why do you still make so little?"). Leaving my postdoc for another job that would pay twice as much was always in the back of my mind, even though my career goal throughout my postdoc was to obtain a tenure-track faculty position. Better support for parents is also needed. Another major concern is weighing the value of a postdoc—for a student interested in pursuing academic research, it's no secret how hard it is to get good positions now. Seeing that competition for faculty positions (who doesn't know an absolutely stellar postdoc that struggled and failed to land a faculty job in their first, and even second year trying?), and thinking about spending 4-8 years in a postdoc, I would definitely think very hard before starting a postdoc if I were graduating now. Students also sometimes say don't want their PI's job "because they want a life". This can be interpreted several ways, but when I have heard this, I think it comes from wanting a good work-life balance. Graduate students now don't all want to work on the weekends or evenings, but they see us doing that, and I think it's fair to not want to sign up for a career where that seems expected. I am not fully sure how to address this; as a new faculty member I do feel like I need to work weekends and evenings, often, to keep up.

Existing NIH policies, programs, or resources

Increase the recommended minimum postdoc salary, and increase raise percentages with each year as a postdoc. Track postdoc career trajectories, and make this data easily found so students can better inform their decision to pursue a postdoc.

Proven or promising external resources or approaches

No response

Response 1971

Perspectives on the postdoc roles and responsibilities

Catalyzing future independent investigators to conduct rigorous basic, translational and/or clinical research.

Fundamental issues and challenges

The traditional postdoc structure and associated salary is no longer sustainable with maintaining an adequate quality of life. Graduate students, like myself, can no longer maintain a positive outlook or quality of life following graduation if entering a traditional postdoc. Industry opportunities are simply the more lucrative decision now, especially if one wants to raise a family. The postdoc crisis exists for several major reasons: salary that is unsustainable for adequate living, not enough jobs, and limited support for ESIs pursuing extramural funding.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1972

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an avenue to continue training via a few strategies:

1. gain additional training in necessary skills for transitioning to research independence;
2. have protected time to increase publication/presentation record and collect preliminary data for establishing research independence/developing a career-development grant application. The postdoctoral position also offers additional opportunities for networking, time to interview for faculty positions, and ability to exercise preliminary research independence without the additional pressures of being on faculty.

Fundamental issues and challenges

The main issues are: low pay (particularly that is not commensurate with cost of living: for example, $53K goes a further in North Carolina than it does in San Francisco), poor insurance coverage, and poor time off/parental leave. Many postdocs are getting married and/or starting families during their training, but struggle to have time off to go on honeymoons, spend time at home after birth of a new baby, or financial ability to afford feeding, diapering, clothing, childcare, etc. for children —particularly in areas with higher costs of living. This is especially relevant for female childbearing postdocs who have little to no time to recover or bond with their babies. For female postdocs who experience difficult pregnancies, this may result in much time off without pay. Lack of time and money results in many postdocs delaying families, leaving postdoc to start a family, and/or living with anxiety over making ends meet and caring for children.

Moreover, health insurance for postdocs is subpar. For major medical emergencies or postdocs with medical issues requiring regular physician visits, many postdocs would/do incur large medical bills. Combined with low salary, it is not feasible for many to enter into a postdoc when industry careers offer better benefits and significantly more pay.

Finally, low availability of money for reimbursement for travel to conferences and many forego some networking/research presentation opportunities due to inability to afford the unreimbursed travel.

Existing NIH policies, programs, or resources

Allowable training-related expenses should be expanded to include additional travel costs. For example, my training grant only allows $2000 for travel to the NRSA trainee research conference. First, $2000 is maybe the cost of a hotel and flight in today’s economic climate. Secondly, that limits my ability to attend national conferences in my research field because I cannot afford the costs. Meanwhile, there is the extra

"training-related expenses" budget that I am unable to use for travel despite it being a necessary and beneficial part to my training.

The ability to offset childcare costs via a $2500 stipend is incredible. However, again, cost of living and cost of childcare across the country is vastly different. This should be taken into consideration when determining the appropriate stipend level for childcare.

Stipend levels should be altered to be commensurate with cost of living and inflation.

Proven or promising external resources or approaches

Working with insurance companies to alter the coverage for postdocs will be invaluable and reduce stress surrounding medical needs. Working with institutions to improve leave policies, particularly parental leave, will also be beneficial at improving morale.

If the postdoctoral benefits can be more commensurate with what will be offered via industry jobs, it may be easier to recruit and retain postdocs who are interested in academia but cannot afford the low benefits PLUS the low wages. Of course, NIH will not be able to provide the same level of benefits as industry jobs, but commensurate benefits and salary coupled with the excellent additional training may be able to entice individuals to remain in academia for a few additional years.

Response 1973

Perspectives on the postdoc roles and responsibilities

Initially when one starts his/her Postdoc, every one want to grow in Academia, But eventually, the interest fades away because of environment and the conditions most of the PI create in the lab.

So my perspectives how postdoc should have been is totally different than what i see now.

There should be proper regulated system.

Fundamental issues and challenges

The Fundamental issues and challenges in the postdoctoral recruitment is the salary and time wastage because the Principal Investigators don't publishes till they grants funded for that particular project.

Though there are many challenges, like postdocs are expected to provide more efforts and being paid less. This is one of the fundamental issue. Another important issue is the unmet promises from the PI's to the postdocs especially, the longways to jump to the next level of their career.

Another thing i would like to mention is that I am almost in the 8th year of my Postdoc and i am now getting $54000 annually. In particular the PI's at [redacted for anonymity] pays very minimal salary (epecially at Department of Pharmacology and Regenerative medicine).

Existing NIH policies, programs, or resources

I don't think existing policies are balanced as we see very high bias interms of postdoc fellow recruitment. For example, in one particular department one PI pays to his/her according to the rules but at the same time others don't follow.

I would like to mention to the NIH that the rules for postdoctoral recruitment should be modified and this should be regulated by some committee which is under the direct control of NIH.

There should be proper Basic Minimum of salary amount which a postdoc should get and importantly, there is be defined increase every year irrespective of the Institution, lab or the Principal Investigator.

Proven or promising external resources or approaches

I can only say some PI's are really mentors, otherwise PI's kill the career of their postdocs rather than developing it.

Response 1974

Perspectives on the postdoc roles and responsibilities

A postdoc is where you receive training to develop skills and confidence to become an independent researcher. You receive training on grant writing and grant thinking. Guidance from your PI to apply for pilot studies and develop them into training grants and R01s. You develop your teaching portfolio and build connections with program officers.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

More free NIH grant writing workshops. Networking opportunities with NIH PD and POs. Grants and financial support for joining research organizations such as SER, AACR, APA, and ISEE. Opportunities to review grants.

Proven or promising external resources or approaches

Peer mentoring/matching programs

Postdoc retreats to exchange ideas and share experiences

Writing training

Course development training

Time management skills and tools

Response 1975

Perspectives on the postdoc roles and responsibilities

Incredibly valuable for post docs, research teams, academic environment and broader work force.

Fundamental issues and challenges

I have directed a post doc research training program for 20+ years. Over the last few years there has been a clear decline in number of applications. I don’t know why this is but suspect it is due to the intense competition for subsequent positions. Perhaps this is a problem that is self-correcting. But clearly in order to increase recruitment/application we need to increase the likelihood of success post training. That is a complex set of factors that there is not space to address here.

Existing NIH policies, programs, or resources

I think the issue is not inherently within the post doc training programs but post training (as above).

Proven or promising external resources or approaches

Increase time of post doc. Our program is two years. I think three years would decrease pressure on trainees and better prepare them for subsequent experiences.

Response 1976

Perspectives on the postdoc roles and responsibilities

Envision and execute scientific project; train in new technical and leadership skills

Fundamental issues and challenges

Low stipends; bad environments with little accountability of mentor abuse of power

Existing NIH policies, programs, or resources

Higher NIH stipend levels at least consistent with the NIH intramural pay scale

Proven or promising external resources or approaches

No response

Response 1977

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a dedicated time to conduct research and build a research program. While there is a little mentored training in the first year or two of the postdoc, the postdoc position is primarily a time to conduct independent research that benefits the lab and the university.

Fundamental issues and challenges

The fundamental issues facing postdocs is that our salaries and benefits do not match opportunities outside academia. In recent years, our salary has not kept up with the rising cost of living due to inflation. Additionally, many postdocs are starting families, but our salary/benefits are not sufficient to support them. As highly trained individuals in our 30s-40s, we do not make enough to save for retirement. These problems, combined with the uncertain time period that a postdoc position often lasts, are driving individuals to leave academic research. Additionally, the lower income that postdocs receive are driving individuals from lower socioeconomic and historically under-represented groups to leave at a higher rate.

Existing NIH policies, programs, or resources

The current career development awards should be expanded to include more opportunities for late-stage postdocs and individuals from historically under-represented groups. The existing eligibility window for the K99/R00 is ridiculously short as it discriminates against individuals with families, medical issues, or COVID-related disruptions. The prior extensions to the eligibility window for COVID were not sufficient and ended abruptly. There needs to be multiple grant opportunities and funding sources to support postdocs transitioning to faculty positions as well as to postdocs transitioning to non-tenure track positions.

Proven or promising external resources or approaches

No response

Response 1978

Perspectives on the postdoc roles and responsibilities

A postdoctoral position means moving to a new location for a temporary position and continuing to do the same work as grad school.

Fundamental issues and challenges

Pay is barely over the graduate stipend when health insurance costs and taxes are accounted for and far less than industry. Because the goal of most postdocs is to get a job that requires moving again, it’s hard to feel settled

Existing NIH policies, programs, or resources

The stipend needs to be increased. Additionally, PIs need more training on how to structure postdoctoral fellowships to be completed in under 5 years and end in the successful placement of the postdoc in their desired career

Proven or promising external resources or approaches

More professional development opportunities, time limits of postdoctoral fellowships, yearly check ins with additional faculty

Response 1979

Perspectives on the postdoc roles and responsibilities

I view post-doc position to develop additional technical expertise and explore challenging research questions more independently but also receiving support from mentors. Unfortunately, many postdocs are just left on their own to survive without much support in training and development.

Fundamental issues and challenges

Mentors don't take post doctoral scientists very seriously specially when they are from minority. There is no accountability of why a certain postdoctoral scientist was not able to publish. Was it the advisor's fault who are busy continuously building their careers. Lot of racial discrimination happens. Secondly salaries are the lowest for individuals with the highest degree. People actually say that you should focus on training and not money. However that is completely wrong because you have already spend so much time in school and with no prospects of job or financially stable future, results in depression, lack of motivation and desire to do research.

Existing NIH policies, programs, or resources

Lot of higher education has people who are international students and they are not allowed to apply for certain grants then automatically their resume wont stand out.

Again lot of weightage is given to people who have list of accolades. During my time in academia, I observed all these awards such as AHA and conference talks are determined by who is their advisor. There was no outcome from the research as the winner never really worked on the project but having the award boosted their resume to get more recognition.

Mostly people are only working to build their careers and not to continue research.

Lot of it depends on the advisor and not the student. Which is complete unfair advantage.

Proven or promising external resources or approaches

1. Improvement in salaries, most US undergraduates make more in industry than postdoctoral scientists. This is completely demotivating and shows there is no value in doing basic research which is the fundamental in generating IP.
2. There is a strong inclination towards studying only translational science.
3. Putting emphasis on publication than intellect as a judging factor of students merit.
4. Unsaid racial discrimination.

Response 1980

Perspectives on the postdoc roles and responsibilities

The postdoc position should provide adequate training in becoming an independent scientist. This includes grant writing, project design and implementation, and mentorship. The lack of uniform training of these things at the postdoc level is apparent and needs to be promoted regardless of subsequent career path.

Fundamental issues and challenges

Given the competitive nature of the academia, post-docs are inherently required to work long hours to even have a chance at success. The high-stress, long-hours, and minimal pay discriminates against many who are more than qualified, including those who have or are wanting to start a family. Increasing the institutional minimum salary set by the NIH and providing better benefits is an absolute must if recruitment and retainment efforts are to be improved.

Existing NIH policies, programs, or resources

Given the minimal faculty positions available, one could argue that the NIH is currently supporting to many post-docs. One way to potentially increase the post-doc salary is to simply put a limit of the number of post-docs a lab can have. Perhaps this limit is even applied at an institutional level. This may "re-invent" the process of procuring a post-doc, having a more generalized application system, like is done for graduate school.

Proven or promising external resources or approaches

No response

Response 1981

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary, options following a postdoc are slim, most industry doesn't require papers or much of a postdoc if any

Existing NIH policies, programs, or resources

I don't think NIH is the problem. Generation shifts and the complicated nature of getting to tenure these days is the problem. The bar is so high that only those who are truly exceptional and work 24-7 can tread water. Students don't want to work even 40 hrs per week, so a postdoc or PI position is no value to them. The next generation is in it for the money, and there's no money in science

Proven or promising external resources or approaches

Faculty positions are the problem, not postdoc, which causes the lack of postdocs. It's becoming extremely challenging to get a PI position and become established to tenure. It's more competitive and the bar is very high, and academia is not supporting sufficient funds to run and staff a lab, R01s are not enough and get cut often. The next generation wants work life balance that is not conducive to most biomedical science roles.

Response 1982

Perspectives on the postdoc roles and responsibilities

I believe that post doc training should help nurture a fully independent scientist for the type of role they would like to pursue in the future. There should be some scientific training as well so that the scientist can learn new and pertinent techniques, but the focus should be on preparing the individual to write grants, manage people, manage time and projects, and to conduct great research.

Fundamental issues and challenges

In academia, there is a focus only on academia. No training for industry positions is available. The academic advisors are not trained in management skills and do not provide psychologically safe workspaces (this goes for doctoral training mentees/PIs as well). They take their stress on grant writing out on their post docs or trainees. They still berate people in front of other coworkers. There is zero work life balance and zero HR protection. There is zero vacation. There are extremely high expectations and pressure with little pay. You can easily move to industry and make 3x the money in an industry post doc. In industry, management is required to take managerial and psychological safety training as well as harassment training. Tenure does not protect people if they participate in bullying behaviors in industry but it does in academia. There are little benefits as an academic post doc and the pay doesn't match inflation. You can hardly afford to live on current salaries and if you have a family there is no way you could afford daycare. Why would anyone want to work in this environment when they can make a more direct impact on patients by working in industry while having better workplaces/benefits/safety. The entire academic tenure system should be overhauled. It is difficult to get grants and we see how it affects our mentors and we want to leave. It's not a good system.

Existing NIH policies, programs, or resources

Required management training for mentors

Required psychological workspace training for mentors

DEI and harassment/bullying training

Better pay and better benefits

Vacation time and sick time

HR requirements

Proven or promising external resources or approaches

See previous comments

Response 1983

Perspectives on the postdoc roles and responsibilities

1. Opportunity to share and teach knowledge about research, writing grants and papers, presenting, and some effort on teaching. During meetings, introduce the postdoc to many local, national, and international colleagues.
2. Should be viewed as someone qualified and relatively independent with limited supervision and more assistance focussed on what would best benefit the postdoc.

Fundamental issues and challenges

Traditional job prospects are very limited, and we must be more honest about that.

Difficult to recruit in smaller, not as well-known colleges or universities.

Politics get in the way these days when trying to locate and convince the best applicants to join the team as a postdoc.

Existing NIH policies, programs, or resources

More programs that facilitate the transition from postdoc to junior fac.

Though, from experience, when a postdoc gets a K99, then he wraps up the project and is often immediately recruited by another "bigger/better" university that loves these applicants as they arrive with their own funding. Be creative to find a way to protect this exode of K99 awardees (in which the mentor spent a lot of effort). Find incentives that maybe a 50K be given to the current Dept if they can recruit that person (and that 50K would not be available if the applicant goes to another institution. It is even more difficult in clinical departments to commit to such recruitment (so there is no incentive at the end for the mentor to do these K99-R00.

Proven or promising external resources or approaches

Improving National and International Recruitment maybe with a central repository of open positions (for free).

Response 1984

Perspectives on the postdoc roles and responsibilities

Post docs are severely underpaid. Please do something. There scarcity of smart people in academia will be the prominent otherwise.

Fundamental issues and challenges

Extremely low salary.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1985

Perspectives on the postdoc roles and responsibilities

Postdoc is supposed to be a training position where Postdoc receive academic training to prepare him/her for next level in career.

Fundamental issues and challenges

Postdoc nowadays suffer from many difficulties and hardships starting from low salary compare to working hours and whether enough to cover a small family expenses to poor monitoring by PIs. While this position in essentially important for advancing science in all fields, those trainees (postdocs) are not treats equal to their effects and they are not well protected against PIs power over them especially that most of them are international who are in USA on visas.

Many freshly graduated PhDs try to avoid going through postdoc positions because they don't want to spend several years earning little money (most times not enough to survive) and not getting enough support by their monitors to progress in their career.

Existing NIH policies, programs, or resources

Most important is to monitor PIs activities because most PIs are selfish and intentionally blocking their trainees which is the opposite of their proposed role as PIs. Please, watch PIs' behaviours closely and request school/departments to follow on how PIs-Postdoc relationships are going from the start through toward the end of the proposed training. Most of the time, postdocs are the loser side and this produce bad reputation where newly graduated PhDs who will decide not to do postdoc but to join industry instead.

Proven or promising external resources or approaches

I think, as someone spent many years in postdoc training who wished to have good transition to faculty position, the most difficult part is dealing with PIs during training. I worked with couple of them and they share same bad attitude that should not be in a person who serve as academic and should set as a good example. NIH needs to work closely with schools/departments to help in improving the outcome of postdoctoral training and make sure they are not just used to make PIs only successful.

Response 1986

Perspectives on the postdoc roles and responsibilities

I view a post-doc as a known stepping stone towards academia and continuously refining the research interest, techniques, scientific thought and direction of the field for faculty positions. However, I also feel this is a laborious undertaking that does not pay for the quality of work demanded, treatment of the stature "post-doctoral" and lack of sustainability given the diverse set of graduated individuals from many PhDs. I am an undergraduate seeking to consider this route, but financial security will always be priority.

Fundamental issues and challenges

The most obvious one is pay. How can one claim to be an independent scientist, fully-trained yet his/her/their value is worth at a bare minimum, "not much more than" a PhD stipend? Especially, given that the industrial life is much more appealing financially but also academically in some sense too—it just does not seem like a great investment. It's not only the funding that I see is an issue, it's also this old-school culture of "publish or perish" and to join the best of the best labs for the sake of prestige. This does not push science forward. This limits science. Especially by those in marginalized groups that are being brought into the academy and expected to survive by the traditions of "it is the way things have been" and yet, systemically and historically, have favored a group more so than the others. The richness of a postdoctoral training does not mean we should devalue of a person. And that is increasingly more true if the cost of living does not reflect the salaries. Let's start reforming old practices and push science forward by adapting the old ways of post-doctoral academia.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Please consider the following below in the way we think about the ecosystem:

https://journals.plos.org/ploscompbiol/article?id=10.1371/journal.pcbi.1009313

Response 1987

Perspectives on the postdoc roles and responsibilities

A postdoc position should only be training to step into an independent role. However, many principal investigators view it as a position to help their lab and their career, with minimal or no grooming of the postdoc to be independent. On contrary, some PIs make sure that the postdoc remains in the position as long as can be stretched and when the time limit is reached, they try to leave them helpless to struggle with their career.

Fundamental issues and challenges

1. PIs who are not interested in development of other people careers and merely care about their labs
2. Very low income and bad health insurance coverage for postdocs
3. Nepotism to retain people who butter the PIs ego and not to retain those who are rational thinkers. Opinionated postdocs are at the risk of being fired if their ideas are better than a PI. There is no way to let postdocs think and work freely.
4. PIs who are toxic and discriminating to the postdocs are threat to the science.
5. No conflict resolution or ombudsman to handle toxic work environment.
6. Stepping into a career which may not land anywhere in the future, leaving postdoc and their families stranded in tough situations. All their years of training is wasted as a result of poor retention in academia.
7. Often departments hire postdocs from big lab (nepotism) because they know their PIs. No equity standards in hiring process
8. Often departments have someone whom they want to hire even before they post a faculty position

Existing NIH policies, programs, or resources

1. NIH must have a means to measure the PIs capacity to supervise a project. Some PIs are not intellectually able to train a postdoc due to lack of experience in their field. If you refute a PIs idea even if it not backed by scientific hypothesis, they may perceive it as rude behavior and the postdoc may face threat to their career as retaliation from the PI.
2. NIH must have a website where postdocs can rate a principal investigator. This way prospective postdocs will have the means to check if the PI has a good or bad reputation with other mentees.
3. NIH must have a confidential website to report any kind of discrimination and must support postdocs who are victims of such abuse. I was one of the victim, but the institute where I worked didn't take any step to ensure PI is investigated because the PI was a clinician who more necessary for the hospital than a researcher
4. Institutes favor clinicians over scientists.
5. NIH must make it mandatory to hire people without professional references. Professional references from a PI who is bad to the postdoc won't be fair portrayal of the postdocs ability. If NIH wants to keep the professional references then it should also be mandatory for a PIs promotion. PIs must need a reference from their postdocs for their assessment as a PI. There should be some way to have a 2D referencing systems, which means PI writes reference for postdoc's future jobs and postdoc should write a letter for PIs promotions. This will ensure no PI intentionally holds a postdoc for an infinite time and also ensure the postdoc is not unfairly treated
6. All the references should be visible to both parties. Professional references should not be confidential.

Proven or promising external resources or approaches

1. NIH must make it necessary to provide a report for past postdoc recruitments as a section in PI's R01s. This section should also be scored and must be used to decide on future funding or R01's outcome
2. NIH must make a website with PI ratings, so that no future postdoc has to go through the same rude behavior from a PI
3. All the postdoc trainings must directly be funded by NIH, so that the PI doesn't blackmail the postdoc to fire in the middle of postdoc position
4. Postdocs must get same salary and must get chance to present their work every 6 months at their host institute. Often PIs present the work and postdocs don't get chance to present their own work

Response 1988

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is meant to be a continuation of the training that you received in your PhD. However, instead of the technical skills, I think that postdoctoral should entail more leadership training and responsibilities, regardless of whether the individual intends to continue in academia. For those who are intending to continue in academia, it is the place where you also develop your research program and identify your niche within your chosen field.

Fundamental issues and challenges

Many institutions do not have formal support for postdocs, which stand in stark contrast to graduate or faculty support. In many institutions, postdoctoral fellows fall in the cracks as there is usually not a formal office set-up to provide them with formal support. At the same time, this lack of organization means that there is also no social support for postdocs, many of who travel far away from their social and family circles and can feel very isolating. In addition, for non-US citizens/residents there are very few opportunities for funding application, and instead rely on private funding sources which are often extremely competitive, and the availability can vary greatly depending on your chosen field.

Existing NIH policies, programs, or resources

Additional funding opportunities for non-US citizens for all postdocs at various developmental stages (ie. both early and late stage postdocs) would serve to provide more training opportunities for postdocs seeking an academic posting. At the same time, it would help to have formal training sessions for skills that are expected of individuals who want to run their own research lab but are generally harder to develop (ie. budgeting, grant writing).

Proven or promising external resources or approaches

No response

Response 1989

Perspectives on the postdoc roles and responsibilities

This should be an opportunity to focus-in on research topics to lay the foundation of the rest of your career. However, we (postdocs) perform the experiments, collect and interpret the data, and make the discoveries that end up boosting the career of the PI and of the institute/university much faster than our own careers, and for minimal compensation relative to the amount of work/findings we contribute. Where would the PI or the institute be without the researchers?

Fundamental issues and challenges

Salary is embarrassingly low for the amount of experience we bring and the amount of work we do (not to mention the amount of educational debt we accrued to get to the postdoctoral position). I love my research, but cannot support my family on this salary and will be seeking industry employment sooner than originally planned to get compensated appropriately for the tireless hours I spend doing research. Just a single example: with such a low salary, especially with today's exponentially increasing cost-of-living, we cannot afford nice housing, which cascades into endless home repair projects that we must DIY

because we cannot afford to hire help. This takes away from time working/focusing on research and prevents any possibility for free time or much-needed rest. This all results in faster burnout. With appropriate compensation, we could hire help (for home care as well as child/family care) and improve morale drastically. The status as a "trainee" is also very difficult for postdocs in mid-late 30s (most of us): we are not eligible for retirement contributions or other benefits offered to "actual" employees. We are too old and experienced to be treated like young people with no outside responsibilities.

Existing NIH policies, programs, or resources

Honestly, increasing salaries to compete with full-time jobs is the number 1 issue. Many of my fellow grad students skipped the postdoc position to take real, full-paying jobs for the money standpoint alone. We help submit substantial grants for research funding, yet so little of that money directly supports the individuals that make scientific discoveries possible.

Proven or promising external resources or approaches

No response

Response 1990

Perspectives on the postdoc roles and responsibilities

My current postdoc position is offering me learning opportunities to built new skills, project management skills and team work. The learning opportunity by participation in conferences and workshop is helpful in career development.

Fundamental issues and challenges

- I believe the biggest challenge is that the postdoc stipend is very less and is not adjusted for inflation over the years.
- The second challenge is visa options for visiting fellows. NIH-funded postdocs have 212e section on their visa which requires a 2-year home residence. No such policy exists for fellows pursuing their postdoc in Canada/Europe/UK/Australia and hence makes those destinations more desirable for prospective postdocs, and this will impact the US postdoc diversity in near future. Beside 212e, the visa sponsorship is short (1-2 years initially and renewed annually) and for visa stamp renewal one has to go back to their home country and this whole scenario limits participation of postdoc fellows in international conferences/workshops.
- No relocation allowance for postdocs especially those who relocate from outside USA.
- No affordable childcare policy
- Lack of remote work opportunities
- No subsidized housing options (postdoc salaries are not enough to cover rents in this inflated market and it pushes postdocs to rent room in shared houses)
- No pension plans for postdocs
- Maternity/Paternity leave policies are not good
- Gender bias
- Lack of framework for non-track tenure positions

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 1991

Perspectives on the postdoc roles and responsibilities

Contrary to the intended purpose of post doc program, which was to allow early career scientists gain experience in independent scientific investigation with some the guidance for field experts, postdoctoral have become an extension of graduate school experience, where individuals are grossly under-compensated and disregarded, while being used to do graduate student work, lab manager duties, and train younger scientists with very little guidance.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Emphasize on career opportunities after postdoc training

Response 1992

Perspectives on the postdoc roles and responsibilities

Additional training period for highly skilled academic-bound scholars. Employees are appointed with substantial freedom to learn new skills toward managing their own labs and pursuing unique directions for their own future research programs. Responsibilities include assisting with lab and project management and student mentoring with the support and direction of the lab PI. The appointment should not proceed for an indefinite period of time. Outcomes and career goals should be mutually agreed upon at the beginning of the appointment, and the lab PI should be supportive of the postdoc to the fullest extent of their capabilities. This includes letters of support submitted in a timely manner pursuant to application deadlines, etc.

Fundamental issues and challenges

Fundamental issues that I foresee are, primarily, lack of competitive and adequate salary support. Lack of familial support. Other possible issues might include indefinite training periods and lack of PI career support.

Existing NIH policies, programs, or resources

I think the NIH needs to increase minimum salary guidelines. Many PIs use this as a benchmark for establishing postdoc salaries and it’s simply not adequate enough for the level of existing skills that they contribute to the laboratory ecosystem.

Proven or promising external resources or approaches

NIH-sponsored mentoring of postdocs, I think, might help to supplement lab PI mentoring and experience. Conferences and other scholarly events would help to inform postdocs and hiring institutions of potential job candidates. Monetary support for conference travel for postdocs who have not secured or are ineligible for fellowship support would help postdocs pursue academic positions and help alleviate the monetary burden to the PIs.

Response 1993

Perspectives on the postdoc roles and responsibilities

training to acquire a position as a faculty member in an academic setting—stable career prospects

Fundamental issues and challenges

salary, lack of support for women in science especially mothers, lack of adequate day care support in huge cities where cost of living is too high, lack of clear direction for career transition, lack of clear timeline,

publishing issues—too long review process, high stakes for publishing, career transition awards timelines, low funding, long work hours

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

job satisfaction

Response 1994

Perspectives on the postdoc roles and responsibilities

I personally view the role of being a post-doc in academia as an opportunity to further my training and skills gained during my graduate program, acquire new skills in both benchwork and writing and make concerted efforts to move into an academic position to satisfy my intellectual curiosity and also benefit the research community at large by helping excel the careers of people working within the academia, especially from underrepresented backgrounds, by constantly advocating for their rights and creating an equitable atmosphere to support them.

Fundamental issues and challenges

The most significant issues and challenges in this regard are:

1. Non-uniform and mostly lower than average salary.
2. The nature of the job itself where one ends up working 7 days a week (usually on writing on the weekends) which leads to poor work-life balance, poor quality of life and burnouts.
3. Lack/scarcity of funding opportunities for post-docs which leads to disappointment and severely affects passion and motivation in the long run.
4. Exploitative PI centric atmosphere, especially for international fellows, where PIs lack accountability to higher authorities altogether regarding the overall career graph, wages and treatment of the fellows.

Existing NIH policies, programs, or resources

1. Uniform salary policies dictated directly by NIH which are not subject to modification by institutions/ PIs.
2. Creation of more funding opportunities for international post-doctoral fellows, since international fellows constitute the largest fraction of post-docs in the Unites States, most of which are forced to move out of academia after 3-5 years of post-doctoral training when they are not able to score funding for themselves. This, to me, is the biggest impending factor for retention of post docs.
3. Post-doctoral training expectations and consequent burnouts affect women post-docs the most in terms of retention, since most of them are not able to meet the requirements of this role while managing a family and raising kids. Creation of more hybrid (Teaching /research) positions in colleges and universities, with special preferences for women post-docs should tremendously affect retention.

Proven or promising external resources or approaches

A large number of postdoctoral trainees have moved, and many are planning to move out of academia to industry for primarily three reasons:

1. Better salaries
2. Better hours and less stress/burnout
3. Growth directly related to productivity.

If NIH is able to deliver on at least one of these criteria to begin with, retention would significantly increase. Putting endless number of hours in writing a paper/grant application with a failure rate of more than 90% is a very stressful situation and is something that has come up in discussion within the post-doc community across US as one of the biggest reasons for switching field.

Response 1995

Perspectives on the postdoc roles and responsibilities

Advance science while receiving training to move career forward.

Fundamental issues and challenges

Compensation does not match cost of living.

Existing NIH policies, programs, or resources

Salary limits should be removed and post-docs should be able to negotiate salary based on training and productivity.

Proven or promising external resources or approaches

No response

Response 1996

Perspectives on the postdoc roles and responsibilities

I was excited to take on an academic postdoc to continue my growth as a researcher, and to develop some independent research skills so that I could pursue a position as a PI and researcher. I'm currently in a T32 fellowship. Unfortunately, what I have learned is that jobs do not exist for this career, and so my postdoctoral fellowship will likely not help me move into that role (because there isn't one!). Addressing this at fellowship doesn't make sense. There need to be more changes upstream first. There need to be more academic jobs available, more opportunities available at that level, and then post-docs will become popular again.

Fundamental issues and challenges

1. Student loans: As clinical research programs shift to not being funded, it is challenging to pursue academic research. I have 300,000$ of student loans, and I make ~50k this year as a fellow. I think it's hard to choose this life when a significant portion of my salary has to go into student loan payments. If I go into academic research, how can I make these payments and also survive? It's tough, and I wish NIH was doing something about it. Even LRP, if I were to get it, would be a tiny drop in the bucket. It's hard to consider staying in this world when it's not financially feasible.
2. Salary: It is truly appalling to work for so many years to receive such a paltry salary at this state of training. I have been in graduate training since 2016. When applying for postdoctoral fellowships to start in 2022, I considered taking a fellowship in private practice which offered better benefits and an 80K starting salary. It was a significant sacrifice and has negatively impacted my quality of life to take a fellowship in academic research over one in private practice.
3. Job security: In spite of working tirelessly on fellowship (the capstone of many years of tireless work as a graduate student), jobs for me may not exist. They may not meet my needs, they may not pay well enough. Institutions have all the power, and we have none. In light of this, it feels like it makes sense to jump ship sooner rather than later. Trainees are not respected and the paucity of jobs in research make it feel like we are jumping through hoops to end up in a fire anyway.

Existing NIH policies, programs, or resources

LRP should be significantly more and younger trainees should be prioritized for receiving this grant. This might incentivize more people to pursue and stay in academic research (If NIH was taking care of my loans, I would be delighted to commit to staying in research!) More time to do a K and being able to have a virtual mentor rather than getting it through a specific institution—many institutions won't even give you the opportunity to apply for a K and, if you're in a specific field, there may only be a handful of mentor options who could support you, and if that institution doesn't hire you, you are unable to apply for these training awards. The salary should be increased dramatically. Additionally, there should be a commitment on the part of NIH to try to help us find and land somewhere that will encourage our research.

Proven or promising external resources or approaches

Again, this pathway is not financially feasible. NIH can say all it wants about supporting postdoctoral fellows, wanting to encourage research, DEI, etc. But many people will never be able to take on these kinds of paths due to the financial difficulties they create. I am a child of immigrants and put myself through college and graduate school because I desperately wanted to do this work. After over 10 years, I've finally acknowledged that I can't sustain this. It's heartbreaking, and I do really wish NIH was more responsive and had more programs for loan repayment on a larger scale. (Even things like taking care of our student loans payments while we're on fellowship would make a MASSIVE impact!)

Response 1997

Perspectives on the postdoc roles and responsibilities

The academic postdoc is essentially a PI in training. This means that they are not just independent scientists driving forward research projects in innovative and collaborative ways, but also mentors to their colleagues who are in earlier stages of their research career (e.g. graduate students, technicians, and even undergrads). They are a key element to the lab in that they bring their own expertise and training obtained throughout their PhD journey to the lab and can share that with the other lab members. I see a postdoc as a role model and a second, perhaps day-to-day, mentor aside from the PI. In larger labs, they are a critical component of the graduate student learning and training experience when the PI is more absent or busy. They also help shape the culture and environment of the lab and have major influence on workplace interactions and the ultimate directions of a lab.

Fundamental issues and challenges

Pay is a critical element here. Given the responsibilities and roles I highlighted above that postdocs often take on in a lab, and considering the fact that they do, in fact, have a PhD, academic postdocs are paid far too little for all the work that they do. Besides this, the academic postdoc usually makes below the livable wage for the city they are located in, especially in places where the cost of living is becoming astronomical. There is also a lot of insecurity regarding when an academic postdoc will finish their time in the lab and when they have published enough. With fewer tenure track positions available, competition for those jobs requires a postdoc to practically eat, sleep and breathe their research, with little room for a work-life balance or personal goals. When is it enough? Along with pay, lack of proper benefits is also critical. Many postdocs are in committed relationships or are even parents who need access to adequate and affordable childcare, healthcare, leave of absence policies, and healthcare. A postdoc often makes too much to qualify for government aid like EBT/food stamps, but not enough to meet the increasing global inflation and cost of living. Finally, a lack of diversity in academic leadership, funded PIs, and departments is a major driver of decreased recruitment and retention of diverse PhDs into postdoc positions. As a grad student considering a postdoc, it is really discouraging to look around and only see the same kind of people in academic positions of power and decision-making: older, white men whose experiences in science largely do not match the dynamic changes occurring both in the scientific community and the United States. Our generation's challenges are simply being overlooked and often ignored.

Existing NIH policies, programs, or resources

Increased K99/R00 funding for postdocs from smaller, non-RL-1 institutions would be a great help in securing positions. An expansion of the recently developed NIH F99/K00 fellowships for graduate students would also be a major support for students who are seeking postdoc positions in various fields of research. This would mean extending the F99/K00 program to other branches of the NIH besides the ones currently participating. Adding/expanding requirements for DEI training within NIH-funded academic institutions and incentivizing recruitment of scientists from diverse backgrounds, research fields, and institutions would also allow for increased diversity among postdocs, and ultimately, principal investigators. Reforming the academic tenure system within NIH-funded institutions and implementing newer, stricter guidelines for who gets tenure would also be really important. For example, a professor seeking tenure should be required to provide substantial proof of their efforts in fostering diversity beyond just sitting on a DEI committee or hiring diverse scientists. That way, more professors who are truly committed to DEI efforts will be in decision-making positions.

Proven or promising external resources or approaches

The industry model for postdoc recruitment is a great example of what kind of pay and benefits postdocs should be receiving. In addition, following closely the fluctuating and ultimately increasing costs of living surrounding each NIH-funded institution and implementing baseline guidelines for adequate postdoc compensation in accordance with these costs would be helpful.

Response 1998

Perspectives on the postdoc roles and responsibilities

The postdoctoral role seems to be a required step for advancing an academic career and being considered for either tenure-track or non-tenure track positions. It is a time to publish research, and learn how to run a lab, and demonstrate skills. It is also an opportunity for the postdoc to disseminate knowledge and research protocols between the institutions where he/she has studied so that both institutions can grow together in performing better research.

Fundamental issues and challenges

We need stability. Salary is often mentioned, and would be helpful, however I think it more important to re-envision the postdoctoral position as a 3-year position instead of a 2-year position. Unless there are no setbacks encountered at all, two years is not enough time to develop the independent research foundation that is required to be considered for tenure-track at universities. We spend two years feeling like our job is tenuous, trying to reassure our families, while knowing that we could have no job at all in a very short time due to delays beyond our control. We need stable positions and more funding opportunities designed specifically to support postdocs that are available to both institutions and individuals. This is even more important considering that often universities require applications for employment to be sent in the fall, so that a postdoc has had at most one year to prepare proof of independent research. I find this to be the biggest failing of the postdoctoral position. Rather than giving enough time to develop our career, we must still rely on networking skills who gets the best mentor recommendation letter to advance to the next stage.

Existing NIH policies, programs, or resources

Funding opportunities that are designed specifically to support postdocs need to be expanded so that both institutions and individuals can be simultaneously seeking to provide stable employment. Stability is paramount.

Proven or promising external resources or approaches

The ecosystem must provide resources and approaches that encompass the next career stage after postdoctoral training. How is the NIH helping postdocs to successfully move to the next stage? Current opportunities are too limited.

Response 1999

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Temporary visa holders: ID and drivers' license expiration dates dependent on contract and customs stamp, funding for non-citizens, payment (low for families and problematic for J1+J2 where the latter is not allowed to work), benefits for partners and families.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2000

Perspectives on the postdoc roles and responsibilities

Postdocs play a vital role in academic research but while they are skilled, at the same time we must also consider that they are still trainees who are using this position to build their own future careers. This latter point is often lost in recent discussions focused on skilled workers being underpaid.

Fundamental issues and challenges

There are primarily two issues here:

1. The uncertainty over whether postdocs will ultimately become faculty is putting some off taking this training path. This can be addressed institutionally but graduate students also need training in understanding that this is a competitive career path. Not everyone can "win", but you can't win if you don't try. Acceptance that alternative career paths after a postdoc are not indications of failure and are, instead, viable and good options is really important.
2. The second issue is pay/compensation. Expectations should be realistic, again considering these are training positions, while fair in considering cost of living and that some postdocs will commit to longer periods in the lab than others, making the postdoc position more of a career in itself and therefore more needing of better compensation. But the major problem in pay/compensation comes from NIH policies (see below).

Existing NIH policies, programs, or resources

It is ridiculous, and postdocs are shocked when they find out from PI's, that NIH will not allow cost of living increases to be budgeted for in grants, yet NRSA makes sweeping recommendations for very large increases. To make matters worse, each year NRSA not only recommends 3-4% raises, it raises the base level each year. In effect, this results in an approximately 9% raise per year if pay grades are based on experience. As a result, a grant that is awarded with a Level 0 postdoc is rapidly outpaced by NRSA-recommended increases. Moreover, when a new postdoc joins a lab later in an awarded project, their base 0 pay grade is actually higher than the base 3-5 of the original award, creating massive inequity and unfairness that is not the making of the PI. NIH and NRSA policies are completely out of alignment and unsustainable. The pay/compensation issue faced by postdocs is no the making of PIs (most try to pay postdocs as much as possible), it is the making of the NIH/NRSA disconnects.

Proven or promising external resources or approaches

Solve the pay issue above. Also create more equitable and sustainable funding system so that postdocs have more stability. By that I mean, "fund the investigator" for longer periods and avoid funding a small number of investigators with massive amounts of money (multiple, multiple R01s) that show diminishing dollar-value return.

Response 2001

Perspectives on the postdoc roles and responsibilities

In my view, postdoctoral fellow appointment should be reserved to those who have a genuine chance of successfully competing for a faculty position and being successful in that role. Too often, young researchers are appointed as postdoc who do not stand a realistic chance of ever being competitive for a faculty position. Rather, they are hired to work on sponsored research projects under the false pretense that they are being prepared for an independent academic role. These researchers who may not be competitive for faculty positions should be hired directly as staff scientists, without having to go through 5 years of postdoc. Postdoc positions should be reserved for the most promising researchers and should be highly prestigious positions that are well remunerated and with high likelihood of advancing to faculty positions. There should also be many stably funded scientist opportunities for those interested in research who may not be ready for the tenure track.

Fundamental issues and challenges

Recruitment is very hard because most PhD graduates have realized that a postdoc position is a highly risky path with low chance of landing a faculty position and low pay/benefits. Opportunities in industry have improved and provide alternative career paths for newly minted PhDs. The increase n foreign

postdocs is because, to a large extent, the chance to emigrate to the USA is worth the downsides of a postdoc position for many foreign PhDs.

Existing NIH policies, programs, or resources

Here is an ambitious suggestion:

1. Have an early mechanism similar to K99 to identify promising postdocs who are most likely to advance to faculty careers. Only these "super-postdocs" may continue past their second year, possibly with more generous salary, support and training.
2. Other postdocs who are not selected cannot continue past their second year and can either transfer to academic staff research position or industry.
3. Increase the number of stably funded staff scientist positions.
4. Towards the previous point, there is a need for a mechanism to reduce year-to-year fluctuations in grant funding of individual labs. Labs should be able to "bank" unspent grant funding to create a financial buffer and smooth out grand funding volatility.

Proven or promising external resources or approaches

No response

Response 2002

Perspectives on the postdoc roles and responsibilities

An important transition career to independent research scholar

Fundamental issues and challenges

Limited duration of visa/DS2019 status for non-US citizen, uncompetitive salary for a PhD.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2003

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Not providing a competitive salary for scientists with doctoral degrees (or even enough to live in the area of the institution in some cases) and especially not enough to start and support a family. Additionally, the increasing expectations on postdocs to be competitive for faculty positions can leave postdocs at a low paying transition phase for years with no guarantee they will land a faculty position. At least if they were getting properly compensated for their work this would be less of an issue, otherwise it is just another example of academia underpaying for research labor, then complaining when they don't have enough labor and initiating these surveys.

Existing NIH policies, programs, or resources

Increase Postdoc pay, incorporate COLA.

Proven or promising external resources or approaches

No response

Response 2004

Perspectives on the postdoc roles and responsibilities

Conducting the scientific research under guidance of postdoctoral mentor. Do researching experiments, data collection, analysis, report and publication. Training and support graduate students!

Fundamental issues and challenges

1. Very limited fellowship or grants to apply; Rare postdocs mentor group supportive environment
2. Need to renew contract annually or even half of year, under the terrible experience to leave the job under pressure; International postdocs are especially vulnerable to badly behaving faculty because they depend on those mentors for their visas.
3. No supporting medical insurance for Spouse dependent
4. Lower postdoc salary from my institute, moreover, H1 dependent H2 was not permit to work in U.S.A except a few cases

Existing NIH policies, programs, or resources

Except K99 fellowship grants, open more accessible to T32, etc for non-citizens

Proven or promising external resources or approaches

1. Give Postdocs a safer/stable environment to hold their positions when renewing contracts, recommend both hired postdocs and NIH funded lab/PI to report their postdoc hiring recruitment and changes records
2. Having something like an "International early career program" for non-US citizens to apply similar to the Diversity Supplement so that "funding award" can be added to their CV as an accomplishment.

Response 2005

Perspectives on the postdoc roles and responsibilities

Leading a research project, mentoring others, building a future research plan. Should be somewhat independent but still receiving feedback from the PI.

Fundamental issues and challenges

The cumulative low wage from undergraduate student loans, to low pay as a graduate student, and then continued into the postdoctoral position. This can equate to 15 years in which you are unable to save any substantial amount of money. Thus there is more incentive to move to industry instead where you can make 2x to 3x more money from the start.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2006

Perspectives on the postdoc roles and responsibilities

I view a post doc as a resource for the lab in terms of scientific questions as well as troubleshooting technical issues. They should be a mentor to the graduate students and undergraudates in the lab while not taking over the position of the PI.

Fundamental issues and challenges

Post docs aren't making enough money to live on, especially if they could go into industry and be making almost double what they would remaining in academia. There should also be mandatory 8 week paid parental and medical leave so that PI's can't deny this leave or not pay them during that time. In addition, the rising costs of living expenses and child care make it difficult to justify spending 3-5 years in a position when they could be making more elsewhere. It also depends on what trainees want to do upon completion of a postdoc. Academic faculty positions are harder to come by, even in a strictly teaching capacity.

Existing NIH policies, programs, or resources

Expand the IRACDA program to be more than 20 universities. There should be more resources and funding available for those who want to pursue a teaching directed career.

Proven or promising external resources or approaches

No response

Response 2007

Perspectives on the postdoc roles and responsibilities

The postdoc is a valuable training exercise to learn more about what it is like to be an independent investigator than is feasible as a graduate student. Additionally, the added expertise from an additional, and hopefully different and complementary training experience helps to ensure that postdocs who go on to work independently in the scientific community will bring invaluable novel insights with them.

Fundamental issues and challenges

Postdocs are getting longer and longer and it is not a viable career path to simply stay in a training position into your mid to late 30's. There needs to be more opportunities at junior or training PIs promoted by the NIH for this system to sustain itself.

Existing NIH policies, programs, or resources

Please please please peg your minimum NRSA stipends to cost of living. These vary so wildly from place to place. It makes absolutely no sense to afford the same amount of personnel expenses on a grant for trainees living and working in Cambridge, MA the same as West Lafayette, IN.

Proven or promising external resources or approaches

No response

Response 2008

Perspectives on the postdoc roles and responsibilities

It's an opportunity to showcase your phd training the same time, produce preliminary data and apply for grants to establish yourself as an independent researcher.

Fundamental issues and challenges

It all boils down to staggering low salary and astounding working hours. Science is never a 9-5 job especially for those in their early career. Most post docs are in their late 20s or in 30s and are experiencing important life events like marriage, babies, first house etc. The salary and working hours forced by academic setting depressed overall quality of life, therefore it's inhibiting recruitment or hindering retention.

Existing NIH policies, programs, or resources

Higher salary scale! More budgets towards supporting pre and postdocs.

Regulated time commitment policies for postdocs via university, or PIs/ universities should be punished.

Proven or promising external resources or approaches

1. Higher pay
2. Regulated work hours
3. Trainings on funding opportunities
4. More early career awards with better pay

Response 2009

Perspectives on the postdoc roles and responsibilities

To me, the academic postdoc is meant for you to design and develop your own independent research project in order to take it with you to a full-time professor/PI or permanent research scientist position. I do think that a temporary postdoctoral position could also be taken in order to extend the time it takes to find a full-time position elsewhere after graduate school.

Fundamental issues and challenges

1. The postdoc pay is abysmally low, even compared to starting salaries of entry-level jobs. It's hard to justify taking that kind of pay when postdocs quite obviously have an advanced degree completed and 4-8 years of experience. The average American with a Bachelor's makes >80k a year with benefits (healthcare, 401k, etc.), and often postdoc positions are offering half that amount, sometimes without benefits. It's not an appealing position if the best offer is struggling financially for what will inevitably be an undetermined number of years.
2. I view the postdoc as the next step to move up into academia. Current postdocs are struggling to find and get offered an academic PI position, especially in a place that is safe for scientists from marginalized groups. It does not make the postdoc job market attractive if the career move afterwards may not be possible.
3. There is a big focus on doing postdocs apart from the university in which you did your graduate work. Graduate students often have started families, have life responsibilities, and ties to the area that make it not appealing to pick everything up and move for a postdoctoral position (especially when the pay is so low).

Existing NIH policies, programs, or resources

Fund more and more often. Strict requirements on NIH postdoc grants are often eliminating any chance for non-traditional postdocs to have their own funding.

Proven or promising external resources or approaches

No response

Response 2010

Perspectives on the postdoc roles and responsibilities

The best academic postdocs are highly skilled, highly experienced, and strongly motivated scientists. They drive some of the most ground-breaking new experiments. They are a crucial part of the workforce of academic science.

Fundamental issues and challenges

The likelihood for a postdoc in academia to obtain a tenure-track faculty position in academia is extremely low, unless they have worked in one of very few "elite" labs at very few "elite" institutions. Postdoc salaries in academia are also very low relative to positions in the private sector. And there are also very few long-term research scientist positions in academia that can truly offer enough financial stability to support a family. Given these three realities, recent PhDs are justifiably wondering, why bother with an academic postdoc? Why not just move to the private sector immediately after earning a PhD and get started on my long-term career? The academic postdoc track is seen as a dead-end, or perhaps a way-station that only delays what often seems like an inevitable transition out of academia.

Existing NIH policies, programs, or resources

Perhaps the NIH could actively support senior research scientists who've been productive and scientifically successful, but have not secured tenure-track faculty positions and therefore remain as skilled senior members of a lab. Perhaps such senior research scientists could be allowed to independently apply for major grants, without the assumption that whatever they do is subservient to their "PI". Perhaps NIH could increase their salary guidelines for postdocs, and also provide salary guidelines for senior research scientists. Perhaps the NIH could advocate for increased funding to support these highly skilled and vital members of the US scientific workforce.

Proven or promising external resources or approaches

No response

Response 2011

Perspectives on the postdoc roles and responsibilities

Postdoc is additional research training after a doctorate for pursuing an independent investigators pathway (typically, non-tenure track or tenure-track faculty) or research scientist pathway (typically, staff position at a research institute)

Fundamental issues and challenges

Challenges:

1. limited funding for international scholars,
2. faculty mentors not trained in postdoc mentorship and equity, justice and inclusion, and
3. postdocs are paid less and told to do everything from lab cleanup to grant ideation and writing. In general, when academic institutions are looking at adjuncts and non-tenure track faculty to carry out the day-to-day operations of a department, postdocs are considered even lower in the hierarchy and told to do departmental activities without any related pay.

This could include touring people who visit the lab, making souvenirs for guests visiting the department or teaching for free. International scholars usually look at the foundation, K99/R00, or R-level funding and cannot apply for other training grants like citizens do. This impacts retention. Less pay impacts recruitment. Faculty are typically European American and will not treat international scholars or scholars of color with the respect they deserve. Majority of the faculty will treat the postdoc as an extended PhD student or a pre non-tenure track. They will be told to write grants based on their ideas and then the faculty will put their name as PI; this is quite common. The culture and dynamics of the workplace and the way postdocs get treated impact the esteem, confidence and quality of life of the scholar. Interdisciplinary scholars will have an additional tough time as a postdoc as funding and mentorship is scarce.

Existing NIH policies, programs, or resources

This is the first time I am looking at these policies and programs when giving input to NIH. It would be nice that institutes that hire a postdoc recommend (a new) NIH training where postdocs are familiarized with postdoc mission, training outcomes and outputs, resources, challenges and unspoken truths. Tell postdocs that they don't have to do it because people up the chain are telling them to. Establish standards for postdoc training. For instance, there is a Ph.D./faculty handbook but rarely would one see a postdoc handbook at an institute. It is common for postdocs to get abused in the lab. International scholars cannot report abuse because they will have to go home if they do.

Proven or promising external resources or approaches

Share with postdocs that there is life outside of academia. It is unnecessary to seek validation by publishing or getting a tenure-track position. Go to the industry if you like.

Response 2012

Perspectives on the postdoc roles and responsibilities

It is a way to temporarily fund a full-time researcher—i.e. FT work for the length of a grant.

Because positions are soon after PhD, training and mentoring for the postdoc are expected. Postdocs stay up on literature for writing papers and often also oversee a project in terms of personnel (graduate students) and project management.

Fundamental issues and challenges

The number of postdocs has long outnumbered the number of academic positions available. It used to be that you didn't need a postdoc after a phd unless you wanted to go to an R1. Then you needed at least 1. Now i know postdocs that have 3-4 postdoc positions before either landing something or quitting Academia. Moving every few years, trying to publish a bunch, sometimes doing your own work in the margins after the grant you are paid from. At a pay rate that is significantly less than a faculty or industry position. It is not amenable to support a family to move every 2-3 years nor can partners sustain that.

Existing NIH policies, programs, or resources

I think less reliance on postdocs and more on MA, PhD, grant managers, and full-time permanent positions. That is hard to ensure, but I think it would be really cool to incentivize institutions to pool resources to recruit full time researchers, then have grants buy their time. I don't think more postdocs solves the problem. I think our over-reliance on them is the issue, and the idea that we need 9 years of postdocs. If we dont have enough FT research positions or faculty positions, then what are we training them for? Are grant investigators being held to their mentoring plans, is anyone checking placement after the postdoc, etc.

Proven or promising external resources or approaches

No response

Response 2013

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as un-unionized exploitation of immigrant scientists. The pay is well below middle class standard of living in the urban areas that post docs live. Everyone know that no post doc or graduate student works less than 50hrs a week. It is just a scheme designed to poach international talent while they apply to get a green card so industry can accept them. In my cohort of 12 people no one is seriously considering post doctorate work. Everyone has to go to the industry as it is unlivable the wages.

Fundamental issues and challenges

Pay, and hours. The expectation of a post doc is to work 50+ hours a week for less than middle class wages. It's stressful, and employment is not guaranteed. Furthermore, there are very few principal investigator positions, so it is highly likely that you will have wasted your years trying to become a P.I. Finally, everyone has student loans, and to be 26 and not have any retirement savings, or money to purchase a home and then trying to balance the poor pay of post docs, its only people who have no other choice and are trying to come to America.

Existing NIH policies, programs, or resources

Unionize post docs, ensure employment, pay fair wages.

Proven or promising external resources or approaches

Get an arbitrator for when the post docs unionize.

Response 2014

Perspectives on the postdoc roles and responsibilities

Fundamental issues and challenges

Two challenges:

1. Future career opportunities
2. Lack of sufficient pay

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Training beyond lab—finding job outside of academia

Response 2015

Perspectives on the postdoc roles and responsibilities

conduct research, collect data, publish papers, write grants. Engage in training for future career including academic positions and industry positions.

Fundamental issues and challenges

The current salary for postdocs is incredible low resulting in many grad students leaving for higher paying jobs and post docs leaving academia early for higher paying industry positions. Many graduate programs have already recognized this problem and have increased the graduate stipend, however the post doc stipend in many institutions, including my own, have not yet matched this increase in pay.

Existing NIH policies, programs, or resources

Currently the F32 funding program is only appealing for building resumes, but financially can be detrimental to post docs since most academic institutions no longer view post doctoral fellows as employees and therefore eligible for health insurance. I am not sure how this program could be changed, but I would be much more inclined to submit an F32 grant if I knew I would not receive a lower paycheck.

Proven or promising external resources or approaches

The IDP system has been beneficial for my graduate and post doc training.

Response 2016

Perspectives on the postdoc roles and responsibilities

Pathway to generate experience scientist for the future.

Fundamental issues and challenges

Uncertainty: As a postdoc after having PhD degree, it is difficult to digest the uncertainty of postdoc career. Years of postdoctoral experience doesn’t ensure any promotion in career. The ideal goal of a postdoc can be getting an academic position in universities, which is very difficult to get. Other ideal condition can be getting any major grant like K99/R00. I am k99/R00 research fellow. In the second year of K99 phase mostly I was looking for an academic position for the R00 phase. Applying and taking preparation for interview was killing most of my time. I didn’t get any advantage of having k99 in the position search. I got rejection from most of the universities before or after the preliminary interview. I can’t think how a candidate can get an interview call without having a grant! Anyone will easily understand how difficult it is to get a NIH funding but when I asked the interviewer about the tenure process, I got the reply that I will be judge same way as other faculty who joined without any grant. Although I waste a lot of my time as a postdoc to get the grant, I will not get any special consideration at the evaluation for the tenure process. Postdocs who finished PhD at similar time like me and jointed as a faculty immediately after PhD without prolonging the postdoctoral period for getting the grant are now in the process of getting Associate professor position while I am still trying to get an Assistant professor position. And if I get a position as assistant professor, I must go through the normal process of evaluation. This gives me the impression that I did a mistake by doing this long postdoctoral training which is not helping in any way to advance my career.

Existing NIH policies, programs, or resources

Other fundamental issue is financial discrimination:

In a very simple word, it is impossible to survive with a postdoctoral salary in most of the cities in USA. It is very strange that NIH has the same salary range for the postdocs throughout the country while salary in companies varies a lot based on the location of the company. There is no reason for a person to remain as

a postdoc while with the same experience that person can get a job in a company with three times more salary than the postdoc position. Earning less has a significant influence on the postdoc's life. For an example, personally, I was looking for a one room apartment in many housings complexes, but I didn't get any apartment as the rule in most of the apartment complexes in Massachusetts is that the salary needs to be three times than the rent of the apartment, which none of the postdoc earn according to the NIH salary range. Some apartment complexes suggested me to buy an insurance to get the assurance that I will be able to pay the rent on time. Consider a postdoc is so passionate about science and taking all the hurdle to apply for a very competitive grant (like k99/R00) and got the grant, that will not have any influence on his/her salary. The postdoc who did not get the grant, quit science and join the companies earn three times more than the postdoc who got the grant. Most of the postdocs are in their early family life, so in this stage financial condition has a huge role in their person life. Although they wanted to be in academic, due to less salary they need to move out of academic to support their families.

Proven or promising external resources or approaches

Recommendation related to uncertainty in the career:

There should be a year limit how long a person can remain as a postdoc. After that period the institutes must promote them to the new phase, if possible, to an independent role. Postdoc who will come through a major funding mechanism should get privilege for getting an academic position. If a postdoc spend a significant amount of time to obtain a grant during the postdoctoral period and prove the successful track record, they should evaluate differently during the process of tenure process to encourage their achievement. Without these changes there is no meaning to remain as a postdoc or trying to get a grant in the postdoctoral period to get independence as getting grant can easily cost two to three years of the postdoctoral time.

Recommendation related to salary:

NIH should have a salary recommendation based on the location of the postdoc. The salary if not same, should be similar as the salary of the same postdoc in the industry of that area. K99 or similar funding mechanism salary should be heavily adjusted to encourage postdocs to choose this path of independence. Without these changes it will be difficult to bring or keep brilliant postdocs in science. Now the postdoc we are seeing in academia, are mostly J1 visa holder who have no option to move to the company. So, the actual motivated scientists are reducing every day. As soon as they get the green card or work permit, they are moving to the industry. But many of the postdoc started their career as a postdoc to build an academic career and live a decent life.

Response 2017

Perspectives on the postdoc roles and responsibilities

Initially, postdoctoral training meant an opportunity to broaden my interests and get training in a new area. Now, it is basically a holding position until I get a faculty position or other job. I write grants. I plan and carry out experiments. I analyze data. I write papers. I train and supervise students. I functionally act as a direct supervisor for multiple students, but my institution doesn't recognize that. I can't be listed as their official supervisor or sign the paperwork they need to register for class or work. My PI is very willing to give me feedback on grants and my writing, but not everyone is so lucky. Postdoc sometimes feel like a position that was created just so highly educated people could be minimally paid for their labor. Faculty jobs are so impossible, if you want to do research, you get stuck as a postdoc. If you've been a postdoc "too long" people start looking down on you, including funders. If it's been more than 5 years since your PhD, you're no longer eligible for K99 onwards and many other funding sources. Industry doesn't care about postdoctoral training, and from what I've heard they consider it a waste of time. I enjoy my work, projects and colleagues, but the longer I am a postdoc, I feel more disrespected and undervalued. Ideally, grad school would teach you to be a scientist, a postdoc would teach you how to be a PI and run a lab. There's no training on how to be a PI unless your postdoc mentor specifically discusses those things with you.

Fundamental issues and challenges

The biggest issue is that postdocs are not paid a living wage. The pay scale is appalling considering the level of education. While it's a "training" position and some of the "compensation" is supposed to come from the education received, that is a joke. Postdocs mentor younger/less experienced lab members, plan

and execute experiments, write grants, write papers, analyze data. Postdocs are the ones doing the training. If you don't have a good mentor, the only "training" you will probably get is some seminars series. We all know that the majority of work shown in published articles was done by postdocs, grad students and staff. Academic science COULD NOT EXIST without postdoc labor. I have been a postdoc since 2017. I live in a HCOL city and qualify for low income housing. Luckily I am single, supporting a child or family on my pay would be impossible. If i had student debt, I couldn't manage on a postdoc salary. The only reason I have anything saved for retirement is due to laws in my state. Postdocs miss out on years critical for building retirement savings. The pay is also just insulting. It shows the absolute lack of respect academia and the rest of society has for postdoctoral and scientific work. Postdocs are not treated as valued, contributing members of the scientific workforce. Most of my grad school peers left academia following graduation due to the pay. Due to the current economic/political climate the generation currently entering grad school won't put up with not being adequately paid. The current postdoc system is simply not sustainable. Being a postdoc means choosing intellectual fulfillment over financial security. It shouldn't mean that.

Existing NIH policies, programs, or resources

The time since PhD limit on K99 and K01 awards needs to be abolished. As many funding sources follow the NIH guidelines, this means I'm "too old" for many funding sources. If I can't get funding, I won't get a faculty job, and I'll just become an older postdoc. The limit traps people in training positions. Why does years since PhD matter? I know there are exceptions for parental leave, sick leave, and changing fields. The "changing fields" exception is so subjective. These limits also don't consider that having a postdoc with a bad or unfit mentor can run out this clock and leave the postdoc with limited options. I was stuck in a bad mentoring situation just prior and during COVID and wasted three years with no papers to show for it. Everyone in academia KNOWS that there are toxic, bad mentors, but there's no formal acknowledgement. Why make exceptions? Just do away with the years from PhD limit.

Proven or promising external resources or approaches

There needs to be training on how to be a mentor and manager. Everyone in academia has been directly impacted or knows someone who was directly impacted by a toxic or inept mentor situation. I think requiring PI's to receive training in mentoring would help. There needs to be specific training for postdocs in "soft skills"--managing, mentoring, budgeting. Running a lab is like running a small business, and most postdocs have no business experience. There aren't enough faculty jobs for every postdoc, so there needs to be acknowledgment of a senior/staff scientist path and training.

Hostile work environments need to be taken SERIOUSLY. It often feels like PI's can get away with anything. If it is racial discrimination or sexual harassment, it might be taken seriously by your institute, but general maltreatment is totally ignored. I worked in a lab where there was no sexual or racist harassment, but it was incredibly toxic. The PI belittled lab members in front of the group. Implied that I should not have passed my PhD qualifying exams. Lab members would not take time to help one another because they were so afraid of not completing their own work. I was more nervous before one-on-one meetings with this PI than I was before presenting in front of a 1,000 person audience at an international conference. Nothing was done and there was nothing that could be done. The students had some resources, but there were none for postdocs. A postdoc ombudsman or postdoc support services would be helpful. The culture also needs to change that that type of behavior is unacceptable.

Response 2018

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Feeling of disengagement from society and its problems while establishing careers or furthering the careers of their sponsors.

Fear that public support for science is eroding, making careers less attractive and tenable.

Existing NIH policies, programs, or resources

Provide postdoctoral training in science communication, conveying the results and excitement of basic and applied science to the general public, including science in other disciplines.

Provide postdoctoral training in risk communication, identifying and conveying the scientific results that are relevant to audience members decisions.

Science communication focuses on scientists' need to be heard.

Risk communication focuses on audience members' need to make decisions, where science might the helpful

Proven or promising external resources or approaches

No response

Response 2019

Perspectives on the postdoc roles and responsibilities

A postdoc position is meant to serve as a stepping stone from graduate school to full employment, especially in for those who hope to establish an independent laboratory. A postdoc made sense for me as I wanted some time to prepare for the transition from trainee to independent investigator. I wanted to learn more about how different labs operate, and, most importantly, I wanted to be able to think seriously about what direction I wanted to take in my future independent research. I assumed that, in return for these benefits, I would serve as a senior member of my mentor's laboratory who may bring in new skills and could be trusted to manage/develop projects at an advanced level. My experience as a postdoc has shown me that these goals are only secondary to the real purpose of the position—which is to publish at all costs. The postdoc is there to publish so they can be competitive for a job. The mentor hired the postdoc to help them publish. There is no time for growth.

Fundamental issues and challenges

I cannot state strongly enough how disappointing and heartbreaking my experience with academic science has been. I've always felt confident in my ability to contribute productively to the scientific community. What's been so unbelievably frustrating is that my faithfulness to my values as a scientist is what made my continuation in this role unbearable. The pervasive entrenchment of these issues at every level of the scientific process is disturbing, frankly. Upon starting grad school, I was told that my job was to be the best scientist that I can—to be rigorous, curious, transparent, etc. I happily accepted this expectation, as it was what I already expected from myself. But this was a lie. For most people, it is impossible to be a good scientist.

Obviously there are many passionate scientists who aim to perform their duties responsibly, but it seems like everything is set up to make that as difficult as possible. We must publish often, and in "high-impact" journals, whose designer brand images stand to benefit from our bitter infighting for the honor of appearing in their pages. The rush to collect data precludes engagement in activities essential to performing effective science—no time to ponder theory or review statistics or update protocols. We must publish so we can get grant money. Then, our grant money is burned on insultingly overpriced essential supplies from monopolized research supply providers. Our work is messy, and we're lying to ourselves if we say it isn't. We are oversaturated with low-quality publications. We have no money leftover to pay trainees. We are exhausted and demoralized. Innovation is stifled, and progress only happens despite these conditions, not because of them. The general public is losing trust in us due to the proliferation of predatory journals, which thrive off of publish-or-perish culture.

Existing NIH policies, programs, or resources

Re-evaluate our relationship with publishing. De-monopolize research supply providers. Trainees won't truly be respected until this happens.

Proven or promising external resources or approaches

Re-evaluate our relationship with publishing. De-monopolize research supply providers. Listen to trainees. Show some respect for the values of science and for the money given to us by the general public to perform this research.

Response 2020

Perspectives on the postdoc roles and responsibilities

Training period that facilitates your transition from a mentored researcher to a fully independent researcher. Roles/responsibilities include writing research grants, mentoring students, designing and conducting experiments, presenting research results, collaborating with other research labs or lab members, publishing original research articles, and peer review of research manuscripts.

Fundamental issues and challenges

1. Salary is completely unrealistic; especially for people living in larger cities. I should not have to rely on support from a union for a fair wage. As a government institution, which provided salary increases to its' employees to account for inflation, it is unconscionable to not do the same for postdoc salaries.
2. Work-life balance does not allow for raising a family with any thoughtfulness or care towards other human beings. Research experiments often require being in the lab 7 days a week, but we can't afford to live close enough to the lab to achieve this without working extremely long hours. Raising the salary would help alleviate this problem.
3. Expectations for timelines have become unrealistic.it is not funny to suggest that you do a second PhD as a postdoc.this favors the PI's interests and not the trainee. The NIH needs to take the initiative to help mediate this problem.for example, ask PIs to justify why postdocs stayed longer than 3 years. Labs with postdocs who routinely stay above 5 years is an red flag.
4. No retirement benefits provided.
5. NIH-funded postdocs are still asked to work on other projects not related to their proposal. This creates an unrealistic expectation of running many projects, despite having your own NIH funding, which leads to a very unpleasant work-life balance and an extended postdoc timeline. NIH needs to make it clear that there are penalties for PI's who try to coerce postdocs into running additional projects beyond their funded proposal.
6. NIH needs to reform the peer review process for postdoc grants. Applications should not be rejected by reviewers who cannot objectively critique the scientific foundation of a proposal. Bad reviews, even if unjustified from a scientific perspective, are all it takes to push talented scientists away from postdoc.

Existing NIH policies, programs, or resources

1. Limit the length of a postdoc to 3 years. Anything longer should require a special exemption signed by both the postdoc and the mentor.
2. Increase the salary to an acceptable living wage based on the location of the postdoc.it does not make sense to pay all postdocs the same salary regardless of location.
3. Set clear guidelines for the time commitment required for NIH F32 and k99 fellowships. It should be clear to PI's that they cannot coerce funded postdocs into working on other grants for them.
4. Improve child care benefits and retirement benefits to match NIH employees

Proven or promising external resources or approaches

No response

Response 2021

Perspectives on the postdoc roles and responsibilities

The postdoc is a training period between PhD and next step (either academic or non-academic scientist). The roles are designing research directions, performing experiments, mentoring students, writing research grants, writing and publishing original research, presenting results, and peer-reviewing papers.

Fundamental issues and challenges

The salary does not pay a living wage, especially for postdocs living in larger cities. I should not be living paycheck to paycheck as a Ph.D. level scientist. The fact that the NIH has not adjusted salaries to account for the inflation is insulting. The current situation is one in which people are trapped in a system in which

they are used and taken advantage of as cheap labor. Additionally, the lack of retirement benefits and limited health benefits further underscore the little value placed on scientists who are performing the bulk of the research work. In addition, the unrealistic expectations with regard to work/life balance and the low pay make it impossible to start a family in good conscience. This forces people to choose between staying as postdocs to further their potential academic career and having a family. Furthermore, the current expectation of people doing a postdoc that is as long as a PhD is unacceptable. This only benefits the PI, is detrimental to the career of the postdoc, and further exacerbates the problems of work/life balance. Another problem is that postdocs who have secured independent funding are still asked and expected to work on projects that the PI has grants for. This dilutes the postdoc's time and makes it harder for them to focus on the research that they are funded for, serving to extend the postdoc timeline. Finally, it can often feel that a postdoc is just a glorified graduate student. As a next stage in career development, there should be a more clear delineation between the roles and responsibilities of a graduate student and those of a postdoc (ie, more leadership and mentoring, less bench work science).

Existing NIH policies, programs, or resources

The upper length of a postdoc should be limited to four years. Anything longer should require a special exemption with rigorous assessment (not just a form that is routinely signed). The salary should be increased to be an acceptable living wage based on the location of the postdoc, as it does not make sense to pay all postdocs the same (ie, cost of living in a big city is much higher than in a rural setting). Significant childcare benefits and retirement benefits should be included. As a government institution, the NIH should give postdocs the same benefits it affords other government employees (ie, like the employees who do research at the NIH).

Proven or promising external resources or approaches

No response

Response 2022

Perspectives on the postdoc roles and responsibilities

The postdoctoral period provides individuals with additional research training and exposure. I view this as an opportunity to expand upon specific skills required to efficiently and successfully establish an individual program of research.

Fundamental issues and challenges

1. Postdoctoral positions in clinical disciplines (e.g. medicine and nursing) are difficult to identify. Ideally there would be a system for central posting. I'm completing my PhD in nursing and am interested in a postdoctoral position, but have not been able to locate one either in the academic setting or NIH.
2. Postdoctoral positions in clinical disciplines (e.g. medicine and nursing) do not offer a livable salary for individuals in these field who often pursue doctoral training later in life. Spending 18 years in clinical practice caring for critically ill children prior to pursing my PhD has been invaluable to me and will continue to inform my research, however I am unable to take a $100k paycut mid-career given that I have a family now.

Existing NIH policies, programs, or resources

Create postdoctoral positions in clinical disciplines that allow for continued clinical practice. This would allow researchers to maintain the clinical relevancy necessary for meaningful research as well as to both augment their incomes to make postdoctoral training economically feasible.

Expand postdoctoral positions for clinical disciplines and translational science.

Proven or promising external resources or approaches

Create centralized posting system for available positions which is searchable by specialty/topic/discipline. Allow candidates to post CVs so researchers who can accommodate postdoctoral positions could reach out to interested candidates. One of the barriers to diversity in research is the current system of having PIs write in support for candidates they know rather than creating positions which could be applied and interviewed for. The current system is more about who you know than your qualifications.

Response 2023

Perspectives on the postdoc roles and responsibilities

Garner skills in order to successfully start up an academic laboratory with research topics and skills learned throughout postdoc. One should be be equipped with the skills of writing grants, manuscripts, managing and mentoring employees, and the financial aspects of starting up and running a lab.

Fundamental issues and challenges

Post docs are now a second PhD, you do not gain the skills to run a lab, only the skills to perform research at a somewhat higher level. With PhD projects become longer and more difficult, a postdoc has diminishing returns in terms of the scientific techniques to learn. The other parts of being an academic researcher are not taught during the postdoc either so there is no point. The postdoc exists for cheap labor for academic institutions with the false promise of starting an independent research group.

The salary is not livable and needs to be around $80K, especially in high cost of living areas. The PhD is clearly not values by academic institutions, so people are going elsewhere, i.e. where they have the means to start their lives as they have been delayed due to graduate school.

Existing NIH policies, programs, or resources

Higher salary. Less scientific training, more training of how to run a lab.

Proven or promising external resources or approaches

Higher salary.

Response 2024

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are typically temporary research positions for individuals who have recently completed their doctoral degrees. The role of a postdoctoral fellow is to conduct research under the supervision of a principal investigator or mentor, gain additional experience in their field, and prepare to transition to an independent research career. The responsibilities of a postdoc may include designing experiments, conducting research, analyzing data, presenting research findings at scientific meetings, writing research papers, and applying for funding. Postdoctoral positions are an important step in the career pathway for many biomedical scientists, and can provide opportunities for career development and networking.

Fundamental issues and challenges

There are several Fundamental issues and challenges that may inhibit recruitment, retention, and the overall quality of life for postdoctoral trainees in academic research. Some of these challenges may include:

Limited career prospects: Postdoctoral trainees may face limited career prospects after completing their postdoctoral training, which can be a major source of stress and uncertainty.

Financial insecurity: Many postdoctoral positions offer relatively low pay and lack benefits such as health insurance, retirement plans, and paid time off, which can lead to financial insecurity and instability.

Work-life balance: Postdoctoral trainees may struggle to maintain a healthy work-life balance, as they may be expected to work long hours and weekends to meet research deadlines.

Lack of mentorship and career development opportunities: Many postdoctoral trainees may lack access to mentorship and career development opportunities, which can limit their ability to develop the skills and knowledge necessary to pursue independent research careers.

Addressing these issues will require a multi-faceted approach, including increased funding and support for postdoctoral trainees, improved mentorship and career development opportunities, and a commitment to promoting diversity and inclusion in the academic research community.

Existing NIH policies, programs, or resources

There are several existing NIH policies, programs, or resourcesthat could be modified, expanded, or improved to enhance the postdoctoral training ecosystem and academic research career pathways. Some of these include:

Increasing the number of postdoctoral positions: The NIH could provide additional funding to support more postdoctoral positions, allowing for a greater number of trainees to gain valuable research experience.

Improving compensation and benefits: The NIH could encourage or require institutions to provide better compensation and benefits for postdoctoral trainees, including health insurance, retirement plans, and paid time off.

Promoting mentorship and career development opportunities: The NIH could provide additional funding or require institutions to develop and implement formal mentorship and career development programs for postdoctoral trainees.

Supporting diversity and inclusion initiatives: The NIH could establish or expand programs aimed at promoting diversity and inclusion in the postdoctoral community, including recruitment of trainees from underrepresented backgrounds.

Facilitating transition to independent research careers: The NIH could provide additional funding and resources to support the transition of postdoctoral trainees to independent research careers, including grants and fellowships designed to support early-stage investigators.

Overall, improving the postdoctoral training ecosystem and academic research career pathways will require a concerted effort from multiple stakeholders, including the NIH, academic institutions, and the research community at large. By working together to identify and address these challenges, we can help ensure a bright future for the next generation of biomedical researchers.

Proven or promising external resources or approaches

There are several external resources and approaches that could inform NIH’s efforts to enhance the postdoctoral training ecosystem. Some of these include:

Mentoring networks: Developing and supporting mentoring networks that connect postdoctoral trainees with established researchers and professionals in their field could improve training and career development opportunities.

Professional development programs: Creating and supporting professional development programs that provide postdoctoral trainees with the skills necessary to succeed in academic research and other career pathways.

Career services: Providing career services to postdoctoral trainees, including job search assistance, interview preparation, and resume building, could help them transition to successful careers after their postdoc.

Diversity, equity, and inclusion (DEI) initiatives: Increasing diversity, equity, and inclusion within the postdoctoral training ecosystem could improve the overall quality of life and career opportunities for all postdoctoral trainees.

Collaboration and networking opportunities: Encouraging collaboration and networking opportunities between postdoctoral trainees, researchers, and professionals in academia and industry could facilitate the transfer of knowledge and improve career development opportunities.

Transparent and equitable policies: Implementing transparent and equitable policies that address issues such as compensation, benefits, and work-life balance could improve the overall quality of life and job satisfaction of postdoctoral trainees.

These are just a few examples of external resources and approaches that could inform NIH’s efforts to enhance the postdoctoral training ecosystem.

Response 2025

Perspectives on the postdoc roles and responsibilities

The postdoc and the PI should ultimately have a symbiotic relationship. The postdoc should certainly be a reliable colleague for the PI through providing technical expertise, writing and editing manuscripts, and performing other duties as appropriate; however, the PI should provide ample opportunities for growth for the postdoc. These opportunities should include learning new laboratory techniques, access to career development opportunities (i.e., seminars, workshops, courses, networking), opportunities to increase the quality and quantity of publications, and outstanding mentorship.

Fundamental issues and challenges

Challenges to recruitment, retention, and quality of life for trainees include burnout following completion of the doctorate, compensation (especially compared to opportunities in industry jobs), benefits (paid time off, maternal leave, etc.), and the overall culture in academia. Culture in the academic work place is overly political with very complex personalities, which can be toxic at times.

Existing NIH policies, programs, or resources

I'm not quite sure how to answer this question, as I'm not entirely familiar with NIH **policies, programs, or resources**. Perhaps these NIH entities could be accessible and easily digestible for the trainee.

Proven or promising external resources or approaches

I'd consider looking at various industry leaders that have the best rates of recruitment and retention.

Response 2026

Perspectives on the postdoc roles and responsibilities

A postdoc position provides training for becoming an academic PI. However, most postdocs cannot become PIs based on numbers alone (i.e. the number of postdocs exceeds the number of open faculty positions). Practically speaking, most postdocs are heading toward a position other than academic PI.

For postdocs who do plan to become PIs, the training they receive varies widely. Some postdocs supervise junior lab members and therefore have management experience in preparation for running their own lab, while other postdocs have no supervision responsibility. Similarly, some postdocs teach classes or complete formal teaching training, while others are actively discouraged from teaching, even if teaching will be central to their future career. Grant-writing experience also varies widely depending on the expectations of each advisor. The central focus of a postdoc is generating publishable data, and some postdocs have little time to learn the other tasks they will do as a PI.

For the postdoc position to make sense as a traineeship for a future PI position, postdocs would need to have a reasonable expectation that they can become a PI, and they would need to have mentored experience in the tasks they will do as a PI (including lab supervision, teaching, and grant-writing). The term "trainee" is not accurate if most postdocs will never become PIs and are not necessarily receiving much mentored training in the various roles of a PI. As a postdoc, it is easy to feel that the term "trainee" is simply a justification for low pay. In industry, people with PhDs who conduct research are called scientists, not trainees, even when they have exactly the same qualifications and experience as postdocs. When I look at my peers in industry, including my classmates from grad school, I feel exploited and disillusioned with my choice to stay in academia.

Fundamental issues and challenges

I am a postdoc in the Boston area, and I am also a parent. It is difficult for me to support one infant on a postdoc salary. The monthly cost of the daycare provided by my university is $2,972/month, more than half of a postdoc's gross pay. We searched extensively, beginning 7 months before our baby's birth, and secured a spot in another daycare for $2,000/month, which is the lowest we can reasonably expect to pay for a licensed daycare center in the Boston area. As it is, my partner and I can barely make ends meet, and if we had a second child, our financial situation would become untenable. It is difficult to stay through the end of my postdoc knowing that I could earn dramatically more in industry, and there is no guarantee that I will eventually become a PI in exchange for these low-paid years as a postdoc.

Postdoc salaries should be adjusted for cost of living in the location the postdoc is working. Although some postdocs can choose to live in places with lower cost of living to make the postdoc salary more livable, others are more constrained in their choice of location. I am a transgender person in an interracial relationship parenting a biracial child, and my family cannot safely live in many parts of the country that have dramatically lower cost of living. For us, living in a liberal city is a matter of personal safety and, increasingly, basic rights to healthcare access.

The duration of postdoc training can worsen financial stress, particularly when escalating expectations of top-tier journals lengthen the publication process. Papers in top-tier journals now include many more figures than they did in the past, and these escalating expectations can lengthen the duration of a postdoc, intensifying financial stress.

Existing NIH policies, programs, or resources

Currently, postdoc salaries are set nationally, without adjustment for cost of living. This makes recruitment and retention challenging for PIs in areas with high cost of living, and creates a financially untenable situation for postdocs with families in high-cost locations. Postdoc salaries should be adjusted for cost of living in the location where the postdoc is working.

Proven or promising external resources or approaches

No response

Response 2027

Perspectives on the postdoc roles and responsibilities

I was a postdoc for 2 years following my PhD before accepting an industry position. I view postdocs as professionals in their own right, not simply as trainees.

Fundamental issues and challenges

The single greatest issue with Postdoctoral training is compensation. It is literally a joke—a punchline—for anyone who has gone through academic training. Nothing else—programming, retreats, resources, etc. would come close to the quality of life improvement that a substantial increase in compensation would provide.

Existing NIH policies, programs, or resources

Increase compensation. I recruit PhDs for my current company, and if I’m competing against an academic postdoc, I win. It’s not even close. Even as a CRO, which doesn’t pay nearly as well as, say a large pharma company, we can beat the typical postdoc salary by about $10-20k.

Proven or promising external resources or approaches

For the love of God, increase postdoc compensation.

Response 2028

Perspectives on the postdoc roles and responsibilities

A professional, postgraduate researcher in the lab of a principal investigator. A postdoc is a dedicated researcher that assumes a leadership role on their project and in the lab more broadly. They significantly contribute to the training of graduate students, especially in experimental operation, since most PIs are stretched thin and don’t do much experimental work on their own.

The postdoc continues to develop the skills of designing and implementing research projects, but brings with them an entire PhD’s worth of training and skills, often promoting consistent progress on their (and their mentees’) projects and the smooth operation of the lab.

For the postdoc, the experience in a new lab allows them to gain exposure to scientific questions and techniques beyond their PhD experience. For those postdocs interested in pursuing academic/basic science careers afterwards, a postdoctoral position can be a great place to practice proposing new projects and forming the foundation of their independent research program.

Fundamental issues and challenges

I have taken on a huge opportunity cost in terms of professional development and financial stability, because a postdoc is only necessary for applying for an academic position in my field. As number of positions remain small and the costs are high, it is no surprise to me that fewer young scientists are signing up to be postdocs, and a part of me feels gullible for accepting this deal.

I am payed significantly lower (approximately half) than my peers in the private sector, with the implicit expectation of working longer hours to ensure "meaningful progress" on my project. As well, while my peers in industry are able to actually save appropriately and afford to live in a region with in a robust science job market, I can only afford to save about 4% of my net income per month and have no contribution from my employer towards a retirement fund. I frequently rely on my partner's income to meet expenses such as car maintenance.

A Postdoctoral position is necessary for attaining an academic job, but unnecessary and sometimes detrimental to an applicant trying to change sectors, say into industry or the national lab system. Because of the small odds of landing an academic job and the limited demand for my particular technical skills in the private sector, I've experienced deep self-doubt and uncertainty throughout my three years as a postdoc.

Particularly since I started remote in 2020, my time as a postdoc has been isolating. Not only did it take more than a year to get to know my labmates, but there is much less interaction outside the lab since I don't have a cohort like in graduate school. As well, I commute 1 hr+ each day and leave between 5-6 to be home with my spouse, limiting after-hours interaction.

Existing NIH policies, programs, or resources

The NRSA zero-level postdoc salary of $56K is not reasonable for a PhD-educated professional researcher, and does not reflect the huge cost-of-living disparity across the country and recent high inflation rates. Stipends should be tied to regional median cost-of-living estimates, which is regularly measured by the Federal Reserve.

Proven or promising external resources or approaches

Along with compensation in-line with cost of living, support for staff scientist positions on extramural grants could alleviate the labor shortage. Not every postdoc is looking to establish an independent research career after only 3-4 years after their PhD, and would be fulfilled continuing to work in a professional role in a basic science setting under a PI. Viewing postdoctoral positions as training and temporary appointments limits this opportunity.

Response 2029

Perspectives on the postdoc roles and responsibilities

I view the academic postdoc as a training position where PhD scientists are transiently employed by a laboratory to gain additional experience in their intended field. Postdoc positions are for training purposes and thus the PI hiring a postdoc should keep this in mind. Postdocs are not "cheap technical help", but rather aspiring top level scientists who are employed for training purposes.

Fundamental issues and challenges

The main problems with PhD postdoc positions are the lack of appropriate benefits and pay for such a professional position. Earlier, when US PhD training took 4-5 years, a short postdoctoral position was suitable. However, with PhD training now spanning 7-8 years, it is difficult to convince PhD scientists to take a "double penalty" and spend another 7-8 years in a transitory position with low pay and a benefits package that often includes no retirement benefits. This is especially relevant when MD fellows get paid double or triple the salary of postdocs and then "moonlight" to make additional salary, often at the expense of their laboratory obligations. It is particularly ridiculous when the postdocs need to train the MD fellows because they lack laboratory skills, while getting paid a fraction of the salary. The laboratory expertise of postdocs should be appropriately valued, regardless of whether the postdoc has a PhD, MD, or both.

Existing NIH policies, programs, or resources

Improving the postdoctoral training system begins with doctoral studies. Relieving the undergraduate debt burden for doctoral students would be a good way to ensure that they don't begin with a "penalty" relative to foreign students who most often have no undergraduate debt. Streamlining the undergraduate with BS to PhD programs that enable students to enroll in a PhD program after two successful years of undergraduate study would enable students to save two years of tuition as beginning their PhD studies two years earlier. This would enable students to obtain their PhD degree by age ~24. They could then complete their 5 year postdoctoral studies before age 30. This is a huge issue, especially for students who plan on having families. PhD programs should be better defined and have milestones for success, with stipend increases for achieving candidacy and also increasing the stipend to postdoctoral level stipends after the 5th year. This will provide an incentive for PhD advisors to enable their PhD students to graduate in a timely fashion. Presently there is little incentive for PhD advisors to encourage a well trained senior PhD student to graduate. They would rather have them function as postdocs or technicians while continuing to pay them as a graduate student. Fixing these types of conflicts of interest would be immensely helpful for encouraging PhDs to pursue postdocs. Providing for lab manager funding for labs would also discourage using postdocs for this purpose. The postdoc position should have a 5 year limit. Beginning in year 3 of the postdoc, postdocs should be eligible for submitting R01 grants. This would remove another conflict of interest where the PI can prolong the postdoc training period by keeping the postdoc in a holding pattern while they continue to work under their paygrade.

Proven or promising external resources or approaches

No response

Response 2030

Perspectives on the postdoc roles and responsibilities

Postdocs and research scientist do everything: from teaching and mentoring students (undergraduate/graduate) to writing grant and manuscripts, to perform experiments, to attend conferences.

Fundamental issues and challenges

Not enough tenure track positions for postdocs to transition to and Not enough support to the research scientist track, which is a great opportunity for team scientists.

Financial remuneration is not reflective of the effort delivered.

In several academic institutions, postdocs do not qualify for retirement benefits.

Postdocs and research scientist are treated as cheap labor that promote the careers of their MD colleagues. There is not accountability for the PIs that exploit postdocs (especially, international postdocs)

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Provide administrative supplement grants to postdocs

Increase salaries

Establish accountability checkpoints for the PIs. Enforce multi-mentorship to create a supportive, professional and non-professional, environment.

Support international students with immigration information.

Support the research track as alternative for postdocs to continue producing exciting science (salaries, special funding opportunities)

NIH should ask for feedback from the postdoc community in a regular basis (e.g., 2 or 3 years) to determine whether the programs in place are having the desired impact. In our fast changing society regular checkpoints will inform whether changes need to be done to obtain the desired effect. Preventive vs. correction action

Response 2031

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral role as an opportunity to establish oneself as an independent researcher, continuing the PhD training into an individual line of scientific questions not directed by the PI, but aligned with the research in the lab where training occurs. In this position, the responsibilities and opportunities should be guided by what the postdoc is looking for in future career stages.

Fundamental issues and challenges

From a graduate student perspective, academic incentives revolve largely around number and impact of publications, and prestige of academic institutions where training occurs. Therefore, recent PhD graduates focus on maximizing these metrics and tend not to focus on the fit between their career aspirations and the environment created by the PI and lab they join. However, biotechnology and pharmaceutical hiring managers prefer candidates with industry experience rather than academic experience, making publications and institutions less important when postdocs leave academia. This inhibits recruitment because it makes postdoc training less valuable for PhD students intent on following industry careers.

Moreover, there is very little difference in stipend levels between academic institutions, but the pay gap between academia and biomedical industry for a recent PhD can be two to three times the starting postdoc salary, making the postdoc role objectively less attractive in short and long term monetary returns. This is very important for PhDs carrying student debt and international researcher looking to offset the costs of moving their lives (and at times families) to the US.

From a postdoc perspective, postdoctoral training is largely ruled by the will of the PI who funds the position, and the competitive nature of leading research groups push PIs to require postdocs to spend all their time furthering the research program funding the lab. Therefore, postdocs have little space to pursue training for industry positions, and at times even for faculty positions. In essence, postdocs need more control over their funding and time in order to better negotiate their positions, responsibilities, and expectations.

Existing NIH policies, programs, or resources

Evidently, shrinking the pay gap would be a major element. However, even at a lower salary, academic positions tend to offer more stability than job largely ruled by “at-will” contracts (the standard in biomedical industry). The stability can offset some of the pay differential. A postdoc position would be even more attractive if postdocs had more independence than graduate students with respect to their funds and training opportunities. For example, today, a postdoc can only pay for professional conferences and training using university resources if the PI requested such resources in a grant and if the same PI allows the postdoc to use it for such activities. If all postdoctoral positions funded by the NIH had a professional development yearly stipend, it could be used to pay for online training (such as Coursera or LinkedIn Learning subscriptions), in-person workshops, or travel-related costs for professional conferences (travel, lodging, fees).

By transferring control of these funds to the postdoctoral researchers themselves, the NIH would achieve better distribution of training funds to the entire postdoctoral workforce (not just those in top tier universities with large labs and even larger research grants), and a guarantee that all postdocs would have the opportunity to obtain professional training outside academia. This could be offset by prohibiting the use of grant moneys to fund postdoc professional training (only PIs and (under)graduate students could use the funds, for example).

Proven or promising external resources or approaches

Multiple institutions implement Individual Development Plan where postdoc and PI discuss and put on paper the plans, expectations, training, and other activities proposed for the following year. This helps both parts clarify expectations regarding the use of the postdoc’s time and the lab’s resources for the upcoming year, and what each part expects from the other.

Postdocs looking for faculty positions could ask to be more involved and trained in grant-planning and teaching activities, while postdocs looking for industry positions could be given the time for training of industry-related skills, while PIs can clarify their expectations regarding lab management and student supervision.

For example: https://www.med.upenn.edu/postdoc/postdoc-training-individualdevelopmentplan.html

Response 2032

Perspectives on the postdoc roles and responsibilities

1. Design projects/experiments, perform experiments, analyze/organize data, write/publish manuscripte.
2. Felowship/grant writeing.
3. Collaborate with lab members/others, provide feedback (suggestion/advice if possible) to others work.
4. Metoring some students.
5. Review manuscripts.

Fundamental issues and challenges

1. Relatively low salary compared to the living cost (especially for house/apartment renting) in big cities.
2. Maybe it is helpful for postdoctor candidates to choose the right lab for them if there is a public evaluation report about the PI and lab.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

1. If there are public available vedio protocols (from well established labs) for experiments/data analysis, that will be helpful.
2. More zoom classes about project desigining, experimental performing, data analyzing, manuscript writing, and fellowship application.
3. Increase salary to against the inflation.

Response 2033

Perspectives on the postdoc roles and responsibilities

To me, a postdoctoral position serves as a stepping stone to get the skills and training necessary for a faculty position. It also serves as a time for the post doc to figure out if working at a university is their main career goal or if they wish to pivot to a different career goal.

Fundamental issues and challenges

Right now, post docs are underpaid and that's the number one reason why graduating graduate students are taking positions in industry, pharma, etc. In addition, there are not a lot of protections for post docs. Often, post docs can be easily overworked and taken advantage of (especially international post docs). In addition, institutions don't often provide resources for things such as child care which is a barrier for women who wish to do a post doc. It's hard to justify moving to a new state or city when the pay isn't the best and when there aren't good resources to ensure your family is taken care of in this new location.

Existing NIH policies, programs, or resources

I believe that the funding resources (T32, F32, F99/K00, K99/R00, etc.) are good resources and allow the post doc to build a competitive CV for faculty positions. I think that post docs need more education on the F32 payback policy. Not many post docs realize that this policy exists and some post docs feel trapped once they discover they don't have the flexibility to change careers easily. I enjoy when IC's host webinars on funding resources/professional development. I've attended a few of these, which have been very informative in learning how to be competitive for funding and what funding/policies exist.

Proven or promising external resources or approaches

I don't know of any resources off the top of my head.

Response 2034

Perspectives on the postdoc roles and responsibilities

As a fifth year grad student, I am currently interviewing for academic postdoc positions. I view the positions as exciting, but a tough road. Doing an academic postdoc would allow me to transition to a fully independent scientist while having some freedom to work on exciting and potentially groundbreaking science. At the same time, I am well aware this is a difficult road particularly if I want to achieve my goal of becoming a principal investigator down the road. I view it as the road less traveled, with way less pay than industry positions, and a struggle to succeed in academia.

Fundamental issues and challenges

The biggest issue facing postdoctoral trainees in my opinion is financial security and being rewarded for your skillset. It's absurd that a first year post-doc with a PhD will make less than a large number of 22 year olds just graduating college and entering the workforce. Moreso, making half or 2/3rds less than our peers who go take jobs working for a large company (Genentech, Kite Pharma, Gilead, GSK, etc). It is in my opinion the single largest driving force that is leading to a loss in the number of PhDs even interested in doing a postdoc. The recruitment seems like an ok process, although difficult to navigate alone. Retention, from what I've heard, can be tough depending on a lot of factors.

Existing NIH policies, programs, or resources

I think there should not be a cap on postdoctoral payment. The postdoc pay should be scaled with living costs, similar to how PhD programs work. Someone in grad school can make the NIH minimum in a cheaper city like Des Moines, Iowa, but grad students in Los Angeles or NYC are payed up ot 35% more than the NIH minimum due to a much higher cost of living. Why shouldn't it be like this for postdocs? Postdocs in NYC or other high cost-of-living areas should be able to get paid 20-30% above the minimum to help account for the additional living expenses.

This does go back to an issue with NIH modular budgets, which for an RO1 has been stuck at the same level for 20 YEARS. $250,000 in 2003 would be approximately $400k today, adjusted for inflation.

Additionally I think more programming and structured mentoring for NIH funded postdocs would help retain postdocs longer and I think lead to an increase in research productivity.

Proven or promising external resources or approaches

From what I have heard, most postdocs love what they do. They just think they should be treated fairly for what they are doing, and payed with respect for their level of intellect and hard work. Job satisfaction would improve greatly with reasonable pay (20-30% increase in pay).

Response 2035

Perspectives on the postdoc roles and responsibilities

An academic postdoc, I believe implies to most people, including me, a transitional position where one continues training for (ideally) a tenure track position. And this training aspect is how employers have implicitly justified the fact that postdocs in most cases are dramatically underpaid compared to the market value of their qualifications.

Fundamental issues and challenges

Tenure-track faculty positions have become increasingly more difficult to acquire, which decreases the value of the training aspect of the job for most people. Importantly, while a PhD is a useful asset for getting an industry job, postdoc experience rarely provides much value beyond the academic track. This problem was recognized some time ago, and everybody agreed that we should do more to encourage students to go to industry if they were so inclined. Thus I find it difficult to understand why we are now all surprised that's exactly what happened, and there are fewer postdoc applicants. If the US biomedical research needs more postdocs, I believe there's no other way than to transform the position such that (after some experience) people who decide to stay on the bench rather than become PIs can do so and get paid like professionals, not like trainees. However, in most cases, institutional rules and salary structures, but more importantly the NIH salary caps are not compatible with such career tracks. Bottom-

line is postdocs are getting paid too little for the hope that it leads to a faculty position, which is probably not going to happen for most of them, and they know it too.

Existing NIH policies, programs, or resources

As an example, NIH could mandate that after the first 3 years, postdocs be offered salaries dramatically higher than their starting one, if they choose to pursue a "professional researcher" track (which could be enforced by e.g. ineligibility to apply for NIH grants as a PI for a defined amount of time). More generally, it is necessary to improve career advancement opportunities of postdocs as well as their financial situation.

Proven or promising external resources or approaches

No response

Response 2036

Perspectives on the postdoc roles and responsibilities

Postdoc position involves working on a project initially with a member of the lab and learn about the field of research and experimental skillsets. Later, the postdoc is expected to successfully lead a project and collaborate with lab members or other labs. The postdoc should be involved in designing project, writing grants, attending seminars and conferences, training new lab members, etc.

Fundamental issues and challenges

Number one challenge is the salary. Postdocs in big cities and suburbs cannot get paid the same. The salary needs to be scaled to the average expense in a given place. Additionally, other benefits and compensation like 401K, HSA, etc.

Existing NIH policies, programs, or resources

More NIH programs should be open to international postdocs.

Proven or promising external resources or approaches

It could be beneficial to form a committee like that of a thesis committee to assess the progress, work load and dynamics between the postdoc and the Principal Investigator.

Response 2037

Perspectives on the postdoc roles and responsibilities

Postdoctoral training adds both depth and breath in my scientific training while forging my career pathway to an independent research program. It is an integral part of my development both scientifically and professionally. I had the chance to try my hands on "running a lab" in a sub-area in my PI's lab to build confidence in later establishing my own independent research lab and program.

Fundamental issues and challenges

While there are many uncertainties that affect the decision in taking a postdoc position, one of the biggest issues is relocation expenses. None of the postdoc opportunities, both for myself and fellow postdoctoral colleagues, was offered a relocation allowance. The relocation expense is a huge burden on perspective postdocs in moving across country and even in times internationally. A cross-country move is at least $2,000 with additional upfront cost of apartment rental (e.g., application fees, security deposits) and living expenses with the first paycheck's delayed arrival 1-2 months after the position starts.

There is no supervision on PIs in matching NIH salary on an annual basis once hired, leaving it up to institution administration/PI. The employee benefits also vary greatly depending on the institution policy in how postdocs are viewed as official vs. unofficial employees. The lack of accountability in securing employee benefits and leaving it up to institutions/PIs put postdocs in extremely vulnerable financial positions, while many postdocs are at child-bearing age with families and partners to support on an underpaid postdoc salary with frequent moves.

On top of these difficulties, international students face additional challenges due to lack of funding opportunities. While it is understandable that federal funding favors supporting domestic research, the

extremely limited options for international students in applying for federal grants put them at additional risk in the power dynamic who rely almost entirely on PI/institutional funding.

There also seems to be limited options of career outcomes for postdocs in my field —mainly in academic settings with few opportunities, resulting in severe competitions among postdocs in securing a position.

Existing NIH policies, programs, or resources

If translational research is of current central interest to NIH, I suggest investing in funding industrial research by allowing and supplementing postdoctoral trainees in industry settings. These environments are more likely to encourage technology transfer that will directly benefit translational research, while enhancing the lived experience of postdocs during training with better career perspectives at the end of training. Once industrial postdoc training becomes more popular, it will likely move academic institutions to become more competitive in securing postdoc trainees with better benefits.

Proven or promising external resources or approaches

European Union has successful models in funding collaborative schemes that require participation of industrial partners. Some of the doctoral/postdoc positions are housed within the industrial partners to foster collaboration with academic institutions. These schemes usually require comparable benefits regardless of the home institution (academic vs. industrial partner) with a great sense of equality

Response 2038

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a stepping stone to my next career stage. For me, I am trying to learn valuable skills that will translate well to a career in industry and establish a track record of productivity in my current role as a postdoc. In a recent discussion with other postdocs, we discussed whether we view ourselves as "trainees" or "employees". Almost no one viewed themselves as a trainee. I see the postdoctoral position as no more a trainee than is anyone else in their career who is trying to be better at their job. For instance, my wife just started her first job as an accountant. She is learning on the job, but she is not a trainee, she is an employee. As such, she is entitled to certain benefits that postdocs rarely enjoy (i.e. higher pay, health, vision, and dental insurance, 4 weeks of PTO, maternity leave, etc.).

Fundamental issues and challenges

Money, work-life balance, and long-term academic career prospects that are not incredibly insecure. Money: there should be cost-of-living adjustments for pay and the "minimum" pay should be increased. For instance, in the Research Triangle area of North Carolina where I live, a postdoc should be getting paid at least $70-75k per year to feel as if they did not completely waste their time getting a PhD. Obviously, that number is much higher in more expensive cities. Work-life balance: currently, this is very individual. My PI's expectations are very fair and allow me to have a life outside of lab. This is absolutely not the case for many other postdocs who essentially live at work. If the NIH can influence labs to not encourage unhealthy work-life, this would make the postdoctoral position more attractive. Long-term academic career prospects: it is no secret that it is incredibly difficult to obtain a tenure-track faculty position in academia or government, and even if you do get that job, grant-chasing leaves one in a very tenuous position. As long as junior faculty do not seem sufficiently supported, people will continue to go to industry jobs instead. As long as industry takes people straight out of their PhD (and pays double what a postdoc does) people will continue to go straight to industry out of their PhD, and labs will be left wondering why no one wants to go to academia.

Existing NIH policies, programs, or resources

In recent discussions with others who are more aware of the debate between NIH and Universities on how to retain / recruit postdocs, it came across quite clearly that both parties (NIH and Universities) wanted to pass the blame to the other side. Specifically, the NIH seems to think that Universities should be doing more to supplement what the NIH is already doing to support postdocs. The Universities say the NIH "standard" pay is $55k, so that's what they pay. If either side is actually serious about recruiting more postdocs, they need to get together and figure out how they can do that. No one is more aware of NIH policies, programs, and resources than the NIH. They should get creative and decide how they can meet the basic improvements requested by postdocs.

Proven or promising external resources or approaches

If you want to recruit valuable people, offer to pay them more money. The NIH will obviously never be able to compete with industry salaries, but if they can pay 75-80% of what someone would earn in industry (as opposed to the ~60% that they pay in my area) I have no doubt that they will get more postdocs. Postdoc salary should also be adjusted at least to match inflation each year. By-and-large postdocs do not care who is paying for this (NIH or Universities), but this is what needs to change. As far as work-life issues are concerned, I see little avenue for NIH to change this through policy (although it could start by not requiring its own postdocs to work long hours for low pay, which I know is the case at least in some NIH labs). If postdocs are paid better though, they will be less concerned about long work hours because at least they are being compensated for that work.

Response 2039

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I have a 6-month-old son and it is impossible for me to find him a daycare spot. Forget the cost--I can't even get him in! I therefore have to take time off to watch him during normal work hours and adjust my schedule so that he always has care. Most post docs are in the time of the life where they're becoming parents and there is little to no support from a job that requires so much after hours and weekend work. At times it feels like I should just stay at home with him despite all the work it took to get a PhD and how much I value my research.

Existing NIH policies, programs, or resources

I know that there are very few grant sources for non-Americans and as an American, I understand this. Majority of our NIH funding comes from the taxpayers and I would rather use that money to support American scientists who will stay in America. Even as an American it is hard to get funding. Instead, I believe that we should support a system to help grant citizenship to scientists who wish to spend their career in America. This way their training and knowledge stays here instead of going back overseas.

Proven or promising external resources or approaches

Encouraging universities to have daycare connections for parents would be a start. My job also only offers 6 weeks maternity leave which is the bare minimum recovery for a c-section. I had unexpected complications, and my son was born premature. I needed to extend my leave to deal with his health problems and there was no financial support and very little understanding of how leave functions for post docs.

Response 2040

Perspectives on the postdoc roles and responsibilities

My postdoc position is a time to show research-related skills without any pressure from course works or the pressure of obtaining any certificates. At the same time, it is the terminal stage of fine-tuning learning for me.

Fundamental issues and challenges

LOW PAYMENTS: I can't emphasize enough on this point. In 2023 PhDs earning 53-65K/year won't work. We are at least 20-30K behind the per.

Temporary job status: The job security is not there. Please find a way to make the postdoc position a permanent job.

PI's unwilling to specify the job description: Postdocs are assigned to subprojects without any additional payments

Existing NIH policies, programs, or resources

Please increase the yearly salary by at least 20-30K and bring the postdocs under tax exemption for the national interest. NIH can enforce the universities to pay extra money in exchange for department-specific

jobs such as TA roles, coordinators, and lab managers role. In fact, many postdocs does these, without payment from the department or PI, as an addition to their postdoc responsibility.

Please make the position permanent for the affiliated university. For example, a postdoc position can be an entry-level permanent job at a university. Following that the postdocs could automatically be promoted to the university's open job positions.

NIH can introduce auditing the PIs' role to monitor if postdocs are truly assigned to a specific project. The NIH office can establish direct communication with the postdocs a few times a year.

Proven or promising external resources or approaches

I know some universities are offering additional roles to postdocs with extra payments. It will help both parties.

NIH and Universities can involve some industries to support the postdocs as well. For example, industries can give some contact research to the university and postdocs can perform the job with extra payments

Finally, NIH must develop a system for communication with the postdocs directly.

Response 2041

Perspectives on the postdoc roles and responsibilities

I see the postdoc position as a skill gaining and transition time. During this time, I want postdoc to hone the skills learned in graduate schools (methods, grant writing, teaching) and hone their interests. This will give them the ability to transition to an independent investigator type position. I think postdocs have the role of more senior in the lab to graduate students, but are at the same time learning. I have seen abuses of the positions were a PI gives too much "grunt" work or teaching responsibilities. This does not allow for proper development of a postdoc.

Fundamental issues and challenges

I think the biggest challenge of being a postdoc is salary related. It is impossible to ask science trainees to be impoverished for so many years undergrad, graduate school and postdoc. Once you are a postdoc you are often in your late twenties or early thirties and want to start thinking about a family and buying a house which is often not possible. This impoverishment has many detrimental effects. It turns people away from ever doing a postdoc, and leaving science. It discourages individuals from disadvantaged backgrounds from continuing in science. I often see people who come from families with money who can gives extra support or individuals with spouses making a good salary continue, but those without this extra support leaving. Have a wealthy family or rich spouse shouldn't be a requirement to pursuing a career in science. This leads to drop off of good postdoc candidates simply because they can't afford it. It also leads to difficulties after postdoc as you have not built equity or savings for all those years, where non-scientists have been. I think this discourages a lot of people from pursuing academic careers.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Better salary and benefit support. Housing buying support like is given to military families.

Provide incentives for good mentors to spend time mentoring postdocs of all backgrounds and abilities. Currently, there is no "reward" to mentors for being run a lab that is a good training environment for all.

Response 2042

Perspectives on the postdoc roles and responsibilities

After 5-6 years of PhD training, the Postdoctoral position is mostly waste of an individuals time and young creative age. It is understood academic institutions need Postdocs and PIs also need Postdocs. However, institution hosting a Postdoc must consider the individual as an employee and offer all the benefits they would offer to any of it's employee. For example, employee equivalent matching 401K or 403b retirement

benefits. NIH must be on the phase wise abolish Postdoc Mission and introduce Staff Scientist position with inflation adjusted salary or only allow a three (3) years maximum instead of current six (6) years.

Fundamental issues and challenges

There is NO standard and structure for this Postdoc training program. I am doubtful whether this training is even necessary. The Postdocs are at the mercy of PI or the host institution. After 5-6 years of PhD training one is ready for a real job rather than entering into another trainee position. It is total waste of individual creativity and waste of time, money and life.

Existing NIH policies, programs, or resources

1. NIH must ensure that academic institution hosting a Postdoc must consider the individual as an employee and offer all the benefits they would offer to any of it's employee. For example, employee equivalent matching 401K or 403b retirement benefits. That's not the case in most scenario.
2. NIH must be on the phase-wise 'Abolish Postdoc Mission' and introduce Staff Scientist position with inflation adjusted salary
3. Alternatively, only allow a three (3) years maximum instead of current six (6) years with again inflation adjusted salary and appropriate employee benefits at host institutions that are rich enough to offer match in 401K and 403b benefits.
4. The Staff Scientists should be allowed to submit grants as independent PIs

Proven or promising external resources or approaches

1. NIH should only allow maximum 2+1 (Max) years of Postdoc if not abolishing it immediately by replacing with Staff Scientist position.
2. Standardize and structure the 2+1 (Max) training like MD folks have ACGME type 2 years fellowship post MD-residency with outcome expectations from institutions and PIs in terms of job placement and training.
3. The structure of a 3 years Basic Science Postdoctoral Fellowship should be standardized and professional like any ACGME Fellowships for MD folks.
4. The Staff Scientists should be allowed to submit grants as independent PIs when 'ABOLISH POSTDOC MISSION from the Nation of USA' is achieved.

Response 2043

Perspectives on the postdoc roles and responsibilities

I went into an academic postdoc to expand my skills set but the graduate students in the lab were territorial of the ongoing projects and samples. Though I was able to get a postdoctoral fellowship to have a decent pay check, the low pay for academic postdocs was a hinderance and gave me pause as an international person. Additionally, the postdoc did not give me as many opportunities to situate myself strategically for the next academic or industry position (paper writing teams, grant writing opportunities, teaching opportunities, etc.). One positive was that I was in a lab that was closing. This gave me many opportunities to develop my own connections leveraging my PI's connections. I have know 2 recent female postdocs who were at research centers and moved up to assistant research professor due to the needs of the research center. These trainees did not receive adequate mentorship from their established mentoring teams which left them drained, frustrated, and feeling that their quality of life was not good so they left academia. One of these trainees had a K award that she walked away from.

Fundamental issues and challenges

Low pay and often a lack of health insurance is a hinderance to all three aspects. Poor mentoring and a lack of mentoring has also become a big hinderance to retention and quality of life of postdoctoral trainees. The low number of academic positions to apply to at the end of a postdoc decreases retention and quality of life as many people then have to do additional postdocs. Having the standard often be a 5 year postdoc to be able to get an academic position should not continue to be the standard as if decreases recruitment, retention and quality of life.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2044

Perspectives on the postdoc roles and responsibilities

The postdoctoral trainee is a position where a doctoral graduate gets training for becoming an independent researcher and eventually becomes an academic faculty member. This position provides the necessary training to expand research experience, lab management, training lab members, obtaining funding, and utilizing them in an effective way. It is a very crucial phase in the field of academia. Therefore, it's very common to get overwhelmed by work stress as a post-doc.

Fundamental issues and challenges

No response

Issues and challenges for post-doctoral trainees:

1. The post-doctoral trainee is a temporary job position and depends mostly on the PIs and grants. Therefore, the position does not provide any job security.
2. There is no specific job responsibility for the post-doc which leads to an excessive workload that harms their physical and mental health.
3. Compared to the work pressure and mental stress, the salary is very minimal for post-docs. Whereas similar or even less qualified individuals in a non-academic profession earn way higher.
4. For international scholars, most academic institutions do not provide the option for permanent residency which leads to uncertainty in the immigration status of the post-docs.
5. Most of the post-doctoral grants offered by NIH or other sources have a citizenship requirement which makes it very hard for international scholars to get funded.

Existing NIH policies, programs, or resources

Policies that could be modified, expanded, or improved:

1. Currently the postdoctoral trainee is a temporary position according to NIH. The situation could be modified by establishing the postdoctoral trainee role as a permanent full-time (40hr/week) position with specific job responsibilities that is partially authorized by the academic institute and NIH. If any individual is working after hours, they could be given overtime payments on an hourly basis.
2. The salary of academic postdoctoral trainees is approximately $20000-$30000 lower than the salary of a non-academic position with similar qualifications. The salary could be increased for the academic post-docs to make it equivalent.
3. Academic institutions could provide services for permanent residency or stable visa status to international scholars.

Proven or promising external resources or approaches

1. The salary of a postdoctoral trainee could come from multiple sources. For example, having an additional role in the academic institute or in the associated hospital from where they will get a salary which altogether will increase their income.
2. NIH and other funding sources could extend their eligibility requirements for international scholars with valid visa status.

Response 2045

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Abolishment of T-grants for postdocs and replacing them with more F-grants: an individual fellowship obtained by the postdoc has a much more positive impact on career development than the one given by the institution. An individual fellowship strengthens the postdoc (psychologically, because it was an effort to get it and because someone (NIH) is supporting and believing in them) and strengthens the postdoc's position within the institution. T-positions are part of politics within clinics and departments and have little potential to accelerate postdocs' development.

I imagine that F-grants are much more effort for NIH than T-grants, due to the evaluation process, but it would be beneficial for postdocs and research in general if more postdocs went through this process. This evaluation could maybe be a bit simplified to reduce the effort.

Proven or promising external resources or approaches

No response

Response 2046

Perspectives on the postdoc roles and responsibilities

I thoroughly enjoy science and pushing the boundaries of knowledge, it's an extremely rewarding job and intellectually stimulating. I also enjoy being a mentor and guide to graduate students (both PhD and MSc) and helping enthuse others about science. To be a postdoc is to be doing the groundwork for the advancement of science under senior leaders of their fields.

Fundamental issues and challenges

I think the most critically inhibiting factor as a single person, is the postdoctoral salary and career progression opportunities. Whilst I would generally say my quality of life is good and I maintain a good work life balance through careful budgeting and time management, the salary does not even come close to be commensurate with both experience and the unequivocal expectation of putting in vast amounts of overtime hours, especially in more expensive cities on the east and west coast. There are so many higher paying jobs that will readily hire PhD graduates and postdocs for double the salary and a standard 9-5 working schedule. Many other entry level jobs that require only a BSc (or less) easily pay the same or more, especially in large cities like Boston and New York. Sometimes, the love of science is not enough to overcome this, especially with the snail-like pace of salary progression and paucity of tenure track positions. Excusing the salary by saying the postdoctoral fellowship is training is truly not good enough as many other jobs will pay much higher starting salaries whilst also training employees with valuable skills.

Existing NIH policies, programs, or resources

Increased engagement with industrial partners would be of benefit to offer a more tangible reason to stay in a postdoctoral position if a guaranteed job in industry would be provided at the end, as often there are far too few tenure track positions for the number of postdocs. It would incentivise people to bring projects to completion before suffering from burnout or job dissatisfaction.

Proven or promising external resources or approaches

No response

Response 2047

Perspectives on the postdoc roles and responsibilities

A postdoc is a wonderful opportunity to get additional experience (technical skills, professional development, soft skills) and increase research productivity. I moved from a smaller R1 (newly designated) institution to a well-established institution with an NIH-funded center, so the resources and experience have been an incredible contrast. I understand the postdoc position as an opportunity to expand your professional depth and expertise, so you are more likely to succeed as a PI with an independent lab.

Fundamental issues and challenges

Postdoc positions used to be 1-2yr positions and now are more often 4-5yrs, so the poor pay is really challenging. This is especially true for those who have had to take on loans to get through graduate school due to poor stipends, and those who are not in two-income households or who have family financial support for graduate school or postdocs.

The expectation that postdocs apply and receive a K99 in order to be competitive for faculty positions makes it even more likely that you will need to spend at least 4yrs in a postdoc. Also there *seems* to be an expectation that K99's must be submitted twice in order to be competitive. An additional grant cycle is a considerable amount of time when there is a fine balance of meeting the less than 4yr of postdoc requirement and the implied you must be the absolute best and most competitive to receive the grant. The K99 is presented as more training needed to move forward, but in contrast, it is also seen as an incredibly prestigious award only the best postdocs qualify for. This is counterproductive as the postdocs who need the additional training will likely not receive the grant, and those that are already at the top of the postdoc pool will receive additional support training, and interest from institutions hiring faculty. IF the K99 is indeed supposed to recognize and support top-tier postdocs, the requirement of presenting the additional training as NEEDED, should be revised. We could all (literally every scientist everywhere) benefit from additional opportunities to pursue cutting-edge techniques that expand our skill set.

Existing NIH policies, programs, or resources

Reframing the K99 and K01 grants. Universities find the K99 incredibly appealing as you are able to bring funds to a new institution. Perhaps we should have the option of only writing an R00 as prospective grants to be taken to a new institution, in contrast to the K99 requiring more training, or a K01 that is intended to be written after settling at the new institution.

Proven or promising external resources or approaches

No response

Response 2048

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

As an intramural postdoctoral scientist, I am NOT eligible for the NIH loan repayment program. As I am not classified as a federal employee, I am also NOT eligible for student loan repayment program (SLRP) granted to full time employees as a way to recruit or retain them. This seems like a large oversight as postdoctoral fellows are just entering loan repayment. I love NIH and would love to stay in my postdoc, but feel I cannot afford to do so once the temporary halt on repayment is lifted.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2049

Perspectives on the postdoc roles and responsibilities

Postdocs are highly skilled and trained individuals that have critical roles in academic labs. Their roles are varied and depend greatly on the lab and the postdocs career aspirations. However, the key thing that differentiates postdocs is that they know how to approach a problem scientifically. They often bring important techniques and skills with them that don't otherwise exist at their destination, or come to learn new techniques and apply them to their own ideas. They can work relatively independently, but need support and additional training in leading projects, budgeting, strategic decision making, writing, applying for funding, or other scientific-adjacent skills.

Fundamental issues and challenges

After finishing their graduate degree, postdocs are extremely skilled workers, and yet postdocs are offered very small salaries with time-limited appointments. Expectations of time and commitment are high, but postdoc jobs don't return the favor. Postdocs are expected to be time-limited and there are no guarantees of any particular job at the end. Given this, and the alternative of a highly paid, high potential for career growth position in industry or consulting, it's no wonder it's harder to convince graduating students of pursuing a postdoc. Compounding this problem, postdoctoral training often comes at a certain time in a person's life, where they might be starting/contemplating a family, and otherwise transitioning to a non-student lifestyle. Furthermore, highly trained peers in other fields are doing much better at this stage of life than biological sciences postdocs—friends that went to law school, medical school, or business school are all more advanced in their careers and have greater job security than equivalent positions in academic science. You can not even blame postdocs for feeling discouraged by this prospect and considering other career paths, it is a tough life choice, and without the ability to apply for or supply higher salaries, PIs are hard-pressed to provide a competitive/living salary. We expect postdocs to take postdoc positions out of their own drive and passion, and to tolerate the disadvantages of postdoc life in exchange for vague career training. Its no wonder academia is becoming less and less attractive.

Existing NIH policies, programs, or resources

Salary caps for postdocs should be increased, and there should be mechanisms to allow PIs to apply for supplemental funding if negotiated salary rates are increased mid-award. At my institution—[redacted for anonymity]—the postdoc union negotiated a higher salary for postdocs than what is allowed for postdoc fellowships, putting PIs on the line for the the increase out of discretionary funds (IF they have them). This is a huge problem, and it creates a perverse incentive for PIs to oppose postdoctoral union initiatives, or even just institutional decisions to increase salaries.

Proven or promising external resources or approaches

Honestly, I think it comes down to money/salary support. And if it can't be money—then there has to be something special about postdoctoral training—better benefits or job security/training/placement. Those initiatives would have to be done at the institution level. There are also not enough academic positions, so another thing that would help is eliminating tenure/establishing funding term limits so more positions would be available for new people.

Response 2050

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

All junior scientists need to receive science communication training as part of their NIH award.

Proven or promising external resources or approaches

Many science-communication training opportunities exist, but these need to be encouraged through funding.

Response 2051

Perspectives on the postdoc roles and responsibilities

Post-docs have many essential roles within the laboratory space. We can help to train students, optimize and create protocols, and write papers/grants for our mentors. I think they are essential to the advancement of science as most PIs can no longer tell you the nitty gritty details of an experiment—which are usually the most critical part for success and reproducibility. I also think that post-docs are not given enough freedom for themselves to create their own projects—a lot of this having to do with the overall funding structure of grants. Currently, PIs have projects which are largely accomplished by post-docs and graduate students. However, if a post-doc wants to try to apply for other funding, they have to start a new

project to show separation from their mentor, but there is rarely any "extra" funds for a post-doc to try to carve out their own research. This greatly stymies a post-docs ability to use their training and creativity to try to carve out their own niche for the future. Post-docs are also largely used in every area of research from basic wet lab, paper/grant reviews, or grant writing and are not able to receive credit for these contributions. This also takes up time and does not allow for proper recognition. It also can create an environment that produces burnt out post-docs that are less productive and interested in science as a whole since it is a lot of work in many different avenues with very little credit, recognition, or pay changes.

Fundamental issues and challenges

I think the biggest issue is payment. The pay level for post-docs has not or has barely changed in the past decade. This is unacceptable. There's also usually a miscommunication of expectations as there is a mix of cultures that all collaborate within a lab, and expectations from some countries can be very different than expectations here. This can create an unfair lab environment. There are also people on different funding mechanisms, and so one post-doc can make 10-15K more per year. The funding discrepancy is very apparent when comparing to similar jobs in industry where you can make double for doing a very similar job, there is no incentive to stay in academia. Furthermore, post-docs usually receive 1 or 2 year contracts. This can make it difficult if you're trying to buy a house or start a family. To buy a house where I live I had to show 4 years of previous employment and 3 years or future employment from my current employer. If I would have had a 1 or 2 year contract this would not have been possible. I also think post-docs are not as respected as they should be. Most PIs will look at post-docs are just labor. Post-docs are the future of academic research, so treating them as glorified techs is not the way to maintain them in academia. If treated like a glorified tech, I would have left to a tech's pay in industry—which is almost double my current salary.

Existing NIH policies, programs, or resources

Timeline restrictions for grants has to change. As a female scientist, if I wanted to have kids before applying for an NIH grant, it would have been almost impossible. Giving a 1-year extension max is not sustainable. As we're about 50:50 at the post-doc level and then ~15% as faculty, this has been a major reason among my friends. For example, if I wanted to have a child in my first year as a post-doc for age concerns, then I'm pregnant for 9 months, assuming no complications there are certain chemicals and reagents I should not be around which can affect my work. Then after the baby is born, I'd have maternity leave (ideally at least 2-3 months). During this time there are other physical demands of the woman that the partner cannot take care of. There are also changes in mental state during and post pregnancy. If I want to have a second kid, this does not affect the total 1-year extension. If the requirement for a grant, like a K99—which is almost necessary to have to get hired at a good institution—has a 4 year post-PhD requirement. So, if I did research for 1 year, got pregnant once or twice, a 1-year extension is not going to bring me to the same level as a man who has been continuously working on his project for 4 years with no physical or mental changes because of hormones or pregnancy complications. If you truly want to keep women in science then change these policies. A new "short" K99 has been introduced, why not include a longer one? Also more post-doc funding in general that is not time dependent. People learn, grow, and discover at different rates.

Proven or promising external resources or approaches

I think looking at the structure of other companies that deal with STEM or tech development. In these programs they have protected "creative" time. I also think having funds available either within the R01 mechanism for "creativity" or project branching, or outside of this for post-docs to develop projects is essential. I know personally I have written grants to support the research I wanted to do outside of the projects that were required of me. This has been really challenging and something that I don't think all PIs would allow as they usually believe all of your time should be spent helping their career. This again gives no recognition and no personal grants. While papers have post-docs as first authors, the general community still looks at this as the work of the last author and his group. While true, it makes it very hard for post-docs to feel appreciated/valued or chances for career development. As stated above, if more post-doc grants are created, they should not have time requirements, or have some sort of sliding scale of 1-3 yr, 3-5 yr, and 6+. Papers can take 1-2 years to get published which again is almost punishing people who want to try for a higher impact paper. Post-docs need these higher impact papers for their careers—according to universities. So, overall I think really taking into consideration the impact of having children—a 1-year extension is not sufficient—and having more opportunities for "creative" time for post-docs to develop independent careers is essential if you really want to keep people in academia.

Response 2052

Perspectives on the postdoc roles and responsibilities

It means an opportunity to expand your knowledge and acheive fund to become independent and build your own research lab.

Fundamental issues and challenges

Low salary and lack of job security are the fundamental issues that make the experience so stressfull.

Existing NIH policies, programs, or resources

The minimum salary that is set by NIH is rediciously low. For those who are living in Boston this salary is peanuts.

Proven or promising external resources or approaches

I think increasing the NIH base salary should be a good start to increase job satisfaction.

Response 2053

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salary is easily the biggest problem. In a city like Boston, a decent 1 bedroom house costs $2500/month. The salary after tax deduction is $4200/month. If you have a dependent spouse and child, it is impossible to live on this stipend. The cost of childcare is $2000/month. So rent+childcare alone is more than post-tax salary. Salaries need to be adjusted for cost of living in the big cities. In a city like Boston, salaries must start at $90,000/year. After acquiring the kind of expertise that we do in our PhDs, living paycheck-to-paycheck or building up debt just to pay for living costs is not sustainable. With such limited availability of faculty positions, industry offers are much too tempting to continue being a postdoc and struggling with basic living.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2054

Perspectives on the postdoc roles and responsibilities

To me, the postdoctoral position is absolutely crucial for finding a research niche and obtaining experience seeking funding.

Fundamental issues and challenges

In Washington state, we have a new law that requires over $65K as a minimum wage for all exempt employees and this figure will escalate to over $90K by 2028. As a faculty PI, I am extremely supportive of postdocs making a more livable wage (especially with the high cost of living in Seattle). Unfortunately there is just not a solution for bridging the gap between our research budgets created years ago and these new salaries. Moreover, NIH stipends for postdocs on F and T awards are much lower than our state minimum now, but my institution is not requiring that these postdoc salaries get raised—so we have a lack of parity where those postdocs on research project grants are making more than those postdocs on stipends even though they are working side by side in the same lab. I worry that there will be a disincentive for postdocs to write F awards (or to enter T32 programs). This is also becoming an issue in recruiting junior faculty to my institution because they are very worried about how they are going to afford to pay for postdocs in the lab.

Existing NIH policies, programs, or resources

I would like to see NIH increase all postdoc stipends to be more in line with states that have increased postdoc wages (and/or to consider geographic location in the stipend amount). Other resources that are particularly requested by postdocs is relocation and housing expenses. Perhaps programs could be modified or developed to help address this need.

Proven or promising external resources or approaches

No response

Response 2055

Perspectives on the postdoc roles and responsibilities

The postdoc position is a training ground to gain further experience at the bench, learn new expertise, while narrowing down the central theme that will carry an independent research career.

Fundamental issues and challenges

Overall, Postdoc are SEVERLY underpaid! This is the #1 fundamental issue. Living in NYC at [redacted for anonymity], our starting salary was $58k/year. This is so low considering current salary ranges for even unskilled jobs. Further, Postdoc live in an incredibly precarious reality, and are under tremendous pressure to publish or perish, while at the same time asked to mentor PhD/rotating students, review papers, maintain lab environments, apply for grants, ,ecc. It is not surprising that people are living on mass for the private sector. This is a huge problem for the future of scientific research in America.

Existing NIH policies, programs, or resources

1. Provide greater funding to in all NIH grants: and increase the NIH-payline for postdoctoral training
2. K99 grant application are SO stressful to meet (due to the 4-yr requirements post-PHD, which have been completely highjacked by Covid). Again, the NIH has now removed all support/additional COVID time that was initially provided.
3. If you want us to mentor student, why don't you make this a central aspect when reviewing applications?

Proven or promising external resources or approaches

Pay us more, provide more support and more grants!

Response 2056

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is TRAINING after PhD or MD training. For PhDs, it should broaden the trainee's scientific horizon and enable the trainee to pursue important problems that transcend their PhD training. For MDs, the training may need to incorporate more fundamental elements that PhDs receive during their predoctoral training.

The duration of postdoctoral training should be three years, or so. Long enough to allow the trainees to embark on and complete an important project that will enable them to advance their career, short enough to allow the trainee to begin their independent career while they still possess "the arrogance of youth" and are excited about pursuing their own, hopefully iconoclastic research—or other activity (start-up, whatever).

A key aspect of postdoctoral (as well as predoctoral) research training is that the trainee is "playing with other people's money," this encourages risk-taking and the development of new methods—and enables them grow as scientists.

Too long training, however, will be demoralizing, and work against the career development of the trainee.

Fundamental issues and challenges

The key challenge will be to change the current system, which has been developed by old (usually white male) scientists to benefit old (usually white male) scientists. As one of my mentees, who recently had

begun an independent career recently told me: "I am not sure I can recommend this training path/career, it is a Ponzi scheme." I could only agree, we are in the process of killing the goose that lays the golden eggs.

We have long been aware of the rightward shift in the distribution of NIH grants vs. PI chronological age, which is a definite disincentive to begin an academic career.

NIH needs to provide more information about the more subtle aspects of research funding that provides better insight into the support going to junior and senior scientists. Having this information will guide decision-making and might make it easier to implement difficult policies because the problems will be out in the open. Also, following up on the analysis Jeremy Berg did many years ago, what is the marginal return on research funding to very large labs. There needs to be a discussion of the optimal research budget—and the novelty/importance of research done in very senior labs.

Senior PIs who completed their PhD in five years, or so, now expect graduate students to "hang around" for six-to-seven years, if not longer. They tend to argue that the trainee needs to have an article published in one of the vanity journals in order to get a good postdoc or job—forgetting that they were successful just publishing in the high-quality "professional" society journals.

For NIH to make an impact, it will be necessary to have more data that truly show what is going on, that will provide insight in the underlying problem(s).

Existing NIH policies, programs, or resources

First, institute funding policies that would encourage senior faculty to step back and let the next generation run the show. Some ICs already have such policies in place.

Second, repeating what I write above, have an in-depth analysis of how support an investigator should receive.

Three, consider whether it may be possible to limit the number of years a PI can fund a trainee on their RPGs, which might shorten the length of the postdoctoral trainee's wandering in the career Valley of Death because it will be in the PIs interest to promote their trainees' independence and independent careers.

There will not be a major influx of new money, the only stable solution to the problems that postdoctoral trainees face will be to create room at the top. If we do not create this room, the best trainees will disappear. They may decide to not to apply to predoctoral training programs, there are many other exciting careers. They may also decide to forego academic careers after their doctoral (and, maybe, a few years of postdoctoral) training. That is not necessarily bad over the short term, because they may do great things in startups or more mature companies. But it will be bad over the long term because it will impact on the future training of young scientists who are interested in working on important problems. The key here is IMPORTANT, interesting is not enough.

Looking back over fifty years, the bureaucracy has become a lot more cumbersome. NIH and other institutions need to examine what any regulatory requirement is going to accomplish. If NIH asks for a piece of information, they need to do something with that information. If the information will not be used for quality control or some other identifiable use, it should not be collected.

Proven or promising external resources or approaches

As should be clear from what I have written above, there has to be systemic changes before one should consider these questions.

I also want to add that the problems are so large/complex that it makes little sense to limit the responses to 300 words.

Response 2057

Perspectives on the postdoc roles and responsibilities

This is a senior research role. Main responsibilities include conducting higher-risk (perhaps more complicated) research projects and mentoring graduate students, techs and undergrads. This role also should focus on teaching you how to be an effective mentor and scientist at the same time.

Fundamental issues and challenges

Work life balance is not respected. Post docs work long hours, probably everyday for very little pay. It is time for the NIH to compete with funding/salaries which genuinely compete with industry. Pay is the number one issue with recruiting and keeping post docs. Additionally, there is a lot of abuse that can occur from mentors not having their best interests in mind.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2058

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The biggest question comes down to finances. Every time that I have thought about quitting (and there have been many), it is because after paying off 350k in student debt, it is hard to start a family with no savings while earning at the 10th percentile in the field you trained to work in (as an MD researcher). Every life event means extra weeks of moonlighting such that there has not been a single year in the past 9 that I haven't had to moonlight or take 2nd or 3rd jobs to make up an extra 30-50% of my base salary as a researcher (I currently have 6 regular sources of income, while NIH pays the majority of my primary source). That extra work leads to years of compounding burnout, and at some point you have to realize you could work a quarter the hours for 2-3x the salary, and that no amount of scientific curiosity will resolve that. If you want to retain researchers, there needs to be

a) reasonable parity of salary between NIH grant supported researchers and the industry norm (e.g. must earn at the 40th percentile for academics in field at rank in US region, or something similar—perhaps a requirement that the NIH salary cap be applied), and

b) stronger support for loan repayment that is both commensurate to the real burden of student debt and is not contingent on secured future funding (i.e. can receive despite not having several years of secured funding).

Existing NIH policies, programs, or resources

NIH loan repayment amounts are laughably small and importantly are taxed. Getting an extra $35k off my loans would have meant

Proven or promising external resources or approaches

No response

Response 2059

Perspectives on the postdoc roles and responsibilities

Roles/responsibilities are reasonable

Fundamental issues and challenges

NIH F32 payscale is low vs what we can make working (fewer hours) in industry. This makes it very unappealing to remain a postdoc if extreme events occur (health issues, having kids, etc.).

Existing NIH policies, programs, or resources

Overall, I think NIH training is good

Proven or promising external resources or approaches

Look at industry. What is working to keep people at biomedical companies, tech co mm panties, etc.

Response 2060

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is considered a training for transition to an academic career. Underpaid and overworked work environments, with minimal protection of time and effort.

Fundamental issues and challenges

After several years of PhD, where rigorous training occurs, the postdoc position is still considered another level of "training", hence postdocs are not considered employees, while they are clearly not students like graduate students. Unfortunately, this leads to another 5+ years of extensive and rigorous working without the appropriate benefits, nor experience/assistance that helps transition to a permanent position, neither is the experience counted if one steps out of an academic setting. There are no positions to absorb trained manpower into research institutions. Faculty positions are limited and intake is restricted. International postdocs (who make up majority of the population of postdocs) are faced with incredulous challenges in terms of immigration and Visa issues. Despite all the training, qualifications and qualities to be employable, VISA restrictions discriminate against them, since institutions find it cumbersome and expensive to process and sponsor visas like H1B.

Existing NIH policies, programs, or resources

- NIH policy should include matching retirement benefits for postdocs. This is absolutely essential.
- It is highly discriminatory and dismaying that such highly trained professionals are not paid their worth and not provided with benefits that all other employees with much lesser qualifications are earning because they are employees and not trainees.
- 4 weeks of vacation time is not always used each year due to various reasons, either it should be permitted to be encashed (like how regular employees receive) or allowed to be carried over.
- There is no overtime payment for extra hours and days that one works.

Proven or promising external resources or approaches

Instead of having postdoc positions as training positions that leave them hanging in search for future jobs, why not convert these to permanent Scientist positions. This will ensure productivity and retention of talent and ensure research occurs smoothly.

Response 2061

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1. Salary vs responsibility is disproportionate. The postdoc salary (and graduate student salary) is unlivable for many individuals—presenting even greater barriers to individuals from low SES backgrounds, diverse racial /ethcni groups, etc. from pursuing these positions.
2. Mental health: Many training environments (and faculty environments) make exceptional people feel inadequate.

Existing NIH policies, programs, or resources

Increase pay for postdocs/graduate students. To do that, the amount of money that can be allocated for research awards needs to be increased! NIH is not keeping up with inflation/increasing research costs!

Proven or promising external resources or approaches

Require mental health and wellness training for all institutional training and career development grants awarded

Response 2062

Perspectives on the postdoc roles and responsibilities

Conceptualizing projects, performing experiments, writing grants, managing technicians and students, develop professional skills through courses. To me a postdoc is a continuation of your PhD, with an emphasis on moving towards independence.

Fundamental issues and challenges

For international postdocs moving countries is very hard. Relocation costs are not refunded, so everytime I move to a different position I have to start over with no savings. I dont have parents who I can fall back on financially, so I think many people considering a carreer in acadamie just cant afford it. On top of that, we have often times already spend over a decade studying, obtaining an undergrad, masters, PhD, after 10-15years of studying you deserve to be able to afford your own appartment. I dont know a single post doc who can afford reasonable housing.

Existing NIH policies, programs, or resources

Provide salary ranges based on the state/city the postdocs are based. Provide relocation costs for international postdocs. Provide an F32 program or equivalent that J1 visa holders can apply for. Establishing yourself as a foreign academic in the US is much more difficult due to restricted access to funding.

Proven or promising external resources or approaches

Many unveristies in Europe cover relocation expenses, this should be included in the funds that NIH provides. For example:

https://vu.nl/en/employee/fringe-benefits/remuneration-of-removal-expenses-information

Response 2063

Perspectives on the postdoc roles and responsibilities

I have always viewed the postdoctoral position as something of a scam. Looking back to the 1950s, when resources were more abundant and the pipeline for training was not yet well-established, most would agree that it was uncommon for anyone completing a PhD in the biomedical field to pursue a postdoc. Rather, it was more common to be considered independent, and to immediately launch one's own laboratory. Since then, arguably due to too many PhD graduates chasing too scarce resources, the tradition of requiring a postdoctoral position, sometimes multiple postdocs, has become firmly entrenched.

Although there are benefits to the postdoctoral trainee, I personally do not think that it makes sense for someone who should be independent in their research to gain still further training —when he or she crosses the threshold to become an independent investigator, acquiring new skills would be as simple as hiring someone else to do the work in their lab.

Fundamentally, the current postdoctoral training paradigm assumes that post-doctoral training is necessary, and does not acknowledge that the goal position of an independent investigator is one of a manager, overseeing the productivity of other members in the lab. As such, it does not do the best job of facilitating PhD graduates to transition to a role of management, but still assumes he or she will do all the work with her own hands, and rarely provides sufficient funding beyond the salary of the postdoctoral researcher to hire help.

Fundamental issues and challenges

Despite its best intentions, I would argue that the actions of the NIH have further entrenched this paradigm by creating "career development awards" which may cover the salary of a postdoc but do not provide sufficient additional funds to support 1.0 FTE of a research assistant, or to fully cover the cost of research, and firmly position the postdoc as a trainee under the guidance of another independent investigator. To be sure, these awards are much needed and better than nothing, but they also perpetuate negative aspects of the paradigm I have described, and need to be reimagined.

For MD/PhD physician scientists, who already devoted substantial time to receive PhD training, in addition to residency, and fellowship training, the prospect of spending another 5 years in a "training role" could

not be a more potent recipe for burnout. Although physician scientists are generally paid better than PhD postdocs, it is still insulting to them, who are in their 40s, have faculty positions and act as attending physicians on hospital services with many hands to carry out hospital business, to pretend that they are a trainee. Many of these scientists could snap their fingers and find a position in industry that respects their intellectual contributions and pays 2-5X more, or simply give up research and increase their salary through clinical volume. Having seen many of my friends and colleagues face this decision and exit basic research, I can personally attest that it takes exceptional fortitude to stay the course.

Existing NIH policies, programs, or resources

I think that the role of the post-doc needs to be reimagined. Every moment of a postdoctoral position should be filled with the purpose of preparing the postdoc for independence and lab management —not some sort of purgatory where they gain skills to take to the next postdoc, or labor as sharecroppers under an established investigator who takes credit for the work. We should start considering them to be mini principal investigators--we should call them postdoc investigators, rather than postdoc trainees, and the awards to support them should not be "training awards" but named differently to acknowledge their burgeoning independence.

The budget for post-doc awards and career development awards (or administrative supplements to these awards) should be increased to allow postdoc investigators to support 1.0 FTE of a research assistant, in addition to existing funds for research and salary. The market rate for this would be ~$70K after fringe. The salary for non-clinician post-docs should also be drastically increased.

Any work generated by the post-doc investigator should be considered a collaboration with that of the mentor PI. Post-docs should be allowed and encouraged to represent their NIH-supported work as independent of their mentor, and NIH documents should require PIs to attest to this and forbid them from submitting R01s or other NIH grants using data from the same NIH-supported work unless the post-doc investigator is included as a co-investigator.

They should be allowed to form independent "research groups" within the lab of their mentor. We should support these research groups to grow into independent labs. The IDC rate should be increased substantially to cover this additional overhead. The academic institution should acknowledge research groups and their post-doc investigators as independent. This would overturn established precedent that PIs have the final call on decisions related to the work.

Proven or promising external resources or approaches

Not sure.

The salary needs to be drastically increased--I currently support two full-time staff, and I was shocked to find that their salaries are about the same as the starting salary of a postdoc at our institution. On the one hand, although I am considered a post-doc by the NIH, I should be able to hire postdocs to work for me if I have the funds, but this is not possible because nominally I am just a "trainee" in the lab of another investigator. On the other hand, it is surprising that someone with a PhD and intellectual independence who could carry out a project independently would be paid the same as a research assistant who never went to graduate school and requires training and 100% supervision.

These economics just don't make sense —the best most qualified labor can only be hired by established investigators (not me), but the salary rate is severely suppressed with respect to the market for PhDs in industry, throttling supply, but NIH grants do not support higher salaries.

Response 2064

on the postdoc roles and responsibilities

The academic postdoc position is, to me, supposed to provide a training experience that serves as a springboard into a faculty role. It should provide sufficient independence that postdocs are able to design and execute their own projects, on their timelines, with support and feedback from faculty mentors. In reality, I think faculty members generally behave as though most of their postdocs are cheap labor for generating data in support of their grants.

Fundamental issues and challenges

I think many postdocs and graduate students have come to view postdoctoral training as exploitative labor, and this will continue to affect recruitment and retention of postdoctoral trainees moving forward. Not only are postdocs not paid fairly, but they exposed to toxic work environments with little or no institutional support. Why would anyone imperil their financial future, not to mention their final few years of fertility, to work as a postdoc in this "ecosystem"??

Existing NIH policies, programs, or resources

Force institutions to pay postdocs fairly, with consideration towards both current economic conditions and the level of education and training postdocs have attained. Which is to say, at the same levels that intramural postdocs are paid at the NIH.

Proven or promising external resources or approaches

Paying postdocs fairly!!!

Response 2065

Perspectives on the postdoc roles and responsibilities

A transition position between grad school and the job market.

Fundamental issues and challenges

Salary, uncertainty of the future, status, titles are unappealing, risk

Existing NIH policies, programs, or resources

Salary grid is lower than similar positions in the private sector

Proven or promising external resources or approaches

working environment and job satisfaction

Response 2066

Perspectives on the postdoc roles and responsibilities

assignment to a funded project of a PI relevant to a technique or the specific area of research from the postdoc's graduate thesis, submit publications quickly

Fundamental issues and challenges

Low pay, harsh work environment (long hours, competitive roles), top priority of publications

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2067

Perspectives on the postdoc roles and responsibilities

both a job and a training position.

Fundamental issues and challenges

We should have had regional postdoc salaries for at least the last 30 years. cost of living in the Bay Area, Southern California, New York, Boston, etc. is wildly different from Alabama and Iowa. Postdocs in some regions are barely able to pay rent, in other areas they are able to buy condominiums. Many federal agencies use regions rates for employment and other costs (e.g. travel per diems). Not doing that with postdoc compensation is absurd. The people most impacted are from economically disadvantaged

backgrounds. The NIH says it wants to diversity the scientific workforce, but until they acknowledge economic barriers to being a postdoc, those are just words.

Existing NIH policies, programs, or resources

Just pay them at regionally appropriate rates. I doubt the NIH can effectively provide programs and resources, leave that to the PIs and institutions.

Proven or promising external resources or approaches

If you pay $1 a year, you'll only get people who benefit from generational wealth. If you paid $1,000,000 people would break down the doors to get those jobs. Between those numbers is some function that will look different for ecumenically advantaged versus disadvantages potential postdocs. The function will also look different for low and high cost of living regions. Anyone who think about it for a second knows that. Are we willing to reflect that knowledge with policy, or do we keep our heads in the sand?

Response 2068

Perspectives on the postdoc roles and responsibilities

A post-doctoral position to me is short-term (1-3 year) position meant to allow you to independently develop a project under the guidance of the PI. A post-doc position is helpful for further developing scientific skills after graduate school as well as preparing to become a PI.

Fundamental issues and challenges

I currently plan not to do a post-doc because after approx. 5.5 years of graduate work, another 3+ years of making very little money while working very hard with long hours to then needing to face tough competition for funding and a position as a PI is not appealing. In industry, I can expect to make six figures right after I finish my PhD without the need for a post-doc. Also, I have a partner who is also a graduate student, so we would need to find post-docs and eventually academic positions within the same or neighboring institutions which seems daunting. I would like to settle down and be able to buy a home and start a family, which I feel like I have already pushed off for my graduate work, and I don't want to try to juggle that while doing a post-doc.

Existing NIH policies, programs, or resources

I'm not entirely certain. I think pay increases for post-docs would help as well as improving the work-life balance and increasing the attention to building skills for industry as well as academic careers.

Proven or promising external resources or approaches

No response

Response 2069

Perspectives on the postdoc roles and responsibilities

an academic postdoc is simply extended graduate school but now you are expected to apply for and obtain your own funding.

Fundamental issues and challenges

Postdoc research now lasts 5 years so the average age is 30-35. If you're female and want kids this is the only opportunity but there is little support for maternity leave and child care during a time when you are supposed to be highly productive. Securing a job after your postdoc depends on publication record (which is not completely in your control) and funding to take to your new academic instuition (absolutely not in your control). Working in industry will pay more and provide better benefits. academic postdocs select for people who do not have partners and do not want children.

Existing NIH policies, programs, or resources

Hire in a postdoc to faculty track so that upon completion of a successful postodc they opportunity to be hired on a faculity exists. Success should be well defined by requirements set forth by the academic institute much like P&T process.

Proven or promising external resources or approaches

Treat postdocs like employees not students. Focus on policies that help retain employees and apply those to postdocs.

Response 2070

Perspectives on the postdoc roles and responsibilities

I think my role is to contribute to the scientific project of the lab, to train students, and to develop an independent research project that will lead me to get an academic position in the near future.

Fundamental issues and challenges

Low salaries, limited benefits (health insurance and retirement), limited number of grants international students can apply to, difficulty getting visas or having to come back to your home country every year to renew it (this means, weeks of absent from work and a lot of money from postdocs), not a clear status in the university (we are not students but neither staff).

Existing NIH policies, programs, or resources

To increase the number of grants international students can apply to, to ask Institutions to hire students as staff, to waranty good benefits such as health insurance and retirement, to have a constant comunication with postdocs in the form of anonymous survey, and to allow postdocs to be recognize by their input while writing grants with advisor such as R01 or R21.

Proven or promising external resources or approaches

More surveys like this, annual evaluations from postdocs to mentors and viceversa, and IDP.

Response 2071

Perspectives on the postdoc roles and responsibilities

opportunity to gain more research experience in a given field or explore a new field while gaining exposure to potential roles in academia or outside of academia. The post doc should have access to a group of mentors to diversity opinions, views, and experiences, but also to have multiple views and exposure to different fields. Additionally, this is the time to learn about the path to independence , however it may look for each post -doc, instead of forcing each post doc to follow the foot steps of the mentor.

Fundamental issues and challenges

Post doctoral fellows at the [redacted for anonymity] are treated like freelance scientists. There is very little mentoring, advise, and career development support. Post docs are used for ideas, to mentor younger scientists, and to finish projects that are close to publication. Few post docs are actually ready to move to tenure track positions and if they do, the support to do so comes mostly from other resources or other mentors not directly involved in post-doctoral training. Moreover, post docs have little to now support when it comes to protection against research integrity violations. That is, the authorship and publishing environment at [redacted for anonymity] does not favor post docs at all. Post docs can work on several projects and be integral parts of completing and publishing a project and still not be included as authors. Meanwhile, time and effort goes wasted. This is on top of the fact that post docs are hired as “Vendors” so many of the policies and procedures that apply to employees, faculty, and staff, do not apply to post docs. Moreover, post docs who are not completely committed to entering tenure track positions are immediately pushed out through the methods previously described (authorship problems), and by creating negative work environments.

Existing NIH policies, programs, or resources

Have a more dedicated center/ institute that supports post doctoral training and that ensures that these individuals are not being taken advantage of. Many of the occurrences at UNM could be stopped if such a department existed--especially for those post docs funded by NIH grants (including training grants).

Proven or promising external resources or approaches

No response

Response 2072

Perspectives on the postdoc roles and responsibilities

I tend to view the postdoctoral position as a unique time in a scientist's career where the individual gets to focus on independent scientific inquiry under the guidance of a mentor. It's a special time in a career between having learned how to think/problem solve during graduate school and having to have extra managerial/administrative duties in future positions. I tell my trainees it's an important apprenticeship of sorts for those who think they want to go on to run research groups either in academia or industry.

Fundamental issues and challenges

When I was a postdoc, the pay level was not sustainable in the long term. Even in a city with a more reasonable cost of living, it was a stretch to afford housing, the overall cost of living, and save money for retirement and other large expenses. I couldn't imagine having to manage the cost of childcare as well, but many postdocs must!

Moving for every stage of my career caused significant strain on my personal relationships and probably contributed to delayed family formation. This may result in me having fewer children than I had hoped for.

We now have to compete with biotech companies with far better compensation and benefits packages.

Many grad students know the prospect of attaining an academic position is slim and are not interested in a postdoc.

It is very difficult to recruit high quality postdocs as a junior faculty member just getting established.

Existing NIH policies, programs, or resources

Better funding for postdocs, or more programs to help early investigators support more permanent research staff.

More opportunities for individuals who are at the senior scientist level to compete for funding. I have a postdoc in my lab that should be moving on to the next stage of his career. Because he had poor mentorship in graduate school, he didn't realize he actually liked academia until the 5th year of his postdoc. I'd love to promote him to a senior scientist and be able to continue to support him in developing his grantsmanship without having to keep him at the postdoc pay level for another 2 years. He really hopes to be a driver of scientific inquiry in the field, but he ultimately may be best served by functioning as a semi-independent senior scientist able to write grant applications and manage projects under the umbrella of another lab, but there is no clear pathway to get there.

More opportunities for postdocs to develop management and grant writing skills.

Proven or promising external resources or approaches

More opportunities for postdocs to develop management and grant writing skills.

Better training for mentors on how to help individuals that want to work in industry.

Response 2073

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a time for individuals to chart their own course of research while learning from the PI's existing and underway studies. The postdoc's responsibilities are to be well-versed in the content areas and methodologies they want to have an independent research career in. This includes knowing all past and current research in these areas. The postdoc's role is also to be a leader in the lab for staff and other junior trainees (e.g., students). They can help with training opportunities and advice for others (e.g., grad school applications etc). I also believe that it is a time when postdocs should be allowed to run their own small pilot studies, completely in their own area. This means they will formulate the research questions, fill out the IRB, and run the study on their own or under their direction (having help from staff and the PI, of course). This enables them to be empowered, skilled, and capable when they become independent. Without this opportunity, postdocs are unprepared in a faculty position.

Fundamental issues and challenges

Challenges inhibiting recruitment is that there are a lot of great postdoc positions out there. Retention of postdocs may be difficult because some PIs do not allow postdocs to do anything but act as staff in their lab, which makes postdocs find other avenues (sometimes out of academia). Overall quality of life with a postdoc is exceptionally hard. By the time most individuals enter postdoc, they have completed undergrad, masters programs, and doctorate programs, and are in their late 20s or 30s (not all but broadly). They have had to move all over the country for opportunities and probably have just moved to a new place for the postdoc. All of this is done while making incredibly low salaries and heavy, heavy student loan debt. Unless the postdoc is independently wealthy, it is almost impossible to do without taking on more significant debt. Postdocs arrive desperate to do what it takes to finally have a stable job with a stable salary. Programs like the NIH Loan Repayment Program help some but are hard to get. Women in postdocs are under even greater pressure as most are at the age to have children. To figure out the process to give birth, have a paycheck for maternity leave, and still be competitive on the job market is a real issue. It sets women up to be behind in a discipline where we are already struggling to be seen. Postdocs with families or spouses willing to move where the postdoc is have a hard time finding jobs in the same cities. Postdocs are usually with no family, in long distance marriages, or have a spouse looking for a job in the new city (which they will stay at for only a short time; again, setting up for more financial hardship).

Existing NIH policies, programs, or resources

The postdoc salary could be raised and NIH could recognize more outright parental leave policies. I do appreciate the extension of ESI status based on how many children you have. This was an incredibly easy process and one I pass on to others. NIH should expand the NIH Loan Repayment Program to fund more people and create more transparency around scoring.

Proven or promising external resources or approaches

NIH should start to consider how we can help individuals as a whole with work/life balance and how postdocs are individually affected by moving cities because by postdoc, most individuals are no longer college age approaching adulthood. They are full adults with working lives that are drastically changed each year as they work toward a stable and independent job. And, just because those who have been in the field for a long time have had to suffer this same burden, this does not mean we should be putting the next generation of postdocs through it.

Response 2074

Perspectives on the postdoc roles and responsibilities

Postdoctoral researchers are the drivers of scientific innovation and discovery. Free from the responsibilities of a PI, but also more experienced than a grad student, we are in the prime position to drive innovation forwards. I enjoy the freedom in choosing and guiding my own projects, as well as being in charge of my day-to-day experiments and time management, and the creative aspect of science at this level.

Fundamental issues and challenges

First and foremost: Lack of competitive salary/stipend. Almost all of my fellow postdocs and fresh PhDs who have decided against another postdoc cited pay as the number one reason. I myself live in a HCOL area as the sole earner in my family—we effectively live a college student lifestyle while being in our 30ies and having a PhD. My work does not feel appreciated and I am taking a huge pay cut to pursue my dream of being a scientist—but not everyone is willing to do that.

Lack of retirement savings plans and other benefits (maternity support)

Lack of training on new methods/instruments and other skills (team management, writing, presenting, teaching.)

Some groups have very toxic environments (micromanaging, internal pressure and competition, being scooped inside your own group, research misconduct, terrible work/life balance)

Existing NIH policies, programs, or resources

Give postdocs more money

Proven or promising external resources or approaches

Switzerland (NCCR) 120% support grant for postdocs with family responsibility

Response 2075

Perspectives on the postdoc roles and responsibilities

A stepping stone for permanent positions in academia, government, industry, communication, etc. In some instances, personal reasons might limit the person geographically and s/he may opt to continue as a research scientist.

Fundamental issues and challenges

The industry pay scales are not possible to match in academia unless NIH/NSF can provide special supplements. It is also the case that graduate schools are producing far too many PhDs, some of whom are simply not of the caliber expected for postdoctoral positions.

Existing NIH policies, programs, or resources

A fraction of the time should be devoted to broadening skills for her/his future career. Currently, there are no safety nets for such training.

Proven or promising external resources or approaches

Regional symposia of postdocs supported by NIH grants would be a good start. Best practices should be shared and these regional meetings will allow for networking and showcasing of placement opportunities.

Response 2076

Perspectives on the postdoc roles and responsibilities

A postdoc position is an additional training role to bridge gaps in knowledge between graduate work and a full time career. The training can be around new technical areas and should include additional skills such as mentoring, teaching, grant/technical writing, project management, etc.

Fundamental issues and challenges

1. There are not many good academic jobs available, or there is a perceived inability to make meaningful career progress in academia, and so there is a lack of desire to pursue a postdoc to progress down an academic career path
2. If a student wants to pursue an industry position, the skills obtained in a postdoc do not necessarily translate to or are not required for industry positions in specific ways

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2077

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The limit on number of external work hours allowed per week places many at a disadvantage. For example, individuals who need the extra income and or members of practice disciplines who need to accrue practice hours to maintain a license or certification, may not be able to devote 100% full time to their post-doc yet practice in real-world settings often complements the academic scholarly work and keeps the post-doc current.

Existing NIH policies, programs, or resources

The pay back agreement limits options for post-doc trainees to work in settings other than academia, yet science is conducted in many settings (industry, practice settings, corporate world, policy, NGOs, non-profits etc).

We need broader criteria for eligibility (immigrants, citizenship status etc) that reflect the composition and diversity of the future workforce

Proven or promising external resources or approaches

We provide trainee opportunities for "practical mentored experiences" in our T32. For these experiences, trainees are embedded in real-world work environments across the field of health technology beyond academia. Trainees choose from among 6 "experiences" (digital health, innovation, commercialization and translation, population health, consumer engagement and health, machine learning lab). These experiences often lead to scholarly products, innovations etc. It would be nice if trainees were paid (since the mentor/sponsor) benefits from the trainee's contributions.

Response 2078

Perspectives on the postdoc roles and responsibilities

I understand why the post-doc position exists. I do somewhat agree that it might be nice to have a training stepping stone role in between grad student and PI. However, I don't think postdoctoral positions should become limbo, where you are in a tenuous positions with tenuous pay for an undetermined amount of time until you can find a "real job." I understand why the role exists and why there is a stepping stone, but I am not willing to do 2 or 3 postdoctoral positions while I apply and apply and apply to faculty positions.

Fundamental issues and challenges

It seems like a miserable job. The expectations seem very high and very high-stakes, PIs can be nasty, the pay is poor, the hours are long, I might have to keep moving cities, total duration needed is unclear, and it seems impossible to achieve upward mobility as a post-doc. It seems industry is always growing and pay is better and compensation level is clear up front. I personally would prefer to stay in academia, but for the simple reason of being able to fund my life/pay off student loans I may not be able to. Additionally, in several cities in the US existing as a minority or woman is potentially unsafe--why would I stay in the US to post-doc?

Existing NIH policies, programs, or resources

INCREASE BASE NIH STIPEND FOR POST-DOCS. I have seen over and over again that universities set their post-doc salary at the baseline NIH level, and use that standard as reason not to increase or go over. A five dollar increase does not compete with inflation. It makes postdoctoral positions very unattractive. I'm not sure how but some sort of way to escape the limbo of being a post-doc for an undetermined amount of time. Consider expanding the NIH loan repayment program outside of biomedical and biobehavioral research.

Proven or promising external resources or approaches

No response

Response 2079

Perspectives on the postdoc roles and responsibilities

To me, a postdoctoral position is an opportunity to become increasingly independent as a researcher. Although this period allows recent graduates to finish up publishing their dissertation work (if applicable), many post docs transition into a new lab with a new mentor. In this new position, post docs become involved in their mentor's work to the extent that it facilitates learning new skills. However, these period should be largely driven by the students needs and goals. The post doctoral period is an important time for recent graduates to accumulate publications and be mentored in writing/obtaining their first grant(s) and preparing for their next step (whether as a faculty or Scientist, etc.).

Fundamental issues and challenges

Because most post docs are relatively short, lasting 1-2 years, a major barrier is relocation. At this stage in their career, many individuals applying for post docs have a long-term partner/spouse and/or family commitments (e.g., children or pets). Relocation is extremely expensive due to moving costs but can also be a huge financial burden if there is a need for the post doc to live apart from their partner/spouse during these 1-2 years. There are also costs from traveling back-and-forth to visit the partner/spouse during the post doc period. There should be the opportunity for remote/hybrid post docs with limited travel every 1-2 months. Otherwise, relocation costs should be covered and assistance should be available to assist with relocating the partner/spouse in identifying a new job (if they are eligible to work in the same facility/institution). Another issue that I have seen among peers, is that nobody wants to accept a post doc position because the pay is significantly less than taking a full faculty position. Several individuals I know are leaving research-intensive institutions for smaller institutions where they can be hired as a faculty and mostly teach. Post doc salaries need to be more competitive to prevent students from continuing to avoid post doc positions. An issue specific to non-citizens/green card holders is restrictions on their eligibility for the T32 mechanism. Many institutions use this mechanism as their primary pathway for post docs, so this is extremely limiting for non-citizens/green card holders when searching for a good post doc match.

Existing NIH policies, programs, or resources

Currently, international PhD students are ineligible for nearly all NIH funding (e.g., F30, F31, F99). This restriction significantly impairs these students' progress towards becoming independent scientists and puts them at a disadvantage compared to their American peers when they transition into post doctoral roles. Non-citizens/green card holders are also ineligible for the T32 mechanism, which significantly complicates the search for a post doctoral position. Further, many faculty and institutions lack awareness that international post docs are ineligible for this mechanism, which leaves PhD students to rely on their peers for guidance on what funding mechanisms they are eligible for as a non-citizen/green card holder. An institution's international student department may be helpful for obtaining some guidance; however, these departments vary widely in their helpfulness and visas and funding opportunities largely vary between institutions. Widespread awareness about existing restrictions for international PhD students/post docs and removal of existing funding barriers for non-citizens/green card holders will benefit students and principal investigators alike when attempting to identify suitable mentor-mentee matches.

Proven or promising external resources or approaches

No response

Response 2080

Perspectives on the postdoc roles and responsibilities

Going into my postdoc fellowship, I expected many responsibilities, with the primary role being research. Now that I'm four years into my position, I look back and realize that my responsibilities have been all over the place. I want to say that research has been my primary responsibility. Still, I'd say it barely takes the lead, and a large chunk of my work is completed by trainees I mentor (I have mentored high school students, undergraduates, graduate students, technicians, and other postdocs directly on my project). Beyond my primary research and mentorship, I also spend a significant amount of time doing administrative work coordinating numerous meetings related to my development as an independent researcher, but also frequently completing progress reports for fellowships and grants my work is supported by, and sometimes completing tasks as menial as coordinating meetings for my, even busier, mentor. After many discussions about my efforts with my mentors, it is clear that they view my efforts as "running my lab within [their] lab." While this is great to hear, and I'm excited about the experience I'll have going into a faculty position search, it only emphasizes my undervalued efforts. Compensation for this position is low, and benefits are minimal (I'm nearing my mid-30s with zero retirement savings). To be at this point with 10+ years of research experience and still be a trainee is disappointing.

Fundamental issues and challenges

I do not doubt that salary is the most important fundamental issue with recruitment, retention, and overall quality of life in academic research. Academic postdocs are underpaid compared to their non-academic counterparts, strongly contributing to a sense of low worth. Further, the demands of postdocs are high; in

addition to research tasks, many postdocs are responsible for obtaining funding, contributing to progress reports, reviewing manuscripts, mentoring, and many more. The list of postdoc responsibilities is similar to the list of responsibilities of a principal investigator, but the pay scale is significantly different. Managing all these work tasks while also trying to establish life as an adult (i.e., buying a house, starting a family, etc.) is challenging with the low salaries of postdocs—other important issues related to this directly, such as retirement. Few programs offer retirement to postdocs and the ones that do rarely contribute or match funds deposited to retirement accounts for postdocs. Quickly, those that pursue postdocs are put behind their counterparts because of a lack of savings for their future retirement. Transparent and equitable maternity and paternity leave are also an issue for current postdocs. While there are many problems that postdocs face, it's evident that the majority of these problems can be summarized as worth, and even more clearly, as the salary is far too low to make postdoc positions appealing to new graduates.

Existing NIH policies, programs, or resources

I think some current policies NIH offers for postdocs are confusing. The F32 is an excellent resource for postdocs to apply to, and I fully support it. However, the K99/R00 fellowship is very complicated. The four-year cutoff is difficult for postdocs working on large complex projects or with slow model systems. Further, expectations vary widely from institute to institute—NIDDK expects high-impact publications, while NIGMS often awards fellowships to trainees with few or no postdoc publications. There is a lack of emphasis on the postdoc-to-research scientist transition, but there is a funding mechanism for research scientist-to-faculty positions (K01). It seems obvious to have a much more structured, higher-paying postdoc limited to the length of F32 fellowships. Trainees that wish to pursue faculty positions should then be able to transition to high-earning jobs in academia (like a research scientist or assistant professor role) and be eligible to apply for K01/K99 like awards or have a good chance to transition out of academia at this point (many postdocs seem to move on at around the two year point). This type of pipeline is more similar to traditional career paths that offer room for growth within and beyond the current position instead of lumping many trainees into a single postdoctoral category.

Proven or promising external resources or approaches

No response

Response 2081

Perspectives on the postdoc roles and responsibilities

Not everyone wants to become a prof. Postdocs are becoming increasingly seen as mainly for people who want to stay in academia on a tenure track course. For postdoc positions to be viable there needs to be greater opportunities for career development etc for non"traditional" routes

Fundamental issues and challenges

Most R1 institutions are in major cities with high cost of living. This makes it hard for faculty to attract candidates since industry postdocs pay twice as much for half the work. For example at my institution the rate was just raised to 65K. Median income in the city is 76K, and realistically in the neighborhood that the university is the median income is probably closer to 100k. Paying people with PhDs 65K makes no sense when I could have a bachelor's degree, go to industry, and make at least 70 to 80K. PIs also need more support from the NIH as institutions raise salary minimums but the NIH rates stay the same. What does essentially means is that especially for younger PIs they have to have multiple grants for each postdoc that they want to hire

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2082

Perspectives on the postdoc roles and responsibilities

My understanding of the postdoc position was/is that it is a training role designed to foster independence and provide additional training in a new skill set for that individual to eventually start a research program of their own at an academic institution or industry. Postdocs are also a training opportunity if you need to gain an additional skill or experience for an industry job that you did not have access to during your graduate training. Because universities and the NIH do not view postdocs as full-time employees, or categorize them differently due to their "trainee" status, I do not view post-doc positions, nor do I think they should be viewed as, a primary source of labor in a lab environment.

Fundamental issues and challenges

There are not enough principal investigator positions opening up to support the number of postdocs currently in training. I think what most labs need, and what many current and past post docs would want, is to hire full time, highly trained staffed, which is what postdocs are. However, postdoc pay and benefits (if any are even offered) comes no where close to what the expertise of that postdoc is worth, and therefor many are going elsewhere. I recently transitioned (within last 4 months) to an industry position. I enjoyed my postdoc but I did not want to be a PI in the current university system. I would have gladly stayed in my postdoc lab as a staff scientist if that were an option, and the University valued me as a full-time employee that provided better salary and benefits. It would have been even nicer if I could have received a bump in salary commensurate with my years at that institution.

Existing NIH policies, programs, or resources

I think the NIH and Universities need to consider that graduate student and postdoc "trainees" are not there to primarily be trained but to provide labor for science. This is not bad, many people obtain a PhD and continue to a postdoc because they enjoy doing science labor over other labor types, but they need to be paid and valued more as laborers, especially postdocs who have a terminal degree, and not cheated out of benefits under the guise of "trainee." There is no "certificate" or additional degree you get from a postdoc except experience, and that comes with spending additional time in ANY job. Even phrasing these questions with "postdoctoral training ecosystem" and referring to postdocs as trainees undercuts the serious accomplishments people must have received to hold a postdoc position. I think the number of "post doc" positions should be cut and instead replaced with staff scientist designations so Universities cannot hide behind "trainee" and withhold benefits due to individuals holding a terminal degree with many years experience in their field. Staff scientist positions could be graded by experience post-PhD (Junior, Senior, etc) providing a title that also reflects someone's experience. It is just not economically viable to continue in a position that does not guarantee a basic retirement fund/plan, has sub-par health insurance in a lot of cases, and also pays terribly despite that position providing a SIGNIFICANT amount of the labor necessary to generate data for grants, publications, and IP for new tech and drugs.

Proven or promising external resources or approaches

I would look to the medical training field. I am partnered to someone currently in residency and there is A LOT wrong with medical training as well. But their pay is better, increases more dramatically with years experience post MD, and they are considered employees at the hospitals in which they work. Some also receive retirement plans with match, which I have never seen offered to a post-doc. These programs, so I've heard, are also incentivized or prefer to retain many of the residents they recruit. In medical training, you are not significantly hurt by staying at the same institution. The culture that you MUST move institutions during your academic training imparts further economic and social hardships on academics already paid poorly.

Response 2083

Perspectives on the postdoc roles and responsibilities

In my view, a postdoc should be able to drive the lab to the next level and at the same time, it is the responsibility of the mentor to build the postdoc into an independent researcher. This can be achieved by allowing the postdoc to write an independent grant and provide funding for procuring basic research stuff for generating preliminary data for the grant. A mutual understanding and dependent growth of mentor and trainee should be there. However, even if the mentor wants to support the postdoc, challenges occur

when it comes to funding. The biggest challenge for the postdoc is the basic stipend. After having a highly qualified degree, all the postdocs across the countries are underpaid. This drags the postdoc to move into industries and make them work as a robot, which is not good.

Fundamental issues and challenges

The big challenge definitely the uncertainty. This could be due to visa issues (if international), funding issues and underpaid salary.

Existing NIH policies, programs, or resources

We appreciate the NIH for taking initiative for this kind of invaluable survey. Definitely, the first thing need to modify is the salary. A minimum $75,000 pay scale is required for the postdocs with yearly increments. More grant opportunities are required for both national and international postdocs.

Proven or promising external resources or approaches

No response

Response 2084

Perspectives on the postdoc roles and responsibilities

Preparation for a principal investigator position

Fundamental issues and challenges

Low salary, stressful environment and short contract (One year is too short). A postdoc should be at least two years.

Existing NIH policies, programs, or resources

Encourage or obligate PIs to provide better conditions to their postdocs. Those conditions include : good salary, assistance in case of difficulties, two years of contract without conditions but renewable or not based on the performance, holidays and others.

Proven or promising external resources or approaches

Postdocs should evaluate their PI and future grants should be denied to bad PIs who mistreats their postdocs

Response 2085

Perspectives on the postdoc roles and responsibilities

Academic postdoc is a employee with a training component for the next job. I expect the following from the postdocs

1. Coming to work on time and showing up everyday.
2. Execute research independently with less supervision that a graduate student
3. Write postdoctoral fellowships
4. Help in grant writing
5. Share their expertise from Ph.D. with the lab
6. Train Ph.D. students and undergraduate students

Fundamental issues and challenges

1. Quality well trained postdocs have disappeared
2. As many postdocs got their Ph.D. without publications, they are not well trained.
3. Future pipeline of what they will do after postdoc training is not clear
4. Conversion of postdoc to academic job position is not efficient. Hence important to train postdoc with open minded approach and giving them job options
5. Postdoc positions should be maximum 3 years so that they are aware it is a training and employment but not a permanent job.
6. Postdoc salaries has to be adjusted using cost of living calculator and not just keep increasing.
7. NIH modular budget needs to increase to at least 300K. Everything has become expensive and this budget has not changed.

Existing NIH policies, programs, or resources

1. Increase NIH modular budget to 350K
2. Make sure that postdoc salary is calculated using cost of living calculator. Maybe schools in California should give housing allowance.
3. Increase postdoc perks: healthcare, housing, campus housing access, travel allowance etc.
4. Pay postdocs 2K per year for travel

Proven or promising external resources or approaches

There could be centralized recruitment for postdocs where nationwide everyone with NIH funding can advertise

Response 2086

Perspectives on the postdoc roles and responsibilities

Currently, academic postdocs are expected to take leadership/ownership of at least one scientific research project, giving input into how the experiments should be run, troubleshooting, writing manuscripts, fellowship applications, grants, etc. However, it is also supposed to be "additional training" after earning a PhD, with the PI giving professional development/career advice. However, the majority of the postdocs I have interacted with and met do not feel like their postdoc positions even touch on this important aspect of "postdoc training". Postdocs are "essential" for academic research, but only because they have been severely underpaid and underappreciated. They produce the majority of data in these labs, and the system will fail without them. They need to be treated with more dignity and respect.

Fundamental issues and challenges

Postdocs already have a PhD; they have the necessary background and training to get the science done. Yet, the pay they receive is pennies compared to what they could be making in other industries. That and PIs are essentially running postdocs ragged with how much they expect of them, with most having little to no work life balance. Why would PhD graduates, who have already given 5-6 years of their life working so hard for not nearly enough compensation, want to go into a postdoc when they know they'll have to work even harder for not much more? PIs treat postdocs like a glorified tech, in the fact that they do not give them additional career or professional development training, WHICH IS SUPPOSED TO BE THE POINT OF A POSTDOC.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Make PIs accountable for giving postdocs the necessary career/professional development training—maybe set up a way for postdocs to indicate to the NIH if these aspects are not being covered in their training, or if they are feeling taken advantage of. Have NIH take these into account when awarding grants, as to not

reward PIs who are not properly training/respecting their postdocs. Ensure reasonable working conditions/hours. Increase minimum postdoc salary.

Response 2087

perspectives on the postdoc roles and responsibilities

A postdoctoral position is a training position that is supposed to train PhD holders for their careers. It should allow career development and CV building. The postdoc should have a mentor that keeps in mind the goals and future plans of their postdoc mentee and work on helping the postdoc achieve them. The postdoc should in turn endorse the assigned responsibilities that would be mutually beneficial to both, the postdoc and the mentor.

Fundamental issues and challenges

After graduating with a PhD, graduates have the option of getting a real job with high pay or doing a postdoc with less pay. The main reason many postdocs choose to do a postdoc is for the training and CV building. They aim to fill the gaps in their CVs and become more competitive for future better jobs, specifically academic ones. That is why they sacrifice the extra pay. However, unfortunately, their aims are rarely fulfilled during the postdoc years.

The main challenge is the autonomy of the postdoc. Most postdocs are funded by their PIs' grants and therefore postdocs are always under the mercy of their PIs. They feel coerced to do everything they are asked to do with almost no protection or support. Postdocs end up serving as technicians with almost no CV building.

In addition, postdocs have minimal benefits and very low pay.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Research has continuously proved that employees who are offered autonomy, the chance to grow and better benefits are always more productive.

Response 2088

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as an opportunity to gain additional training in new techniques, systems of study and also as a time for professional growth as a scientist. This is a valuable opportunity to further develop ones skills in leadership, project management, mentoring, and manuscript and grant writing. It should, in my opinion, be a time of increasing independence from the mentor and should be structured around the intended goals of the trainee.

Fundamental issues and challenges

Financial: relocation costs, childcare costs, housing in high cost-of-living areas.

Uncertainty for advancement: one of the challenges facing postdocs today is that with competitive jobs in academia the expectations to obtain a TT position have drastically ballooned. As a consequence trainees are spending longer periods of time as postdocs as they wait to jump to independent positions. A priori this isn't a problem if postdocs are well compensated in ways that would allow them to support themselves and their families.

In some cases there is a sentiment that biomedical research is dependent on a low-wage trainee workforce, both graduate students and postdocs. This results in some faculty using postdoc hiring to accomplish jobs that may otherwise be well served by a staff scientist.

Existing NIH policies, programs, or resources

Limit ability for PIs to pay trainees from research grants. Instead, expand training grant opportunities and move to a system where graduate students and postdocs are linked to fellowships. Fellowships should be dispersed in ways that university benefits are retained by postdocs. Scale postdoc salaries by cost of living

index. These actions would prevent PIs in high cost of living areas from being double jeopardized by difficulties in recruiting and having to raise more grant support to cover the minimum postdoc salaries being mandated by an increasing number of institutions. This would ensure research support is (largely) being used for research costs, and personnel costs are shifted to other funding lines that provide postdocs with adequate financial support to allow them to focus their attention on research. I suspect this would increase diversity within the postdoc pool (women, minorities and those from low-income backgrounds) would not feel squeezed between following their passions and financial pressures they may have. Further, it would allow scientists from non-traditional paths who might be older and have these additional family expenses to remain. Expand staff scientist positions. Stable salary lines for PIs would be transformative in many labs, and by allowing for stable tech/lab manager/staff roles to be maintained this would free up the capacity of postdocs to truly be training experiences.

Proven or promising external resources or approaches

No response

Response 2089

perspectives on the postdoc roles and responsibilities

The postdoctoral experience (in a research context) is a time dedicated to obtaining any specialized training, hone skills, learn new skills, and building one's research portfolio following one's graduation of an advanced degree (i.e., doctoral or equivalent). Often, because manuscripts are one of the main forms of currency in academia, a postdoctoral fellow will use this time to publish papers and increase their number of publications. Postdoctoral training is also a time for professional identity development and can serve as a transitioning point from trainee to a junior colleague/independence. Yes, technically a postdoctoral position is still a training position, but having completed a minimum of 5 years of training at the graduate-level, postdocs are a unique, more advanced type of "trainee."

Fundamental issues and challenges

Financial challenges are among the top reasons for reduced recruitment and retention as well as poor quality of life in academia. I know many colleagues who have left their postdoctoral position to pursue industry/non-academic research roles in order to earn a living wage. To put this into context, here is a personal example that likely reflects the experience of many, but not all, postdocs: I am a first-generation student (college, master's, and doctorate) who made ~$15k/year during graduate school and has student loans. I am in my early 30s and am unable to prepare for my future (e.g., save for retirement) because I am underpaid and trying to make ends meet on my postdoc salary despite the significant amount of training I have had. I am constantly worried about money, paying bills, repaying loans, my future, and so on which significantly reduces quality of life. Because of the T32 funding mechanism, I am not eligible for retirement benefits at my institution and have to put my life on hold, yet again, to have a chance at being an academic researcher. It is not feasible and it is not sustainable, especially for people from disadvantaged backgrounds (like myself, as per NIH's definitions).

This will vary by setting, but it also feels like you have to continue to put your life on hold, which reduces quality of life and does not model healthy work-life balance. Although I do not have any concrete ways to improve this given the variability, it would likely benefit NIH to take this into account.

Existing NIH policies, programs, or resources

Reconsider stipend structure and allotment: Going into the next FY, as a postdoc w/3 years of experience I will make less than a postdoc w/0 years of experience because my money is allotted from the year prior though my appointment will occur in FY2023. Essentially, I was pressured into starting postdoc on 6/30 so the PI would not lose funding, even though they had funding for the next FY. There must be a better way to do this and improve equity. Potential postdocs should not feel forced to start earlier (on paper) to help the PI. Current postdocs should not be punished because of the national postdoc recruitment and retention crisis.

Other financial/stipend concerns: It is unrealistic to think a one-size-fits-all stipend is equivalent across the country. I declined my top postdoctoral fellowship (one of the nation's top programs in my field) because living in that state on the NIH stipend would result in further debt. Existing policies prohibit postdocs who receive an NIH stipend to receive retirement benefits. Postdocs also get slammed with

thousands of dollars at the end of the year, with no formal guidance, and in some cases warnings, on paying taxes throughout the year to avoid tax penalizations.

Payback obligation: Is there another way to achieve what NIH is trying to with the payback agreement? Honestly, it can be seen as manipulative because if someone takes a position and it is ends up that it does not work out/is no longer in the person's best interest, they are essentially stuck in this position or a similar one because if they decide this is not for them, they have to pay back the stipend. As people seeking postdoctoral positions, this is something I have heard is a "turn off," steering people away from these positions.

Proven or promising external resources or approaches

Ã…lund, M., Emery, N., Jarrett, B.J.M. et al. Academic ecosystems must evolve to support a sustainable postdoc workforce. Nat Ecol Evol 4, 777-781 (2020). https://doi.org/10.1038/s41559-020-1178-6

Response 2090

Perspectives on the postdoc roles and responsibilities

I believe it is a training position designed to develop research independence, establish a research output trajectory that can be carried into an academic research faculty position, and impart the skills needed to determine the significant biomedical problems that need focused investigation.

Fundamental issues and challenges

Many postdoctoral mentors use their trainees as a less expensive workforce for their own research grants rather than providing the infrastructure in which the trainees develop their own independent ideas. The trainee then has to negotiate what can be considered their own as they move to the next career stage. Although the NIH postdoctoral trainee stipend has out paced inflation over the past 32 years, it still lags what an individual could earn in the for-profit sector. That coupled with the long hours of work required by most postdoctoral mentors, contributes to a lower quality of life feeling.

Existing NIH policies, programs, or resources

The length of time for a postdoctoral position should be 4 years with the first 6 months devoted to training and learning new concepts and techniques and the last 3.5 years devoted to independent research where the trainee owns the IP. This has the advantage of entering an already established research infrastructure so time and dollars are not needed for that set up and it provides a clear road to research independence. The NIH should enhance the number of K99/R00 awards and expand the K99 portion to 4 years that includes a research supply budget and ensuring the R00 portion has at least 8 modules of direct costs per year. This could in part be funded by reducing the number of F32 awards as they are simply budget relief for the postdoctoral mentor and do little to promote a trajectory of true research independence.

Proven or promising external resources or approaches

The Big Ten Academic Alliance postdoctoral advancement initiative, which was initially NSF-funded, provided valuable postdoctoral networking and professional development that linked participants with potential hiring institutions and departments. Expanding programs that maximize the fit for a postdoc trainee as a potential faculty member allow that trainee to see a clear pathway to an academic research career.

Response 2091

Perspectives on the postdoc roles and responsibilities

A postdoc is a lot like doing a second PhD project, except if it doesn't work out you can leave without having needlessly wasted your time.

Fundamental issues and challenges

Because a postdoc is fundamentally still a training position making it difficult when looking to establish some sort of permanent, stable lifestyle. Not to mention the ever-present possibility that your PI could move and with it your job and project. Postdocs have already spent a number of years in these temporary positions during their PhD and oftentimes other tech jobs or masters programs between undergraduate

and PhD programs. This means that between completing the PhD program and a full postdoctoral project, more than 10 years could have passed between completing the undergraduate degree and postdoc. This is a long time to before obtaining your first "real" job. During this time people who went to work right after undergrad have been able to buy houses, start investing in their retirement plan, and move up the corporate ladder. Between the time spent as a graduate student and a postdoc, there are usually little to no savings for retirement and if you've been on fellowships for a significant portion of that time you may not even be vested in social security. Furthermore, with the nature of these jobs being more like a running a small business—you only get the payout of a manuscript when you complete the project—it heavily discourages taking time off for vacation as that will only prolong the training period. And for all of this work, it is usually known to be unlikely that your institution will allow you to move on to a more permanent position. Unless trying to move to an academic position, there is little reason to spend much time in doing a postdoc because one could likely move up the corporate ladder faster by starting their job rather than publishing a better paper.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2092

Perspectives on the postdoc roles and responsibilities

The academic post-doc should be a time for individuals to receive additional specialized training to advance their research. The post-doc is a unique position that is both a learner and an employee of the individual lab conducting the work. The post-doc should be focused on learning a new skillset. They should have time for learning, mentorship, and writing. The aim should be a clear new skill—in addition to what they learned in their graduate training.

Fundamental issues and challenges

Postdoctoral positions have become a stepping stone for Tenure-Track jobs. I do not believe this should be the case. They should exists, but they should only be used for individuals who need additional specific training. A major challenge in recruiting postdocs is many want to continue on what they were doing prior and are not interested in learning new skillsets. Another challenge is that since many post-docs are for one or two years, by the time they are set up int he lab or research space they are already leaving—resulting in little being accomplished. The NIH Salary amount keeps wages low and does not account for cost of living in many areas. In addition, the fees associated with many universities in hiring a post-doc prevent the scholar from getting them to be engaged in the work. By the time they are settled they are already looking for the next postdoc or opportunity.

Existing NIH policies, programs, or resources

We should raise the available salary of post-docs. We should limit people to one NIH funded post-doc. Post-docs should be limited to the first four to five years after their grant. Post-docs should be encouraged to apply for K awards.

Proven or promising external resources or approaches

Postdocs should be available but not a requirement as part of the academic life-cycle.

Response 2093

Perspectives on the postdoc roles and responsibilities

From the perspective of the trainee, an academic postdoc should be a springboard to a successful future career as an independent and productive scholar.

From the perspective of public health, the role and responsibility of the postdoc is to train efficiently and Move On Quickly to their new institutions where they are independent faculty, and where they will bring their unique blend of training perspectives (unique to their training history).

It has been shown repeatedly that the individuals who up-end their field and change it forever for the better are almost always early career scientists who were bold enough to risk their careers to apply their unique vision to long-standing problems in the field. Currently, it is nearly impossible for early career scientist-trainees to do much other than frantically search for funding while carrying out a senior PI's research aims.

The NIH and the public health will never receive the most field—and world-changing ideas unless they create greater opportunities and more supportive environments for early career scientists, including postdocs. The largest and absolutely most dire and pressing needs are much higher salary and greater protection from exploitative and/or abusive PIs.

Fundamental issues and challenges

It needs to be emphasized that postdocs, and especially those such as myself from disadvantaged backgrounds, arrive to institutions having spent a very long time riding a financial knife-edge, hoping to avoid a major illness or accident, or other misfortune that can easily derail a career and ruin one's financial life. Being a postdoc means having a willingness to gamble one's luck for a few more years, while just staying afloat on debt payments. Understandably, fewer and fewer individuals are choosing this career path. It seems to entail an additional 3-6 year gamble while being insufficiently paid and not infrequently abused and exploited.

Under the current system, the role and responsibilities of a postdoc are: to be a temporary worker, hired to carry out the Specific Aims of a senior investigator. As an under-represented minority from a disadvantaged background and an advanced postdoc, I have found it heartbreaking to have to consider abandoning an academic research career that I spent the last 10-12 years building, simply because I cannot afford it for much longer.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2094

Perspectives on the postdoc roles and responsibilities

An amazing time in my scientific development. Accepted as a scientist, respected as a scientist, with freedom to explore. Pay was pitiful, but I survived.

Fundamental issues and challenges

Grant support for PIs so very difficult to maintain, leading to anxiety and loss of intellectual curiosity.

Existing NIH policies, programs, or resources

No thoughts here.

Proven or promising external resources or approaches

This is a systemic issue, not just at the post-doc level. Academic life is so different now than when I was a post-doc. Not much about it is viewed as worth the massive effort it takes to succeed, and I don't mean doing bench work, I mean gaining funds to do so.

Response 2095

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The number one issue without question is the current stipend. Its incredibly hard to recruit doctoral level scientists, asking them to relocate (no funds to cover this), guarantee only 2 years of funding (little to no opportunities for career development), for a pay that is so incredibly low.

Existing NIH policies, programs, or resources

Restrictions on applications for career development grants, where a postdoc cant apply unless they have a faculty position, make it impossible for postdocs to develop their own grant proposals and advance in their careers. The K99/R00 only effectively works if a doctoral students starts formulating a proposal within their last year of their doctoral phase so that they can receive the award within their first year of a postdoc. Realistically, most doctoral students need to focus on their dissertation and not on a future career award. In addition, for epidemiologists, behavioral scientists and other non bench scientists a K99/R00 translates into a 3-4 year postdoctoral fellowship, even if they apply within the first year of the postdoc, which is not the standard and frankly considered unnecessary in those fields. Thus if the K99 mechanisms is the only path to developing a career development award for a postdoc its counter productive to a vast number of doctoral level scientists.

Proven or promising external resources or approaches

RWJF had a program called New connections where postdoctoral fellows and early career faculty could apply for funds to conduct secondary data analyses research. The awards were small, similar to an R03, but the ability to write a grant proposal and receive a small amount of funds to partially cover the salary provided a much needed experience. The program also had a huge component on mentoring and networking. A program like this but only for postdoctoral fellows (if open to early career faculty postdocs it would become to competitive and postdocs would loose out to others with more experience) would be a great program to add as small career development award.

Response 2096

Perspectives on the postdoc roles and responsibilities

It is difficult to determine as some instances you are considered an employee and gain employee benefits but other instances you are a "fellow" or "Scholar" and you have less benefits and less pay. This is difficult to reconcile with in the job market and makes industry seem like a more livable option even if I wanted to continue on the academic route. The only other option is if I already have a partner who makes a livable wage or has good benefits.

Fundamental issues and challenges

The first one is the actual salary. Most institutions say they are limited to the amount that is set by the NIH which doesn't change with cost of living in a particular city or state. The other is that benefits are variable based on your funding and even cost which beg for more income to cover this cost If it is not covered by the PI. Lastly, there should also be relocation assistance offered. usually grants provide funding for travel but it is very rare for a Postdoc to travel in that first year as they are writing their own grants and collecting data and getting settled. So maybe that first year of support could include relocation funding or reimbursement to assist in the cost of moving. This would help especially with most postdocs coming with a family or dependents. Additionally, there needs to be more focus on diversity-related fellowships and grants. There isn't a full pipeline for most centers like NCI for Diversity F99/K00 or Diversity K99/R00 or other awards. There are K01 but that makes you ineligible for the transition awards.

Existing NIH policies, programs, or resources

There needs to be more training in what being a PI means. Yes, we get a ton of training to be great independent scientists, but running a lab is a lot like running a business. You have to know how to find the right people, you need to learn how to budget for a lab regarding reagents, animals, people, publishing, conference travel, etc. Lastly, you need to know how to navigate study sections, reviews, protocols, IRBs, IACUC requirements, MTAs, and other needs for the business of science.

Proven or promising external resources or approaches

No response

Response 2097

Perspectives on the postdoc roles and responsibilities

I view it as a way to perform cutting edge research that advances my academic career, with the hope that this will result in a permanent (tenure-track) academic position.

Fundamental issues and challenges

The pay is abysmal considering my training and skills. The academic job prospects on the other side seem scarce.

Existing NIH policies, programs, or resources

Higher salaries (>= $100,000/year) are by far the most important thing; this is closely followed by more certainty with respect to jobs (especially concerning location). The life stage of a postdoc is the one where we are hoping to start families—the inadequate pay coupled with the uncertainty makes this seem impossible.

Proven or promising external resources or approaches

Competitive pay.

Response 2098

Perspectives on the postdoc roles and responsibilities

The postdoc position is becoming more and more outdated as faculty jobs dry up and people are pivoting to industry and other alt-ac careers for better pay and quality of life. I do not think there is any effective way to remedy the current postdoc system, it needs to be torn down and rebuilt. I truly doubt that superficial remedies such as expanding access to fellowship opportunities, increasing pay and benefits, and providing better professional development will be enough to stop the trend of Ph.D.s choosing not to do postdocs. Rather, postdoc positions need to become actual, well paid, training for tenure track faculty positions (whether in teaching or research), with a guarantee that a job will be waiting for them at the end of it—more like a medical residency. This would entail treating postdocs more like assistant professors or independent fellows—inviting them to faculty meetings, ensuring they are intimately involved in applying for grants, giving them students to mentor etc.

Fundamental issues and challenges

It is fairly easy to fall into a postdoc position after finishing your Ph.D., but it is often not the most strategic career choice. According to a 2020 Nature survey of postdocs (the publication's first survey of postdocs EVER), 63% of postdocs reported that they were planning to pursue a career in academia and another 26% were unsure. However, results from another postdoc survey published in eLife in 2018 indicated that only 15% of postdocs actually end up in these coveted tenure track positions. This means that there are thousands of talented researchers that will be left in the unfortunate position of jumping from postdoc position to postdoc position, becoming poorly paid and under-appreciated adjunct faculty, or having to pivot to an alternative career path that their years of academic training didn't directly prepare them for.

And requiring a postdoc for tenure track positions (which is the case in many STEM fields) certainly contributes to the lack of diversity in the upper echelons of academia. Not everyone can move to a different institution for a temporary position that pays around $50K/year (the minimum set by NIH and NASEM) after making even less in grad school, especially when it's not a guarantee that it will lead to a permanent faculty position. Postdocs with children, postdocs who are disabled or chronically ill, postdocs who are caretakers, postdocs who don't have financial safety nets via parents or spouses, are all at a disadvantage. It should also be mentioned that ~50% of postdocs (according to the eLife survey) are not citizens or permanent residents, which is a situation that can lead to even more precarity and potential abuse.

Existing NIH policies, programs, or resources

NIH could require that in order to receive a T32, institutions must commit to creating faculty positions, or other permanent (and well paid) research or teaching positions, to offer postdocs in the program at the end of their training.

Proven or promising external resources or approaches

No response

Response 2099

Perspectives on the postdoc roles and responsibilities

Post-doctoral positions are full time research jobs where there is an element of training and a clear deadline to the end of this training. Ie after 6 years of postdoctoral training, the postdoc has to be hired as a staff scientist if staying in the same lab

All postdocs should have their own project and if they wish, have another project that could help them achieve scientific independence.

Postdocs should also train students, teach classes and be active in department/institutional activities and be given credit for such efforts through fellowships and awards

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Increase the base salary of postdocs to at least 70K (not including insurance) and make retirement planning like 401K mandatory. This is lower than industry position to acknowledge that the postdoc position has an element of training, but also recognizes that this is skilled labor that should be properly compensated

Limit the number of years to postdoc and increase staff scientist positions

Proven or promising external resources or approaches

HHMI postdoctoral fellowships at Janelia campus

Response 2100

Perspectives on the postdoc roles and responsibilities

I feel as if though postdocs are trainees they are still treated the same as students. They have earned their degree and should be treated as a colleague.

Fundamental issues and challenges

Pay and lack of benefits.

Existing NIH policies, programs, or resources

I think that all institutions should be required to provide benefits such as medical, dental, life insurance, and retirement packages. The minimum pay is outlined but benefits are not.

Proven or promising external resources or approaches

There should be polls sent to every postdoc and postdoc society.

Response 2101

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is defined everywhere as a temporary trainee position that is supposed to train you for leading research and research groups (as opposed to a Ph.D. where one learns to DO research). It is a time when one is supposed to develop a vision and a research question to which they will dedicate their early career efforts.

Fundamental issues and challenges

Simply put, NIH-funded postdoc research positions in the US are an excuse to bring in cheap foreign labor in restrictive conditions. Postdocs “enjoy” less academic freedom than in their foreign former Ph.D. training, and are expected to stick to their benches and desks rather than developing their own vision. The management training aspect is minute to nonexistent and the focus is on conducting research rather than running it. A few workshops per year are given as lip service by the university for research management and job search, but no aspect of that is present in the day-to-day. In their fifth year postdocs are still

considered a trainee even though most will already have ten years or more in conducting research. The training is used as an excuse for lower salaries despite the extensive experience or the costume of many PIs to pull their hands off the leadership training aspect.

The postdoc life is a combination of restrictive visa policies in changing workplaces (University needs to approve visa transfer), low cost to the academic employers, the lack of job laterality, and the academic clock from Ph.D. This should be added together with the requirement for previous employer recommendation letters and the desire to avoid moving one's family shortly after relocation to the US. All of these create fertile soil for a toxic work environment (with around 50% of postdocs and Ph.D suffering from mental issues) and lack of PI commitment. This is to the extent that universities hold at hand the wage, visa, and sometimes even housing at the same time.

Existing NIH policies, programs, or resources

1. Postdocs should not be considered trainees but rather trained time-limited full employees.
2. Salary should be doubled at the expense of the total number of positions offered, comparing it to the level of Ph.D. holding employees in the open market (with adjustment according to location).
3. PIs and institutions should be measured by the results of their postdoc training (publications, and outcomes such as the number of tenure track awardees and penalized for duration) scored and future grants should be dependent on the results. detailed results should be available in an open database.
4. J1 Visa should be abolished and a time-limited free employer visa should be granted for postdocs allowing more freedom to deal with abusive employers, therefore, creating pressure on PIs to perform in the training aspect.
5. Grants and awards should not have Ph.D clock (Ageism), and more project-oriented (rather than personal) grants should be open to foreign postdocs.
6. NIH should encourage creating lateral structure in academic research dismantling the current "up or out" structure and allowing experienced researchers to be involved in academic research without discrimination regarding grant opportunities (see 5) creating a structure more similar to other non-profit institutions and companies.

Proven or promising external resources or approaches

Performance reviews (also for PIs), Open data regarding postdoc and post-postdoc employment market. Higher salaries attract more applicants. inspection and auditing of PIs mentoring and training outcomes and creating a dependency between grants and results.

Response 2102

Perspectives on the postdoc roles and responsibilities

Many PIs are occupied with numerous tasks outside of the laboratory/their research, and this is favored in academia. They have little time to take care of their groups or read and think about the projects etc. Their research and groups are mainly dependent on the fitness and intellect of postdocs and these labs are de facto run by postdocs. The development of the personal career of these postdocs is hindered on purpose so that the PI/academia can use their energy and intellect as long as possible without paying the adequately and giving them rights (e.g. to apply for grants) adequate to their responsibilities.

This is a structural problem where the main burden of science/research is put on the arms of underpaid postdocs. It is good that these postdocs leave the research because academia should be run by full-paid faculty and not underpaid postdocs. However, of course, the problem is that a lot of talented young people who have a huge intellectual potential to move research forward will leave academia. Especially dangerous is that being postdoc and staying in academia starts to be a synonym for a loser: underpaid, someone who lets being taken advantage of for years, someone who lets being.

Therefore:

- it should be accepted that the majority of PhDs leave academia without ever being a postdoc
- NIH should support a structural change back to fewer (trainee-level paid) postdocs and more (full-paid) faculty positions
- Postdoc should be pre-tenue with around 50% transition to faculty within 3-4 years
- Academia/research should be run (majority of intellectual/academic work done) by employed people with an adequate salary, and right to develop their ideas=apply for grants and not by 35-40 years old "trainees"

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2103

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The fundamental issue is how little post-doc is being paid. Obviously there are other issues like being overworked, being undervalued, toxic power dynamic but those are not issues only in academia. The fundamental issue is the pay!

Just because postdoc is still training does not mean that postdocs should earn less because they are learning something. Almost every job is associated with learning/training for the next step in the career ladder. Postdocs are highly-educated and highly skilled people that deserve to be paid for their value and work. It's a job. What postdoc is being paid now is barely enough to afford a living with the inflation rate and in the coastal area, the postdoc stipend is straight up not enough to cover basic rent. We are in our 30s, with no savings (some still need to pay off student loan), and barely able to afford a living alone (let alone for having a family or children). The problem is the pay. Industry is paying 3x more for PhDs fresh out of grad school and you wonder why people walk away from academia. Yes it's not all about money and we love doing science but if we cannot survive on the current stipend, then yes the issue is the money.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2104

Perspectives on the postdoc roles and responsibilities

I view a postdoc position as the chance to reinvent yourself as a professional scientist under new guidance. As a fully trained, troubleshooting scientist I am responsible for driving my own research forward, with more general and broad guidance from a PI. At the same time, I explore the area of research and try to generate a plan to establish my own independent research program.

Fundamental issues and challenges

Pay is extremely low. I have several colleagues and friends that went into various industry, consulting, or government jobs that are making 2-4 times what I make as a postdoc. Sure, they have less freedom to

follow their own interests, but PhDs are curious by nature and don't shy away from learning. Because of the low pay, things like a mortgage, child care, life events, car accidents, child birth are all scary.

The incentives for gaining individual funding are broken. At my institution, postdocs receive benefits as an employee, including healthcare and retirement. If I were to be awarded an F32, I would lose both benefits and classification as an employee. While my salary would not change per NIH guidelines, my institution would no longer pay me as a employee. So, by achieving a major goal, to receive NIH funding, I would be punished by my institution, losing ~$10,000 in benefits per year. I would be required to pay for my own healthcare out of pocket from the salary that has not changed.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2105

Perspectives on the postdoc roles and responsibilities

To learn basic and advanced research skills, and be prepared for your goal position as a researcher.

Fundamental issues and challenges

Most people don't know what a post-doctoral fellowship is or does, and I think that the ambiguity of it can be scary. The quality of life, from what I have seen, is very good! I'm glad I did it and I encourage others to as well.

Existing NIH policies, programs, or resources

Time management training

Proven or promising external resources or approaches

No response

Response 2106

Perspectives on the postdoc roles and responsibilities

Great as is.

Fundamental issues and challenges

None. Great as is.

Existing NIH policies, programs, or resources

Provide a platform to discuss multi-generational challenges. Ex, differences in personal/professional viewpoints between early and late millennials, vs baby boomers, Gen Z, etc.

Proven or promising external resources or approaches

Create a platform that trainees are required to meet in institution-based focus groups with other trainee-colleagues in other disciplines. Ex, engineering post docs are required to participiate in a focus group with nursing, or veterinary sciences, etc.

Response 2107

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary Issues and Solutions

1. Postdoc salaries increase as work experience accumulates; however, only post-PhD experience is counted. Some postdocs have full-time work experience in the field prior to completing a PhD. For example, I was the Vaccine Adverse Events Reporting System (VAERS) Coordinator for the entire state of [redacted for anonymity] for 2 years and a study coordinator on an NIH-funded R01 randomized trial for 3 years. However, that experience does not bump me up on the NRSA stipend payscale. Allowing previous experience to count (even if 2 years of experience pre-PhD work is counted as equivalent to 1 year of post-PhD work) would recognize the considerable expertise and professionalism that postdocs bring to a position.
2. I was offered three T32 postdoc positions. They all paid about the same stipend level; however, the cost of living in each location was vastly different. Stipend levels should adjust for location.

Existing NIH policies, programs, or resources

I chose a T32 postdoc position instead of an F32 because I do not see much additional value of the F31-diversity fellowship I received above having a T32 as a predoc.

1. The T32 position seemed easier to get. I assumed that the number of T32 postdoc positions was greater than the number of F32 positions and a higher "success rate" for the T32 position compared to F32. Relatedly, as I meet NIH criteria for being from an underrepresented group, if a T32 position was not available, additional funding could be provided to open a slot. Therefore, an F32-diversity mechanism, like the F31-diversity, would make the T32 and F32 more comparable.
2. On my T32 I meet with the other trainees monthly, giving me the opportunity to receive feedback and to form connections. This is not inherent to an F32. An F32 would be more appealing if monthly/quarterly meetings of other F32 awardees was organized by the funding agency.
3. The T32 appeared to have more opportunities to have face time with senior faculty. NHLBI T32 fellows present orally at the AHA Epi/Lifestyle conference. This session is attended by the T32 faculty members across institutions. As an NLHBI F31-diversity fellow, I was not offered an opportunity to present at this session. I emailed the NHLBI pointing out this issue but was told it was logistically difficult to open the session to F-fellows. This would be one way of addressing perceived inequity between T—and F-fellows.
4. Because of writing the F31 grant, I didn't have as much time to devote to publications. If I were to write an F32, I felt I would be further behind, affecting my faculty applications. Data number of publications, citation stats, and placement into academic positions would make it clearer how publications/grant funding are considered.

Proven or promising external resources or approaches

Student Loan Forgiveness

1. I am unclear on whether being a T32 fellow's position counts towards the Public Health Loan Forgiveness program. Clarity would be great.
2. LRP programs should be expanded, and eligibility criteria clarified. For example, what does "an environment that inhibited the individual from obtaining the knowledge, skill, and ability required to enroll in and graduate from a health professions school" mean given that to be eligible you did complete graduate or health professional school? To make things clearer, why not apply (or at least reference) the same NIH criteria for being from a disadvantaged background: https://extramural-diversity.nih.gov/diversity-matters/disadvantaged-backgrounds. Also, why not make the T32 training programs inform trainees of this opportunity. This would help offset the lack of benefits and low stipend levels that make it difficult for researchers to choose to postdoc.

Response 2108

Perspectives on the postdoc roles and responsibilities

The postdoc position is a research-focused position which enables one to expand their technical expertise through the addition of new skills and techniques, explore new research areas of interest, make additional

academic connections, and publish additional papers; all in preparation for starting their own independent research program at a university or research institute. Postdocs generally have more independence than graduate students and better benefits (health insurance and pay), but also fewer protections. I view an academic postdoc as an essential step if my goal is to be a professor at an R01 institution and a beneficial step for landing professor positions at almost any institution. However, I have numerous friends who have landed positions at primarily undergraduate institutions without completing a postdoc. My personal career goal is to teach, and I have been told that teaching experience is the most important asset that I can gain in addition to a PhD if I want to work at a primarily undergraduate institution. Unfortunately, the number of postdoc positions that including a teaching a component are very limited.

Fundamental issues and challenges

The success of a postdoc is even more contingent on the advisor than that of graduate students because while graduate students have a committee and program that can stand by them in the event of conflict, postdocs are on their own and get very little departmental support. Postdocs generally have fewer training opportunities available to them. For example, training grants at my university provide up to 12 trainee slots for graduate students and only 0-2 trainee slots for postdocs. Postdocs are more isolated and are given fewer opportunities to present their research (compared to both graduate students and faculty). I have witnessed a PI ruin a postdoc's career out of spite; and despite having had a successful PhD and supportive PhD advisor, the postdoc had no means for recourse when it came to his word versus that of the PI and so was forced to leave academia. As a member of the lab in which this happened, I know that the PI spread rumors regarding the postdoc that were entirely false, but other PIs are always going to believe the PI over the trainee. Furthermore, the PI not only slandered the postdoc within our institution, he also spread false accusations to other PIs in the field who had offered the postdoc a position. Witnessing this event greatly demotivated me and all the other trainees in the lab from pursuing an academic career path as it highlighted how uncertain that career path is and revealed how truly vulnerable postdocs are. Another thing to note is that most PhD scientists will make significantly (even double) the salary if they go straight to industry rather than completing a postdoc. This factor combined with the uncertain of job prospects following the postdoc leads many people to choose not to pursue a postdoc.

Existing NIH policies, programs, or resources

1. Provide a means for recourse in the event of conflict and/or build in greater protections for postdocs who received fellowships. The postdoc mentioned above held a NRSA fellowship, which provided some financial protection. However because the project was so closely tied to the advisor's research, the advisor was still able to end the postdoc's academic career by slandering him to everyone in the field. Perhaps there could be a mechanism for reporting or something that holds the advisor accountable for good conduct.
2. Improve the parental leave policy and require institutions to follow it. For example, I had a child when on a NIH T32 fellowship. The NIH policy was that I should have 60 calendar days (8 work weeks) of paid maternity leave. However my department's policy only allows for 6 weeks of paid parental leave, and so I had to forgo 2 weeks of paid maternity leave because my department argued that as their employee, the departmental policy superseded the NIH policy. This was not fair. Also, I would recommend that the NIH increase the amount of paid family leave to 12 weeks. Federal law (FMLA) requires public agencies to give employees 12 weeks of unpaid, job-protected family leave. Most postdocs are employed at public universities and so are already eligible for 12 weeks of unpaid leave. One way to enhance postdoctoral training would be to ensure that the postdoc is paid for the full 12 weeks instead of just 8 weeks.
3. Provide concrete tax directives or services. NIH fellows should not be required to pay self-employment tax. However, very little information is given regarding how to file taxes on fellowship money and this creates a huge disparity between NIH fellows. NIH fellows should be provided with concrete, specific information regarding how to complete their taxes.

Proven or promising external resources or approaches

1. Build in protections for postdocs. This could be done by requiring postdocs to identify 2 additional mentors who can serve in a way similar to that of committee members for graduate students. This requirement could be added to postdoc fellowships as contingency for the postdoc to complete within 6 months of starting the fellowship. That wouldn't change the application process and would give the postdoc time to identify faculty at their training institution who would be appropriate.
2. Provide specific information regarding how to file taxes on fellowship income.
3. Improve the family leave policy (make it mandatory for the hosting institution to comply with NIH policy and increase the number of paid weeks from 8 -12).
4. Diversify the postdoc position by increasing the number of teaching postdocs and providing additional career development support through NIH fellowships.

Response 2109

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is the opportunity to deepen your research ability, knowledge, and further develop your career as researcher. It is the opportunity to expand upon the skill sets obtained in graduate school and extend to more difficult questions. The responsibilities and roles of the postdoc include collaborating with the PI in your lab—this should be a partnership where you are working towards a common goal. The postdoc is working through the more day to day details as they apply the the larger questions. The PI can aid the postdoc when they are stuck on a particular idea or topic, and also guide the research from the higher level steps and objectives in the research.

Fundamental issues and challenges

A lack of support. Salary is really tough—many of us are wanting to start families, or have families, or wanting to buy a house and this salary is so low for the level of degree required as a postdoc. Lack of information—it has been nearly impossible to figure out the correct way to file taxes as a grant-funded employee. The affiliated university provided no information and the NIH website has no obvious place to request copies of your of 1099 or other tax forms. Really appreciate the 5k travel/lab funds though. As a computational researcher, this is a significant amount of funds for my conferences which is greatly appreciated.

Honestly—I dont know how this gets fixed, but every postdoc I speak with, we just don't feel like we even have a shot anymore to get an academic position. From small liberal art schools now requiring and pulling heavy hitting researchers, and the 'perish or publish' mentality.

Existing NIH policies, programs, or resources

There needs to be substantial changes in the vetting of directors and PI's for the university affiliated grant programs. I am a T32 postdoc. Within a 3 month period, all of three of the female senior members left the lab (myself, a fellow postdoc who came into the lab before me, and the lab manager.—all having our doctorates). This lab was incredible sexist and toxic. The male postdoc and undergraduates were provided with more resources, opportunities, and mentorship than any females in the lab. I will only speak on my behalf, but I will note that speaking with the two other senior females this is a consistent experience: I was privately provided with no feedback and yet continually criticized on a lack of progress, asked sexist questions about what my current 'drama' is. There were also very obvious data integrity and research integrity issues that the PI perpetuated and permitted.

When reaching out the the co-director of the T32 program in my department to look for guidance and I immediately questioned, interrupted, and dismissed. The co-director concludes the meeting stating to "lower your expectations of your PI, he only wants to talk when you have results." This co-director has spoken to my about my lab situation in from other other T32 postdocs and graduate students.

Honestly—there's so much more but there's a word limit. This experience continues to plague my career and professional life as I suffer now from extreme work related anxiety and panic attacks, especially with the required continued interaction with the co-director. This experience has been detrimental to my mental health and well-being. I will never do another postdoc after this experience due to the lack of support and compassion from all levels within this program and through the university.

Proven or promising external resources or approaches

Again vetting of the supervisors of the program, respect for the postdoc, and better resources with regards to information about the program, documents and specifics with the contract (like the payback), and a higher salary.

Response 2110

Perspectives on the postdoc roles and responsibilities

It should be a mentored research experience, so should have significant mentoring and training in both research methods and professional development (grant writing, applying for a job, writing papers, giving talks, etc.), not just an opportunity for a professor to use a bright , highly motivated and highly trained Ph.D. as a technician

Fundamental issues and challenges

Recruitment—for most of the labs in our department, can't afford them with an NSF grant, only faculty with NIH grants can currently afford postdocs

Existing NIH policies, programs, or resources

Expand MOSAIC—mentoring in collaboration with a scientific society, make these kinds of opportunities open to more postdocs, make them available to postdoc members of the [redacted for anonymity]

Proven or promising external resources or approaches

MOSAIC program—the [redacted for anonymity] wrote a proposal with a score of 12—funding that proposal would be a great way to enable organized mentoring of at least 25 more postdocs

Response 2111

Perspectives on the postdoc roles and responsibilities

Academic postdocs should be straddling the responsibilities of being in the lab with continuing to learn critical skills beyond those of the lab within which they are embedded. One of those skills that is critical to ALL scientists is the ability to communicate about their research. While language around these skills has incorrectly labeled them with the term "soft" (which also inappropriate due to sexist annotations), they are fundamental skills for the modern work of scientists. In postdoctoral positions, there is often a responsibility to serve as a mentor to graduate students and even undergraduates in some settings. The ability to communicate science to these students is paramount to a successful research environment. These communication skills also support interdisciplinary efforts as every area of research has its own jargon and terminology that needs to be explained appropriately for understanding.

Fundamental issues and challenges

Postdoctoral trainees do not receive adequate payment to compensate for the time and effort they are asked to put into the position. The lack of flexibility for those who are parents or for researchers who become pregnant during their time as a postdoc is also a significant challenge. Lack of diverse role models, mentors and sponsors in these fields also reduces the sense of belonging in traditionally marginalized groups.

Existing NIH policies, programs, or resources

It is critical to provide funding to support the hiring of individuals who have expertise in science communication. These positions should not require PhDs or even masters degrees, rather proven experience with science communication and science communication training should be the necessary skills to take on these roles. Creating and/or supporting departments within an institution that are responsible for collaboratively doing this work is also important as individuals doing the work alone can much more easily get overwhelmed and burned out. When funding proposals are opened for this type of funding, there should not be a requirement for the PI to have a PhD. Again, it is proven experience in this work that matters most, not the letters that come after their name.

Proven or promising external resources or approaches

Funding to support training programs outside of academia is critical, along with support for training designed within institutions. Partners such as science museums, zoos, aquariums etc. can provide not only excellent, thoughtfully designed communication training opportunities, but opportunities to engage with an audience that is craving current, understandable scientific information. Funding of efforts such as the Portal to the Public Network brings together informal STEM education and communication experts who can provide opportunities rarely available within a particular higher education institution. Oftentimes these institutions train interdisciplinary cohorts of STEM experts, allowing postdocs to learn about science communication efforts in areas beyond their field of research and connect with others who share their interest in communication and frequently broadening participation in STEM.

Response 2112

Perspectives on the postdoc roles and responsibilities

It is a training experience where the postdoc should feel intellectually challenged but supported by their research mentor (the PI).

Fundamental issues and challenges

The pay is not great. also the mentorship is often not great. mentors often do not have any formal training on how to be a good mentor, and above everything else this would improve the quality of life the most (even above a higher pay).

Existing NIH policies, programs, or resources

Training for PIs that take NIH funded postdocs on how to be good mentors. training on timeline expectations and also clearly defined expectations for how the mentor will support the postdoc once they go onto the job market.

Proven or promising external resources or approaches

No response

Response 2113

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is way for me to gain additional expertise and be exceptionally more productive in doing research compared to PhD. Having gained the a doctoral degree, we are more equipped to work on the harder problem, and do great science without having to establish a research lab from scratch. We add immense and essential value to a research lab, where it's the post-docs that either help set it up, establish entirely new techniques in a fraction of the time compared to a graduate student.

Fundamental issues and challenges

The labelling of post-doc as a 'temporary job' is the biggest challenge in quality of life of a post-doc. We are the most skilled people in the entire world and yet we do not have a stable job and sustainable income. This is exceptionally worse in cities with high cost of living (bay area, Boston area, which is my situation). Every little stress in my life is amplified because of the financial stress of being a post-doc—my father falling ill, my car breaking down, not being able to afford housing, dental procedures, getting contact lenses etc. Long-term post-docs have become so common, and yet there has been no change in how we label postdoctoral scientist as a job. The most impactful papers in field currently—'nature, science, cell' are mostly all work led by post-doctoral scientist for almost 5 years and it is a shame that we have to sacrifice our quality of life. To add on this, there are no guidelines or aid from the department in how many paid holidays a post-doc can take, or how many conferences they can attend. This creates a immense imbalance of power between the post-doc and advisor, where it is on the discretion of the advisor to be 'good understanding human being'. I am a passionate about science, and I especially want to work in an academic environment, but every single day I question if it's worth the stress—the stress of worrying about seeing my family enough, having enough money to live a good quality life. It is a shame that having the world's highest honor gives me zero job security, and everyday I find an additional reason to stop pursuing academic research and move to industry.

Existing NIH policies, programs, or resources

NIH grant amounts has not increased since 1990s. Why? Why is the NIH minimum for post-docs not scaled by cost of living in the specific city? Has the NIH minimum pay scale increased according to inflation? Why are are post-doctoral jobs a 'temporary job' when we are advanced research staff?

Proven or promising external resources or approaches

No response

Response 2114

Perspectives on the postdoc roles and responsibilities

Postdocs are the backbone in academic research communities. Having talented post-docs to lead projects and perform quality lab tasks are a critical factor for productive research and discovery.

Fundamental issues and challenges

It's been a challenge to get quality postdocs in academic setting even before the pandemic. The long work hours, low pay and uncertain job prospect are the major contributing factors for the ever-shrinking candidate pool of postdocs. In particular, the situation is extremely difficult for junior faculties who are clearly at a disadvantage in hiring top candidates, even mediocre. In response to the issue of general low pay, NIH has raised recommended pay scale year over year for postdoctoral fellows. However, the standard budgets for grants like R01 haven't been increased for two decades. As a result, PIs can only afford to sponsor fewer postdocs than they were able to hire before.

Existing NIH policies, programs, or resources

1. To create more funding opportunities for international trainees
2. The career path from postdocs to independent research faculties is extremely difficult, which mostly relies on the ability of obtaining fundings. It is a well-known fact that international researchers are the driving force in most bio-research labs. Most graduate students with the US citizenship are no longer considering postdoctoral training within the academic sector. However, there are not much funding opportunities for international trainees with working visas.

To raise the standard budgets for major research grants like R01 so PIs can spend more on personnel.

Proven or promising external resources or approaches

No response

Response 2115

Perspectives on the postdoc roles and responsibilities

It is a transitioning position, for people who has finished graduate training but did not find a long term position.

Fundamental issues and challenges

Postdoc is a low paying but demanding position. The quality of life is lower as compared to graduate students and faculty members.

Existing NIH policies, programs, or resources

Lots of postdoc fellows are not from US. Polices do not help these foreign fellows.

Proven or promising external resources or approaches

No response

Response 2116

Perspectives on the postdoc roles and responsibilities

Postdoc should be a term-limited training position. Postdocs should enjoy protected status that prevents them from doing administrative work (ie non-training activity).

Fundamental issues and challenges

the pay is quite low and, what's worse, many benefits are not extended to the posdoc! For example, many universities offer a matching contribution to their employees' 403b, but postdocs are excluded from this.

Existing NIH policies, programs, or resources

should include language that protects the postdoc from being assigned busywork or administrative duties. The postdoc should be dedicated training period.

Proven or promising external resources or approaches

No response

Response 2117

Perspectives on the postdoc roles and responsibilities

Develop skills and knowledge for independent scientific career (which can be in an academic or non-academic settings). Most postdocs are very highly trained and independent and labs provide environments to grow.

Fundamental issues and challenges

Cost of living: it's almost prohibitive to live without roommates in Boston, or have kids on postdoc salaries.

Long term financial security: I'm in my mid-30s and don't have a stable saving for retirement—postdocs are not considered full time employees in our institution so they don't get retirement benefits.

Long term job security—there are not enough academic positions after postdoc and expectations are higher and higher leading to longer postdocs. It's not sustainable.

Existing NIH policies, programs, or resources

Extend the k99 deadline

Increase NIH funding so that funding allocation for salaries is better balanced to the cost of living.

Proven or promising external resources or approaches

No response

Response 2118

Perspectives on the postdoc roles and responsibilities

Responsibility of a postdoc includes research, keeping up to date with the literature, writing, teaching, admin work, grant and funding applications, designing experiments on top of other things.

Fundamental issues and challenges

Is there any industry where one person does the job of 10 people (as listed above)? Somehow it has become characteristic of academic jobs, which is not good.

The pay is much lower for the technical skills postdoc bring to the job. I am a postdoc and I earn much less than a professional cleaner if we both work the same hours!

Not enough emphasis on work-life balance.

Not enough emphasis on skills acquisition and career development.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2119

Perspectives on the postdoc roles and responsibilities

As a psotdoc, I see myself as a junior researcher. I am still gaining important mentorship, but day-to-day my focus is on producing research, helping to make sure the lab group runs smoothly, and mentoring younger members of the lab. As a postdoc, I feel like I mostly am working for myself, for my own success, and I enjoy working with my PI as a source of guidance rather than a demanding "boss". I pursue a mix of my own ideas and those of my PI, but I aprpeciate having someone there to help me make decisions and interpret my results. I see my postdoc as a time to develop my thinking and produce foundational work that I will build on in my own lab. In this way, I think postdocs are essentially equivalent junior staff members who recieve mentorship from senior staff members—say a police detective recieving mentorship from their lieutenant—rather than students. No one would call the junior detective a "student" simply because they are early in their career and still work under a supervisor. Many professions involving working under a supervisor your entire career, so thinking of postdocs as trainees simply becuase they work in someone else's lab really makes no sense.

Fundamental issues and challenges

The primary negative aspects of postdoctoral life come from the idea that we are students and not staff. Becuase postdocs are not at all "students," it is extremely frustrating to be treated as such. For example, at my university postodcs do not reciece retirement benefits that other staff members would. This kind of treatment is not only a bit insulting, it is very disuasive for people considering working as postdocs.

Furthermore, while I generally have found the postdoctoral salary to be quite comfortable, this changed when I unexpecetdly had to contribute to caring for an elderly family member. Suddenly the stipend really is not enough, and if I also had children of my own it would be completely unsustainable. At any rate, it is in no means a competative salary, and many of my friends have chosen not to do postdocs specifically for this reason.

Existing NIH policies, programs, or resources

Increasing basal postdoc salary levels would go a long way. Providing build in, automatic child care support for postodcs would also be extremely helpful. Generally, treating postdocs as professional adults and not students, and giving PIs the resources to hire postdocs competatively.

Proven or promising external resources or approaches

No response

Response 2120

Perspectives on the postdoc roles and responsibilities

I took an academic postdoc to fill in gaps in my CV that I hadn't had experience with during my PhD training. I wanted (and have gotten) experience with several specific techniques and with academic writing. My PI is trying to secure NIH grants based on my work and so my role is to generate preliminary data for those grants.

Fundamental issues and challenges

I relocated to a city in which I have previously lived for my postdoctoral training. When I lived here from 2013-2015, I was easily able to afford to live on my bachelor's degree salary. When I signed my postdoc offer letter, I had budgeted to be able to easily live here on this higher salary, as well. Unfortunately, because of inflation increasing rent and prices for basic necessities to a great degree, I can no longer afford to pay my bills in this city and am looking for jobs outside academia as my savings deplete each month. Furthermore, my PI is not supportive of giving me time or bandwidth to pursue core competencies

other than those directly related to research, and he is entirely focused on preparing me for an academic faculty position, which I do not want.

Existing NIH policies, programs, or resources

Postdoc salaries need to increase to be somewhat competitive with what recent PhD graduates can get in the industry sector, or qualified graduates will continue to choose not to do academic postdocs if they have non-faculty career aspirations. I did an academic postdoc because I wanted to gain additional skills before getting a permanent position, and I feel like I made a bad choice that will impact me financially for years by doing so. To increase postdoc salaries, NIH grant amounts also need to rise (and my understanding is that they haven't since 1999). This is unacceptable given the amount of inflation in the last 24 years. Furthermore, I declined a competitive T32 grant because it would have made my tax, health insurance, and retirement savings situations much more complicated. It is not acceptable to tell professionals in their 30s that they cannot contribute to retirement in order to take a competitive training grant.

Proven or promising external resources or approaches

The industry approach is to pay recent PhD graduates commensurate with their experience. NIH could learn from that. NIH's own postdocs that work on site in Maryland are paid more than the NRSA standard, so the institutes are clearly aware that the NRSA minimum is not high enough.

Response 2121

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is employment following completion of your PhD that provides you with the opportunity to further develop the skills necessary for your career. For example, if one wishes to persue a career as a faculty member in academia, their postdoc should provide them with opportunities to teach, write grants, manage team members etc. If a postdoc wishes to persure a career in industry, their postdoc should provide them with opportunities to network or work with industry, develop management skills, attend business classes etc.

Fundamental issues and challenges

Salary is very low in comparison to PhD graduates entering industry. Positions are unstructured and do not necessarily provide the skills needed for next steps in career. Supervisors are known to bully, over-work, and exploit their postdocs (especially vulnerable international postdocs). J1 visas require you to leave the US to extend your visa—something highly inconvenient and often at the expense of the postdoc. Some postdocs give up on traveling internationally as their expired J1 visa would not permit them to re-enter the US (this is legal as long their DS2019 is still valid).

Existing NIH policies, programs, or resources

Increasing the funding for postdoc positions in grants. Increasing the awards/programs available to international postdocs.

Proven or promising external resources or approaches

No response

Response 2122

Perspectives on the postdoc roles and responsibilities

In practice: a workhorse for exploitative labor, coupled with opportunities for learning that are only available for those with the know-how to self-advocate. Ideally, it would be a well-paid role that clearly acted as a stepping stone to the next desired role, with mentorship to get people there.

Fundamental issues and challenges

You need to pay post docs way, way more money. They are being paid probably half of what they are worth.

Existing NIH policies, programs, or resources

NIH high risk high reward is an excellent program. We need more like ti, where post-docs are encouraged to get independent funding that allows them to grow and explore and contribute freely and with minimal strings. Post-doctoral funding is also woefully inadequate. Many post-docs have families ad live in large cities. The current post-doc compensation structure is about 1/2 of what it needs to be to make this career commensurate with alternatives. It is a shame that our nation funds science in this Darwinian way, that disproportionately affects those without the family or community resources to make it endurable. We are losing talent.

Proven or promising external resources or approaches

We need to switch to demand-side, rather than supply side science. We should not be funding science in this nation solely through grants. We need to advocate for a broad scientific ecosystem that has well paid roles for distributed networks of creative work—not just at the NIH, that does not require climbing the academic ladder (within academia) or exiting to industry (outside of academia) in order to focus on doing goo, creative, thoughtful, and appropriately compensated research. We are stunting out ability to grow intellectually as a nation.

Response 2123

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The most critical issue is the current wages. Most supervisors pay the post-docs based on the NIH payscale. The payscale for postdocs is utterly insufficient to survive in key cities such as California, New-york, Boston, etc. For example, in Boston, after taxation, a Post-Doc gets around 3500-3800. The minimum rent of a 1-room apartment is 3500. At the same time, graduates who shift to the industry are offered four times higher salaries. In addition, most of the post-docs are from other countries. It is extremely difficult to get permanent work authorization in the USA. Since they have to find a job back in their countries within a short period, it creates a discouraging environment.

The overall quality of life in PostDoc environment is extremely grim. Extreme workload, high expectations from the lab, poor wages, and no opportunities make it one of the hardest journeys.

Existing NIH policies, programs, or resources

Increase the NIH payscale considering the high costing cities where the most renowned research labs are located.

Proven or promising external resources or approaches

No response

Response 2124

Perspectives on the postdoc roles and responsibilities

All junior scientists should receive science communication training as part of their NIH award.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2125

Perspectives on the postdoc roles and responsibilities

To me postdoctoral position is a full time job that the individual is doing to build their own research idea and gain more independence for their project, more than they had in their PhD. More importantly, I view it as gaining more understanding of setting ones own laboratory in the future or gain more technical skills to be more competent for industry jobs. It is also a period where the individual does more mentoring and grant writing to gain funds to start their own lab or for doing postdoc in the PIs lab. To me its an extended training in a full time job similar to what an individual needs when they start at a new company in an industry job.

Fundamental issues and challenges

I think the biggest challenge for why most graduate students do not want to do a postdoc is the pay. As graduate students we are already in significant amount of debt/financial woes, so if one decides to do a postdoc it is again the situation is just the same and gets worse especially in bigger cities. With the rising cost of inflation and the salaries staying the same its more than tempting to avoid academic postdocs and go for either industry postdocs or full time industry jobs. Plus the pay being low is also coupled with really poor benefits that is below par when compared to full time employees in the academic institution. Even PIs who have excellent funding refuse to pay more than NIH standards because the NIH has set basic salary expectations for postdocs. I really think if the salary can be upto industry postdoc standards that would significantly improve chances of people considering postdoc positions in the future. Postdoc really have a family to and their own health expenses to think of like every other individual. In addition to that NIH should try to have an overall 2-year contract for postdoc positions. I think its too much pressure for having just one year contract immediately after grad school.

The current strike by [redacted for anonymity] postdocs basically tells that postdoc conditions are really bad. Employees should not be going on strike to get paid for fulfilling basic needs of life.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2126

Perspectives on the postdoc roles and responsibilities

Charity work for institutions and supervisors who won’t respect me much

Fundamental issues and challenges

Salary, hours worked per week, vacation time, and the fact that at any moment any member of your workforce can double their salary by leaving.

Existing NIH policies, programs, or resources

Improved salary, reduced hours.

Proven or promising external resources or approaches

Improving postdoctoral salaries.

Response 2127

Perspectives on the postdoc roles and responsibilities

Post doctoral position for me is an opportunity where I can build on my PhD skills, apply those skills to generate data and apply for fundings. It’s a stepping-stone to get to a faculty position where I could focus on the skills and roles I did not take or didn’t have to take as a PhD student.

Fundamental issues and challenges

1. Yearly contract
2. Ending in job termination if one doesn't bring grants within 2-3 years
3. Low pay, low pay, low pay
4. No/minimal benefit
5. No childcare support
6. No holidays or expectations of PI for us to work through weekends and holidays
7. Absolutely no work-life balance
8. Industries now offering everything that academia doesn't

Existing NIH policies, programs, or resources

1. Increased PAY!!!!
2. More funding opportunities for post-docs and early careers
3. Fellowships allowing benefits in it's cost
4. Universities generally allowing for benefits including child care, and NIH proving extra fund to cover for it
5. Treating post-docs like employees and not just "trainees", offering holidays, retirement plant. We are professionals too

Proven or promising external resources or approaches

No response

Response 2128

Perspectives on the postdoc roles and responsibilities

The postdoctoral fellow can have several responsibilities. They must support the research of their department while developing in to an independent investigator. For clinician scientists, the postdoctoral fellow must also support the clinical enterprise.

Fundamental issues and challenges

The three primary issues inhibiting recruitment, retention and overall quality of life is

1. lack of established training/career development pathways,
2. lack of support/resources to pursue existing pathways, and
3. lack of financial incentive/percieved lack of unfairness to work for no financial reward.

Existing NIH policies, programs, or resources

The NIH can consider smaller grants for early investigators that will introduce them to funding mechanisms, pathways and resources. Greater amount of loan forgiveness opportunities should also be considered.

Proven or promising external resources or approaches

The NIH can consider smaller grants for early investigators that will introduce them to funding mechanisms, pathways and resources. Greater amount of loan forgiveness opportunities should also be considered.

Response 2129

Perspectives on the postdoc roles and responsibilities

Right now I am viewed as cheap labor—my leadership has mentioned several times that to address the clinic's provider understaffing, they are intentionally hiring postdocs to see a high pt load because our

stipends are so low. They are clearly placing my clinical load as a greater priority than my training. With the salary, i am barely able to afford to live above poverty, and this, coupled with the high patient load, is leading to very high burnout and I am looking at leaving my postdoc for an industry position.

Fundamental issues and challenges

The low pay and industry providing a decent wage made accepting a postdoc position a very difficult position. I really want to get further training, but becuase internship and graduate school stipends are so i am financially not able to live on the postdoc salary.

Existing NIH policies, programs, or resources

it might be good to take a model more aligned with residency, where we have our doctorates and we are paid a living wage for my city. Here is a published guideline for one city: 1. Yalcin , E., Martinez-Corral, R. & Chugh, M. Retaining postdocs by recognizing their worth. Nat Biotechnol 41, 296-298 (2023). https://doi.org/10.1038/s41587-023-01656-4

Proven or promising external resources or approaches

a cap or limit on direct hours that a postdoc is allowed to see (so we have protected training time). This would stop business-related needs from overworking us and placing our RVUs or profitability over our training.

Response 2130

Perspectives on the postdoc roles and responsibilities

A postdoctoral position allows for advanced and enhanced scientific training both within a classroom and in the lab. I chose a postdoctoral fellowship and a K12-mentored fellowship(ASERT/IRACDA) in order to both get experience/training in the lab and within the classroom, specifically as it relates to minority-serving institutions.

Fundamental issues and challenges

Lack of additional training and mentoring available for all postdocs. Our institution does NOT provide tuition remission for postdoctoral fellows, so postdoctoral fellows cannot take classes which could DIRECTLY enhance their training/professional development. We also DID NOT have a postdoctoral affairs office nor a director of postdoctoral affairs until JUST this last year. We also JUST began a postdoctoral association, which is run by postdocs FOR postdocs. It’s difficult to get buy in from multiple departments because postdocs aren’t allowed time for these activities, historically. I also think a HANDBOOK for how to mentor/train a postdoc is CRUCIAL to increasing opportunities to enhance recruitment, retention and quality of life.

Existing NIH policies, programs, or resources

More funds available for academic institutions to CREATE Postdoctoral offices, SPONSOR Postdoctoral associations, RESOLVE postdoctoral issues fairly and equitably, and FUNDS available to support professional development and networking activities for postdocs. It would also be nice to ACTUALLY GET PAID PARENTAL LEAVE and PROTECTIONS, which currently does not exist at my institution. Additionally, we are NOT ELIGIBLE for our state retirement plan, even though we are ‘employees.’ I really wish I could save for retirement during this time of training. I also wish I made more money, like enough to actually start a savings account.

Proven or promising external resources or approaches

You could improve postdoctoral training ecosystem with a SUPPORTED postdoctoral affairs office, a director of postdoctoral affairs, and ACTUAL office for these individuals, websites for submitting concerns, supporting and developing postdoctoral associations at various institutions to first assess the individual problems, because they seem to all be different at different places. Additional ways to support postdocs could be LOAN REPAYMENT programs, which could help reduce the BURDEN that many FIRST generation college/grad school students may face.

Response 2131

Perspectives on the postdoc roles and responsibilities

In my experience, a postdoc position is the stage where postdocs get to run with their own project, so it is quite different from grad school. I know many do not feel they are still trainees, but perhaps this is semantics and there is a better intermediary word for this period.? If this really is not a period of additional training, senior faculty would need to be educated, because they definitely consider this additional training to help launch the postdocs onto their desired long-term career path. It also doesn't seem industry would rely so heavily on most postdocs spending at least a bit of time in an academic lab if there wasn't some component of training involved. (I admittedly am a lay person, so this is just what I have observed from my vantage point.)

Fundamental issues and challenges

Specific to the NRSA, the health insurance and tax issues are an enormous barrier for postdocs. While receiving the NRSA is supposed to be prestigious, fellows feel like they are being penalized when they accept the funding. The stipend issue is a very out-of-date funding vehicle and needs to be modernized into a normal grant. If the issue is partly the overhead, an NRSA grant (not stipend) without any overhead would still be a huge improvement--and institutions would still save tons on needing less manpower for the health insurance, tax, and stipend pay issues.

I have explained to countless fellows that NIH doesn't expect fellows to be paid at the NRSA scale on the PI's R01s--the NRSA rate is for when a fellow is awarded their own NRSA grant or training slot. However, most fellows think that NIH is increasing their PI's budgets annually to cover the NRSA increases. I don't know what the answer is to better education (and eventually increased budgets!), but fellows would at least feel better if they understood the fundamentals. They also think all the overhead goes to the PI's lab or our Program--so they feel there is all this money that is being kept form them, when in fact, budgets are flat, without cost-of-living increases, and the overhead goes to the institution.

Existing NIH policies, programs, or resources

In addition to the above, it would be great if there was a way for PIs to supplement NRSA salary with federal funds as long as it is assured there is no double-dipping. Fellows have to be supplemented, especially in expensive cities, thus realistically, they have to work on other projects. Sometimes this is a barrier depending on a PI's portfolio.

Proven or promising external resources or approaches

In general, postdocs do not learn grant or personnel management in grad school. This is a part of the training during their postdoc, which I take very seriously to help educate them about, and it is beneficial even if they will go right to industry.

These are complex issues and I truly appreciate the sessions and this survey. Thank you!

Response 2132

Perspectives on the postdoc roles and responsibilities

I view it as a position to start an academic career.

Fundamental issues and challenges

The fundamental issues is that it is expected of a postdoc to work all the time, without a possibility of enjoying another activities necessary for a good mental health. Also the salary is not even comparable with the salary in the industry, which is an important factor for everybody's life.

Existing NIH policies, programs, or resources

I would say that it is necessary more benefits, like the right of working specific hours in order to have free time to enjoy other activities.

Proven or promising external resources or approaches

Probably improving the salary.

Response 2133

Perspectives on the postdoc roles and responsibilities

Many PIs simply see postdocs as older graduate students and treat them as such. They overwork them in the laboratory work aspect and don't care whatsoever about their career aspirations. Other PIs do allow postdocs to utilize their time for further laboratory work training plus a career development component. The latter would be preferable.

Fundamental issues and challenges

Extremely low pay for individuals who have 2 or more degrees. Our university doesn't offer retirement matching and provides very few benefits for postdocs. Many industry positions don't require a postdoc step anymore or are willing to hire a person for a postdoc position at the company. Industry is alluring, due to the higher pay and better benefits.

Existing NIH policies, programs, or resources

Make stipends higher, require that postdocs receive benefits like other full-time employees, and require PIs to allow at least 33% of the postdoc's time to be dedicated to career development activities.

Proven or promising external resources or approaches

No response

Response 2134

Perspectives on the postdoc roles and responsibilities

I new the post-doctoral fellowship as a stepping stone to independence. I want to develop key skills of a principal investigator, including the ability to conceptualize research programs, rather than just experiments or series of them. I will also focus on advanced skills development as well as identifying an preparing to move into an area that I will focus on in my own academic research as an independent investigator.

Fundamental issues and challenges

The biggest challenge is the outdated assumption that a postdoc is only valuable if a candidate changes institutions. I have encountered this repeatedly from individuals employed at the NIH as well as more advance colleagues at my own institution. Graduating PhD recipients have the most compelling interest in their career and decisions not to relocate should be respected and welcomed. There are many valid reasons for not relocating or changing institutions, including continuity, familiarity with key resources that will be important to a future career at the current institution, family relationships and personal choice. Perpetuating the myth that training is better or more effective if a candidate moves imposes a significant burden on career advancement. People who wish to move should of course feel free to do so, but people who do not wish to move should be equally free to stay where they are without incurring some implicit penalty on career advancement. Compensation is an additional impediment, both in terms of salary and benefits. It is better at the postdoc level than the graduate student level, but expecting a postdoc to spend five or more years in a low-pay situation is unrealistic. If postdocs are valued, they should receive enough compensation to be able to live at a reasonable level during the fellowship.

Existing NIH policies, programs, or resources

The implicit and sometimes explicit requirement to relocate in order to obtain a post-doctoral fellowship. The requirement and emphasis on relocation should be removed from all career development awards (the entire K program). The only way to adequately do so is to eliminate consideration of the applicant's current and proposed location from the award process.

Proven or promising external resources or approaches

Incentivizing PIs to participate more in mentoring post docs would be very helpful. The incentives should address both the NIH fellowship application process as well as career advancement mentoring. Among other things, PIs should not assume that an applicant at the postdoctoral level will draft sponsor statements and then hand them over to the PI for signature. The PI should be an active participant in the process. Not sure how to go about requiring this but it would enhance the process.

Response 2135

Perspectives on the postdoc roles and responsibilities

I view the post-doctoral position as a waste of my time--I already spend over 5 years of my life making hardly any money. I have no savings and need to start earning money towards retirement and my own personal savings. I have no desire to pursue a faculty position in academia, and even if I wanted to, I am under no illusion that I would be one of the few to actually make it into one of these positions.

I think the independence gained from a post-doc can be very valuable, however, I would rather pursue an industry post-doc where I will gain skills that will be directly applicable to gaining an industry-level position, all while earning a livable wage.

In short, academic post-docs don't offer nearly enough money and don't always equip you for the difficult transition to industry out of academia.

Fundamental issues and challenges

The cost of living is increasing, and in many cities you cannot simply maintain a reasonable standard of living alone on a post-doc salary. For the amount of time and effort put into a post-doc, it seems like an obviously choice not to pursue it.

Existing NIH policies, programs, or resources

Make schools pay post-docs more.

Proven or promising external resources or approaches

Better pay, better benefits.

Response 2136

Perspectives on the postdoc roles and responsibilities

A stepping stone to an academic position. Academia is no longer revered and many see it for what it is—a sexist hierarchy that is holding onto "the good old days" .

I will not pursue an academic career and I will advise any students I mentor to not stay either. I have tried to see both the good and bad sides of it. Many PIs and labs hide the bad, which is worse because then you are surprised and stuck in an abusive environment where everyone tells you it's normal and there is no help to get out.

Fundamental issues and challenges

Lack of pay, especially among inflation.

Many people don't want to stay in the same system that didn't care for them as graduate students. The people who do stay tend to uphold the current system—pushing minorities out even faster. Why stay in a system that will not change.

The constant need to publish first—the fear of one's research not being considered interesting enough to get funding. The competition is crazy and while science is my life I cannot be stressed over funding for my entire life. I want to be financially stable and have the opportunities to travel and live life outside of a lab.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2137

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an early career training period designed to give young researchers additional training. Ideally this training will further their CV and they can learn new techniques and gain more responsibilities.

Fundamental issues and challenges

The pay is atrocious. I am only able to continue this position because my family helps me out financially. I would make 2-3 times in industry what I make in my postdoc. Seriously. It's unreal how little we are paid.

Existing NIH policies, programs, or resources

Increase the pay.

Proven or promising external resources or approaches

Pay more money. Please.

Response 2138

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salaries are too low

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2139

Perspectives on the postdoc roles and responsibilities

When I began my career as an undergraduate intern, I viewed post docs as high level talented mentors, and was under the naïve impression that they were paid based on their level of expertise and talent, and must've had great benefits for being on the other side of a terminal degree. Now that I'm a fourth year graduate student closer to that potential career step, I realize nothing could be farther from the truth. Now I see post docs as high level scientists that failed to secure a job in time for defending their PhD and had to settle for the less than ideal jobs that are widely available and severely underpaid. It is billed as a short term training position (2 to 3 years) that quickly and easily ensnares people for 6 to 8 years, or in many cases people do multiple post doc positions, to chase the impossible goal of becoming a principle investigator.

Fundamental issues and challenges

Post doctoral trainees do not make livable wages, have less benefits than employees (no retirement contributions, no overtime or holiday pay, no maternity leave, lower quality health insurance) and are largely exploited to carry out duties that are the responsibility of the principal investigator, such as 'ghost reviewing', managing the lab, or being solely responsible for student mentorship. While reviewing manuscripts and mentoring students are important experiences for post docs, I have seen it get to a point where the PI is not involved at all, yet takes credit for these efforts. Post docs have no protection from any type of exploitation. Additionally, post doc positions fail to train scientists for industry or other scientific career choices beyond academia. These are not necessarily blanket statements, plenty of people have had great experiences as post docs, but I do feel that these issues are pervasive enough to turn most modern student's stomachs when considering post doc positions. The jobs beyond the post doctoral step are so

scarce that doing a post doc is an unwise choice for anyone that intends to have a valuable, versatile career that also respects living a fulfilling life outside of work.

Existing NIH policies, programs, or resources

The NIH student loan forgiveness plan is the only program I can think of that provides a valuable benefit to scientists who pursue postdoctoral fellowships. Expansion of grant opportunities specifically for post docs could help also.

Proven or promising external resources or approaches

Intense reform is required to change the working environment and culture that maintains the exploitation of post docs. Reforming academic culture may take generations, especially when the generation of scientists that currently holds the most power are unlikely to embrace change. First and foremost, the salary for post docs needs to be raised to a livable wage that is comparable to other post-terminal degree jobs. The benefits must also be improved. Graduate students don't have retirement contribution benefits, and then go on to another position where they still don't have that benefit? How is that a wise financial move in any way to sacrifice over a decade of not receiving standard matching for retirement funds? Training for other careers beyond academia should also be implemented. Industry has begun to view postdoctoral fellowships as a weakness, not a strength. Students who are interested in pursuing industry are not willing to harm their resume by doing a post doc. There needs to be greater opportunity beyond post doctoral positions, because it is now a dead end road that many talented people get stuck in, often times causing them to leave science all together.

Response 2140

Perspectives on the postdoc roles and responsibilities

It is a training position where new PhDs take what they learned during their graduate training and significantly build on it to become independent scientists. It should be in a field of study in which they want to have a career. Mentors should provide individualized training to assist the postdoc in reaching his/her/their goals.

Fundamental issues and challenges

The large time commitment and highly competitive nature of academic postdoc fellowships inhibit too many of today's young scientists that want to have work-life balance now and not delay it. The long hours it takes to generate sufficient data to have very high impact first author papers for those that want top jobs in academia or industry take longer than it used to because of the size of such papers now (over 100 individual figures/manuscript). Although there is more support for those with children than years past, there is not enough support. There is insufficient NIH funding for trainees across the U.S., and a lack of understanding at NIH that postdoc training takes longer now, which requires more funding for longer.

Existing NIH policies, programs, or resources

Increase the number and extend the funding for grants focused on postdoc training (T32, F32, K99/R00, K08, K22, etc.)

Allow non-U.S. citizen/non-green card holders to be on NIH training grants.

Provide funding for institutions to hire more faculty and staff that only focus on training and career development for postdocs as a supplement for the overworked mentors that have less time to train postdocs in the non-science aspects of career development now.

Proven or promising external resources or approaches

Need NIH to build bridges to top foreign biomedical institutions that NIH has vetted, making it easier to tap potentially great trainees outside the U.S. The vast majority of universities in the U.S. do not have the resources or the connections to build what is needed for these opportunities.

Response 2141

Perspectives on the postdoc roles and responsibilities

An academic postdoc should a early-stage investigator with significant support from mentors and institutions to be successful investigator(provide training in leadership position to manage and develop a research team and collaborative projects, writing successful grant proposal, developing new large skills for future project), manage a small team and project

Fundamental issues and challenges

There is an absence a clear explanation of recruitment (we observed a lot of network support for only white men to recruit them but absence or discrimination for other) and there is lack of providing a good salary and work/life balance for the level of skills that a postdoc has.

The PIs use expertise of some postdoc with previous experience but do not want to recognize and help them for the career of their postdocs.

Existing NIH policies, programs, or resources

Increase of base salary based on the previous years of experience and skills with increase of salary per year.

Provide access for better training and network for postdoc

More clear description of recruitment process and how the American academic system works for foreign people or underrepresented persons without network in an academic research

Proven or promising external resources or approaches

It may be good to look at how industry work to assure to keep their best employees and continue to train them to be good leaders and managers or expert depending on the direction of the person want to go.

To have more long term salary and not short term as in CNRS (FRANCE)

Recognize the role of mentor and provide training for PI to learn how to manage a team and projects!

Response 2142

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is poorly compensated indentured servitude with no guarantee of relief from service. Poor funding opportunities and high competition make the post doc seem less like a stepping stone and transition into a more independent position and instead a high likelihood of never ending limbo. The fear of becoming a perpetual post-doc which is by far the most likely outcome in todays funding situation is a fate that overall career death sounds better than. Transitioning to industry and making an honest wage or changing careers altogether sounds like a far better outcome and has more opportunity for career progression than being permanently stunted as a postdoc. The thought of being a postdoc makes me want to drop out because it is synonymous with career death when it used to be a career stepping stone into a career in academia. If funding outcomes were different and there was data showing that a reasonable percent of postdocs were able to secure funding in a handful of years, then it would make sense. However, the mere thought of becoming a postdoc and just being abused by the system with no recompense is a guarantee that I will change career paths after finishing my graduate education before becoming one.

Fundamental issues and challenges

My hope for securing funding and becoming an independent researcher is dead. There is no incentive to do a post doc if this is no longer a viable option. I really don’t know why you need to do this survey. It should be obvious that humans are motivated by perpetual improvement and if you don’t give them any hope of continuing to grow they burn out. Is it possible to become independent after a postdoc still? Yes, but the chance is so low that the risk isn’t worth it. Especially someone like me who does not have any DEI social credits to my name that could make it easier to secure funding outside of my hard work and track record. I don’t know why anyone, especially in my demographic, would ever do a post doc in this day and age. Period.

For reference, I was originally highly motivated to do a PhD and have a career in academia in undergrad; however, I chose to do the MD/PhD route because I want insurance. I am definitely a PhD research career priority applicant, but the horrible funding landscape made me apply MD/PhD (at a strong MSTP funded institution) to increase funding probability. Additionally, I have the MD as insurance in case obtaining funding is too costly. I am in a very privileged position in that regard compared to many other grad students. I say this to make a point though about just how bad the system looks right now and the lack of incentive to be trapped in a post doc. After 16 years (8yr MD/PhD, residency, fellowship, post dococ) of post ugrad education I could still be trapped in a postdoc and have a hard time securing funding to be an independent researcher. What about all my other colleagues?

Existing NIH policies, programs, or resources

I understand the importance of making our researcher base more diverse and having grants that help people from disadvantaged backgrounds break through the glass ceiling. However, it is to the point where it feels that no matter how hard I work or what my track record looks like, securing funding is like gambling. Increasing funding opportunities that are based solely on merit (in addition to those that help people from disadvantaged backgrounds) would at least give someone like me hope that there is a chance for me to one day transition out of a postdoc.

Proven or promising external resources or approaches

Having postdoc pay that is not 2-4x below industry pay and rekindling the hope of one day securing funding to transition out of a postdoc and not be trapped as an eternal postdoc are critical. Obviously no one expects a postdoc position to pay what is in industry; however, if the pay must be high enough to give a quality of life that is sufficient to consider taking the stepping stone for future career aspirations. Just rekindle the hope of transition one day from a postdoc by improving funding opportunities to a point where it no longer feels futile to try and pay postdocs enough that they don’t feel like they are being absolutely abused.

Response 2143

Perspectives on the postdoc roles and responsibilities

Additional research training to acquire more skills to make you a suitable candidate for a tenure track assistant professor position within academia.

Fundamental issues and challenges

The low salary, poor work-life balance, and no guarantee of a tenure track position upon completion of the postdoc.

Existing NIH policies, programs, or resources

Set the pre-doctoral and post-doctoral stipends higher.

Proven or promising external resources or approaches

Better salary (!!!), formal mentorship, pipeline to tenure track position.

Response 2144

Perspectives on the postdoc roles and responsibilities

I anticipated that this postdoc experience would provide excellent training and mentorship that would situate me for finding a position in my specialty. I anticipated that would be with the group that brought me here for postdoc. I anticipated that the group forming my postdoc training would become a professional home strong personal and mentorship relationships.

Fundamental issues and challenges

I have found almost none of the things I anticipated in coming to postdoc, in fact, I have been severely restricted in my roles, treated in a minimizing hierarchical manner as if I had nothing to offer, no previous training before arriving here, and as if I have nothing to offer to this site other than to break me down so they could build me up in their image. I have felt isolated and professionally adrift to the point of questioning my chosen specialty. When these issues are put in the context of the cost associated of

relocating for a year of training it becomes even more frustrating. And now, the promised option of a second year of postdoc, which would help reduce the personal cost of relocation, has been removed as an option. An intern colleague went to a position paying almost double of what I am earning as a postdoc, so no, I would not recommend an NIH postdoc to current interns based on the experience that I have had at mine.

Existing NIH policies, programs, or resources

Pay us commensurate with our training and the value we add to our sites and make it obvious what the resources of support are for people who encounter toxic training systems like the one I have encountered.

Proven or promising external resources or approaches

No response

Response 2145

Perspectives on the postdoc roles and responsibilities

A training position for a PhD-level scientist that serves as a dedicated time to expand knowledge and skills in a particular field of study, which leads into a productive research career.

Fundamental issues and challenges

No response

Issues and challenges inhibiting:

1. Quality of life and retention: salary is roughly half of what industry pays and does not factor in zip code of where the position is. Many postdocs have a higher quality of life in their graduate studies with part-time graduate assistantships in more affordable areas than they do with full-time postdoctoral salaries in big cities where almost all of the postdoc positions are located.

Existing NIH policies, programs, or resources

Programs:

1. Change the criteria to obtain new or continued NIH funding that focuses on quantifiable advancement in a research field rather than the number of publications the research produces, prestige, etc. These parameters often produce an impossible barrier for anyone coming from a graduate program where the research was not directly funded by a principal investigator's NIH funding, making it harder to have numerous publications or build prestige. These students often learn many skills not found or lacking in traditional NIH-funded research graduate programs to stay competitive, such as varied research methodologies, statistical analyses, technical writing, etc. that are essential to conduct and disseminate research. However, with the current set-up many do not develop productive independent research careers because they are never successful in getting their first NIH grant to springboard their career in a specific field of research.
2. An easier transition to change primary fields of research. Many scientists feel stuck studying research topics that were substantial in the beginning, but overall became "dead ends." However, currently scientists will not change what or how they study their research topics because that is what they built their career on and for a greater chance of continued funding in "publish-or-parish" environments. This particularly impacts postdocs the most since it leads to many principal investigators not having any ideas on how to advance their own research agenda and they instead rely on postdocs to do it for them, who most of the time have to produce results before they have enough time to learn about a principal investigator's research.

Proven or promising external resources or approaches

External resource: U.S. military pay structure.

The number one reason to improve all aspects of the postdoctoral training ecosystem as described in this section is to adequately pay postdocs based on location of postdoctoral training. The U.S. military provides basic pay for a normal salary and an additional housing allowance that is dependent on zip code. A pay structure like the military has will significantly increase recruitment and retention.

Response 2146

Perspectives on the postdoc roles and responsibilities

The postdoc position is unique in that it is both a professional and a trainee position. While the position may have been established long ago under an apprenticeship model of doing science, it is clearly much more than that now. I think it is a valuable position for both trainees and trainers, if not abused and there are equitable opportunities for people in this position, given that they are professionals with an advanced degree. I was in a situation, and still am in a field, where Ph.D.s can take a long time. I have gone through it myself and watched my peers and those who I mentor go through this time in life as both a wonderful time in science and a stressful one in terms of future career and having a life outside of work and the responsibilities it brings.

Fundamental issues and challenges

I think the biggest challenge to being a postdoc at the moment is that you ultimately have to be in a position of privilege in order to be one. Compared with other professional, post advanced degree positions, the salary is low, the benefits are not standard or even available in some cases, and it is not possible to support a family or even yourself living on your own paying rent with only a postdoc salary. In my own case I had a spouse that was at a different stage in his (academic) career (he was faculty) and that's how we were able to make life work. But I would say that my situation is rare and it is much more common for people to be at the same career stage, which causes considerable stress and hardship. Currently, it seems graduate students thinking about postdoc perceive it as a dead-end job, in that the previous promise of a (tenure track or similar) faculty position after a brief stint as a postdoc generally does not exist anymore. There is also a lack of diversity (of all kinds) at the upper levels in academia because of many of these issues, along with there not being many role models for diverse people who have been successful at this path.

Existing NIH policies, programs, or resources

There are at least four ways that existing policies could be updated to dramatically benefit postdocs.

1. Make sure postdocs supported by NIH fellowships are "employees" . At many institutions, an NIH fellowship means the postdoc is no longer considered an employee of the institution and therefore does not receive the same kinds of benefits (health coverage, dental, eye, parking, childcare, retirement, etc.) as those supported by alternate means (including other fellowships that now have updated their rules). The current workarounds are insufficient, and it creates a burden and unfair disadvantage for those on fellowship.
2. Windows of eligibility for fellowships and other funding mechanisms should be increased. Short windows mean that for anyone who's work is on a longer timescale or who takes time for family care is automatically at a disadvantage. While there is allowance for any official leave of absence to extend the eligibility window, it is typically (6-8wks) not enough to extend to the next regular NIH deadline.
3. Family leave should be extended. Postdoc is a professional position that is held by people who can bear children or want a family often exactly at the point in life when they would want to start said family. Grant eligibility windows should be extended by a minimum of one year (as ESI status can be extended). Official leave should be longer. The option for a no-cost extension or supplement on an existing fellowship should be easily available. Funds for childcare should be specifically considered.
4. Salary should be increased to levels commensurate with their professional status and capable of supporting a life and family if that's what's desired. Salaries that were closer to what is offered in industry would encourage a better pool of applicants and aid in leaky pipeline issues.

Proven or promising external resources or approaches

Most of my comments are inspired by working with women in the field and reading current research on what benefits their careers. For example: Kim & Moser, 2021 and Berryhill & Desrochers, 2021 and many others.

Many mentorship and training structures that are excellent exist at the graduate level but are rarely implemented at the postoc level, e.g., onboarding, cohorts, mentorship committees, career & skills development support [writing & computational skills], etc. There are many well-done and recent studies on graduate training. Applying some of those same concepts, which have worked well for graduate

students, to postdocs I think is essential going forward. Postdocs have transformed to be more than just a short steppingstone to an academic faculty position that they once were, and their presence should be defined unto themselves—not as trainees that are grouped with graduate students but as a separate group with their own unique needs, resources, and talents. The NIH has an opportunity to be a real leader for people in the postdoc position.

Response 2147

Perspectives on the postdoc roles and responsibilities

Prior to my postdoc experience—Before I began my postdoctoral training in 2015, I was fill with excitement in that this would be an extension of my Ph.D. and would involve highly specialized formal training that would not only help me evolve into an independent researcher, but to also open up many employment avenues, especially at R1 level academic institutions. I decided to pursue a postdoctoral position because of these additional profession advantages—my advisors, mentors and colleagues told me this and therefore, I had no reason to doubt them.

Post postdoctoral training experience—Toward the end (2021) and after my postdoctoral training experience there was a noticeable shift in my feelings and perspectives of what the postdoc position originally meant to me. This "career launching" experience as advertised by my mentors waned in the wake of COVID-19 pandemic. The reality set in when, during the height the pandemic, my research lab remained closed, while bars were allowed to reopen. My perception from this was that the world did not care about researchers trying to help individuals through phase 2 clinical trials and my value as researcher meant little-to-nothing to my institution. When my research lab was allowed to reopen (~ 4 months after initial lockdown) we were only allowed to operate one or two days a way over the next year that I remained in my position. Clearly, this is not the best approach to be productive to researchers who often balance several studies at a time. Unfortunately, do to lack of productivity in research, my department decided not to invest in another year and I ultimately had to try and find a position elsewhere, half way through the academic calendar.

Fundamental issues and challenges

Recruitment—One challenge inhibiting recruitment for prospective postdoctoral professionals is that there is selective institutional and advisor inbreeding. This is not new relative to today's landscape; it has been going on for decades. The quality of the postdoc therefore, becomes diminished because new research experiences are not attained, and the result is many young professionals competing for the same grants because there research acumen has not been expanded.

Retention—there seems to be a general lack of collegiality between the postdoc and the Institution. This, often times makes individuals rethink what the main important reasons as to why they chose the postdoctoral route.

Quality of Life—I chose to select a postdoctoral fellowship at a Midwestern University because the cost of living from a standardized postdoctoral salary would be cheaper in the Midwest than on the East or West coast academic institutions. Based on the current postdoctoral salaries and cost of rent in West/East coast cities, a postdoc would be spending over half of their paycheck on rent each month. This clearly can alter how an individual lives their life.

Academic Institution Budgetary restraints—Many institutions have experienced severe budget cuts as a result of pandemic-related low enrollment. This has made the prospective postdoc less affordable to many institutions where not only a competitive salary must be offered, but sufficient start up funds are needed for success. In my experiences in applying for institutions, it appears that many simply cannot afford individuals with postdoctoral training; the funds cannot meet the feasible means to conduct successful research. Further compounding this dilemma is that pandemic-related supply shortages have cause price hikes on nearly every facet of the research equipment industry.

Existing NIH policies, programs, or resources

I think the peer reviewer programs needs to have better accountability, more streamlined, and perhaps, audited in some instances where a reviewer appears to be biased and/or inexpereinced. In my own experiences and in many conversations with colleagues who submit grants at the NIH level, there appears to be considerable bias and/or differences between how reviewers review grants—there appears to be a lack of qualified reviewers who are well suited to review grants. With funding lines that run very low, many

times it takes a unanimous review of 3-5 reviewers to get funded. It appears that if you get one bad review, the chances of getting scored/funded become severely marginalized. If, for instance, a grant is submitted and 3 reviewers are scoring 8-10s and one reviewer is scoring 2-4's, there needs to be an audit on this particular reviewer and their potential history evolved around the research grant submitted. Further, if discrepancies like this exist, then their needs to be an adjunct reviewer to review the grant to determine if indeed, the reviewer was not qualified to review the grant application. One simple way to potentially avoid this issue is to have mandatory training seminars for first time grant reviewer applicants.

Proven or promising external resources or approaches

There needs to be resources (perhaps webinars) regarding realistic career pathways that may come from postdoctoral training in the year 2023 and beyond. In the past having postdoctoral experience typically meant the individual had nearly unlimited opportunities, where the individual could land a tenure track position at an R1 institution—here, the individual would be enriched in their own lab with generous start-up funds, and abundant institutional research infrastructure to facilitate their future research goals. While this is certainly possible and available today, it is to a much lesser extent. The pandemic and associated budgeting woes have limited the amount of highly regarded positions at R1 institutions that are now almost exclusively relegated to individuals not only with postdoctoral training experience but also who possess at least one career development award.

Lastly, there needs to be a revamping of resources and/or personnel readily available on how to navigate, manage, and budget the postdoc salary. Postdoctoral researchers work at a University, and not for the University. Therefore, they act as independent contractors, accruing paychecks with no taxes taken out and no retirement benefits. In my experiences as a postdoctoral scholar, there were no individuals at the University that could help me understand if taxes did indeed need to be taken out. This has been a long running controversy in the postdoctoral community where some individuals will take out taxes in good faith and precaution, whereas other do not take out taxes. What is further frustrating about this is that some of the most qualified tax professionals, CPAs, also could not give me discernable advice. This is clearly an issue that should have been resolved at the advent of when postdoc salaries where initiated.

Response 2148

Perspectives on the postdoc roles and responsibilities

I view it as the defining moments for me to positively contribute in a society by discoveries of treatments for the diseases in population.

Fundamental issues and challenges

Academic research have challenges as both postdocs and PI entered in a lab with egos. The process is slow and the salary package is not worthy enough to keep the motivations of postdoc for the research, especially in this time of inflation.

Existing NIH policies, programs, or resources

Speed up the recruitment process.

Proven or promising external resources or approaches

Improve postdoctoral recruitment and mentoring.

Response 2149

Perspectives on the postdoc roles and responsibilities

My postdoc role is really a stepping soon to becoming an independent investigator. I feel very lucky in my postdoc position since I have a lot of autonomy and freedom.I have flexibility in my schedule, and my PI is very supportive of my career and future plans, which is great.

My role includes:

1. Working on data analysis and writing manuscripts from existing data in the lab (currently 3 manuscripts are pending my analysis and writing),
2. Developing a new line of research using animal models (this includes the conception and management of the project, mentoring research assistants, and completing the animal work to collect data)—this will eventually include more wet-lab work and require data analysis and writing two manuscripts,
3. Attending trainings/conferences to learn new skills/updates in the field or present our work,
4. Submitting internal and external grants—so far, I have mostly submitted internal grants within my institution but after we collect animal data, we will be better positioned to submit a K99 (hopefully)

The expectations of me, after discussing with the PI:

Having ~7 papers in a 2-year postdoc position with 1-2 papers being bigger papers, the other manuscripts can be smaller. Am I on track to doing that? Great question! So I have submitted 2 small-ish manuscripts so far, working on the animal data will allow me to have the 2 big manuscripts by my second year of my postdoc. After receiving a training, I am able to work on one new manuscript as well, and then there will be 2 more manuscripts that I may not be able to get to honestly. In short, I think I will leave this postdoc with 4 manuscripts (if accepted for publication, which is an issue) to be realistic since I am almost halfway through with my appointment.

Fundamental issues and challenges

This is a very different position than being a PhD student. It requires adjusting to a new norm, lifestyle, expectations, freedom, and responsibility.

Pros:

1. Having autonomy and flexibility in schedule, task completion, and project selection
2. Feeling appreciated and respected as a "peer"; your PI values your input; they hired you for a reason since you have a skillset they are looking for
3. Having more opportunities to pursue training/conferences
4. General sense of relief knowing this is a "training" and you are no longer a student or pursuing a degree

Challenges:

1. Being fully responsible for a project and being expected to just know what to do is difficult and sometimes exhausting. We are not prepared to lead research efforts as PhD students, so there is this sudden expectation as a postdoc that "you know" how to do things. This should be addressed at the PhD level or early postdoc career
2. Most postdocs I have met are exhausted and overworked—the postdoc experience is very PI-specific and lab-culture-specific. I feel lucky in my position, but I can sense how other postdocs are overworked and it makes me feel like there is no support or community of postdocs since most are just exhausted: not happy enough to socialize
3. The pay is LOW! I earn $60K, $45k after tax. After paying rent, car lease and insurance, groceries, and just daily life things like parking/dental visits and health insurance costs, I am barely left with $100, if anything. This low pay makes me feel under appreciated and affects my personal life. Not having a financial safety net is a REAL stressor that impacts my productivity
4. Not having a job security. You are a postdoc for 2-3 years and that is it! No job security or future plans. The uncertainty kills productivity, combined with a low pay

Existing NIH policies, programs, or resources

I am unsure what programs exist since my funding is internal, not through NIH. I know this is a very privileged position to be in since I do not worry about funding throughout my appointment while knowing that other postdocs worry about funding on an annual basis or have to keep submitting grants to continue their work.

Postdoc demands that would increase retention and make academia a more enticing option (over industry):

1. Increase the pay—why spend 2-5 years of your life being a postdoc when any non-academic company is willing to pay you more, let you work 9-5 ONLY, and give you better benefits, better work-life balance, and better vacation days/maternity or paternity leave?
2. Make the working hours more consistent. Let us be real, we do a PhD so that we can lead a life that is not a 9-5. We appreciate our intellectual clock and work when we are inspired and productive. A life in academia offers the most flexibility and control over our schedules as long as we do not feel like we need to work overtime or weekend to meet deadlines and finish our work. So maybe reduce the work expectation so we are not in a constant state of "hustle", and make the maximum worked hours per week 40. This standardizes the expectation and forces PIs not to overwork their employees.
3. Promote transparency. Many postdocs feel that the expectations are ambiguous
4. Promote empathy and mentorship programs to improve the PIs mentorship style. Many are very toxic in academia and overwork their employees, yell at them, or belittle their achievements (yes, it happens). Having better mentors leads to better employees and an overall better mental health which leads to improved productivity. Win-win situation

Proven or promising external resources or approaches

To improve recruitment: provide financial stability, and if possible, future work contracts. We will work better if we know this position will translate to a more permanent and secure position

To improve training: improve the mentors! The PIs need to be empathetic and understanding and treat all postdocs and employees with respect and dignity. A healthy work-life balance and healthy lab culture is needed for that and this is set by the PI.

To improve working environment: set standard work hours and increase the pay

To improve mentoring: start working on this really early with MS/PhD/MD students. Good habits are formed during our initial training before we become PIs. There should be mandatory mentorship training for students and PIs to become good leaders and mentors. The academic systems are supportive of abusive mentors so long as they secure funding and publish papers, so maybe looking internally at your academic infrastructure may be a good start to dismantle this cycle of improper mentorship being celebrated as long as it yield near-sighted results (good publication for a few years then the people leave to the toxic culture and these papers will not write themselves).

To improve job satisfaction: increase pay, increase positive mentorship where people feel appreciated and praised by their mentors, give us more platforms to showcase our work as postdocs so we feel our work is impactful (which is rewarding), and create focus groups or a postdoc society where postdocs can connect and socialize together to feel valued and part of a group.

Response 2150

Perspectives on the postdoc roles and responsibilities

My perspective of postdoc positions is that they are the next step for people interested in remaining in academia and continuing on to be a professor. They are expected to perform research in a manner that is more independent than graduate students, and are expected to more actively participate in writing grants for themselves or the lab.

Fundamental issues and challenges

Postdoc positions in my field (basic science research) are overworked and underpaid. Research and academia are incredibly demanding environments were it is viewed as normal to work weeks that are closer to 50 hours than 40. On top of that, postdocs are rarely making salaries that allow them to live comfortably in metro areas. As postdocs are essentially designed to guide people towards incredibly competitive professor posts, they don't seem like a worthwhile pursuit if you are not interested in academia or if you don't feel competitive in applying for professor posts.

Existing NIH policies, programs, or resources

NIH policies could mandate increased vacation time, strict maximums on number of hours postdocs are allowed to work per week, increased salaries for postdoc positions, and other improvements that would generally make it a less grueling career path.

Proven or promising external resources or approaches

No response

Response 2151

Perspectives on the postdoc roles and responsibilities

To me, the academic postdoc is not a useful career step unless you want to pursue an academic faculty position. And from what I have experienced during my time in graduate school, I have no interest in continuing academic research. A postdoc is just another underpaid "training" opportunity that intends to take advantage of you as cheap labor rather than help your career growth and development. Since I have already been doing that for 5 years, I do not need any more of this type of experience. I do not believe the current academic system is designed in a way that maximizes scientific integrity, progression, or training. I love and believe in science, however, I am quite discouraged by the neglect, gaslighting, and bullying I have experienced, so I will be taking my talents elsewhere. I know the postdoc is supposed to be a higher level of independence, but I have been completely independent for the last 3 years. Therefore, I do not need another academic experience on my CV, as I feel as though I have already been required to operate as a postdoc while getting paid a graduate student stipend. I think in addition to investigating postdoctoral training, the NIH should have a higher standard for predoctoral training programs (emphasis on training, not publications required) because the experiences my peers and I have had has not encouraged us to continue to contribute to scientific research in this setting. Overall, I view the postdoc as a waste of time, and I hope to receive better training in my future non-academic positions.

Fundamental issues and challenges

First and foremost, the biggest challenge is the postdoc salary. Academic research pretends it does not exist in a capitalist society (and shames their underpaid graduate students and postdocs for wanting higher pay). However, the reality is that America is a capitalist society, inflation is at an all-time high, and the pay from the NIH is not keeping pace with this. It is an extreme privilege to make a salary that is barely above the cost of living (especially since all the "premier" research institutions are in the most expensive cities) when you are a highly capable professional with a Ph.D. (and have been an underpaid graduate student for 5-6 years). It is even more of a privilege to be expected to be in this position for ~5 years with no promotions or raises. And to be told that in exchange for this low salary, you'll be receiving "training" is an absolute joke. If you would like to retain people, you would need to pay them more and provide a higher level of training (rather than use their higher level of independence as an excuse to provide less training). It is quite obvious from the graduate student level that there is no clear standard of training, so it is a hard sell that postdocs are receiving some kind of great training that makes this underpaid position worth it.

Existing NIH policies, programs, or resources

There needs to be a system in which trainees are guaranteed training and there should be repercussions for PIs not providing training. Currently, trainees are at the mercy of the PIs who can say whatever they want and then do whatever they want (i.e. say you will receive training but not provide it because they are really just using trainees as cheap labor for their own lab and reputation). There needs to be standards of training that everyone is guaranteed as well as negative consequences for those not following the guidelines (make it a requirement that every trainee has an IDP? Have a place for trainees to report lack of training?). Overall, not very impressed by this unchecked system of power.

Proven or promising external resources or approaches

No response

Response 2152

Perspectives on the postdoc roles and responsibilities

I view postdocs as a dedicated stepping stone that is considered necessary for future academic positions. This is an opportunity to develop new research areas and diversify your research experience.

Fundamental issues and challenges

There is no guarantee of full-time work after postdocs are completed. Postdocs are underpaid and overworked. This is not a problem that is unique to postdoctoral scientists by any means. But if NIH is interested in improving retention, they need to propose mechanisms that make the positions more attractive and permanent.

Existing NIH policies, programs, or resources

Modify to include longer-term fellowships that allowed preliminary transitions into full-time positions at universities.

Proven or promising external resources or approaches

Consider "bridge to faculty" fellowships offered by some universities like University of Illinois Chicago or University of South Carolina

Response 2153

Perspectives on the postdoc roles and responsibilities

The postdoc position is an advanced training position that is fundamental to preparing individuals for a career as an independent scientist, particularly in an academic setting. The postdoc position should be one where individuals with a PhD can further develop their skills in independently driving projects and in how to engage critically with other scientists about their work.

Fundamental issues and challenges

Most institutions offer minimal vacation time to postdocs, and some institutions don't offer paid parental leave or are just beginning to do so, making postdocs feel somewhat trapped in the job. Furthermore, academic faculty positions are hard to come by and can be even harder to come by if individuals cannot just pick up and move anywhere. A number of industry positions do not require postdoc experience, come with better financial compensation, and better personal leave policies, making them ultimately more attractive, whether from the outset or during the postdoc tenure. Retention is difficult when better compensation on multiple fronts is available elsewhere and the primary goal of an academic postdoc position seems particularly difficult to obtain.

Existing NIH policies, programs, or resources

The NIH has a policy on how much postdocs should make based on their experience level for individuals on training grants and individual fellowships, and they could do more to actually enforce that institutions follow this policy for training grants, and they could expand this policy to include all postdocs paid through NIH grant funding so that there is better enforcement of postdocs actually being compensated based on their experience level. I know of postdocs who are multiple years into their postdoc (4+) that don't even make the minimum for a Year 0 postdoc on a training grant or fellowship. There should be more pressure on institutions to compensate postdocs according to their experience so that postdocs are at least given somewhat reasonable financial compensation (albeit at lower levels than could be obtained outside of the academic setting, which still poses problems for retention). Since academic postdoc positions already pay less than industry positions aimed at individuals with the same level of experience, there should at least be more pressure for academic postdocs to be more fairly compensated if retention of individuals in academic careers is desired.

Proven or promising external resources or approaches

No response

Response 2154

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is meant to facilitate transition into an independent position. It can be used to learn new cutting-edge techniques and help build a portfolio to aid in that transition process. Although contributing to the PI's research is key, the role of the PI in fostering independence is more important.

Fundamental issues and challenges

Salary caps set by the NIH currently do not account for rising costs. The huge disparity in pay between industry (entry level) and postdoc positions limits recruitment and retention of postdocs looking to explore options after their PhD.

Existing NIH policies, programs, or resources

The pathway to independence award needs to be better tailored to accommodate subject switches. The language in the FOA needs to be clear as to when exactly a postdoc is eligible to apply. This award has to be submitted in the third year of your postdoc but one of the criteria that candidates are judged on is productivity (visible: papers); which can be difficult to demonstrate within 3 years especially if candidates change fields.

Proven or promising external resources or approaches

No response

Response 2155

Perspectives on the postdoc roles and responsibilities

I am in a clinical and research role as a clinical health psychology postdoctoral fellow. I have 40% research time, 50% clinical time and 10% didactics.

Fundamental issues and challenges

My QOL has been the lowest during my fellowship year than any other year of training—including internship year when I was defending my dissertation and working 60-70 hours/week. It has been so low because I feel like I am over-supervised and under-supported, I still have no power but I am held to a high degree of responsibility, and I have a doctorate and am making 50k, when my friends and peers who chose not to do a fellowship are making 2-5x this year what I am making. 50k in a busy city is not nearly enough to not face very significant financial stress. I can choose between living in the city or being able to afford going out to eat, but not both. The financial stress hurts worse when I feel like the pay cut I took for the education didn't actually provide the education or mentorship I thought I would have. I have several peers (in multiple different fields) who have quit their postdocs, and I understand it completely. We have great support from our postdoc director, but he has so little power and isn't involved in my day-to-day life at all. It feels really difficult as well, because emails are sent and responded to on the weekend and as late as 9 or 10pm at night. Add to that only getting ten days of PTO total—of course I am burnt out. Anyone would be burnt out in my shoes. And my career hasn't really even started, but in my first ever professional role, I am just barely hanging on and miserable.

Existing NIH policies, programs, or resources

- Expanding mental health resources (my academic insurance somehow doesn't cover therapy, even though I am a mental health provider myself)
- Affinity groups for minoritized folks (I am LGBTQ+, but I think this would benefit BIPOC folks as well, or parents, etc)
- More PTO—10 days total is inhumane
- Higher salaries, especially in big cities. A nationwide minimum is a good start, but for me in a huge metropolis, it barely makes a dent, when the folks in Lawrence, KS, are probably living just fine off 50K
- Clear reporting lines for ethical violations of supervisors, ideally with the option too be anonymous
- Allow us the option to charge for working overtime, or create another pathway where we get paid for all the work we do outside of the 40hrs/week we are on currently paid for

Proven or promising external resources or approaches

- Affinity mentorship—I would have loved to have a mentor who was also queer and/or a woman
- Mental health or other non-sick days; we are only allowed to take sick leave when we are sick, but the amount of sick leave we get is equal to our total PTO.shouldn't I be able to take a sick day for a necessary doctors appointment or for therapy? And yet, these requests were denied because I can't take sick "ahead of time"—this creates a culture where lying is rewarded and honest people are burnt out to a crisp. Sick days should be health days and we should be able to spend them in therapy or getting our physical therapy or taking our kid to his neurologist if we need to

Response 2156

Perspectives on the postdoc roles and responsibilities

Postdocs are a mainstay of my lab and account for most of my lab's research productivity. I view them as employees not as trainees.

Fundamental issues and challenges

Since the onset of COVID, postdocs have essentially disapeared in the US. This is driven by low pay and the tenousiousness of their appointments.

Existing NIH policies, programs, or resources

Pay them adquately and understand that is taking them longer to achieve independence.

Proven or promising external resources or approaches

No response

Response 2157

Perspectives on the postdoc roles and responsibilities

The postdoc is key career development position where the trainee is till very much building research skills, communication skills, critical thinking skills, and establishing a higher level of independence as a scientist. Postdocs are essential for the success of the biomedical research field both in terms of its present workforce and its future workforce, both in academia and industry

Fundamental issues and challenges

Postdoc stipends are too low to be attractive given that many postdocs are also worried about not finding a stable, good paying job after completing postdoctoral training. The NIH needs to not only increase what it pays postdocs via NRSA F32 and T32 but also dramatically increase the amount of the average R01 award to at least $350-400k direct/year and also raise R01 paylines to a~20-25% to allow all postdocs to be paid better and also allow for more the funding of more stable, senior research staff positions that postdocs can transition into. Many postdocs do not want to become faculty/PIs or work in industry and would be happy staying on as senior research staff scientist in academia if the pay was competitive and

some level of job security existed. They feel that other paths into academia via the faculty track are too risky and more based on luck than hard work because the number of faculty jobs is too small and highly competitive. Thus, they feel that they might as well just jump into an industry job or leave research science altogether after PhD based on short-term financial benefits rather than spending more years in training that they equate with buying a lottery ticket.

Existing NIH policies, programs, or resources

Increase the NIH budget to increase not only NIH R01 paylines/number of R01s but also average R01 award amounts. Nothing else matter that much is postdocs don't see a future with stable, gainful employment as research scientist. They feel that other paths into academia via the faculty track are too risky and more based on luck than hard work because the number of faculty jobs is too small and highly competitive.hus, they feel that they might as well just jump into an industry job or leave research science altogether after PhD based on short-term financial benefits rather than spending more years in training that they equate with buying a lottery ticket.

Proven or promising external resources or approaches

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Response 2158

Perspectives on the postdoc roles and responsibilities

This hasn't changed over the years, this position is all about more training in a focused area as well as the first true steps for independent grant writing.

Fundamental issues and challenges

The NIH pay lines are terrible, and post-docs are being training in an environment where the PI's are super stressed and can't get funding. This is trickling down to the post-docs who see what the PI's are doing to stay afloat and they are rightfully scared. Who would want that kind of stress? The other big issue is the pay differential between an NIH level 0 post-doc and an industry position. I personally feel this is short-sighted thinking, but it is very prevalent. So the NIH could increase the post-doc salaries as well as the K award salaries to help minimize this discrepancy. So as usual, the issues boils down to funding—both of R01s and grants competitiveness in general, but also funding of their salaries.

Existing NIH policies, programs, or resources

The loan repayment program was a great step—so keep that going and expand if possible. Change policies for level 0 salaries for post-docs would be a big help.

Proven or promising external resources or approaches

No suggestions here.

Response 2159

Perspectives on the postdoc roles and responsibilities

I view postdocs as semi-autonomous research that should guide and manage a project. When they walk out of a postdoc they should be able to take on a managerial position whether that be in academia, industry, or government.

Fundamental issues and challenges

The fundamental issue inhibiting recruitment, retention, and quality of life is the low salary. Postdoc salaries have not kept up with inflation (nor have NIH grant budgets) and it's very hard for postdocs to

live in high cost of living cities where many universities are located. It's virtually impossible to start a family, buy a house, or save money on a postdoc salary.

Existing NIH policies, programs, or resources

The NIH should change the postdoc pay scale with concomitant increases in grant budgets to cover postdocs.

Proven or promising external resources or approaches

The best way to enhance the postdoc job satisfaction, like any other employee, is to pay them a fair market value salary. Everything else is virtue signaling and window dressing.

Response 2160

Perspectives on the postdoc roles and responsibilities

The postdoctoral role should be an opportunity for additional training that makes an early career investigator more scientifically sophisticated and brings their publication record, career skills, and grant-writing skills to a level where they are ready for an independent position (in academia, industry, or any other arena requiring additional training beyond the PhD).

This training period should be brief: approximately 2-3 years for most scholars. Except in relatively unusual situations, longer postdocs effectively amount to an investigator working at the level of a staff scientist or junior faculty but without the recognition or pay of such a position.

Fundamental issues and challenges

- Postdoctoral positions are too long, with many investigators sitting in a "holding pattern" for 5+ years until ready for the increasingly competitive faculty job market. Unrealistic expectations of institutions for the track record of new hires contribute to this, as does a relative dearth of available permanent positions relative to number of trainees.
- Postdocs are, for the most part, paid poorly; this might me a moderate issue if the positions were brief but given the increasing duration of the position in many fields it becomes an economic burden. This of course places a barrier in the way of young investigators from disadvantaged backgrounds.
- The perception of the academic faculty job market as an unstable thing where luck is a huge factor and most fail is a major deterrent.

Existing NIH policies, programs, or resources

The obvious fix of course is a much larger congressional appropriation so that there are sufficient funds to pay postdocs what they are worth and support more junior faculty so those postdocs are not trapped in trainee positions for 5+ years.

Barring that, it seems like it may be time for the NIH to have a serious dialogue with research institutions. A big part of the problem in the academic research career path is that many (and most of the top R1) medical schools and universities have not moved past a model where they can expect faculty to cover their entire salary from extramural funds (thus needing 2-3 R-series grants per lab, which is simply not sustainable with the current available funding). Along with this, there are fewer and fewer tenure-track positions. This makes academia unattractive to many top graduating PhDs.

What if the NIH said to all awardee institutions, "Look, you have to have skin in the game. To be eligible to apply for an R01, an investigator must have XYZ% (not sure what the appropriate number is; maybe 40%?) of their salary committed by the institution." This would move some of the burden for supporting faculty off of the NIH and on to universities, which would then have to find ways to bring in philanthropy or other sources. The immediate effect might be more contraction of positions but in the long term they would be more stable and would grow at places that are committed.

Additionally, super-huge labs with many many postdocs are inefficient both in terms of use of funds and in terms of good training. The NIH should consider revisiting the idea of a soft cap on annual $ to any one investigator, so that junior scientists currently stuck as postdocs can get their own grants instead.

Proven or promising external resources or approaches

No response

Response 2161

Perspectives on the postdoc roles and responsibilities

A postdoc is still a training position with individuals learning how to conduct research independently with the goal of fully managing their own project. This may involve opportunites to train junior researchers. The expected outcome is publications and tangible improvement in project management experimental design and management training.

Fundamental issues and challenges

The major obstacle is salary and benefits available to postdocs. A postdoc just starting after completing the PhD is making 1/2 what they could make in an industry setting. Further benefits for childcare, healthcare and wuality of life are typically better in an industry setting. While it would be nice for academics to be able to retain or recruit postodcs by offering higher salaries, the current budgets of grants do not allow for this>ven though the NIH has raised postdoc stipends a correspoding increase in grants did not accompany these raises resulting in reduced ability to support experimentation. In addition, for postdocs desiring to learn new technologies and leverage cutting edge approaches, these are typically more expensive than traditional experiments.

Existing NIH policies, programs, or resources

Providing more opportunities for researchers returning to science could be beneficial. Limitations surrounding applying for return to research funds while not in the lab make it ddifficult for trainees and mentors to coordinate that return and advise on the content of those supplements. Perhaps allowing applying or up to 6 months after returning to the lab and not limited by funding status of parent grants. Expanding the availability of diversity supplements for international postdocs to encourage more trainees from international backgrounds and not tying to parent grants. Perhaps providing additional methods to obtain salary support outside of traditional grants. Allow for increawed salaries or funding for career researchers so postdocs don;t feel its a tempoorary position with only endpoints of academics or industry for those that want to stay at the bench.

Proven or promising external resources or approaches

No response

Response 2162

Perspectives on the postdoc roles and responsibilities

You can’t even create a form that doesn’t completely erase itself when you click on the NIH “policies” link. I just spent 30 minutes writing a thoughtful response to have it deleted. This is the perspective on postdocs. They’re futile. You are no more than your PIs technician. Just another piece of property that your PI has to “fund and keep happy”.

Read Doug Seals’ take on academia as a business. This is a published work that is so tone deaf it hurts. He compares postdocs to lab technicians. Cool.

Fundamental issues and challenges

Pay. Are you serious? Pay. Your PI owns you. They get the credit and they determine what you do. Also, there aren’t any academic jobs to get. If you don’t want an academic job, you further price yourself out of the private sector. You have a ton of experience, but the private sector will view you as inexperienced and disillusioned.

Existing NIH policies, programs, or resources

You really think that we’re going to view this information? You can’t even click these links without losing all your progress. Make it simpler. Make it simpler. Make it simpler. I’ll say it again until whoever is reading this gets it. Make it simpler.

There's too much information. Like I have time to read, understand and implement 50 different "resources" and vague infographics with links to funding that are irrationally competitive in the first place.

Also, there aren't even statistics on how doing a postdoc will help you. I.e., be open about the prospects after doing a postdoc. As it stands, the infographics say what "could" be done. This doesn't speak to what postdocs ACTUALLY DO for someone.

Proven or promising external resources or approaches

Pay postdocs more. Allow them to negotiate there salary, workload, projects, benefits etc.

Create a postdoc transfer portal similar to the NCAA.

Create opportunities for remote postdoc opportunities.

Give postdocs a housing allowance.

Give postdocs tax breaks.

Give the postdoc practical recourse to retaliate against bad PIs.

Allow postdocs to more easily leave their positions to take other jobs without burning the PI and leaving them with bad LORs that will inevitably further damage their job prospects and invalidate the whole experience.

Give postdocs summer's off.

Don't require postdocs to obtain their own funding.

Create a portal for postdocs to easily transition into industry. This should be setup anytime a grant is proposed that has a budget with a postdoc so the opportunities match the supply.

Response 2163

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1. The job opportunities available for new PhD graduates is so much greater with the expansion of non-research related careers such as science communication, consultant positions and even diversity in the types of PhD level jobs available in industry. I look at my own lab where 5 of the first 6 graduates did postdocs and only 1 out of the last 5 have. I see this in my training grant as well. This has even influenced graduate programs that now try to provide additional information and opportunities outside the academy as students expect to learn about "alternative careers." The NIGMS even ran a program (BEST) for institutions to develop training that includes internships.
2. That changes the question to how do you alter programs to make a postdoc more attractive? Clearly compensation would help but for that to be feasible, the budgets on grants will need to change. With the modular block system has been in place for around 20 years without change, it will be very challenging.
3. There is a perception that the job market for academic positions is very competitive. That is true and can also be discouraging to people, although i suspect that has more of an impact on people who are already postdocs and leaving for other positions than those who are still in graduate school.
4. What may be more of an issue for graduate students than the competition is the work life balance they observe. Students see how grant writing dominates their mentors time and many decide that is not the life for them so they never enter the postdoc pool and because there are plenty of other job opportunities that will compensate them better than being a postdoc for 5 years.

Existing NIH policies, programs, or resources

1. Update grant budgets so we can afford to compensate postdocs better than they are currently paid.
2. Stop putting so much emphasis on training a workforce beyond academia and start celebrating academic careers. After all, its become the new alternative career.
3. This one is probably controversial, but I worry that grants like K99/R00s have created a bit of a class system for competition for jobs. I suspect there are postdocs who take themselves out the pool because they feel as if they are not competitive for positions. This is probably true but clearly there are postdocs without these awards who get jobs.

Proven or promising external resources or approaches

No response

Response 2164

Perspectives on the postdoc roles and responsibilities

To me, a postdoctoral fellowship is a necessary stepping stone for trainees who want to go on to be a principal investigator in an academic setting. This is a time when you can expand your skillset and practice managing and executing an independent research project in preparation for starting your own lab.

Fundamental issues and challenges

I will not be pursuing a post-doctoral fellowship because I no longer see a career in academia as a viable option for myself. I think that completing a postdoctoral fellowship is an incredibly stressful experience because postdoctoral fellows do not receive sufficient financial compensation for the value that they provide and there is no guarantee that they will be able to secure a more permanent job at the end of the fellowship.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2165

Perspectives on the postdoc roles and responsibilities

The role of the postdoctoral research scientist is to gain the additional training that will best position them for the next phase of their career. This role is achieved by an involved mentor capable of providing this training. Training includes responsible conduct of research, new techniques, how to work as a team with shared goals, how to be a peer and how to train more junior scientists. The mentor works with the post-doc to determine their goals and how to achieve them. Goals include primarily academic science but also industry, teaching and other alternative pathways.

Fundamental issues and challenges

Pay for is too low for postdoctoral research scientists. There are too few academic positions available afterwards. Overall, this discourages the whole pathway, as the path to academic positions is seen as the primary reason for pursuing a postdoc.

Existing NIH policies, programs, or resources

Postdoctoral pay must be increased.

Transition K grants to independence should be increased in salary and scope; consideration of “L” grants that support transitions (K to L to R).

Consideration of capping overhead costs for all grants to fund this.

Proven or promising external resources or approaches

The primary mentor is usually compensated as part of the parent funding effort. Consideration of other means of funding this effort or how to add additional mentors needs to be considered and encouraged.

Response 2166

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Several financial issues come to mind immediately. Besides the stipend itself, in many NIH postdoctoral programs, such as the T32 fellowship program, universities treat fellows as different than full-time employees, which presents many barriers to accessing resources that might otherwise be available.

For example, taxes are not withheld from T32 fellows' paycheck, leaving postdocs to arduously hunt down guidance (not forthcoming from most quarters due to liability reasons, I might add) on whether and how much taxes they will owe at the end of the financial year. Then, they have to singlehandedly calculate, schedule, save, and start prepaying their own estimated taxes. This is a burden that sounds perhaps trivial, but in years when you have moved states or universities (a common occurence in academia) or had a significant life event such as a child or a marriage, can take days, if not weeks, to figure out on your own. This burden is not unique to postdocs, and is in fact true for grant recipients at all stages, but it becomes more and more onerous the more complex life becomes, and oftentimes tax advisors do not understand the unique situation that we are in—I have a friend on a fellowship who was audited by the IRS after paying H&R Block to do her taxes, and H&R Block had done them wrong, leaving her on the hook for hundreds of dollars (a non-trivial amount on a small stipend). Creating a mechanism to alleviate the burden on the individual fellow to do their own taxes would improve quality of life significantly for those postdocs to whom this applies.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Postdocs on a fellowship are not given access to any employer-assisted that might enable saving for retirement, such as a 403(b), and of course no matching contribution from the employer. Postdocs are typically at least in their thirties, if not older, and the utter lack of what is in other situations a basic employer benefit is a significant deterrent for some folks. Provision of an external resource, of a supported account for retirement savings that qualified for some basic match benefit, either via the university or outside of it, would significantly enhance many postdocs experience.

Response 2167

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I left academia after completing a postdoc (on an F32) and 3 years as an Assistant Professor at [redacted for anonymity] (on a K01). Although I successfully published, earned NIH grants, and an academic position at an R01 institution, I ultimately left academia because I couldn't financially support my family. These reasons are relevant also for postdocs, and need to be considered if the NIH wants to retain women and those from disadvantaged backgrounds.

The cost of living has dramatically risen across the US, and [redacted for anonymity] is no exception. My husband ([redacted for anonymity] staff) and I made a combined ~$200,000, yet we struggled to support ourselves and 2 children. We lived in a below market rate apartment unit within [redacted for anonymity] housing, but couldn't afford faculty housing, which cost ~$4,000/month, so we requested to live in a student unit (~$3500/month). We send our youngest to [redacted for anonymity] daycare, and our older child attended a private school where we received financial aid. Our income was not enough to be able to

send our youngest to daycare full-time (full time=$3,200/month), therefore my husband and I balanced watching our child 3 days/week, and paid for part-time care (2 days/week = $1400/month).

This was not sustainable for me after 6 months. I was in a period of K to R transition attempting to write grants, wrap up publications from my K award, in order to support the next stage of my career—all with only 2 days a week of childcare. An NIH/[redacted for anonymity] faculty salary should be able to support university-associated expenses, and support junior faculty during a critical and vulnerable stage of their career. Other faculty who were able to stay were either:

1. single,
2. had a spouse who made a considerable amount of money, or
3. an MD who worked nightshifts to earn extra money.

Existing NIH policies, programs, or resources

Provide childcare subsidies to individuals on training grants, including F31, F32 and even K01. This is needed.

Supplements for cities with considerably higher cost of living expenses such as rent and children.

For other ideas, see a recent publication that outlines how to support women in medicine (although pandemic specific, there are a lot of great general ideas as well): https://rdcu.be/cHd4a

Proven or promising external resources or approaches

No response

Response 2168

Perspectives on the postdoc roles and responsibilities

Independent research, demonstration of ability to secure grant funding, manuscript preparation and publication.

Fundamental issues and challenges

PhD students are paid a salary considered below the poverty-line. It is not a liveable wage for a single person, let alone a married couple or students with children or other family members to support. After four years of being in a PhD program (now pushing five to seven as the norm), the appeal to continue with a postdoctoral position is not there. Postdoctoral positions also do not pay a livable wage for their students, who are at a level of experience and qualification that would warrant so. The pay needs to be comparable to what is offered in industry to incentivize students, otherwise, it is an extenuation of unpaid labor that started in the PhD program. Also, the incentive to stay in academia is dwindling as entry-level professor positions are becoming exceedingly selective.

Existing NIH policies, programs, or resources

Better pay for postdoctoral trainees.

Proven or promising external resources or approaches

Better pay for postdoctoral trainees.

Response 2169

Perspectives on the postdoc roles and responsibilities

For me postdoc position is an intermediary step to achieve my career goals. During this position, I seek to get training in various areas such as project management, time management, critical thinking and general scientific skill (improving techniques etc.) among others. At the same time I want to grow in my personal life as well using the experiences I gain as a postdoc.

Fundamental issues and challenges

Postdoctoral trainees are often viewed as cheap labors by the academic faculty. They are expected to work long hours and on weekends and holidays. Work-life balance is never stressed upon and the excuse is

often given that 'you are in training'. This really affects the quality of life because as a postdoc you are also well ahead in your personal life. Therefore, you need time to complete those responsibilities as well. But the PIs refuse to understand this and provide no support whatsoever.

Existing NIH policies, programs, or resources

NIH can start offering H1b visa. It may be difficult because it is a federal organization but it can provide more opportunities to postdocs (exchange program, collaborative short projects etc.) who are international in different ways.

Proven or promising external resources or approaches

The NIH has really done well on defining the pay scale for postdocs according to experience. NIH can devise guidelines for academic faculty to promote work-life balance for their post docs. This can also change the mindset of PIs to view postdocs as colleagues rather than cheap labor who will work more than they are paid for. This is specially evident with international postdocs.

Response 2170

Perspectives on the postdoc roles and responsibilities

The academic postdoc should be eliminated entirely, and recent graduates should be appointed at the rank of assistant professor. It's the same work, why not make it tenure-track?

Fundamental issues and challenges

It's an position most would rather not have if they could be a professor instead.

Existing NIH policies, programs, or resources

Do your job, expand your budget and act for once like you value science enough to not have an abysmal payline. It's the responsibility of the NIH to lobby Congress for additional budget.

Proven or promising external resources or approaches

Direct hire into professor roles sometimes occurs at small liberal arts colleges and teaching schools. Use this model at R1 research universities and Ivy League.

Response 2171

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a transition period between the PhD and a more permanent job (academic, industry, teaching, editing, etc.)

Fundamental issues and challenges

The salary is a problem, specially for postdocs who have dependents and in cities with a high cost of living. A position in industry after the PhD offers a much better salary and many people are choosing alternative careers because of this reason.

Another problem is that international postdocs, who are more than 50% of postdocs in the US, have disadvantages as compared to permanent residents and US citizens. The K99 is the only grant available for international postdocs, but it would be fair to open all NIH fellowships to them too. This is a clear disadvantage when they apply for faculty jobs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2172

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as a training step between graduate student and early-career faculty. It is a chance to expand expertise into a field related yet unique from one's graduate training in order to launch towards an independent career. Successful postdoctoral training should focus not only on technical skills and scientific knowledge, but also professional skills needed to move towards progressive independence.

Fundamental issues and challenges

Postdoctoral training is lengthy and not particularly well paying. The next step, be in K-award and/or first faculty position can feel like a daunting transition, and some trainees spend far too long in the postdoctoral position (i.e. professional postdocs). The model that success is defined by independence is not always no most appropriate next step for everyone. Securing funding to transition can be extremely challenging. Postdocs are often also at a challenging life stage of beginning a family, etc. and seeking balance vs. productivity.

Existing NIH policies, programs, or resources

Programs such as lone repayment, early stage investigator status extension based on qualifying life events, etc. are very good and should continue or be expanded. There is an unwritten mentality, at least in my area, that no one seems to get a K-award their first submission, which really drags out the funding process. It is very easy to have gaps between funding stages (i.e. F to K and K to R).

Proven or promising external resources or approaches

Formal training opportunities centered on career development and professional skills, but for trainees and their mentors.

Response 2173

Perspectives on the postdoc roles and responsibilities

In my point of view, I view post doc as a training that lead to a smooth transition to independent researcher. However, in general perspective, post doc training can prepare a trainee to the future career, either in academic research or industrial research.

Fundamental issues and challenges

Fundamental issues for a post doc life in academic research are that some of the PIs are under pressure for grants, and the pressure from the PI becomes worse to the post docs because they also want publications to make easier transition for their future careers. However, the PI only may focus on the grant, and don't focus on the publication or helping post doc to prepare their future career.

Another challenge is sometimes, some PIs are not good mentors, and they only want the post doc to work for them without preparing them for a future career.

Existing NIH policies, programs, or resources

Although I am still very new and not yet very familiar with all the policies, programs, or resourcesof NIH, So far I think they are good for post docs, the only concern is how the PI helps the trainees to transition to their future careers.

Proven or promising external resources or approaches

The surveys like this and follow-up for post docs life as well as regular reminding the mentors their responsibilities towards their trainees will probably help to keep the mentors mindful to their trainees.

Response 2174

Perspectives on the postdoc roles and responsibilities

My role as a postdoc is to conduct and publish research as quickly as possible while maintaining a high level of academic integrity. This role, as looked at by myself and other postdocs I have spoken with, is transitionary. Often used as a way to maintain pay after graduate school because we were unprepared or

lacked time for the proper networking, application, and interview process that is required for obtaining a job outside of academia. The postdoc position also allows us stay versed in the sciences (no gaps in resumes), while applying for other positions. Personally, I am using this role, in addition to maintaining pay, to gain technique based skills that I believe were missing in my graduate career and would make me a more viable candidate for jobs in the [redacted for anonymity] area.

Fundamental issues and challenges

The lack of adequate pay and benefits for the educational and technical expertise we have earned. The current $68,604 cap, although placing us above the median salary range (after 7+years!) for overall salaries in the country, it is only slightly more than half the median salary $127,774 for PhDs overall and this does not include benefits, which are totally inadequate in a postdoc position. A base salary of $56,484 without 401K benefits, < 2 weeks accrued vacation, and parental leave only being approved at CU Anschutz last week (3/16/2023) makes life as a new postdoc difficult to comprehend, especially when other government jobs such as mail carrier can earn $78,898 base after 8+ years and include benefits with a high school level of education. Simply, the postdoc position makes me feel used.

Existing NIH policies, programs, or resources

Changing existing program rule to NOT include payback time. It is simply creating a more hostile environment where I am essentially trapped in a program for two years at low pay without benefits. This incentives me try my best to get out of the position as quickly as possible and/or search for a job that can compensate me 2x ($112,968) so that I can pay back the government for working for them. These sort of financial penalties (although good for the government, pay a highly educated person as little as possible for work that can impact GDP) discourages new graduates from taking the postdoc role unless they lack other options.

Proven or promising external resources or approaches

Money talks. With inflation at 6% year over year, 15.5% since 2020, why would I want to work for this salary? No amount of training, mentoring, or community building is going to overcome the fact that I can earn 2x the salary + benefits that put me on track for retirement and allow me sufficient time off after equivalent years of work.

Response 2175

Perspectives on the postdoc roles and responsibilities

Training for transitioning from an early career researcher to Principal Investigator.

Fundamental issues and challenges

Bare minimum salary, very few research fellowships available to non-citizens (or permanent residents), age and experience-capped federal funding irrespective of the difficulties in publishing in a particular field, prioritizing publication productivity rather than science which often informs future funding/grants.

Existing NIH policies, programs, or resources

Raise in the minimum salary to make the already difficult research relatively lucrative; more emphasis on guidelines and resources on career development; increasing opportunities for jobs currently identified as ‘alternative career options’ like Science informationists and careers in Science outreach, communication, and policy.

Proven or promising external resources or approaches

Enforcing actual mentoring, happier and safer work environment, and competitive salary would be helpful.

Response 2176

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

When I was looking at postdoctoral positions, I was confronted with the choice of uprooting my family or taking a position that would do little to advance my career and training. I ultimately opted for the former and completed two cross-country moves before settling into a faculty position, which has been incredibly hard on my spouse and children.

Existing NIH policies, programs, or resources

The only people I know who were able to stay in place for their postdocs —and many, eventually, for faculty positions —were those who were connected with large, well-funded labs and received postdocs through those labs' grants. I was working with a small, newly established One Health research center, and there weren't any postdoc positions there. I had funded my doctoral work through an F31, and I would have happily written an F32 or K99 if it meant I could stay and work with this group. However, my understanding was that I needed to demonstrate for those grants that I would be in a different environment than my doctoral environment, and this was the only group doing research in my specific field at my home university (i.e. that didn't require a move). I feel this expectation should be reconsidered. Many people have become successful by deepening their training in a topic rather than starting over in a new lab/research group. The expectation of moving to a new environment excludes non-traditional students who are more advanced in their family lives and not able to move for a postdoc from competing for NIH postdoctoral funding mechanisms.

Separately, fast-tracking postdoctoral funding mechanisms would improve things for postdocs. Right now, if a resubmission is required, well over a year passes between the first submission and funding. The current system seems to assume that you already have a postdoctoral position, and the F32 or K99 is just to free up some of your mentor's funding, so it doesn't really matter how long it takes to get the grant. If NIH wants to actually expand postdoctoral opportunities, these grants need to be obtainable when doctoral students are still students. Faster turnaround times would help immensely with that.

Proven or promising external resources or approaches

Create a mechanism to fund postdocs working with ESIs or other investigators not super well-established with NIH. Many bright, up-and-coming postdocs want to work with bright, cutting edge researchers, even if they don't have lots of previous mentees in high-ranking positions.

Response 2177

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral period as a way to get extended mentorship and training in areas beyond my Ph.D. For me, with the pandemic really impacting my Ph.D. timeline and experience, I felt that I needed more formal training to build upon that and really hone my skills academically to where I wanted them to be before deciding on/transitioning into my next career steps.

Fundamental issues and challenges

For me, the cost of living in major cities vs. the postdoc pay is embarrassingly low for the level of education, training, and expertise. 3/5 of my paycheck is just to keep me alive and housed. There is no adjustment for this for area of living, and even if there was pay of $50-60k is something I could have made with high school degree doing much less. We are trained scientists, and not treated as such. Not to mention that I am having to do the distance with my spouse to find a position that was able to pay me. This, mixed with a lack of guaranteed funding, not knowing if I have a job or not the next year, and the lack of job security. We are usually adults in our late 20's-30's, living as if we are extended students, working a lot of hours while being underpaid, away from family/partners, with the next steps of our career still 3-5 years away. Where, if we go into a mid-level research institution can start a career right away OR go to industry to make 6 figures with the same level of training. I run my own business alongside my postdoc and did my PhD as well to be able to live. I am capable of making $250k+ a year in this, but love research so am still here. It would be a lot easier to beable to know I had job and financial security in ONE job vs having to manage two to live.

Existing NIH policies, programs, or resources

Pay us more. Create more stable funding opportunities for PI's to pay us and train us.

Proven or promising external resources or approaches

Pay us more.

Response 2178

Perspectives on the postdoc roles and responsibilities

I view postdoctoral training as an opportunity to build my own scientific niche, network with my peers and establish collaborations that prove fruitful for my current as well as future research. As an academic postdoc I also expect to gain insight into the hiring process and trained for grant writing.

Fundamental issues and challenges

Lack of funding or fellowship opportunities to international postdocs makes it difficult for postdocs to continue their research, as even PI funding is also very uncertain and sometimes forces a postdoc to be compliant to a PI who may not be a good person.

Existing NIH policies, programs, or resources

As international postdocs who come to the U.S in hope of publishing well, building an academic network and gaining an academic position, I think the cultural barriers sometimes delay these processes as one settles into a new country and into this new role. As a result, lot of funding opportunities are lost since they are very limited and only cater early postdocs. I wish there were more opportunities for senior postdocs (>5 years) to gain funding especially the career awards that intend to support transition from postdoc to PI. I say this because being on non-immigrant visas makes it difficult for international postdocs to obtain funding and continue to do research and gain employment in the US.

Proven or promising external resources or approaches

Ultimately, publications, successful projects and ability to gain a grant seem to be what governs a transition from a postdoc to a PI position. Most postdocs fail in one or more aspects of this sometimes for no fault of theirs. I think postdocs need some kind of job certainty or security in their lives as they are at an age where they have a family and ensure their well-being as well. The biggest stress factor is an uncertainty of future and lack of options in academia.

Response 2179

Perspectives on the postdoc roles and responsibilities

I see the postdoctoral position as a second PhD whereby I gain more experience and insight into conducting research, preferably in a different area than PhD. In more pragmatic terms, the postdoc is a layover and another sifting stage required by the rarity of academic jobs, the aspiration of many of those choosing the option.

Fundamental issues and challenges

The fundamental issue for me is financial. The NIH sets the same guidelines for salary across the US despite the huge variability in the cost of living. In certain areas, the wage is literally a starvation wage. A family with kids cannot live on this wage for rent and basics. I therefore learned from the experience that a person who supports a family is not welcome by the NIH salary policies. Driven by the need, I tried to teach extra time to support my family but other NIH rules prevents more than 100% effort!! Meaning that I have to reduce my research hours to do teaching hours resulting in the same pay!

On one hand, I am happy with the research opportunity I got. On the other hand, the salary and the associated policies are just an insult to the basic human needs. I don’t see it otherwise because the funding is very generous in all other aspects except the postdoc salary. If I would go back in time, I would have gone for an industry job where my economic dignity would have been much more cared for. I would have been way more productive if I didn’t have to battle the financial stress in the same way I did.

Existing NIH policies, programs, or resources

- Salary guidelines should take into account the cost of living and the different conditions of the individuals especially those with families.
- Freedom of postdocs to work more if needed without kneecapping. why prevent me from working more if I have a family and your salary guidelines literally starve us?!

Proven or promising external resources or approaches

The resources available to the NiH are clearly so vast that it doesn't make sense to financially victimize a group of those supported by it. Think of the long journey a person with a PhD goes through and the amount of debt they could have incurred through the undergraduate and graduate education and how they would feel and produce on a postdoc salary.

Response 2180

Perspectives on the postdoc roles and responsibilities

Is the period to solidify the concepts learnt during the PhD about how to do science, and how to develop scientifical thinking. There is a very important part that does not get accounted often and that is the opportunity to learn and develop the leading skills required to become a principal investigator. I really do not understand how someone without that experience, without being mentored on how to be a good mentor can directly jump to have the responsibility to be the leader of other scientists.

Fundamental issues and challenges

Particularly in the USA, there is as an issue with the transition from postdoc to PI. The system favours almost exclusively the people that do short postdoc periods with strong publication record. In order to achieve that most of the times you depend on the the ideas of your PI and the projects already started in the laboratory that you join. So in the end what is awarded is that you came out from a lab with resources and ideas, not that you are really ready to be a group leader which should mean that you have more than a strong publication record. Another thing that is needless to say, is the differences in the salaries between the industry and the academia, I think that is a big issue that needs to be tackled.

Existing NIH policies, programs, or resources

To remove the restriction of a certain amount of years after the PhD is obtained as a criteria to apply for most of the fellowships. That creates extra pressure on the postdoctoral community, and more often than not forces the investigators to leave the academic carreer even at a young age. I think a lot of talent is being lost because of those restrictions.

Proven or promising external resources or approaches

To invest on mentoring the postdocs and PIs on how to be a leader. I truly believe most of the postdocs that become PIs are not ready from the organizational and human point of view to lead and manage other scientists.

Response 2181

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should be one that allows an individual to head their own research under the guidance of a more experienced MENTOR, one who will also help with training and developing new skills. A academic postdoc should be highly encouraged and given the opportunity to teach. Postdocs are responsible for the advancement of their own research as well as assisting/mentoring the entire research group with the advancement of the PI's research. By the two year mark of a postdoc position, postdocs should have the ability/resources/skills to apply for grants as the lead. Post docs should go out of their way to access resources to further develop their professional skill set.

Fundamental issues and challenges

- Insufficient salary for experience/education level (this contributes to all three)
- Lack of respect and appropriate job title
- Not enough research freedom/stuck under PI's research scope/vision
- Little to no recruiting effort
- Academic institutions favoring those with more years of postdoc experience (3+ years) and in more recent years expecting more, makes it difficult/inaccessible to the majority (also no one wants to be a 5th year post doc thats 35 yo making $55k with a baby.not every home has two incomes)—If post docs are staying longer, it hints to potential issues in academic hiring/job availability
- Competition with industry (better salary/HR/accountability/stability/clear path for growth)
- PI's trying to become more interdisciplinary researchers are applying for grants/requesting postdocs but lack knowledge in this new field and have no idea what they are looking for in a postdoc
- No acknowledgment of personal/family life and career demands
- Insufficient pay for assistant/associate professorships—why grow in a career that is so limited/will always be a time/financial struggle
- Overall not really enticing and it no longer seems as though the sacrifice is worth the payoff

Existing NIH policies, programs, or resources

- More accountability on PI's to provide consistent structure for post docs (i.e. NIH check-in's with post docs and their PI's; plan template; timeline; expectations)
- Required training for lead PIs—how to recruit, what to expect of a postdoc, main concerns of postdocs, how to be a mentor, how to mentor a post doc
- Payback agreement—this is very odd and off-putting. This is not acceptable in any workplace as asking EMPLOYEES to payback money for time they have put in by going to work is borderline illegal. While I plan to stay the entirety of my contract, this agreement gave me a lot of doubt and insecurity. As someone who comes from a lower socioeconomic class, things like this can trigger financial insecurities and are deal breakers.
- Student loan assistance should be offered IMMEDIATELY upon start date

Proven or promising external resources or approaches

- I would like to see the NIH take initiative to activity recruit and educate potential postdocs (I didn't know about my current post doc position until the PI personally reached out to me.which most likely means I also didn't have competition and most likely got the position because enough of my background matched BUT I think there are better candidates out there who simply never heard of the opening)
- Required mentoring training for PI's and postdocs (multiple studies have shown that lack of proper training on being a mentor is a huge issue and contributor to lack of diversity). Additionally, postdocs are expected to be mentors in their labs but are normally just coming out of a lifetime of schooling where they were always the mentee and don't have the necessary training

Response 2182

Perspectives on the postdoc roles and responsibilities

Postdocs are the key persons to carry out research in the laboratory. A good postdoc is directly responsible for the success of the lab.

Fundamental issues and challenges

There are less good applicants in recent years. Many graduate students chose to go to industry after graduation. The reason is too few academic positions are available when the postdocs finish their training. Students learn from their mentors that academic career is tough because it's difficult to obtain grants due to large numbers of applicants.

Existing NIH policies, programs, or resources

NIH should increase the minimal salary for graduate students (to $40,000) and postdocs (to $70,000). This will attract more young people into the research labs. This will also reduce the numbers of posdocs competing for academic positions. We have produced too many postdocs in the US and we don't have a matching number of academic positions for them. This will also reduce the number of people competing for grants. NIH budget has increased annually for recent years, however, success rates for grants remain low. This is simply because too many people competing for the limited fund.

Proven or promising external resources or approaches

NIH should evaluate the quality and results of postdoc training by the grant recipients. If a PI received large amounts of grants but none of the postdocs in the PI's lab obtain academic positions, then NIH should take note and take actions to reduce the PI's grants.

Response 2183

Perspectives on the postdoc roles and responsibilities

To learn and transition to independence. To mature intellectually and apply that maturity in an environment that is supportive of my career goals (to become an independent researcher).

Fundamental issues and challenges

Fundamentally, the pay scale is poor and not suitable for the expectations to get funding later on.

Existing NIH policies, programs, or resources

Having to move institutions to increase my odds of receiving funding is an especially taxing, even if unspoken, criterion. I understand that there is more to learn in different institutions but it is a move for privileged people who have the support and resources to change locations. When funding opportunities arise in the future I know that I will be at a disadvantage because I did not change institutions. I can bolster every other aspect of my application but all things being equal, someone who was lucky enough to have the ability to move will be rewarded.

Proven or promising external resources or approaches

Increase pay. We have the highest qualification in our field and have to go through several more years of training before we are considered for faculty positions. We are living through unprecedented times of rampant inflation and uncertainty that is the fallout from a worldwide pandemic where many of us have endured losses and I am seriously considering leaving academia because I have to work towards a life that I can live comfortably. Academia is already a place where you are at risk of being removed at every stage. The added economic pressure isn't necessary.

Response 2184

Perspectives on the postdoc roles and responsibilities

I enjoyed my academia postdoc. I learned a lot of new technical skills and more importantly, it is where I developed as a manager. However, I feel like I stayed too long.

Fundamental issues and challenges

My story is not unique, but after many years of grant rejections, I felt my chances of making it as an academic investigator, especially as a woman, were dwindling. I was also very attuned to the financial drawbacks of doing a second postdoc or even teaching at a university. I wanted to become a foster parent, and this would not be possible if I stayed in academia.

Existing NIH policies, programs, or resources

Pay postdocs better and recognize that these are the people running the lab and writing grants. There is a huge disconnect between the number of academic positions and the number of postdocs. Leaving for a job that provides financial security as well as intellectual fulfilment is not a failure.

Proven or promising external resources or approaches

Mentoring helps, also providing information early about other careers.

Response 2185

Perspectives on the postdoc roles and responsibilities

The role and responsibilities of an academic postdoc should include learning new techniques and skillsets not acquired during doctoral training, mentoring and supervising students, contributing to research funded by their sponsor, and conducting an independent research project under the mentorship of established faculty,

Fundamental issues and challenges

Compared to industry, government, and other positions that are available to new PhDs, academic postdoctoral positions pay significantly less while usually requiring more work hours. In addition, in some cases, postdoctoral trainees are treated like glorified lab technicians or graduate students and not given the independence necessary to transition into their own independent research careers.

Existing NIH policies, programs, or resources

To address the pay gap between academic postdoctoral positions and other equivalent positions, it may be useful to institute a mandatory pay scale for postdocs for all NIH-funded projects and not just F32s/T32s.

Proven or promising external resources or approaches

No response

Response 2186

Perspectives on the postdoc roles and responsibilities

I came into my postdoc as a greener scientist—my PhD consisted of mostly IF techniques so I was looking to expand my horizons. It means, for me, more time to develop my skills before trying to become a leader myself. I very much still consider myself a student in this position.

Fundamental issues and challenges

I feel like the traditional expectations of working day and night are beginning to clash with post-COVID realizations about quality of life. For example, some older postdocs in the lab still work continuously, coming in early in the morning and not leaving until 8-9pm, while others are beginning to balance their work/life and are making an effort to only work 8hrs a day. These clashing mindsets between lab mates and PIs are causing some extra strain. I love science and I love being in the lab, but I'm struggling to reconcile that feeling with also feeling like there's more to life than working. At the same time, I feel like I can't miss this postdoc opportunity since I've been working towards it for years.

Existing NIH policies, programs, or resources

When I started here, there were a few seminars from the NIH about leadership, being your own advocate, and transitioning into a PI role. I thought these were awesome and would definitely attend more workshops for postdocs thinking about going into academics.

Proven or promising external resources or approaches

Mentoring is difficult and largely depends on your PI—oftentimes PIs can be stubborn about changes in the work environment/speed. Is there any credibility to the slowing of scientific progress that everyone is worried about post-COVID?

Response 2187

Perspectives on the postdoc roles and responsibilities

For me postdoctoral position is a transition from graduate studies to an independent researcher. It is an opportunity where a postdoc person could learn from the principal investigator to become a successful researcher.

Fundamental issues and challenges

I believe the main challenge to recruit or retain postdoctoral trainees is the availability of the funding for the principal investigators. But it could also be due to the process of recruiting a postdoctoral trainees most academic institution are using. The criteria at least comparing to the application to the positions in industrial sectors is length and tedious. Another reason that might be the reason is the compensations for academic postdoctoral trainees are not as attractive as you would get if you went to the industrial sectors.

Existing NIH policies, programs, or resources

I think the funding to the principal investigators should be increased and there should be someway of compensation may be increase salaries for the trainees. I would also say that Carrer development for the trainees may help to retain them.

Proven or promising external resources or approaches

The recruitment process and the incentives most biotech companies and other large industries are taking could be a good model.

Response 2188

Perspectives on the postdoc roles and responsibilities

I currently view my postdoc as a chance to slowly build toward an independent position. In my current state, I am working solely on research and developing a review paper. I am learning new research skills, and practicing time management. I anticipate the demands of the position increasing over time, to become more adjusted with the workload of an independent researcher (in my case, professor).

Fundamental issues and challenges

I spent nearly a year cold-emailing professors doing work that interested me, building a relationship via email, setting up meetings and giving presentations on my dissertation work. The majority of the time, if the professor thought we were a good match, they did not have funds to support me. The SART program finally allowed me to connect with a university that matches my values and dedication to diversity. The money provided by NIH NIDA helped, and having a professor willing to teach me new techniques was vital. Professors wanted me to hit the ground running, and produce data for their lab, but I needed training in the more modern techniques being used. This was another barrier to placement.

Existing NIH policies, programs, or resources

I am a successful scientist, and every time I have encountered a road block to my progress I have found a way around. If it weren't for the various NIH programs supporting diversity in science, I don't think I would have been as successful. My own determination kept me going, but the money provided by NIH opened the door. Yet, I was largely unaware of NIH until my Master's program, as I attended a community college when I returned to school (having previously obtained a BA). Perhaps expanding more thoughtfully into spaces where there is higher diversity and need, such as local community colleges, would improve the impact of these programs.

Proven or promising external resources or approaches

Increase visibility of postdoctoral opportunities. There was no one location for me to find professors who work on my area of interest, I had to comb through university websites myself, and then cold email to find out if they would have space for a postdoc. Postings on job search websites, even hosted by NIH, were difficult to narrow down to my field (behavioral neuroscience)—though that may be user error.

Response 2189

Perspectives on the postdoc roles and responsibilities

Post doc position is a advanced training in handling the new projects and learning grant submission.

But joining at wrong place where I learnt that what to do not in post doc, how selfish supervisor are? They are considering post doc as technician especially international scholars.

Fundamental issues and challenges

Highly issues at this stage, especially for those PI, who are throwing arrow in space without knowing the destinations

Existing NIH policies, programs, or resources

Low wages to post doc position will kill the basic science in future due to non availability of Human Resources. So it is necessary to modify the present policies for the betterment of science

Proven or promising external resources or approaches

Conducted feedback from all post doc position quarterly and creating single platform for vitiable ecosystem.

Providing visa for long term for international scholar to prevent them from slavery.

Response 2190

Perspectives on the postdoc roles and responsibilities

Our academic section reviewed this RFI together as part of our standing research meeting. This writing comprises experience from 2 former T32 recipients, as well as 2 F award recipients and two senior T32 faculty members.

Our group members wished to highlight the likely biased feedback NIH will receive in response to this RFI on the basis of distribution primarily to those in academic research careers. We urge NIH to seek feedback from physicians and scientists who were interested in academic research but chose other careers (such as clinicians and industry employees).

A postdoc position was viewed as a critical step in the career of an academic researcher. The postdoc position provides for the opportunity for the individual to gain skills and experience, and to have teaching/mentorship that are distinct from those that were part of the doctoral program. The postdoc experience allows time for the individual to publish completed work, develop funding applications, and consider faculty positions.

Fundamental issues and challenges

The primary obstacles to recruiting and retaining postdocs are: insufficient salary, restrictions that require US citizenship/permanent resident status, and a cultural expectation that researchers perform their doctoral training and postdoc at different institutions, then a faculty position at another institution requiring them to uproot partner/family/home 2-3 times within a few short years.

Specifically, it was noted that T32 salary is too low, especially for physicians who carry a heavy student debt. Participants noted that potential researchers could only accept a T32 position if they were willing to sacrifice financial stability, or had a personal partner who was gainfully employed. This low salary biased T32 participants toward those with greater familial wealth at baseline.

Faculty noted that accomplished clinicians and researchers from outside the US regularly ask to join the group to obtain research experience, but that it is infeasible for many to obtain NIH-funded postdoc positions in the US because of both T32 policy and because visa holders are required to return to their home country in 2 years' time.

Postdocs noted that the position timing typically overlapped during the time in one's life when a person is most likely to start a family, and value stability in terms of income, housing and social supports. Participating in a postdoc often requires sacrificing this stability.

Another concern was that postdoc positions were not consistently of high quality, with some postdocs being asked to perform duties similar to a research assistant, rather than work aimed at their learning.

Existing NIH policies, programs, or resources

It was not feasible for our group members to read the 400+ page policy document. If NIH wishes for feedback on specific policies, they might consider postdoc/faculty focus groups to present and discuss such policies.

Proven or promising external resources or approaches

Group members highlighted the importance of salary and benefits being competitive. NIH may require institutions to establish a full-time faculty position for postdocs, which include standard benefits. NIH may consider a mechanism for enhanced loan repayment or forgiveness for postdocs with high student debt burden. NIH may consider a policy that allows for postdocs who are not US citizens.

Response 2191

Perspectives on the postdoc roles and responsibilities

My expectation from a postdoc included:

1. Transition to independence
2. To pursue research different from my PhD, something with more risk
3. A stepping stone to a career in academia/research

Fundamental issues and challenges

1. Too few grants for international postdocs
2. Immigration is a major hurdle—despite some postdocs being more skilled, talented and qualified we are ineligible to many of the training and transition grants. Some have an intent to stay in the US and contribute to ecosystem here, so I don't see an issue making them eligible for these grants.
3. There is an institute to institute difference in policies and my research is related to NHLBI. I feel NHLBI is least supportive of grants for postdocs and training (e.g., no R21 mechanism).
4. I am competing with senior PIs who have many grants, so there is a system of 'rich getting richer'—there should be a way to fix this
5. NIH payscale is not competitive and very low, especially for someone with a PhD
6. Fortunately my lab was well funded by NIH, so I had money for science (through my PI) but not to support a family
7. A postdoc is more than a postdoc, they are fathers/mothers, have families who need to be supported. Doing a postdoc shouldn't mean it has to come with sacrifices on the family front.

Existing NIH policies, programs, or resources

1. NHLBIs decision to not give out R21s is STUPID
2. More transition grant mechanisms are required
3. You could offer many smaller transition grants than fewer large transition grants (e.g., K99/R00)

Proven or promising external resources or approaches

1. Reduce overheads to universities and pay it to trainees
2. Put a cap on open access journal costs and force that money into supporting postdocs, and allow PIs more flexibility with how they use their grants/money
3. Some private grants offer a no strings attached family support with their transition grants, include it with NIH grants too
4. Some trainees work for multiple NIH grants but there is a cap on their salaries. Provide a provision to pay trainees proportional to their effort, rather than capping their salaries—this involves conversations beyond NIH, but needs to involve NIH

Response 2192

Perspectives on the postdoc roles and responsibilities

As a current PhD student, my impression is that an academic postdoc conducts all aspects of a research project with little recognition, including securing funding, data collection, data analysis, and writing while

acting as a mentor to undergraduate and graduate students. Essentially, the same role as an academic researcher for a fraction of the pay and not being able to choose the subject/focus.

Fundamental issues and challenges

The pay is the primary reason that I do not plan on doing an NIH postdoc. The pay is worse than what I was paid as an RN with just a bachelor's degree. After so many years of study and little pay, why should we continue to work for pennies? We deserve to be paid similarly to junior academic faculty. At my university, assistant professors are paid $120k/year. To me, that means that a postdoc should get paid $100k (postdoc positions I have seen are $40-65k per year).

From what I have heard, there is a culture of overworking and abuse in postdocs. I have no desire to put myself through that when there are other opportunities. CDC offers fellowships that are pseudo-postdoc positions and the pay, while lower than I would hope, is more fair than the majority of postdoc positions I have seen.

Neither industry nor non-profits nor government care about a postdoc in my field. The only career path that I am aware of that does want to hire people with postdoc experience is research-focused academia. Even teaching-focused academia doesn't care about a postdoc. For those of us who care less about choosing what we research, these other career paths are more appealing. I also have not found many postdoc positions in my field as they seem to be geared more towards bench sciences. While I haven't looked extensively, this is also a huge deterrent in why I would seek a postdoc.

Existing NIH policies, programs, or resources

The pay needs to be increased significantly. Someone with a doctoral degree in my field should not be paid less than $100k/year (depending on cost of living, but what I would expect for this metro area). I would tolerate a couple of years at a slightly lower pay, but definitely not less than $80k. It doesn't seem like the pay has kept up with inflation and cost of living.

Mentors should be evaluated by NIH (including previous postdoc/student reviews) so that postdocs are less likely to be working with an abusive mentor. There should be enforced caps on number of hours worked.

Proven or promising external resources or approaches

I have heard wonderful things about CDC fellowships, including EIS, prevention effectiveness, and lab training.

Response 2193

Perspectives on the postdoc roles and responsibilities

As a postdoc, I am working to becoming independent. To work on my own hypothesis and carrying them out. This is a crucial step in my career as an independent scientist.

Fundamental issues and challenges

Biggest issue and challenge is that the pay for postdoc is incredibly low for the incredibly high effort and intensive work that we do. It is essier to go to industry and just work for 100k or more, when some postdocs are only paying around $58k-$60k, we work so hard and put to much of ourselves into our work, to not be valued

Existing NIH policies, programs, or resources

Programs like support for grant writing, professional development would be great! Specially for people that are not part of training programs.

Proven or promising external resources or approaches

No response

Response 2194

Perspectives on the postdoc roles and responsibilities

Biomedical science and engineering students become postdocs after receiving academic training to become experts in their field. What most don't learn are the career success skills to communicate effectively with non-experts, interdisciplinary colleagues, and others outside their domain. Courses covering these essential communication skills are missing from most graduate curriculum and not required for graduation. Further, the opportunity to practice, regularly apply these skills, and receive feedback or coaching is not part of the typical graduate researcher or postdoctoral training experience.

This creates a disadvantage for academic postdocs. They must figure out how to work effectively in new organizations and navigate situations where effective communication skills would be beneficial. In environments where public engagement is encouraged and lab research talks are required, the untrained academic postdoc has a steep learning curve.

Fundamental issues and challenges

Currently, few universities offer formal communication training. One-and-done seminars or workshops fail to provide adequate learning, practice, and performance opportunities. Trainees need to learn how to give effective lab talks, job talks for future employment, how to network, and how to voice their ideas succinctly. Junior scientists without these foundational skills will be frustrated, have their ideas rejected, and be less competitive in the job market. Formal science communication training could improve the success of underrepresented minority scientists, especially those facing English as a second language challenges.

Existing NIH policies, programs, or resources

The NIH can take steps to fill this postdoctoral training gap by supporting skill building programs designed to enable a postdoc to tailor their communication to diverse groups with differing levels of knowledge, create trusted relationships, and work collaboratively in teams where shared goals, clear expectations, and the ability to be understood are essential ingredients for success. All junior scientists and postdocs receiving a NIH training (T), fellowship (F) or career development (K) award should be required to take science communication courses that cover writing and speaking skills. Universities administering these awards must indicate in the application how these requirements will be fulfilled. A core curriculum, based on published papers from noted professors and communication researchers, could be developed to cover the essential skills.

Proven or promising external resources or approaches

Based on my decades of consulting to biotech and healthcare companies, I have observed the challenges faced by smart, young researchers who lack communication skills needed for their ideas to be heard, supported, and drive action. Training in presentation skills, effective science communication, and interpersonal communication (including influence skills) would enable early career researchers to make a bigger impact. Formal scicomm training models exist at several universities (e.g., MDAnderson Cancer, Harvard, Rutgers, Duke, and Stanford). These models can be replicated across all research intense universities if modest funding is available to support the trainers and minimal infrastructure needed. Increased support for studying the sciences (sociology, psychology, and neurology) of science communication would also be valuable.

Response 2195

Perspectives on the postdoc roles and responsibilities

Academic postdoc is a position where I get to apply my knowledge from PhD. in a different area to while acquiring new research skills, serve on review committee for journals, and build a network in research field where I want to work after postdoc. overall I see postdoc as an opportunity to create a path for my future research interest in academia.

Fundamental issues and challenges

Postdocs are extremely underpaid with long working hours, not eligible for retirement benefits, uncertainty of length of Postdoctal training (long years that are contact based), lack of structured training, lack of support from organization both personally and professionally and uncertainty of getting a faculty position

after postdoc. Most organizations don't have a structure in place to protect the rights of postdocs thereby treating postdocs like contact workers including low pay, lack of retirement benefits, long working hours, lack to support to start a family, and lack of job security. Unfortunately most postdocs are at the mercy of their research mentors especially international postdocs which is detrimental to the quality of life of Postdoctal trainees

Existing NIH policies, programs, or resources

NIH should increase postdoc salary to minimum of $74,000 to match the postdoc fellowship offered by ACS, JCC, Helen Hay Whitney etc. It should be mandated that academic institutions follow NIH payscale if they are funded by NIH.

Proven or promising external resources or approaches

No response

Response 2196

Perspectives on the postdoc roles and responsibilities

Its valuable training time. I have a great advisor, mentor, collegues who I do research with. I have learned a lot of new research techniques, gained teach experience, and grant writing experience. But my mental health has tanked because I work close to 60-90 hours a week with dismal pay. The reality that there are 200-400 people applying for tenure track positions forces me to work harder, but at a great cost.

Pay. Postdocs. Livable. Wage.

Fundamental issues and challenges

Pay. Postdocs. Livable. Wage. NIH needs to increase postdoc pay standards.

Existing NIH policies, programs, or resources

Pay. Postdocs. Livable. Wage.

Proven or promising external resources or approaches

Pay. Postdocs. Livable. Wage.

Response 2197

Perspectives on the postdoc roles and responsibilities

In a practical sense, I view a postdoc as a stepping stone between graduate training and establishing an independent career, be that in academia or industry.

Fundamental issues and challenges

Money.

Existing NIH policies, programs, or resources

Increase minimum salary to $70,000. It is demoralizing to be making $54k in your 30's with a PhD (especially in high cost of living areas! I am making the minimum in an expensive city!). Most postdocs are in the stage of life where they are seeing their non-academic friends and colleagues buying homes, starting families, etc., and it is frustrating to feel excluded from being able to reach these life milestones purely because of finances. Before turning your nose up at this large of a raise for postdocs, it is important to consider the broader context as well—the loss of personal wealth during graduate training (instead of being in the workforce) is substantial, especially considering outside work is often forbidden. Many people are choosing not to do a postdoc purely because of MONEY. I came close to this decision myself, and am only continuing with this for very specific reasons, but ultimately feel I am making a major personal sacrifice to do a postdoc. Especially considering inflation, the salary is far below what a postdoc is worth. Increasing wages NOW is the only feasible way I see to help retain anyone in academia.

In addition, creating policies that shield postdocs from having their employee benefits stripped as a result of becoming a fellow. Many institutions do this, effectively "punishing" people for obtaining their own funding. That is absurdly unethical and I do not understand why this is allowed to happen.

Proven or promising external resources or approaches

Money.

Response 2198

Perspectives on the postdoc roles and responsibilities

I believe that you need to have experience with the people in the Real World and understand what they are doing and feeling before you can start working on your Pos-Doc.

Fundamental issues and challenges

Life experiences are a prerequisite to success in the Caring and Treatment of Patients

Existing NIH policies, programs, or resources

The piece of paper is not the only way to learn

Proven or promising external resources or approaches

No response

Response 2199

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The TY32 payback policy for the first 12 months of training salary has created financial complications for our dermatology department and trainees as traineeshave changed career paths during the fellowship. I would recommend discontinuing this policy.

Existing NIH policies, programs, or resources

The TY32 payback policy for the first 12 months of training salary has created financial complications for our dermatology department and trainees as traineeshave changed career paths during the fellowship. I would recommend discontinuing this policy.

Proven or promising external resources or approaches

No response

Response 2200

Perspectives on the postdoc roles and responsibilities

I did a postdoc position at my current university before being appointed as faculty. I am somewhat different than many postdocs —somewhat older, coming back to university for a degree in epidemiology/public health after a long career in the software industry. I wanted to contribute to public health and medical research. The postdoc position I took was in a large diverse research group in which I could work on different types of study designs and people across the U.S. (this group had mentored many people over the years). It was an excellent introduction to the academic world and research; in addition to the work itself, our university has a postdoc society and training in research, ethics etc is required.

Fundamental issues and challenges

base stipend paid for postdocs is low, especially for large cities. Postdocs are explicitly NOT employees and are paid through a separate system intended for contractors. Fellow-postdocs had difficulty affording rent and basics in the Boston area, and the "non-employee postdoc" label was confusing for taxes. Financially a job in a corporation outside of this research track is much more attractive. The postdoc experience really needs to offer more money, and a lot of good experience to make up for the opportunity cost of taking the position.

Although the salary was far below what I had previously earned, I had other resources and could make a financial sacrifice for ~2 years for the experience.

The other issue which directly affect me was health insurance: my husband and I had health insurance through healthcare.gov (Affordable Care Act). The postdoc university program was supposed to re-imbursed the part of the payment for coverage for me —but then about 6 months in they decided the documentation from healthcare.gov was not what they wanted, and refused to reimburse any portion of what I was paying for coverage. Neither healthcare.gov nor the insurance company were going to change reporting from what was required by law. After having several thousand dollars go un-reimbursed as a postdoc , I was forced to switch to an inferior (but no less expensive) plan offered for students. It seemed this was clearly what the university wanted.

I heard about several of these items from other postdocs when I interviewed, but I continued, because I could make a sacrifice for a couple years, but if I was starting out my career and had already spent so much to get here, I would likely skip it!

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2201

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is to further develop skills as a scientist to better prepare for a career as an academic investigator, while supporting and mentoring other members of the lab.

Fundamental issues and challenges

The salary of academic post doctoral positions is far too low to support a good quality of life, especially because inflation and academic institution profits have vastly outpaced salary increases. Inflation was over 9% in 2022-2023 but academic post doctoral salaries didn’t even increase by 4%.

Existing NIH policies, programs, or resources

Existing policies and programs need to support higher salaries for academic post doctoral positions. Industry positions often pay double what academic positions do.

Proven or promising external resources or approaches

No response

Response 2202

Perspectives on the postdoc roles and responsibilities

Academic postdocs are the lifelines for most of the laboratories because they all come with a long training record during their Ph.D. We provide platforms for postdocs to train, and publish great work. WE need to promote and help them becoming independent thinkers and scientists such that they can be competitive candidates for academic and non-academic jobs.

Fundamental issues and challenges

There are several road-blocks:

1. CoVID stalled postdoc recruitment.
2. A large number of graduate students leaving academic postdoc options for jobs in other sectors that pays much better.
3. Immigration policies and perceived anti-immigrant feeling/sentiment is possibly discouraging foreign graduate students not to apply to US institutions and head to other countries for post doc work. Long delay in visa processing is also a contributing factor.
4. Less job opening in academia and institutions requiring postdoc to come with funding for Asst. Prof appointment may be discouraging Pd fellows to stay in academic research.
5. Here is the hard fact: The PD fellows don't see the light at the end of the tunnel to stay motivated and work in an academic setting.

Existing NIH policies, programs, or resources

NIH should fund PD fellows directly. NIH is increasing PD salary but is not supplementing existing grants with additional funds to make up for the deficiency this additional pay creates. It's also absurd that foreign PD fellows can't apply for NIH fellowships. Private PD fellowships are extremely competitive and handful. NIH should take a serious look into this most pressing hurdle.

Proven or promising external resources or approaches

NIH should have collaborative PD recruitment (with salaries paid) with other countries such that PD candidates are supported by the host (US institutions) and the countries the applicants are coming from. Some European countries do that. Change immigration policies and fast track processing of PD candidates visa application. Encourage US graduate students to do post-doctoral work in the US and provide direct financial support that is similar to what they may be earning at non-academic jobs. Immediately create and support a pipeline for minorities and under-represented graduates in biomedical research with proper mentors. NIH should Work with national societies (Endo, AACR, ACS, SSR, etc) and private foundations to recruit and financially support all PD fellows and specifically minorities and under-represented candidates using a cost share arrangement.

Response 2203

Perspectives on the postdoc roles and responsibilities

Postdoc is a role that helps you transition into your next career. Even though it's a transition career, it still is a career. There are a lot of roles **and responsibilities** including performing research, mentoring, collaborating, generating new ideas, etc. Especially in an academic position, postdocs usually perform the best in conducting research as they have graduate school training and can learn things pretty quickly. Postdoc is a position where a scientist gets to explore fields outside their comfort zone and still be able to contribute significantly.

Fundamental issues and challenges

Postdocs are undervalued. Severely undervalued. In a literal sense, postdocs are paid at least 2x less than industry positions of similar job responsibilities. In most cases, postdocs work more than scientists at big biopharma. But postdocs aren't paid as much as scientists in the industry. This is the main reason why people do not want to pursue a postdoc career. Financial stability matters especially for people in their postdoc career stage as they start settling down, maybe getting married, and starting a family. Getting underpaid and working long hours aren't job perks anyone is looking for. Unfortunately, for some postdoc is the only option for reasons like applying for a professor position, or for international students it is easier to get a postdoc position than a scientist in industry. The postdoc can then start feeling like a trap as they can't leave because perhaps they haven't published enough or they're not ready to apply for a professor position. This is a big mental burden for postdocs. Postdoc training can be especially unpleasant if

1. the project isn't working,
2. you're being forced to work on a project that you don't want to,
3. the work environment isn't good,
4. there is a lack of support or mentorship from a postdoc advisor. These factors on top of getting underpaid are not why anyone received a PhD degree.

Postdocs are talented and capable workers but are severely underpaid and undervalued.

Existing NIH policies, programs, or resources

Increase the salary!! By at least two folds!! If you want one of the best-talented groups of people to stay in academic research, make sure they are taken care of. Especially financially. When industry positions pay you more, why stay a postdoc? And in the industry you still get to do amazing research, mentor other people, able to publish papers, and go to conferences. Academic research isn't the only path to becoming an impactful scientist. In fact, scientists in the industry do impactful research that is translational and they can see how it impacts society. That's more rewarding. There are rewarding aspects to academic research especially when it comes to mentoring. But the financial benefits provided are so low that sticking with an academic postdoc is not worth it. So, you want to improve the postdoc training ecosystem? Just increase the salary!!! By at least two folds!! I know I started by saying this but repetition is good. So I'll say it one more time: INCREASE THE SALARY BY AT LEAST TWO FOLDS!!!

If you don't increase the salary, you'll keep seeing declining numbers in postdocs. There are current postdocs who are advising graduate students to not pursue postdocs. This is nothing against NIH. But we are scientists who learn so that for the next cycle we can do better. So we are telling future scientists to take a path where they can make amazing scientific breakthroughs while not suffering financially.

One more time hoping it will be charming this time: INCREASE THE SALARY BY AT LEAST TWO FOLDS!! OR MORE!!

Proven or promising external resources or approaches

I know a promising and proven approach that has retained a lot of scientists doing amazing research in the industry. The scientists there are valued. They are getting paid according to their knowledge, skills, experience, creativity, and contribution. If you want postdocs and retain them, it is simple. Let them know that they are valued. How? Pay them according to their knowledge, skills, experience, creativity, and contribution. PhDs who go straight to industry jobs are getting paid 130,000—150,000 salary as a starting point in their career. While postdocs are getting paid 55,000. And when they do 3—6 years of postdoc and go to a professor position, they will make as much or less than the starting industry job salary. That is completely unfair. If you respect postdocs and their contributions, you should pay them what they deserve.

Response 2204

Perspectives on the postdoc roles and responsibilities

When I was a postdoc, I viewed the position as a chance to hard focus on pursuing the scientific question of my choice with zero distractions from classes/committees. I knew I loved mentoring so I aspired to train with the goal of landing a professor position. Thus, I focused my training on pursuing good experiments, writing grants, managing and mentoring students, and building a social network in my field of interest.

Now that I am a professor, I think the postdoc position depends on career desire of the postdoc. Long gone are the days that postdocs automatically want to become professors, nor are there enough jobs to fulfill this. If the postdoc aspires to be a professor because they enjoy science and mentoring, then we should focus their training on building and completing a good research program, grant writing, mentoring, and academic networking. If the postdoc aspires to go to industry, we should also focus on building and completing a good research program but then tailor a training focused on gaining desired skills and building a network of industry connections.

Fundamental issues and challenges

I really enjoyed my time as a postdoc because I loved the science that I was doing and I loved the lab members I called colleagues. However, it's hard not to feel nauseous when I look back at my life as a postdoc, living in a basement with no windows because that's all I could afford for 6 years and without being able to save for retirement. I also feel like those conditions made it incredibly difficult for me to start a family, a thing that I had to sacrifice when my non academic friends did not. I still feel lucky that my postdoc was so enjoyable from a scientific and community perspective, but I can't imagine how horrendous the experience would have been if those two things hadn't worked out as well.

As a faculty member now, I lose sleep at night thinking about how little I can compensate postdocs (and research assistants if I may add this here). Much to my surprise, I don't get to choose how much I can pay people who work in my lab, these rates are set by the university, and the university uses NIH paylines as guidelines.

It's clear that the fundamental issues are:

1. Postdoc salaries in academia are atrocious compared to starting salaries in comparable industry jobs.
2. Exit outcome of postdoc is far murkier than exit outcome of PhD. PhD programs often have career offices that provide job options and resources to PhD. This is far less common for postdocs.

I think point 2 is worth restating. In my experience, and talking to fellow postdocs/grad students, the biggest hurdle to doing a postdoc on top of not being paid enough is the large uncertainty of what working 6 underpaid years nets you.

Existing NIH policies, programs, or resources

Postdoc starting salary needs to go up.

Proven or promising external resources or approaches

No response

Response 2205

Perspectives on the postdoc roles and responsibilities

I have been a mentor of postdoctoral MD and PhD trainees since I started my faculty appointment in 1992. My trainees have met with extraordinary success in terms of funding and independent research careers. This success has been recognized in terms of national and international mentoring awards. The current process for both graduate student and postdoctoral fellowships under the NIH is fraught for many reasons. First, the applicant is expected to write a research proposal independent from their mentors' research and provided with only salary support. The second is that physician scientists are reviewed on an equal playing field to PhD scientists in terms of their research productivity which is unrealistic. The third is the instructions, it is unclear whether the career development plan is supposed to be written by the mentor or the trainee. Of these the most important is that the trainee at a very new point in their career is expected to outline a plan that is realistic, independent and likely to provide productivity in 12 to 36 months. Despite these issues these awards are hugely important. In my opinion, the individual training awards under the F mechanism are exceptionally valuable for the candidate in terms of predicting future fundability and yet they are erratically reviewed. It is not uncommon to have critiques such as one might have for an RO1. Finally, there is the issue of salary and the difficulty that a young individual in their late 20s early 30s might have to live on this paltry sum. I would be happy to contribute to a process for revamping these. I do not believe that dismantling T32 infrastructure which allows young scientists to gain the preliminary data and grantsmanship needed for successful F and K grants is plausible.

Fundamental issues and challenges

The choice of a career in biomedical research is a fundamentally high risk endeavor. We are asking individuals with great academic acumen to choose a career with 10% funding (as such 90% not funded), poor pay, long work hours and high likelihood of rejection of grants, manuscripts, abstracts. At the same time this is the most fulfilling career I can imagine. Still, 30 years in, there are grants and manuscripts that are not discussed or not reviewed. Young people in the field see this happening to their mentors and experience uncertainty. In addition, academic medical centers need to support the first and second year of graduate training prior to entering a specific lab and there is often not institutional support for that either.

It is critical that the expectations are set and that the mentors and the mentees understand the urgency of hard work and the productivity metrics. Increasingly I have seen students who are just seeing this as another step in there education we need to make it very clear that postdoctoral training is very individualistic and the mentor needs to have the ability to support the transition to independence and the fellow needs to use all the tools at their disposal to develop an independent vision of their career.

Existing NIH policies, programs, or resources

Instructions and structure of the grant submission. There are so many little sections that the candidate is unclear how to focus and the reviewers' may weigh different section differently

Proven or promising external resources or approaches

Formal institutional training programs and mock study sections are highly supportive for trainees. The ability to use cores with the expertise provided by the cores directors at either free or highly discounted pricing is a must. Formal training in grantsmanship, writing, negotiation, development of vision statement and professional development statements is crucial. It cannot be the luck of the draw that the mentor actually has the skills to facilitate career transition.

Response 2206

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is an additional training period for those trainees who are not yet competitive for a faculty position.

Fundamental issues and challenges

There is almost no chance that a postdoctoral trainee will secure a faculty position, so it is irrational to do a postdoc for pay which is near minimum wage. Everyone is privy to this now, even undergraduates.

Existing NIH policies, programs, or resources

It is immoral to tell trainees that they are getting ready for a life in academia when this is not true.

Proven or promising external resources or approaches

Pay postdoctoral scholars enough money to survive the years of futile toil, or make it likely that trainees will find a faculty position to do what they were trained for.

Even professors are leaving for Industry.

Response 2207

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is framed as further training required to launch an independent academic career, but it's only necessary because we require it in the biomedical sciences. In many fields, particularly quantitative STEM fields, PhD students can graduate and begin work as TT assistant professors without spending an additional 2-7 years as a postdoc (for a slim chance at landing a TT job once that's over!). I see postdoctoral training as two things:

1. absolutely fundamental to the productivity of modern science, because of the way labs are structured with a single PI, and
2. as a waiting room meant to cause biomedical PhDs to drop out of the running for a limited number of TT jobs.

Fundamental issues and challenges

An analogy (even if you aren't a sports fan): imagine if every college football player, when they "went pro", did not actually play football as a professional but instead were told to coach a team. They would need to recruit a bunch of players from somewhere and these players would have to want to go pro, too. You can see we would quickly have a situation where there would have to be many more players than coaches, and by design most of these players would never get to become coaches because there are a

fixed number of coach spots. We do the same thing to postdocs—they are treated as dispensable, give the sharpest years of their life to the work of a lab that is not their own, and at the end have very slim chance of getting their own lab. They're wisening up and realizing that better opportunities are out there beyond academia, where real science happens too. Given this huge amount of risk postdocs should be funded like NIH intramural staff scientists—the postdoc job should be able to stand on its own as a respectable career and should further the career potential of even those postdocs who don't end up leading labs, which it currently does not. We can pay postdocs more and that's one solution, but the better solution is that not every PI needs to have a lab so we don't create this scarcity in the first place. Promoting multiple-PI labs is good for team science and creativity and minimizes the duplication of efforts and resources required to set up an individual lab.

Existing NIH policies, programs, or resources

Allow co-authors on grants and treat authorship of grants like authorship of any other publication (even if the funding only goes to the PI's lab). Then postdocs (and all other lab members) can have tangible line items for their CV/resume: ability to secure funding is very valued outside of academia and postdocs do this work anyway, so they should be allowed to get credit for it.

Proven or promising external resources or approaches

A postdoctoral position needs to be a real job, simple as that. That means retirement contributions, health insurance, a salary in line with what the federal government pays starting PhDs (GS-11 with locality pay would be great).

Response 2208

Perspectives on the postdoc roles and responsibilities

I think postdoc should be a period for additional training and a career transitions (i.e., to faculty, to industry, etc). That is, postdoc should be a period where scientists' expertise is respected and valued (they are experts in their field, after all!). Yet, postdocs should also be able to get additional training—whether that be mentorship to help the postdoc extend into new research areas, to publish, to develop a mentorship/PI identity, etc. Too often postdocs are seen (and treated) as grunt workers—they are underpaid and are often running PIs' studies without the pay, credit (authorship), and respect due to them. This can lead to abuse of individuals in this role and lead to them possibly leaving academia.

Fundamental issues and challenges

Pay for postdocs in the US has stagnated and is appallingly low. (Really, pay across academia has stagnated and is appallingly low; postdoc pay is one part of this problem). Developmentally, many postdocs will be in their late 20s, early 30s, or beyond—these are years where many US adults get married and have children. These are also transitional years when many US adults begin to develop health problems. I don't think it's feasible or reasonable for postdocs to somehow balance these multiple identities and their associated financial and emotional costs without adequate financial support from NIH and their host institutions. How are people supposed to engage in science full-time, while also (possibly) raising children and/or caregiving, while also balancing multiple personal roles such as that of a spouse, and also maintaining and treating their health—on a barely ~57k/year salary? It's just not feasible. The system needs to change so we can accommodate and support people with multiple identities during the postdoc transitional period. Doing so will improve the success of US science, as well as the success of postdoc trainees of all backgrounds. That is, changes to these policies and systems will benefit everyone. NIH has an opportunity to be a leader in initiating these changes.

Existing NIH policies, programs, or resources

1. It would be amazing if existing (already appointed) postdocs could easily apply for NIH supplements with very short applications with rapid turn-arounds for things like childcare grants, caregiving grants, etc.
2. Programs like the LRP are amazing, but the application is very time intensive (16+ pages), AND it takes almost a year to hear back (and then people can only submit once annually anyway). Having multiple opportunities for LRP submissions, with shorter review periods, would increase retention of clinical and basic scientists, particularly those from underrepresented backgrounds.
3. NIH should consider changing/extending the T/F32 award period from 3 years to perhaps 4 or 5 years, especially for postdocs with career interruptions.
4. I have been excited to hear about career re-entry grants/policies. Many of these are supplements, which means the applicant needs to have maintained academic connections during their interruption. Many people with career interruptions are no longer in their original labs and may not be at an academic institution. Can these awards be applied for via a non-supplement mechanism, with a process in place for matching PIs to institutions, so applicants can successfully compete for these grants and re-enter academic research? Getting people to the PhD is already such a huge financial investment; supporting people with PhDs in their re-entry seems like a relatively small financial cost which could potentially boost the success of US scientific progress and promote retention in research.

Proven or promising external resources or approaches

1. NIH could consider investing in a mentor-mentee matching system to match postdocs to mentors who are able to give them advice based on their unique identities. These relationships might be outside of traditional scientific mentoring. For example, perhaps a bench scientist postdoc has adequate mentoring for their research program, but maybe they are managing disability —can NIH create programs so people with unique unmet mentorship needs are able to get the advice they need? This seems like it could be a relatively small financial investment on NIH's part but could potentially lead to increased retention of US scientists and thus, better scientific progress.
2. NIH T/F32 salaries have a minimum pay scale, but there isn't clear guidance across institutions with regard to stipends/support for health insurance, retirement, etc. At a minimum it would be beneficial for NIH to create policies which recommend minimum fringe benefits of this type; even better would be for NIH to include financial support for postdoc fringe benefits in T/F32 budgets/award packages.

Response 2209

Perspectives on the postdoc roles and responsibilities

I did a postdoc with the whole-hearted intention of using it to further my professional development and to gain independence as a researcher. I worked with my PI to develop an exciting, fundable research project that I would take with me when starting my own lab at a PUI. I attended conferences and workshops, wrote grants to secure funding, mentored students in the lab, and met regularly with my PI to develop my research. My postdoc experience was wonderful and exceeded my expectations, but it was ultimately cut short because I could not afford it. I now work in industry.

Fundamental issues and challenges

I left my postdoc after 1.5 years, even though I had secured an additional 1.5 years of independent funding that paid approximately the NIH minimum in a low cost of living area. I had a child during my first year as a postdoc, but there was no childcare available in my area ([redacted for anonymity]). We spent hundreds of dollars getting on daycare wait lists starting during pregnancy, and we were not offered a space until our child was over a year old. We did not have local family that could help with childcare. In order for me to continue my career trajectory, my husband had to be a stay at home parent. Despite serious efforts to live frugally and modestly, my stipend was not enough to live on, and our savings dwindled.

No one had answers, but encouraged me to stick out the postdoc to faculty path anyway. I was repeatedly told I would be a very competitive candidate once on the job market, and if other people could make it work, so could I! *jazz hands*

I asked everyone I could think of to identify just ONE woman like me who had made it to a tenure track faculty position. Just ONE mother who made it happen without a golden ticket—a spouse that made a lot of money, access to free or heavily subsidize childcare, or family who could help financially or with childcare. Spoiler: we don't exist. We can't exist in the current landscape. So I left, because the alternative was to run our family's finances into the ground in pursuit of a career path that could ultimately lead to a failed job search in a few years anyway. Every single person like me (fathers and mothers without extra external support) has been pushed out of academia.

Existing NIH policies, programs, or resources

Either directly support parents through efforts like subsidized childcare, or dramatically increase salaries. Not just for postdocs, but for grad students through faculty. It's ridiculous to have to choose between staying in academic science and raising a family.

Proven or promising external resources or approaches

Subsidized childcare, parental leave (4-8 weeks is a JOKE), increased salaries and/or benefits.

Response 2210

Perspectives on the postdoc roles and responsibilities

Postdoc is a training period where a candidate gets exposure to different fields of biomedical research

Fundamental issues and challenges

I am more than +13 years of resarch experience candidate from India. I have written all the grants from India but not able to get recruitment in a permanent position in India. There is lot of drawbacks of Indian funding so the candidate loose interest in pursuing his/her research. I have ideas to share for research. I am lacking funding. Other than postdoc science communication jobs should be open so that postdoc scientist can communicate and job opportunities evolve.

Existing NIH policies, programs, or resources

Indian candidates having experience should be welcome where there is exchange of ideas and good science happens. Lot of collboration required . There should be opportunities to work in US for other citizens also.

Indian Ayurveda is an untapped potential for biomedical research. There is lack of funding in Indian research. If NIH opens fund and collaboarate may be good sciene might happen.

Proven or promising external resources or approaches

Since a candidate has to do both experiments and writing I would like to mention scientific writing jobs should also open up and be promoted. Reviewer should also get a remmuneration per paper they review so that they review in a thorough way.

Response 2211

Perspectives on the postdoc roles and responsibilities

I think postdoctoral trainees are mostly looking to expand their skills and achieve independence. Most of them are not being "trained" after a year or two and this should be reflected in their title and pay. Postdoctoral positions are only useful for PI positions and most can go on to industry or other jobs directly after BS or Ph.D. So NIH should help postdocs evaluate their career options on a regular basis so they are not doing 7-8 years of training when the academic market is so competitive.

Fundamental issues and challenges

Academia/science has benefitted for too long by exploiting underpaid postdocs. We may need to reduce the number of postdocs by helping Ph.D. students with career planning and considering why they want to be postdocs.

Postdocs should be trainees for only 2-3 years as most of them will be experts by then and should be converted to a more secure position such as scientist. If a postdoc is not able to gain independence, there

should be a discussion about the reasons and how to help them transition. They can be also retained as technicians/specialists working on a specific instrument or technique based on their evaluation.

Existing NIH policies, programs, or resources

Expand funding programs for postdocs so they can get experience in grant writing and have more independence to prepare for future careers.

Have regular small group grant writing courses like Paula Gregory Grant Writing Course to help postdocs get started on writing grants. PIs should encourage and support postdocs to write grants.

Finally, Having semi-annual or annual IDP with the office of education or OITE to evaluate career options and reassess plans. This will be helpful as PIs are not trained for these discussions. Talking to OITE or the office of education can help postdocs prepare for talks with PI about their career too.

Proven or promising external resources or approaches

No response

Response 2212

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs unquestionably need greater support. Academic research is losing our scientific talent to industry salaries and career paths that are more compatible with a high quality of life, even though highly trained and creative people want to participate in the research and educational missions of our academic institutions.

Existing NIH policies, programs, or resources

Following are some ideas that could improve this situation—some of which will require time and higher-level policy changes and others that could be more easily and quickly implemented:

1. Broaden training grant eligibility to international scholars. AFAIK, non-US scholars cannot apply for F/T and can only apply for the K99/R00. The narrow eligibility timeline puts them in a do-or-die positions that makes it impossible to buffer life events (see below).
2. Partner with other countries to co-fund international post-doctoral scholars.
3. Extend K99 eligibility for family events—like the ESI extension that allows extension for life and parental events. There was one for COVID-19, but nothing else triggers the extension.
4. Increase budgets for R01 grants to better accommodate competitive salaries for post-doctoral scientists.
5. Afford bigger raises to post-docs with additional years of experience, given the time needed to produce publications that allow them to compete for a K or faculty position.
6. Support costs for health insurance, parental/family support, mental health resources, etc.
7. Require greater institutional transparency for postdoc training outcomes—including paths to non-academic careers.
8. Recognize that PIs cannot be financially responsible, without dedicated support, to implement these changes. Without it, these challenges disproportionally burden ESIs and EEIs.
9. Provide a grant program to support and incentivize cohort hiring of faculty to make the academic career trajectory a bit more appealing.
10. Recognize that all of these challenges are amplified at smaller IDeA state institutions.

Proven or promising external resources or approaches

No response

Response 2213

Perspectives on the postdoc roles and responsibilities

For those interested in academia, a postdoctoral position serves almost like a sabbatical, in which postdocs focus solely on research and devote time to potentially new methodological training to enhance their research. It is a short period that should be about developing an independent research portfolio and career development.

Fundamental issues and challenges

A major issue I found in applying for postdocs was the lack of transparency for open positions, especially in regard to T32 fellowships. For instance, some positions had a hard deadline when applications were due each year. However, the vast majority had "rolling admission" listed on their website and you just have to email them to find out if there are any openings and hope they respond to your email. I even had one postdoc program (a long standing, well known T32 fellowship) in which I had no contact and there was no public information about potential openings, invite me for an interview simply because a faculty member informally inquired on my behalf. While application processes are not standardized, I believe if a postdoc position is NIH funded, there should be required procedures on announcing openings and deadlines. This makes the process more transparent, equitable, and fair.

Additionally, a website (similar to NIH reporter) devoted to open NIH funded postdoc positions, institutional fellowships especially, would be helpful. As these positions are often just listed on websites, which are often not listed on the institution's career pages, they do not come up in standard job search engines like academicjobs or indeed.

Lastly, a major issue for me when first starting a postdoc and considering where I could afford to move, was the inability for NIH funded postdocs to offer relocation packages for moving expenses. Cross-country moves often cost $5K or more now, and after being in a doctoral program for many years, making very little money, this was an impossible ask, that my position could not help me with regardless of their available grant funds or desire to. I believe that should be a standard part of any postdoc package if moving over 50 miles for the position.

Existing NIH policies, programs, or resources

The fact that there is no adjustment of NIH-set stipends or even institutional allowances for cost of living in different locations is absurd. That is not the case in any other type of job or even at the faculty level. It makes people forced to work extra jobs, be limited in where or how long they can be a postdoc, or whether they even bother to do a postdoc or just go straight to an industry job because they cant afford it. It is inequitable and problematic.

Proven or promising external resources or approaches

No response

Response 2214

Perspectives on the postdoc roles and responsibilities

I see PostDoc as applying the techniques that I got trained-with during the PhD time. Take more challenging project and applying them without much relying on supervisor. It's sort of transition platform from "more supervisor dependent (e.g. PhD)" to independence.

Fundamental issues and challenges

1. Really low salaries for higher degree programs
2. Still considered a training phase and less focus on grooming the independence of PostDocs
3. PIs grant pressure is translated to PostDocs where they end up taking less challenging project so they could rather focus on publications than the outcome of science. But again, without publications no one gets the grants accepted. So its a vicious cycle that needs to evolve to keep postdoc time as fun as PhD time.
4. PhD takes a big toll on most students, in terms of over-working hours, deadlines to publish, thesis submission and defending PhD thesis etc. If PostDoc ends up being same and without much additional skill than just experiments (e.g., training on how to manage funds, how to run labs etc.); they might end up making a good scientists but not good PIs. And that's the current problem where most PIs lack. They are well trained scientists but not well trained PIs.
5. Better recognition, appreciation from more startup-companies that provide better or similar working condition as academia but with better benefits.

Existing NIH policies, programs, or resources

1. International PostDocs are not eligible for most grants
2. K99-R00 program is much limited in terms of eligibility criteria where one needs to transition within 4 years of their PhD. Some fields take more time.
3. Better VISA conditions/options
4. More courses to train researchers to be make great PIs (e.g. How to run a lab, how to manage funds, best practices to train PhD students, different ways to train PhD vs research tech vs PostDocs etc).
5. Healthcare and family benefits for PostDocs
6. Better compensations

Proven or promising external resources or approaches

Decades ago industries had a strong drawback on their policies compared to academia. But a lot more start-up often spin-off from academia has now been able to overcome those challenges very well and attract more PhDs and PostDocs. Perhaps, their new policies and environment changes could be adapted by academia as well.

Response 2215

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a training position meant to allow trainees to perform research under guidance of a seasoned researcher or committee of researchers. The position is educational in nature and enables trainees with access to resources for research and time to explore career development. It is a period of growth and career development. However, in recent times, the educational/training aspect has not provided the career development value that is needed for the current stipend and funding environment in academia.

Fundamental issues and challenges

There are increasing cost of living and lack of opportunities for postdoctoral trainees in recent times. The stipend has not changed relative to increased cost of living as well as the necessity of postdocs in labs. In fact, many labs are dependent on postdocs but do not pay an adequate salary for the value generated as compared to industry levels. It is nearly impossible to have or raise children on a postdoc salary when many female postdocs are at a stage in their life where having children may be more difficult as time goes on. Forgoing children and perhaps owning a house has been a binary choice when choosing to become a postdoc. The difficulty in obtaining funding and faculty positions is a major hindrance to an academic career. The proliferation of twitter and online webinars has enabled spread of information in terms of career development and opportunities for postdocs. Prospective postdocs see the writing on the wall. There has been a shift to explore alternative career paths in industry, government, and services. While

this has been a boon for those sectors, academic research is the foundation for advances in technology and medicine.

Existing NIH policies, programs, or resources

Many institutions use the postdoc stipends set by the NIH as the guaranteed salary levels. Increases in this stipend to accommodate increases in cost of living and competitive salaries in industry is needed for recruitment and retention of academic postdoctoral trainees. In addition, programs that supplement DEI, working moms, and cities with high cost of living will be beneficial to allow postdocs better choice in where they take their careers. Often times, it can be a decision between two locations and the choice comes down to cost of living. Resources can be expanded by providing funding for career development targeted to postdoctoral offices that enable more workshops and training for trainees.

Proven or promising external resources or approaches

Postdoctoral offices are a key support for postdocs. However, not every institution have optimal postdoctoral offices or even has an office. National Postdoctoral Association and ResDev has been conducting a series of surveys to grade postdoc offices. Given that the postdoc offices has power to enable improvements in recruitment, retention, and quality of life for postdocs, it is a critical area to improve. In additional, faculty and PI need additional training in mentoring and recruitment. Oftentimes, PIs do not have adequate training in mentoring and this can lead to miscommunication and misalignment in goals.

Response 2216

Perspectives on the postdoc roles and responsibilities

We do and are relied on a huge amount for the success of departments and individual research programs and don’t get paid nearly enough.

Fundamental issues and challenges

It is quite simple. We don’t make nearly enough money to support ourselves. The stipends need to be increased substantially and then additionally increased for cost of living for the area the position is held (Boulder/Denver, Boston, California are huge hubs of research and aren’t adjusted for cost of living expenses). I pay 3000 in rent and 2000 in child day care before I even begin to address utilities, food, diapers, or anything else. We can’t do anything for leisure or go on vacation. Because of this, we get burned out incredibly quickly. I was initially a sure thing to go to academia for my full time position and now I am daily looking up industry jobs to see if there is a “can’t miss job” to leave and make 100,000 more immediately. I am not going to have a second child because of this issue. I skip meals to make sure my child has enough. I have a PhD. This has to change. Inflation (8-10%) killed us this year and you only raised stipends by 3.0% (actually is was less, it just rounds to 3.0%).

Existing NIH policies, programs, or resources

If you don’t expand the stipend substantially first then no other policy change will matter. It is money. Period. People are leaving in droves because they can make 150,000 immediately instead of 55,000 to start. There is no other reason. I’m within a few months of doing the same. Every person I know as a postdoc in academia is looking for industry jobs. You are losing tenured faculty because they can make 250,000 in industry rather than 125-150,000. They also don’t have to fight for crumbs to only receive an R01 modular budget that hasn’t changed in a very long time. If salaries and research support don’t increase it will only get worse.

Proven or promising external resources or approaches

See above and nowhere else. My responses are real, not harsh. We are struggling.

Response 2217

Perspectives on the postdoc roles and responsibilities

I think the postdoc position is a transitory mentored reserach phase that prepares you for the next level of career, be it in academic, science policy, scientific communication, industry roles, or start-up and entrepreneurship. It help carve out individual reserach to strengthen core and technical skills, networking and collaborations, build mentoring and careerrelated support systems that would help in thorughout the

different stages of carreer path. A postdoc training with a supportive mentor and equally supportive colleugeue and peers would help achieve these objectives. Also, it is this cohesive and inclusive environment and support from collaborators and technical core facilities that help bud off your new research path as you go down the line, and prepare you as an independent investigator, who is suppose to continue this cycle of support, encouragement, and mentorship for the new aspirants researchers, with overall aim of propelling the standard and quality of human life upwords.

Fundamental issues and challenges

There are several key issues that I personally experineced and also learnt from my fellow peers abour theirs experiences.

1. Most invetigators are not trained nor they updated their mentoring skills that hinders the growth and development of a postdoc.
2. As an international postdoc, I often face challenges to find appropriate funding opportunities. They are scarce for us and we need more inclusive funding programs for our growth and independence.
3. Postdoc compensation benefits do not have a place for funds for career development activity, conference or workshops, etc. We must have a dedicated funds that postdoc can utilize for their development outside of their institution.
4. The key issue is finding post-postdoc career opportunity. Most of the international postdoc have to join the academic positions (like RA, research scientist, etc.) that barely provide space for their independence and nor properly compensate for their skills and competencies. We must have a mechanism for obsorbing postdocs into academic system. Currently, a small fraction of postdoc reach to tenure or other reserach-intensive career paths. Most often, the postdocs forced to adhere to the non-tenure positions with poor compensation and long-hours of workloads. These issues are more devastating for the international postdocs.
5. Academic institutions should recognize the contribution of postdocs and junior researchers by annoucing yearly awards and other additional compensations, funding career development activities, inclusive programs for academic and industry partnership, etc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2218

Perspectives on the postdoc roles and responsibilities

I view the postdoc position as a period of transition that can be helpful for gaining confidence in your skills, research interests, and future goals. It can be a time for additional training in areas that are an extension of or completely different than your graduate research. Additionally, it can provide an opportunity to train under the mentorship of a different person and at a different institution. It can also be a time to enhance specific skills for your career that you did not gain or develop in graduate school. Traditionally and in my current postdoc position, we are not given many opportunities to gain skills or knowledge about non-academic positions and we are often discouraged to seek non-academic positions. In fact, under a T32 training grant, we are penalized if we want to leave for a non-academic position before the 2-year contract ends. This signals that academia is not focused on the wellbeing or true goals of a postdoc.

Fundamental issues and challenges

The primary reasons that I am considering leaving academia after completing my postdoc are lack of financial support, lack of job security, and abundant work-related stress. Financial support is a key contributor to graduate students and postdocs choosing jobs outside of academia, especially for trainees of minority backgrounds who have historically been excluded from building wealth and who often support other family members outside of their immediate family. Additionally, though we are being trained to be competitive for the academic faculty job market, tenure-track positions are very difficult to obtain, and we

are also expected to move wherever the job is located. It is important for me to remain where my family is located for general quality of life and care needs. Lastly, my quality of life as a postdoc has not improved much compared to when I was a graduate student. I am still treated as a machine for production of data and papers. I am expected to work long hours to complete ambitious projects that do not recognize work-life balance. The culture of "publish or perish" is not something that I want to guide my view of success. We do not have enough time as researchers to carefully conduct studies, especially those that involve establishing community partnerships. Rather, we are encouraged to manipulate time (working endlessly) and cut corners to complete projects for publication. I have experienced burn out, lack of sleep, and lack of time for personal priorities. When I talk to colleagues in industry, they often say that having a "9-to-5 job," especially with children, is one of the best reasons to leave academia.

Existing NIH policies, programs, or resources

I have had a lot of difficulty with obtaining NIH funding as an early (1-2 years) postdoc. As most postdocs in my field last 2-3 years, it seems strange that there aren't more opportunities for smaller grants with quick turn-around time. It would be helpful if these aspects are considered, especially since the primary grant for a postdoc is a K99/R00, which is highly competitive and would take over one year to get funding if you have to resubmit the grant. Grants that enable more risk taking during the postdoc would also be beneficial, especially as postdocs are encouraged to begin to form their own research agenda that is separate from that of their mentors.

Proven or promising external resources or approaches

At minimum, all postdocs need employee status. As a T32 postdoctoral fellow, we are limited in our benefits since we are not considered employees. Taxes are also very difficult a a non-employee postdoc; we are not eligible for free tax preparation services (such as TurboTax Free Edition) because we are not given a W-2. I also advise NIH to set standards for other benefits such as comprehensive, quality, in-person mental health insurance coverage. This has been a large gap in benefits, especially for a high-stress job.

Response 2219

Perspectives on the postdoc roles and responsibilities

Intermediate academic appointment between grad school and an academic faculty position where the postdoc strengthens their skills as an independent researcher and typically seen more tangibly as an increase in their number of publications.

Fundamental issues and challenges

The NIH minimum is the base and usually the max PIs pay postdocs and it has not kept pace with inflation, especially in places with high cost of living which is where many competitive NIH funded PD positions are. This is especially harmful for retaining single women (there is a known marriage gap) who cannot support a comfortable lifestyle on a single income. We should be able to have a comfortable lifestyle (free of roommates, ability to save and invest in property, no food insecurity, etc) after dedicating and sacrificing so much to attain the education needed for a PD role. We want pay that matches our current stage in our lives and late 20s/30s and beyond housing is major. Also for women who choose to have children, there is very little support especially financially for retaining them.

Existing NIH policies, programs, or resources

Better advertisement of the NIH LRP for postdocs—may help recruit them to academia. Also why is the application so extensive—if a postdoc is already working on an NIH grant why is that not enough to allow for LRP to be activated? Can this be made into a sort of supplement to the R01 they are funded on?

Extension of NRSA grants to be used to support maternity leave past 8 weeks. FMLA is 12 weeks. 8 is not sufficient.

Increase NIH base to account for HCOL areas, maybe instead of the base being a flat number it should be a multiplier of something like the poverty line associated with the area the PD is working.

Proven or promising external resources or approaches

As for working environment and job satisfaction there should be more funding opportunities past a training grant (F series) for early postdocs that could allow for earlier independent work. Potentially shorter duration grants for collecting preliminary data. And/or removal of the rule that having an R21 makes one ineligible for a K99.

Response 2220

Perspectives on the postdoc roles and responsibilities

The role of a postdoc (in my opinion) is equivalent to an apprenticeship in any blue collar industry position. However, there is a greater emphasis on postdocs supporting themselves through fellowships, teaching commitments, and generating research data for the PIs. I view a postdoc as a way to increase scientific independence, broaden the understanding of scientific techniques, and continue developing professional skills. Postdocs are also expected to be intellectual workhorses for the lab (contribute new ideas for the PI) so if your PI submits a grant on your work/ideas then that takes away opportunities to submit a grant application that would promote independence. A postdoc is stepping stone to establish academic independence and establish a new scientific niche to further scientific understanding.

Fundamental issues and challenges

The glaring issues are the low salaries and lack of academic tenure positions. Postodocs (and grad students) are largely expected to put in significant hours of work towards experiments per week which easily exceed the standard 40hr work week. However, with this increased expectation there is no return in benefits for the postdoc. Postdocs are generally at the age where they are starting families but they cannot financially support a family or pay for childcare with the current salaries. From personal experience I want to pursue a postdoc (and currently have an F31) and an academic career. However, my spouse also works which limits the locations as to where I can work while accommodating their career. While pursuing a postdoc would help me further those academic skills and research interests I would not be able to interview/ secure a job as a professor while still considering the needs of my spouse. With this in mind why would I spend 6 years losing out on income and retirement savings to pursue a job I have a 1% chance of getting? At conferences I have been repeatedly informed that the postdoc experience should be roughly 6-8 years before you have an application strong enough to tenure track positions. Non-traditional students find this career unappealing as that could put them at 45+ years of age before acquiring tenure. Postdocs are not quite government employees but non long term institutional employees so they lose out on investment from either.

Existing NIH policies, programs, or resources

1. Establish cost of living allowances or scale compensation according to the postdoc region. A postdoc position in San Francisco cannot survive on the current stipend however a postdoc in College Station TX will thrive. Many government organizations already do this.
2. Establish more long term academic (non professor) roles that postdocs can transition to. This would increase the value of a postdoc for those who are interested in remaining in academic research but not pursuing a tenure track position.
3. Establish some sort of transition system to other careers. Such as if you conducted a postdoc in academia it gives you preference points for transitioning into government research. This would set up a clear path to non academic careers and allow the NIH/taxpayers to still not lose those trained individuals to industry.
4. Set up required childcare programs for NIH funded institutions. Admittedly, I don't know much about this part but I know that colleagues often complain that University childcare centers are overfull and postdocs generally transition into positions at times that do not let them register a child in advance.
5. Allowing postdocs to transition to research assistants where they can still apply for grants. This would make it more appealing for PIs to allow for long term researchers. Contingency of these grants should be have a PhD and x amount of years of postdoc experience.
6. Set up a retirement system that is not tied to an institution.
7. Set up a job board through the NIH that any investigator with NIH money can post open positions on.

Proven or promising external resources or approaches

The problem is not lack of interest in scientific research its lack of future options and return on education.

Usajobs.gov gives veterans and government employee preference points for careers. Work environment and job satisfaction is what is lacking. There are many successful mentorship and training programs already in place.

https://www.cnbc.com/2019/07/16/perhaps-money-can-buy-you-happiness-at-least-at-work.html#:~:text=The%20biggest%20survey%20disparity%20related,per%20year%20said%20the%20same.

Response 2221

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is to dwell in research with diverse scientific skills to solve the more significant science problems with cutting-edge research and technology. My personal feeling as per my experience is that postdocs are overburdened with experiments to fulfill the expected publications. They do not have real-time to think about the research implication scope and innovation.

Fundamental issues and challenges

Pay-scale, which is not uniform throughout the country (even though funded by NIH or NCI grants). Many are working under reduced wages as low as 47000 USD per annum. Lack of retention may be due to the lab environment, better opportunities with higher pay scales in industries, and an uncertain future. When it comes to the quality of life all the above-mentioned drawbacks reduce the quality of life. They are expected to work for 11-12 h daily and on weekends as well, which results in poor social life and happiness.

Existing NIH policies, programs, or resources

There should be a compulsory uniform pay scale through institutions and research training, which can boost the skillset and networking.

Proven or promising external resources or approaches

No response

Response 2222

Perspectives on the postdoc roles and responsibilities

Additional training on how to think like a PI.

Fundamental issues and challenges

Need a central website for candidates and positions open.

Existing NIH policies, programs, or resources

More funding for matching and support of post-docs.

Proven or promising external resources or approaches

Improving recruitment.

Response 2223

Perspectives on the postdoc roles and responsibilities

Postdoctoral appointments are, or should be, mechanisms for new Ph.D.’s to gain additional experience in research and communication so that they are better prepared for work in academia, industry, or the government. Post-doctoral appointments should allow young scientists to design and carry out their own research, not be low-paid apprentices conducting research designed by someone else. Pos-docs should also receive training in written and oral communication so that they can represent the importance of their research to the public and train their students in the same skills.

Post-doctoral appointments have traditionally focused on research and have given little attention to communication skills. However, communication skills are directly related to a scientist's success as a leader, influencer, and teacher. Modern biomedical research is a very collaborative process. A young scientist must be able to communicate with other scientists, administrators, students, and technical staff. The lack of training in these areas has greatly impeded scientists' ability to communicate with the public, the results of which we see all to clearly in contemporary society.

The importance of communication in science has been highlighted in reports from the National Academies (https://www.nationalacademies.org/our-work/the-science-of-science-communication-a-research-agenda) and the American Academy of Arts and Sciences (https://www.amacad.org/publication/public-face-science-america-priorities-future). Scientists want to become better communicators and, as reported in the just-released Research!America poll (https://www.researchamerica.org/wp-content/uploads/2023/02/2023-January-National-Survey-Results-ResearchAmerica.pdf), 8 in 10 Americans say that a scientist's job should include communicating their research to the public.

Fundamental issues and challenges

Student's applying for a post-doc must know that they will be paid a living wage that allows them to support a family and that there is a clear path to their own job. They must know that they will have time to pursue their own research and grants, while at the same time learning new techniques in their host lab. Their appointment must include training in skills that are directly transferable to their future positions. Chief among these are communication skills, which will directly affect their grant success and prospects for employment. Post-docs caught up in conducting experiments that others have designed and training other people's students are not gaining the skills they will need to be successful in the job market. They must show that they have conducted their own research, obtained grant funding, and are able to communicate their research clearly to a variety of audiences. Poor communication skills inhibit their chances for finding and retaining a job. The inability to communicate clearly undermines job satisfaction and retention both in the post-doc and beyond as the scientist will feel that their work is not being taken seriously merely because they cannot explain it clearly.

Cameron et. al (2020) have shown that scientific communication productivity, and a student's expectations based on this productivity, predict a student's intention to pursue a career in scientific research. This fact, together with the finding that scientific communication ability predicts science identity (the sense that one is a "science person") means that scientific communication training can increase career persistence. See: Cameron, C., et al., The role of scientific communication in predicting science identity and research career intention. PLOS ONE, 2020. 15(2): p. e0228197 https://doi.org/10.1371/journal.pone.0228197

Existing NIH policies, programs, or resources

NIH award applications should be required to include both time for and training in grant writing. They should also require the post-doc to be broadly trained in communication skills, skills that allow them to address both audiences of scientists outside of their specialty, and the public.

In Fiscal Year 2022, the NIH awarded nearly $1 billion on over 6000 training grants, but only 50 of these awards (0.8%) mentioned some amount of science communication training. Of the 873 R25 Research Education Program awards in FY2022 ($208M), only 11 (1.3%) mention science communication. To increase these numbers, NIH could earmark additional funds to be made available to awards that include a science communication training component. This would allow the creation of formal science communication coursework (not just workshops, seminars, or one-and-done training events). Training grant funds could be used to expand existing courses, train more instructors, or set up new programs to help improve junior scientist communication skills. The availability of these funds would help incentivize faculty and their organizations to teach these courses. Training grant applications should require details of how the PI would set up or tap into formal scientific communication training, who would lead the training program, what the program would entail, and how the university/organization would contribute to and oversee the success of the sci comm program.

Proven or promising external resources or approaches

The National Science Foundation already requires applicants to explain how their research has Broader Impacts on society, including the presentation of their research to the public. NSF also funds the Center for Advancing Research Impact in Society (ARIS; https://researchinsociety.org/) with the goal of improving the quality of Broader Impacts work. ARIS provides high-quality resources and professional

development opportunities and creates connections among researchers, community partners, and engagement practitioners.

There are many resources that can be used to lessen the anxiety that many graduate students and post-docs feel when presenting. Using a simple four-part structure for conference presentations and abstracts will greatly reduce anxiety and allow scientists to present with more confidence. The structure in presented in books like "Presenting Scienced Concisely" and "The Narrative Gym" are important resources.

Response 2224

Perspectives on the postdoc roles and responsibilities

It's a career transition.

Fundamental issues and challenges

Income and work-life balance.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2225

Perspectives on the postdoc roles and responsibilities

Post doc are highly skilled scientist in a short term training to gain independent research experience. The post-doc supervisor should treat the post docs as colleagues rather than trainees. The fact that they are in a temporary the career transition stage did not mean that they should be overworked and underpaid. The current academic system is clearly exploiting the postdocs with way below salaries, benefits and with toxic cultures often induced as a consequence of unnecessary competition and the poor management and training skills of Postdoc supervisors.

Fundamental issues and challenges

1. Non-competitive salary; Postdocs are in the age group of 25+ and like any others have family and personal responsibilities, It is really hard to live on a minimum wage to support and build. a family,
2. Poor Benefits package: Vacation, Childcare
3. Living cost in cities (Boston, New York, California etc). It is unfortunate that most universities, be it a city or rural universiyt follow the minimum salary (55k/year for 0 year experience). The universities/departments/labs has policies not to pay more than this salary. The NIH should amend this rule and factor in (minimum wage + proportional living cost in each city)
4. No guarantee in the job market. With the. limited academic opportunities, many students consider this as a waste of time as 1. it is often difficult to find a competitive job with the post doc experience 2. huge loss of income compared to accepting job right after PhD.
5. Toxic culture: The post docs are exploited in the academic system as the next step is often dependent on a good reference letter from the supervisor. this is the same case for grant applications etc. The supervisors take advantage of this and pressure the trainees on multiple levels (job, grant etc)
6. Visa situations—international students are admitted mostly through J1 program which in many cases limits the opportunity to find jobs in the USA
7. Moreover the visa renewal is a stressful problem for the postdocs.
8. Limited postdoc fellowships for international trainees. Compared to the domestic trainees, international trainees have limited grant application opportunities.

Existing NIH policies, programs, or resources

1. Implement new salary policies considering
    a) living cost in the cities
    b) current inflation rates and future inflation adjustments
    c) competitiveness with the similar positions in Industry (current industry starting salary for fresh PhD is atleast 100k/year +bonus +benefits)
2. Introduce benefits package (housing benefits including subsidized housing, childcare benefits, better 401(k) matchings
3. Introduce subsidized and better health care, vision and dental packages
4. Make special visa processing renewal schemes for postdocs so that the international post docs can renew the visa from USA.
5. Make the NIH grants available for early career researchers. Include more grants where internationals are eligible to apply.
6. Include post docs in grant review panels
7. Post docs from new labs gets grant rejections citing "PI has not enough experience". Bring in policies to not let this happen or separate/include grants where only early career PIs are eligible to apply. Update the eligibility criteria on those grants where an application from early career PI is not expected.

Proven or promising external resources or approaches

No response

Response 2226

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

There is very little and declining funding to reasonably support the research training and skills development of academic generalists in health services research. However, primary care is the foundation of our healthcare system and greater primary care ensures more equitable care. Coming out of residency training, most clinicians need courses, such as those offered in schools of public health, to learn the methods needed to conduct high quality health services research. Yet, the tuition for these programs is continuously rising and grant funds to support post-doctoral training in health services methodologies are nearly non-existent. At best training programs may support PhD trainees but PhDs do not have the clinical perspective often needed for high quality health services research.

Existing NIH policies, programs, or resources

The budget of T32s through HRSA need to increase and NIH needs to offer more T32 opportunities for MDs interested in primary care health services research.

Proven or promising external resources or approaches

No response

Response 2227

Perspectives on the postdoc roles and responsibilities

To me postdocs are generally the most productive members of a biomedical science lab. The combination of obtaining a PhD with the common goal of pursuing a tenure track faculty position results in a highly competent and motivated individual. In addition to long hours of laboratory work and publishing high impact papers, postdocs are expected to mentor graduate students, postbaccs, and undergraduate students. The expectations are highest for postdocs compared to anyone else in the lab (excluding the principal investigator). Usually it assumed that someone is pursuing a postdoctoral fellowship to pursue a

tenure-track faculty position. However, these jobs are extremely rare and competitive. Therefore, it is often advised to not consider a postdoc unless you NEED to do it for your desired career (such as tenure-track faculty positions). This advice makes sense because the pay is poor relative to the expertise and training needed to even apply for a postdoc position. This is compounded by the fact that postdoc positions are temporary and have the reputation of having poor work-life balance from the high level of pressure. Most graduate students at my institution have the goal of avoiding the need to do a postdoc and leave academia to pursue higher paying careers.

Fundamental issues and challenges

Postdocs have a PhD, but make less money than most entry-level jobs that only require bachelor's degrees in fields such as engineering and business. The financial burden is amplified by the fact that PhD programs also have low salaries, which are required before a postdoc is even an option. This is a potential 10+ year span without making more than $65,000/year. In addition, postdocs are only a temporary position with no job security. Therefore, postdocs are poorly paid and have no career trajectory to obtain a pay raise without applying for very competitive jobs (tenure-track faculty, industry scientists, consulting) and usually moving geographic locations. Because of the limited timeline on postdoctoral positions, high pressure to be productive, pressure to secure personal funding (F32, K99, etc.), low salary, and bleak job prospects, often postdocs have the reputation of being extremely tough from a mental health and financial standpoint. It is also often a time when people are having children (early to mid-thirties), making this job less desirable as work-life balance is not associated with a postdoc position. Regarding retention, because tenure-track positions are so competitive, a very high impact publication is needed in the postdoc to be a qualified applicant. Therefore, if a postdoc project is stalling or is not likely to result in a high impact paper, it makes sense to simply quit and find another job that pays better and does not have the same level of pressure, workload, and provides work-life balance. Postdocs are also considered "trainees" which sometimes disqualifies postdocs from the same benefits as regular employees even though postdocs have obtained a PhD.

Existing NIH policies, programs, or resources

To improve the postdoctoral training ecosystem, the first thing that is required is an increase in salary and benefits. Benefits that could attract people to this job even without a substantial salary increase may include expanding student debt forgiveness that is currently available. In addition, it is often disadvantageous to apply for F32, etc. because at many institutions you will lose institutional benefits such as retirement, medical insurance, etc. Fixing this issue (government funds to the institution to keep healthcare/retirement, or reclassification of postdocs with these awards) would make these awards more attractive, as currently there are disadvantages to even applying even though it has career benefits. In addition, the "clock" on how many years that are allowed to apply to NIH transition awards increase pressure for postdocs as well as institutions putting time limits on postdocs. A ban of these "clocks" for NIH awards and at institutions would also decrease the intense pressure and increase work-life balance for postdocs.

Proven or promising external resources or approaches

To improve the postdoctoral training ecosystem, the first thing that is required is an increase in salary and benefits. Benefits that could attract people to this job even without a substantial salary increase include free childcare, disability insurance, paid family leave, government administered pension/retirement benefits for postdocs (similar to being a true government employee). In addition, I believe "transition awards" that provide a few years of funding for other non tenure-track careers such as staff scientists, non-tenure track research assistant professors, teaching positions, etc. would allow postdocs to seem more attractive as there would be more available careers after completing a postdoc other than tenure-track faculty. In addition, the "two-body problem" due to couples that are both scientists makes postdocs/tenure-track job searching less desirable. I believe "couples" transition awards would also help retain scientists in academia if a co-submitted award ensured that couples are funded together and competitive in the job market.

Response 2228

Perspectives on the postdoc roles and responsibilities

To generate data and publications with original ideas that fall under the PIs area of research. To mentor students and other lab members. To improve writing, technical, and critical thinking skills.

Fundamental issues and challenges

Too little pay and too many hours. not enough protection for postdocs or any sort of present or future job security.

Existing NIH policies, programs, or resources

A postdoc conference with recruiters, a job board, when special seminars are held have some of the speakers be postdocs, set up mentorship relationships where postdocs can be paired with a PI / someone with a career path they want who will give career advice and help them navigate their career trajectory

Proven or promising external resources or approaches

More blinded reviews of grants, new journals that accept and encourage negative data, more emphasis on good science rather than productivity in the scientific review process. The system is flawed in that it favors those who have connections and those with resources and continues to divide scientists by continuing to fund and praise those who already have research accolades. there is also a lack of turnover in science especially as there are few academic jobs.

Perspectives on the postdoc roles and responsibilities

Postdocs are basically slaves to illegal academic enterprises (aka: universities). They're treated like [redacted], not given typical workforce rights according to standard employment laws, have no future prospects, and get stuck in their roles for the sake of bolstering the careers of their PI and the value and prestige of their university through the prime years of their life. On the other end, there are no jobs and many realize they have no broadly marketable skills because all they did was run assays and write papers.

Fundamental issues and challenges

There is no future for the overwhelming majority of postdocs. This isn't rocket science. Universities should be put on trial for building their value on the backs of underpaid, mistreated scientists wasting the primes of their lives for what amounts to an organized crime syndicate. The universities are the problem here. Look closely at them. They are subsidized by the taxpayers yet have no limits to the amount they will continue to take from citizens or the amount of money they will stuff into their own bureaucratic pockets. If any big company treated people like a university treats its people it would be on the front page of the newspaper within weeks. I know we're talking about postdocs here, but graduate students and (particularly) early and mid-career professors don't have it much better. But at least they can count themselves as either being students with a future ahead of them or some kind of actual employee for something that looks like a reputable organization. Universities should be forced to create actual, good-paying, long-term, scientific jobs with job titles like associate scientist, scientist, senior scientist, etc. Until that happens I wouldn't wish a postdoc position on my worst enemy.

Existing NIH policies, programs, or resources

Get rid of the payback burden for people on T32 training grants. There is no future in academic science and universities do nothing to invest in what actually makes them valuable (i.e. their people). So when postdocs need to scrape together their measly salary on their own, they may end up with one of these toxic waste heaps as a funding source. If they leave early (or maybe other circumstances as well? I'm trying to forget the language in my own T32.) because they realize they are on a dead-end path to nowhere they may need to actually then PAY BACK the money they were paid to do a job for a lab that happens to be part of a multi-billion dollar entity. This is obscene and so fundamentally unethical. What it means is that the university will have had somebody working for them for whatever period of time, providing value to them and their departments and professors, for FREE. The work the postdoc did doesn't somehow magically get undone, and that time of their life cannot be gotten back. They are already being paid less than minimum wage in many cases and should be free to take whatever career path is best for them at whatever point in time is right for them. If you run the math on the time they spent working as a postdoc after payback, then it comes out WAY below minimum wage. How is this allowed? Do not try to control them and if you are going to control them then you better put 10x as much energy into providing the with broadly relevant training during their postdoc and protecting their next level of career opportunities so it actually exists.

Proven or promising external resources or approaches

Put university employment practices under the microscope. The universities are the problem here. Bring universities up to par with any other organization in the modern employment landscape (for example,

obeying standard employment laws and HR practices for a happy and healthy workforce) and for them to actually support a hierarchy of job opportunities with broad relevance to what they are ostensibly trying to do then I think you'll start to see change.

Response 2229

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1. We would like to suggest a separate budget category of "research expenses" for the postdocs, since "Trainee-related expenses" are absorbed mostly or entirely by insurance costs.
2. It may be helpful to require mentors having specific training for postdocs. It is a different experience than mentoring RAs or graduate students, as postdocs are in a different role with different needs. It may improve the postdoc training, work environment, mentoring and job satisfaction.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

It may be helpful to require mentors having specific training for postdocs. It is a different experience than mentoring RAs or graduate students, as postdocs are in a different role with different needs. It may improve the postdoc training, work environment, mentoring and job satisfaction.

Response 2230

Perspectives on the postdoc roles and responsibilities

My post-doc position was about my career and work and i was given freedom on what to pursue and mentored in that process, my postdoc gave me the additional training that i needed to do the research that i wanted.

Fundamental issues and challenges

Salary & benefits. It is not fair that someone with a PhD is being paid so low, and need to live with roommates or find side-jobs to live decently. My postdoc did not include sick leave, nor any other benefit. It is better to apply for industry and other positions that can really provide a living for me and family.

Existing NIH policies, programs, or resources

Allow people to move Post-docs/labs and retain their funding. Stop supporting toxic labs, many people don't leave their toxic labs pending a letter of recommendation or a promise for one.

Proven or promising external resources or approaches

No response

Response 2231

Perspectives on the postdoc roles and responsibilities

It's academic labour. You are expected to do everything, from being a technician, manager, post doc, manuscript writing, presentation, getting data ready for Grants, one always feels to be in pressure situation that too when you are on Visa.

Fundamental issues and challenges

It's very stressful job given huge expectations from a postdoc with nominal salary for the amount of work being done by a postdoc. It's equivalent of being a slave in academia. There is no job security or future security in academic research. You are supposed to work over weekends as well. Majority of the postdocs have mental health issues, develop anxiety.

Existing NIH policies, programs, or resources

This grant based research should be reassessed as PIs want to submit grant in every cycle creating pressure on postdocs to generate data. It's never ending process. Also, there is no job security for postdocs. Once grant is awarded to a PI, he should be asked about productivity in terms of outcome from the grant whether it helped in expanding science and knowledge in that domain, whether any manuscripts were published from that. Strict measures should be taken to assess the conduct of PIs towards postdocs if they only see them as labour or they want to mentor them to make them independent.

Proven or promising external resources or approaches

Emphasis should be more on postdoctoral funding, proper training and mentoring. We sacrifice our time, family, to get trained but after some years we see only grant business with postdocs becoming obsolete.

Response 2232

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position to be an enhanced trainee period where one is able to

1. received specialized training that builds upon one's program of research that one initiated in graduate school,
2. have an ability to produce more research and gain more publications in preparation for the academic job market, and
3. take on more leadership and mentorship roles in order to prepare one for the role of a lab director, professor, and mentor within the academic sector.

I also view the postdoctoral position as a time where more skill-building of research methodology and statistical analysis could take place for those who are not planning to remain in academia.

Fundamental issues and challenges

The stunning lack of adequate compensation for a postdoctoral position is the number 1 challenge that inhibits recruitment, retention, and quality of life for postdocs. It is incredibly difficult to justify to one's self why, as a person with a doctoral degree, one would subject one's self to such long hours (70+ hour weeks), economic cost (postdocs make less than our peers without advanced degrees due to their being able to obtain permanent employment earlier in life), and isolation and instability for a VERY slim chance of eventually obtaining a tenure-track faculty position. It has been my experience that fellow postdocs are leaving their positions for industry due to higher compensation and a better standard of living. Additionally, postdoctoral positions do not do much in the way of enhancing one's chances of obtaining an industry position, and as the academic job market gets more competitive, I find that the postdoctoral position is becoming obsolete.

Existing NIH policies, programs, or resources

Increase the minimum postdoc salary to a competitive rate (at least 75,000 USD)

Proven or promising external resources or approaches

No response

Response 2233

Perspectives on the postdoc roles and responsibilities

First, I see my postdoc position as an opportunity to further hone my research skills, be that in a new model organism or system. I believe that I do this in a quasi-independent status where I work with my postdoc advisor rather than simply for my postdoc advisor. That being said, all of this training is meant to simply augment my current skillset and because of that I feel that postdoc positions should be treated as a highly skilled workforce. Second, the postdoc position is a chance to improve mentorship and managerial skills. Thus, postdocs should help train undergraduate and graduate students and postbac researchers. This is because subsequent positions, be they in academic, private, or public sector, often require some form of mentorship or managerial roles. Thus, it is important to learn how to effectively mentor and manage people from a diverse range of education levels. That being said, the postdoc is meant to

augment a student's training, not totally replace a professor's duty to train and advise students. Last, the postdoc position is a change to further network and hone presentation skills. Being able to effectively communicate is a key to successful research career regardless of whatever subsequent position the postdoc takes. Gaining a solid network of fellow researchers to discuss ideas with and who can support you in your current and next steps is also crucial to a successful career. I also see the postdoc as a temporary role which means the postdoc should not have undying loyalty to their advisor and should be able to move on to their next step at any moment guilt-free (this is largely informed by the abhorrent compensation and benefits that postdocs often receive). I wanted to be a professor but reality made me change my goals to biotech.

Fundamental issues and challenges

There are likely countless reasons for why it has gotten difficult to find postdocs for academic research. First, the pay is often simply abhorrent. Outside of the few labs that are well-funded by private institutes like HHMI, the Hutch, etc., most postdocs cannot afford a single bedroom apartment in their absurdly expensive city. The average postdoc salary seems to be roughly 1/3rd of the average biotech salary. I come from a low economic level family and if I did not have a partner with a high-paying job, I would not have considered postdoc position. Second, the benefits that postdocs receive are often abhorrent. I am currently employed by HHMI and have relatively great healthcare and benefits (however I do not get employer retirement contributions unlike at other jobs). Moreover, postdocs are often pressured to secure their own funding. Frankly, this is an awful position to put a postdoc in, especially one like me where I am currently being paid through HHMI (more than the NIH minimum). If I get an NIH fellowship, I lose my employment with HHMI and become an employee of my university where I am suddenly given worse healthcare, fewer benefits, and suddenly my taxes aren't withheld and I have to pay quarterly. Basically sending a message of, "Congrats on your prestigious fellowship, go screw yourself." This has serious exclusionary implications for people with health concerns who do not want to get lesser healthcare. Finally, the academic environment is simply toxic and I think that many find dealing with it is just not worth the pitiful compensation just to get some additional training and maybe publish a paper for clout points. Private companies are more than happy to train their employees, too (and they pay better for it).

Existing NIH policies, programs, or resources

First, raise the NIH minimum salary. I understand that there are limited funds to go around but maybe some could be policies implemented to better spread the money around. For example, the NIH could prevent someone from getting an F30/31 and then a subsequent F32 to enable funding to be available to a wider group of people. F-series grants should be somewhat needs based. For example, you could implement a ban on HHMI-funded labs from applying to F-series grants. Why are postdocs in well-funded HHMI-funded labs allowed to apply for public dollars? Second, the NIH could require that NIH-funded institutions are to give postdocs the same benefits that the faculty are given. We have the same degrees!? Why are many of us still getting offered student healthcare and benefits? Frankly, it is absurd and an absolute disgrace otherwise. I think that there is a general sense that postdocs are not treated as the highly skilled and educated workforce that they are. By raising salary and standardizing quality benefits, the NIH would establish a step in the right direction that postdocs are being treated as such.

Proven or promising external resources or approaches

Just raise the pay so I can afford to live and eat, and require that postdocs are given benefits commiserate with their educational attainment. Maybe if you did that, more people would be convinced to stay in academia.

Response 2234

Perspectives on the postdoc roles and responsibilities

In its truest form, I view post doc positions as a training opportunity to learn hard and soft skills not required or taught during graduate school -skills useful and necessary to run a lab.

Fundamental issues and challenges

In academia, work-life balance does not exist, and academia always rewards those that grind. PhD graduates do not get paid enough, and too much is expected of them without the training opportunities. Furthermore, post doc and faulty opportunities do not always align with geographic location where they

want to live. Cost of living rarely aligns. If faculty and future workplaces change from the top down, it is irresponsible and irrational to think the problems with lies with post docs.

Existing NIH policies, programs, or resources

Policies, programs and resources also need to align, and be implemented within with future career plans and opportunities.

Proven or promising external resources or approaches

Train faulty members. Change the workspace. Give a voice to post docs. Listen. Remember your (hi)story. Don’t repeat trauma.

Response 2235

Perspectives on the postdoc roles and responsibilities

I see a postdoctoral position as an important step between graduate school and seeking an independent position. It is a great opportunity to have mentorship on one hand, but have some independency on another, moving forward with your project. Supervising students is another important feature of postdoctoral experience, which is also an important step on the way to having your own laboratory.

Fundamental issues and challenges

In my opinion, a postdoctoral scholar’s role is often underestimated. Although we are a key element in advancing research, we have even more responsibilities than some staff in the lab and we work unlimited hours, which is sometimes much more than 40 h/week, we do not have the same benefits as staff. At [redacted for anonymity] and many other universities, postdocs are not eligible for matching retirement plan contributions. Another issue for international postdocs is that DS-2019 forms are made only for the contract period and at least at [redacted for anonymity] it is 1 year. Even though we are eligible to stay in US when our contract and DS-2019 are extended, to visit a home country we have to apply for the visa once again every time, which is a long, sometimes stressful process that also costs some money. And if someone has a family, it leads to quite significant expenses.

Existing NIH policies, programs, or resources

I believe that it would be helpful to extend the period of time during which individuals are eligible for a postdoc position. It might be helpful to have an opportunity to get 2 trainings from different universities/Institutions. However, completing a project and getting a good publication often takes 3-4 years. So people often do not have enough time during 5 years to enhance their research experience by taking training in different laboratories.

Proven or promising external resources or approaches

No response

Response 2236

Perspectives on the postdoc roles and responsibilities

As a 3rd year graduate student, the possibility of becoming a postdoc is looming on the horizon as a step that I am told is necessary for me to become an independent academic researcher. The roles and responsibilities and opportunities of the postdoc position appear, from my pov, to be largely variable from lab to lab. Importantly, there is a clear relationship between funding availability and the roles, responsibilities and opportunities of the postdoc position that clearly effects the pool of potential postdocs, skewing where/who they are willing to postdoc and whether they will leave academia entirely . For older more independent students like me, it is difficult to imagine taking a position under another scientist in a situation where they lack the funding to support my role/my science therefore requiring me to take on responsibilities that won’t necessarily contribute to my growth as a scientist. Postdocs are not lab managers but under low funding conditions they are often forced away from their science to take on tasks of lab managers and/or technicians.

Fundamental issues and challenges

Postdoctoral pay scales are too low for people at this level of experience, and often are insufficient to cover basic needs in this economy. Furthermore, people in postdoc positions are often in the part of their lives where they are building families, and supporting dependents, requiring more money just to get by. These factors drive down recruitment, retention, and overall quality of life before we even consider the pressures and long hours of the the roles and responsibilities of the academic postdoc. So inevitably many people go to industry to meet their financial needs and the needs of their families. Also there's a housing crisis.

Existing NIH policies, programs, or resources

NIH needs to raise the fellowship and training stipends across the board.

Proven or promising external resources or approaches

No response

Response 2237

Perspectives on the postdoc roles and responsibilities

At [redacted for anonymity], the intention of a postdoctoral associate position is to provide a continued opportunity for training in a specialty area for a limited amount of time. We believe a postdoc should receive active mentoring from a more senior scholar and ideally have a team of formal and informal mentors available to support them in their career and professional development.

In terms of responsibilities of a postdoc, we believe while their time will mainly be spent focused on research and scholarship, obtaining teaching, mentoring, and other professional development experiences can be crucial for them to transition to careers of their choosing. Importantly, we support the OMB's uniform guidance of the "dual role" of postdocs as both trainees and employees "[those] in postdoctoral positions engaged in research are expected to be actively engaged in their training and career development under their research appointments" .

At [redacted for anonymity], we categorize our postdoctoral associates as research faculty in our human resources systems and this provides them access to near-equivalent employment benefits as other faculty at the institution. Fundamentally, we believe all postdocs should receive access to reasonable employee benefits and resources while recognizing that they are also in a time-limited, temporary training position. Here, we do not allow individuals to be hired into or remain in postdoctoral positions once they are 5 years removed from receiving their terminal degree. A clear means of "capping" time in the postdoc that relies on an indisputable criteria (date of doctoral degree) helps ensure the position is used appropriately for training and development of early-stage researchers.

We are agnostic as to what careers postdoctoral training prepares one for and believe the skills and abilities obtained through a postdoc can allow one to succeed in a variety of fields post-postdoc.

Fundamental issues and challenges

Visa & Immigration Challenges

A major challenge in postdoctoral recruitment is the current inefficiencies in the visa process in the United States. Processing times and bureaucratic hurdles make it difficult to onboard international scholars in a timely manner. NIH should work with the State Department and USCIS to improve the visa and immigration process for early-career researchers, especially those possessing important knowledge and skill sets to ensure US competitiveness in research and innovation.

Budgetary Practices that Acknowledge Increased Personnel Costs for Postdocs & Staff Researchers that Lead to a More Effective Research Enterprise

The research skills and talents postdocs both bring and develop during their training make them critical components of the US's research and innovation ecosystem. Many would like to continue working in academic researcher roles after their postdoc. Given their advanced training and skills, an individual transitioning from a postdoc to a senior researcher is (rightly) more highly compensated. At [redacted for anonymity], the increase in compensation from postdoc to a more senior research role is 30-50%. Even if faculty wanted to retain research talent through promotion within our research faculty ranks, current NIH

Research Project Grant (RPG) budgets make this difficult. Furthermore, inflation and other costs have risen substantially since the NIH modular budget "cap" was put in place in 1998. The issue of higher personnel costs being necessary to address in NIH RPG budgets equally applies if faculty and institutions seek to better compensate postdoctoral associates to ensure a living and stable financial arrangement for the postdoctoral population.

NIH must strongly consider the message it sends in its RPG budget guidance as it relates to more adequately supporting the scientific workforce. Higher personnel costs should not be seen as a negative during but rather as a condition leading to a more stable, robust, and effective research enterprise.

Existing NIH policies, programs, or resources

Budget Line to Support Postdoc Offices

The National Postdoctoral Association suggests NIH require a percentage of indirect costs on grants supporting postdocs to provide postdoctoral offices with increased resources to foster stronger postdoctoral communities with healthier, sustainable cultures. At a minimum, it seems reasonable to expect NIH Training Grants (T32) and Fellowship Awards (F32) that directly fund postdoctoral training to include a budget line item that supports the postdoc office at their institution that scales with the number of postdocs supported by the grant mechanism.

Access to Fellowships and Training Grants for International Scholars

The 2021 Survey of Graduate Students and Postdoctorates in Science and Engineering found 53% of postdocs at US institutions are on temporary visas. Current restrictions on F32 and T32 support of US Citizens and permanent residents only shuts off international postdocs from additional support mechanisms to help stabilize and enhance their postdoctoral training. While we understand the value of ensuring US tax dollars support the training of US Citizens and permanent residents, there is value in providing means for talented international scholars to maintain support for their postdoctoral training and research.

Equitable Access to Benefits for Postdoc Fellows and Employees

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. This can prevent postdocs from losing employee benefits when accepting an NIH fellowship, making these prestigious awards more feasible. NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.

Proven or promising external resources or approaches

Collaborate with NSF Programs, Including INCLUDES and AGEP to Identify Best Practices in Supporting Scientific Workforce

NSF's programs focused on increasing diversity in both the science and engineering workforce and professoriate could be excellent partners for NIH as we seek to support Ph.D.s and postdocs from historically underrepresented groups in their pursuit of employment at US colleges and universities and beyond.

Curation and Sharing of Resources and Best Practices in Postdoc Training and Development

The NIH should work to consolidate professional development resources and make them more accessible and available to postdocs, faculty, and postdoc offices.

The NIH Broadening Experiences in Scientific Training (BEST) awards provided significant resources to a select group of institutions to develop and share best practices with the broader community and, indeed, some data from this program have been presented and published. However, resources to ensure dissemination could continue after these awards' funding ended seems to not have been addressed. One specific example is the website that used to host publications and resources from the consortia of BEST institutions (NIHbest.org) is now defunct.

Building off this point, NIH's OITE provides amazing resources and workshops to aid postdocs in their career and professional development and other organizations such as the National Postdoctoral

Association, Graduate Career Consortium, iBiology, and others have developed tools and resources that can benefit postdocs in their career exploration and planning process.

A well-maintained comprehensive data bank should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. In an increasingly virtual environment, the current and future wealth of resources for postdocs should be curated, sorted and readily-available. This would complement federal commitments to open science by increasing not only the availability and access of federally-funded research but also its community resources.

Response 2238

Perspectives on the postdoc roles and responsibilities

As a postdoc I am primarily research focused. Using previous training, postdocs produce results/publications at a faster rate than graduate students. Simultaneously, as postdocs we are encouraged to learn new skills. We are called trainees, but that's insulting, frankly; it is normal for people in industry to learn new skills, especially when first starting a new job. They're not called trainees or paid ludicrously low wages because they don't already know all the skills in rapidly changing fields. Most PIs don't seem to do any more training than industry managers (who also point to new career opportunities and help employees identify and rectify skill gaps). Again, it is insulting to call experts in their fields, many of whom are in their mid thirties, trainees and then use it to justify low wages.

Fundamental issues and challenges

NIH pay scales are very low and in my case, state law mandates a minimum of 65K for salaried employees. This money has to come from somewhere, and it is my impression that NIH fails to account for this, disproportionately impacting faculty without access to non-federal dollars. Simultaneously, I still experience financial stress. Further, there are many more postdocs than their are suitable academic faculty positions (I would rather be a janitor at a university than an adjunct) —which is why most of us are here, since the postdoc does not equip us to move into industry. I feel hopeless about the state of academia as I see excellent scientists being churned out by what has come to feel like a low paying research mill. Further, it is obvious that these conditions (low pay and low job security) disproportionately impact those with less financial resources and women in their child bearing years.

Existing NIH policies, programs, or resources

Perhaps the number of postdocs in training for academic research pathways should be roughly commensurate with the jobs that will be available. I believe the decline in postdoc numbers is indicative of postdocs voting with their feet —we have poor job prospects and extremely low pay. What are the incentives to stay? Every day I think about quitting and looking for work at a plant nursery, and I'm not alone. This is not to say that postdocs on non-academic pathways should not exist, but currently it doesn't seem like there's a good training model and it feels like we're rolling dice hoping something will work out. Perhaps training programs could be created in collaboration with companies to determine the skills they're actually looking for and incorporate these into hybrid training programs. In order to maintain competitive research programs perhaps we should employ more research scientists and ensure that these positions receive adequate pay. NIH pay scales should take into account high cost of living areas; postdocs shouldn't be rent burdened and they must be able to afford childcare.

Proven or promising external resources or approaches

I had a colleague who did a project with a tech company that I believe was funded in some manner by this organization: https://www.momentalfound.org/. This proved to be the experience that landed him a great industry job, even though the bulk of his skills were built in his academic training. It seems that companies are looking for tangible outcomes beyond academic publications, and it would be nice if there were more opportunities to do hybrid training like he did. Notably, purely industry postdoc positions aren't helpful to maintaining academic research, which is vital for the US. And some postdocs may prefer to keep both paths open —which is why I think hybrid training may be useful. Perhaps this should be the rule rather than the exception if we want to reduce the chance of discrimination in faculty hiring and better train the scientific workforce.

Response 2239

Perspectives on the postdoc roles and responsibilities

My postdoctoral position is simultaneously my first employment as a PhD, and the next step for my academic training. I view it as an both an opportunity to receive training that I was unable to receive as a graduate student to prepare me for my independent research career and time for me to build my own independent research track record. As a postdoctoral fellow I simultaneously lead my own independent research under the advisement of my mentor, mentor graduate and undergraduate students inside and outside of the lab, and lead outreach efforts across campus and the country.

Fundamental issues and challenges

Pay. Explicitly the base pay is too low. First time Postdocs have just graduated from PhD programs where they were already severely underpaid. Continuing the academic track as a postdoc which can last anywhere from 2-6 years is a extremely tough decision to make for most graduates. Especially for first generation PhDs and doctors of color. I personally was only able to afford to do so due to a pilot fellowship that was funded by the NSF that has a required stipend of 75,000 a year (Which is well above the pay for most NIH postdoctoral fellowships). Even still I have to be very careful with my budget and cannot afford basic life milestones such as purchasing a home (Instead of renting) or affording to have children. Milestones that are common for individuals of the same age.

Doing a postdoc for most individuals means having yet again a opportunity cost of living your life for the promise of a academic job that might not even be available. The pay is way too low for the average person.

Existing NIH policies, programs, or resources

Increase stipends/pay for graduate students and postdocs. Require improved healthcare for graduate students and postdocs and provide funding in addition to this pay to afford this health insurance.

Proven or promising external resources or approaches

ASEE eFellowship, Schmidt Science Fellows, and HHMI Hanna Gray Fellowship.

Response 2240

Perspectives on the postdoc roles and responsibilities

Roles:

- Independence in designing experiments
- Independence in asking novel research questions
- Bring new technology/methods into the lab
- Mentoring other newer postdocs, grad students, undergrads that come through the lab

Responsibilities:

- Become the point of contact person for training
- Become the point of contact person for lab management
- Become the point of contact person for grad/undergrad students and prep fellows
- Heavily write grants

Fundamental issues and challenges

Fundamental issues:

1. Pay, pay, pay: academic postdocs are heavily underpaid therefore inhibits recruitment, retention, and overall quality of life of postdoc trainees == at minimum, all postdoc should be making 70,000 and also dependent on the city where they postdoc
2. PI wants already *trained postdocs in their areas of research vs. spending the time to train a postdoc that is interested in learning/enhance their previous grad training
3. PI expectation that research is more important than pay

Existing NIH policies, programs, or resources

Increase postdoc pay scale

Proven or promising external resources or approaches

No response

Response 2241

Perspectives on the postdoc roles and responsibilities

1. A postdoctoral position is a short period (approximately 3 years) of mentored research training to become an independent researcher.
2. Postdoctoral trainees should make decisions regarding the direction of their research projects.
3. Postdoctoral trainees should be viewed as budding researchers, and valued by research mentors for their intellectual contributions to research projects.

Fundamental issues and challenges

1. Current postdoc stipends do not reflect the cost of living; stipends need to be increased to recruit and retain postdocs.
2. Inconsistencies in postdoc stipends across US universities make it challenging for some institutions to retain their postdocs; there needs to be some consistency in postdoc stipends across universities.
3. Greater number of job opportunities in industry versus limited academic positions.
4. Lack of healthcare and retirement benefits for postdocs.
5. Lack of support by some research mentors for the work-life balance needs of postdocs.
6. Fear of taking vacation time, to which postdocs are entitled, due to repercussions/displeasure from research mentors.

Existing NIH policies, programs, or resources

1. The NIH could provide more funding opportunities for postdocs, including international postdocs, so that they are less dependent on their research mentors for funding, and free to steer the direction of their research projects, thus making them better prepared to apply for faculty positions.
2. If possible, international postdocs should be granted a category of visa that does not restrict their research training with a specific research mentor, but allows them to switch mentors and labs should the need arise, without fear of having to go back to their home countries if they are terminated by a research mentor. This will relieve them of an enormous amount of stress, so they can focus on their research.
3. The NIH should mandate that all new postdocs take an NIH-created online training/orientation to better prepare them for their postdoctoral experience. Many international postdocs may not be fully aware of what is required of postdocs in the US.
4. Research mentors should be mandated by the NIH to undergo mentorship training prior to hiring postdocs. This should be followed by an annual refresher mentorship training.

Proven or promising external resources or approaches

No response

Response 2242

Perspectives on the postdoc roles and responsibilities

The postdoc position is designed to help scientists transition into independent research careers by providing training at the bench and with career development with mentorship in things such as grant writing, leadership, budget planning and more.

Fundamental issues and challenges

The fundamental issues include lack of faculty positions, especially tenure-track positions, low wages, relocation requirements to get new training. The postdoc position is designed to train people for an independent academic research position. If those are limited, postdocs have to look to other places for jobs. Industry is a likely place to use the skill set a person obtains from their graduate work and many don't require a postdoc experience and have higher salaries. So it makes sense to move into new position without doing a postdoc to increase a person's earning potential. This situation is more motivating if a person needs to stay in a certain location because of family reasons or having strong community support in their current location.

Existing NIH policies, programs, or resources

Better pay would make the position more competitive with industry. But also a decently paying research career pathway in academia where a people can use their expertise but not be a principal investigator may kept more people in academia. Or honestly more faculty positions because it is not worth delaying getting a higher salary if getting a faculty position is unlikely.

Proven or promising external resources or approaches

No response

Response 2243

Perspectives on the postdoc roles and responsibilities

To me a postdoc is a position where individuals are trained to build skills more akin to developing novel and important research questions others aren't thinking about. Ideally this is done using the most agnostic approaches while upholding the highest standard of scientific rigor. This should be done in tandem with furthering their technical skills in other areas other than what they were trained in during their PhD. This combination of conceptual and technical development should prepare the individual to be a self-sufficient and adept researcher who can effectively guide others down a similar path.

Fundamental issues and challenges

By in large pay scales are not competitive with industry jobs. The skills a postdoc is required to build are more rigorous than those required to attain an industry job. At the same time industry jobs often pay more, and sometimes 2 or 3 times that of a postdoc salary. Many people aim for a healthy work-life balance, and the ability to live comfortably on a postdoc salary in many places, while trying to build a life/ investments for the future is often difficult in most college towns.

This touches on another issue. Universities are ran like businesses. In my opinion, this is the antithesis of what a university is meant to be, as an institution of learning and advancement for the general public much less the rest of humanity. Since universities are ran like businesses, they tend to operate on and infinite growth scheme where the profit margins are expected to be in the black compared to the year before. This causes a constant increase in tuition rates for undergrads and housing costs for dorms. This has a 2-fold impact on postdocs. First, many people graduate with exorbitant amounts of student debt from undergrad, which the current salary rates for postdocs at most universities essentially requires them to accrue more debt through their postdoc(despite loan forgiveness or extension programs). Many people find postdoc positions unreasonable for this reason. Second, as on campus housing costs increase with the infinite growth rate, this causes off campus housing to increase similarly. This impacts the area around the university, not just the undergrads looking for housing. Thus forcing postdocs to choose to either live close

and pay a lot more, or live farther away and pay for a larger commute. Either way causing them to pay more and disincentivizing pursuing a postdoc position.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

There is growing divide in political representations in academia (I am omitting the merit or my personal opinions on the matter in an attempt to be as objective as possible). By in large, academia is extremely democratic or liberal and is largely pushing for greater inclusivity/ diversity and open discussion across many demographics and topics. Yet, a vast majority of those in higher levels of academia are democratic (https://www.pewresearch.org/politics/2016/04/26/a-wider-ideological-gap-between-more-and-less-educated-adults/). This gap increases the higher you go in the academic hierarchy. It is possibly a large swath of the public are intentionally not pursuing postdoctoral degrees as they realize there perspectives on many topics are often at odds with their peers. If there were a way to make academia more accessible in general; or postdoctoral positions more attractive as potential career paths to those with more conservative views a declining population of academic participation might be brought back into the fold.

Response 2244

Perspectives on the postdoc roles and responsibilities

Training position for future science career (academic or non-academic). Temporary.

Fundamental issues and challenges

Many challenges versus other classes of non-tenured researcher. Employment is contracted (often) on a yearly basis which is shorter than the expected training period. Often no support outside the mentored lab (no committee, no co-PI, no network), frequently visa is dependent on employment status. Precarious position. Even if postdocs earn additional awards (e.g. merit-based fellowships through NIH or private sources), stipend is often not higher than base salary (may be lower as well) and have postdocs transition to university "contractors" thus costing them their health insurance, 401K, and other benefits.

Additionally, postdoc phase coincides with the age at which many researchers choose to be parents. There is a "parent penalty" that penalizes the parent that is more involved in childcare (most often women) in addition to the parents who take time off for maternity and parental leave. This, combined with the financial costs of taking care of children and finding adequate, affordable childcare, lead many postdocs to opt out of continuing their academic postdoc in favor of a better compensated role.

Existing NIH policies, programs, or resources

More financial resources to support postdocs (e.g. increased salaries, hardship funds, more parental benefits, retirement funds). In some states such as Washington State, the base salary for postdocs (0 yrs experience) will rise to over 80K/yr. While this level of funding is likely to encourage more postdocs to accept postdoctoral positions, unless PI grants are increased to account for this salary raise, PIs in WA will be incentivized to not accept postdoctoral trainees or contract for shorter periods to conserve grant funds.

While stipulating that NRSA fellows and career-development fellows are allowed to take time off for maternity/parental leave is beneficial, it is unfortunate that the award is not given additional funds to support the fellow (e.g. 3 extra months of funding added for 3 months of leave). Additionally, while parental supplements (e.g. to F32 and K99) are useful, the small monetary level of these awards (2500/yr) may only support childcare for 1-2 months in many locations. Increased funding would be beneficial.

Lastly, there are supplements to various NIH awards for maternity/parental leave that support hiring additional support staff. However, the short duration of these awards (and the fact that these supplements are available for K99 fellows but not for those in the R00 phase) mitigate the potential of the award. Hiring additional staff is laborious and these contracts are usually for at least a year. It is difficult for researchers without another source of financial support (e.g. PI, other personal grant) to find the funds hire support staff for an entire year. More funds should be provided to mitigate these issues.

Proven or promising external resources or approaches

No response

Response 2245

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Some of the grant programs are restricted only to US citizens.

Proven or promising external resources or approaches

No response

Response 2246

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a necessary step for pursuing academic careers. It provides space and time for people to be more independent, learn new skills, and develop research programs. However, the fact that many people do not stay in academic positions, primarily due to the paucity in available positions, means that the training as a postdoc essentially serves as time where faculty have access to highly skilled and cheap labor that often leads to exploitation. And this is the result of already tight budgets due to lack of funding and grants for faculty. This issue is the same with graduate students, in that after their "training" period, they are essentially highly skilled labor.

The demands placed on postdocs to perform research and publish and apply for grants means that other important issues (DEI, education, training, family) do not get attention they deserve as none of that work is "rewarded" in that they are not considered important in the faculty hiring process. Caring about and working on these additional issues —issues that should be responsibilities of everyone in academia — means that less time is spent doing the only tasks that are used to evaluate people for the already limited number of positions. This incentive structure results in rather selfish behavior and ends up rewarding said behavior, and these people then go on to become faculty.

Postdoc positions do allow people to explore non-academic careers and institutions are making efforts to allow and encourage people to do so. This, however, ends up becoming very mentor-specific, and in terms of networking opportunities, this sort of work is not considered "part of the role" of being a postdoc, more like an extra activity that you do if you want to explore these alternate career paths.

Fundamental issues and challenges

The biggest issue is money. Money that is not commensurate with the demands, stress and efforts of the work and responsibilities placed on postdocs. Money that does not scale with inflation, that is not performance related, that is not enough in terms of benefits such as retirement. Couple this issue with the fact that childcare is expensive if even available it makes no financial sense for people to pursue a postdoc if they do not intend to go to academia. Compared to salaries of people who have equal training or even less training (people with bachelor degrees are making more in industry science than postdocs make after 5+ years of training), why would people want to be a postdoc, even if "temporary"?

The second biggest, and only slightly less important, issue is the lack of faculty positions. There aren't enough of them, and many people recognizing that do not pursue this "temporary" job that can last 8+ years that doesn't even guarantee a faculty position at the end of it.

Fixing these 2 issues will result in much greater recruitment, retention, and satisfaction, thus improving the quality of life of trainees. And while understandable that the NIH only has a limited budget, the NIH needs to work with congress to increase budgets for everyone.

Existing NIH policies, programs, or resources

As a non-citizen and non-resident, a lot of NIH programs do not apply to me and people like me. Making these opportunities available to us would help with retaining some people as postdocs as there would be more viable approaches towards attaining faculty jobs. And of course, increased funding levels and increased opportunities that go towards people's salaries commensurate to their training, skill and responsibilities will help people both want to do postdocs as well as become faculty.

Proven or promising external resources or approaches

None that I am aware of

Response 2247

Perspectives on the postdoc roles and responsibilities

I am a graduate of postdoctoral programs for physician scientists. A postdoc position is the time to start one's career, write career awards, and contribute to a mentor's laboratory in a way that advances all parties.

Fundamental issues and challenges

We need to pay postdoctoral researchers a fair and comparable rate on their grants. I wish to speak directly about physicians in a postodoctoral and early career status. K23 awards provide an absurdly small amount of money for salary that is supposed to be 75% of time. This poor reimbursement means that physicians must choose to take a pay cut to stay in research; this is disproportionately unfair for those with high amounts of debt or come from disadvantaged backgrounds and minoritized groups. This is causing physicians to not enter research, and drop out more often.

Existing NIH policies, programs, or resources

K23 awards should pay commensurately with local geographic areas for physicians.

Proven or promising external resources or approaches

Fair pay for research will provide an important incentive to keep physician scientists in the workforce. Otherwise they will keep dropping out.

Response 2248

Perspectives on the postdoc roles and responsibilities

Postdocs are in large part the group of workers that do the bulk of the research for any given lab. They are fully trained versions of graduate students without the burden of classes and are like novice PIs without (usually) the constraint of grant writing and class load. Their job is usually to do the bulk of the leg work on their given project, run their lab in absence of their PI, train and mentor graduate students on proper lab procedures, provide progress updates that the PI can manage and relay, and otherwise support the success of their PI. Traditional postdocs usually have milestones for recording their progress in the form of presentations at conferences, publications, and academic awards. Some postdocs have less traditional roles and will take on the job of researching and forming a commercial aspect to the research when the PI is unable to take time away from their institution.

Fundamental issues and challenges

Most of the issues around postdocs stem from the issue of compensation. There are institutions that will treat postdocs like they are still graduate students by giving them some of the same benefits as students, however, they will take away any benefit possible by saying postdocs are not students but more like staff. This leads to the issue of why postdocs will not be treated like staff and at most institutions are seen as "temporary" or "in-training" without providing any form of training metrics for the postdoc and not switching them from "temporary" when they have been employed for 12 months or more. Another issue around postdocs is the attitude those with the power to impact postdoc lives have with regards to postdocs. There are too many people that think since they had to deal with harsh conditions as a postdoc that all postdocs must deal with the same or similar conditions. The part they do not keep in mind is that times have changes since their time as a postdoc and industry is offering roles with 2X compensation and magnitudes better work life balance. The institutions have it in their head that they only want those who

"want it enough" but do not attempt to reward those who are willing to go through the hellscape of postdoc life, therefore driving them away.

Existing NIH policies, programs, or resources

My home institution is one that bases its treatment of postdocs off of the NIH policies released. The NIH needs to be a leader in changing the postdoc landscape making the overall experience for postdocs much more pleasant. NIH needs to try to make itself more competitive and keep up with factors like increasing cost of living, social changes occurring nationwide, benefits industries are offering that they can replicate, and what different occupations might need to be competitive with industry. For example, a biology postdoc funded by NIH vs a biomedical engineering postdoc funded by NIH would need differing levels of compensation to be competitive with the industrial options for said postdoc. There should be a bigger compensation by the NIH for funding projects that have a commercialization aspect as these projects are taking postdocs and PIs that would thrive in an industrial application and allowing for the expansion of science without alienating those bright minds who don't just see the science but see why the science is important.

Proven or promising external resources or approaches

I have no examples of this, but I am sure there are many models that the NIH can pull from to see what is a good way to bring in postdocs, keep them in the academic/research space, and enhance the overall ecosystem. The NIH should not be afraid to look outside of US based systems as well and outside of the science community to find programs that work and NIH needs to be willing to adapt the successful programs they find to their target audience (postdocs). The biggest thing NIH needs to do is see postdoc positions for their true value as the group that truly moves research forward and not just as cheap labor that can be exploited as the only way to academics is presented to be through postdoc positions.

Response 2249

Perspectives on the postdoc roles and responsibilities

Training position for a future permanent position in academic or industry research as faculty or scientist

Fundamental issues and challenges

Pay is generally across the board poor. Number of available faculty positions is very low, making it ultra-competitive to find one. Institutions put out too many PhDs relative to the number of jobs taking PhDs. Pressure from PIs to produce data.

Existing NIH policies, programs, or resources

Expand institutional training grants

Proven or promising external resources or approaches

No response

Response 2250

Perspectives on the postdoc roles and responsibilities

A postdoctoral research position to me means taking the tools that you develop in doctoral training, and gaining additional tools that you need to establish yourself as an independent investigator.

Fundamental issues and challenges

The current structure deemphasizes independence during the postdoctoral training period. Given that postdoctoral trainees only have 4 years to obtain a K99, this requires a project that is ready to go the day the postdoctoral trainees walk into their new lab. There is no room for changing a postdoc mentor, and on the current K99 timeline, there is no room for the trainee to develop their own project. Further, NRSAs on this timeline also have to be pre-casted by the mentor. To reach these milestones, a trainee must rely on the mentor's lab space and personnel while simultaneously completing their obligations to their mentor. It seems under these conditions that receiving a K99/R00 relies heavily on choosing the right postdoctoral lab and correct project (which may be out of the trainee's control).

Existing NIH policies, programs, or resources

Expand the K99/R00 timeline to 6 years. This would allow for project failures, a single mentor change (if necessary), and ample time for longer projects to reach publication. Most postdocs seek a new career once this traditional path to independence expires. I took an alternative route and was fortunate enough to secure a Research Track position to try to secure R01 funding; many postdocs do not have this option.

Proven or promising external resources or approaches

No response

Response 2251

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is to learn how to independently work on various projects and learn the skill sets needed to apply for funding and operate as a principal investigator.

Fundamental issues and challenges

Graduate students have a very clear structure. Postdocs have little to no structure. A major limitation is that most funding opportunities targeted to postdocs who want to become PIs are required for submission by their 3rd year. Most don't start thinking about the next steps until the 4th year of their postdocs, a year too late for funding applications.

Existing NIH policies, programs, or resources

Annual checks required for all institutions with a clear path outlined for how to transition from a postdoc to a next career phase.

Proven or promising external resources or approaches

The biggest loss comes at the end of the postdoc position with no support on available direction.

Response 2252

Perspectives on the postdoc roles and responsibilities

Postdoc is the transition from graduate school to an independent position. Postdoc suppose to conduct research and gain the capability of designing, conducting and writing the manuscript independently.

Fundamental issues and challenges

The salary is low for postdoc comparing with industrial position, which largely hinders the passion of graduate students.

Existing NIH policies, programs, or resources

Need more funding opportunities for international postdocs since not all the postdocs holds permanent residency.

Proven or promising external resources or approaches

Improving salary and increasing faculty positions.

Response 2253

Perspectives on the postdoc roles and responsibilities

I feel like they're extremely underpaid for the level of work and degree they have. They do the same work as an industry position but typically make under 70K a year

Fundamental issues and challenges

There's a lack of academic funding right now which makes positions competitive and requires the worker to take on additional roles within a lab because there's no money to hire extra help (labs are understaffed)

Existing NIH policies, programs, or resources

Create more opportunities for post-graduate funding or increase the number of approved proposals for the ones that exist now

Proven or promising external resources or approaches

No response

Response 2254

Perspectives on the postdoc roles and responsibilities

Responsibilities—generating publication quality data in well established projects and new projects alike, mentoring other members of the lab (grad students, undergraduates, etc), maintaining and setting up lab equipment, writing articles, reviews, commentaries, fellowship, and grant applications

Fundamental issues and challenges

1. Pay and benefits are not commensurate with the level of training
2. Visa process is burdensome for foreign nationals
3. American science is falling behind other counties
4. Long training path and poor job security, "tenure" may be removed from public universities in the not so distant future.
5. Lack of protections afforded to PhD students (through the graduate program), staff scientists (HR), and faculty (tenure)

Existing NIH policies, programs, or resources

Reduce burden for setting up T32-type funding mechanisms across universities

Proven or promising external resources or approaches

I think NIH intramural does a good job of centering the postdoctoral experience, offering alternative job opportunities and training

Response 2255

Perspectives on the postdoc roles and responsibilities

Too much work and pressure, not enough pay or benefits, and no academic freedom. Often doing the work of many graduate student with the added pressure of having to be know everything.

Fundamental issues and challenges

The pay is too low, the hours are too long and not enforced (work/life balance).

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Have more career development opportunities.

Response 2256

Perspectives on the postdoc roles and responsibilities

Leading pre-existing projects and proposing research directions to PI, advising graduate students and lab techs within adjacent projects. Coming in for longer hours than initially listed in job description.

Fundamental issues and challenges

Cost of living is rising and post doctoral researchers don't receive enough salary or benefit compensation for the amount of work expected. Work done exceeds hours listed in initial job description. Labs are often understaffed which results in post-doctorates having to take on more responsibilities.

Existing NIH policies, programs, or resources

Allotting budgets for post doctoral relocation and trial periods not only for the employer, but also for the postdoctoral trainee in order to create more flexibility, which would result in higher job satisfaction.

Proven or promising external resources or approaches

Greater compensations and flexible work schedules by employers could air job satisfaction and working environment. Hiring staff to handle basic lab chores/preparations reduces responsibilities put on post-doctorates. Compensation for relocation by institutions would also improve post doctoral recruitment.

Response 2257

Perspectives on the postdoc roles and responsibilities

The purpose of a posted is to apply graduate training to work as an almost completely independent researcher. It is also with the intention to cultivate a project/technique that can be transferred to your own individual academic lab. Usually scientists intending on being a PI seek a postdoc. But generally a postdoc is useful to increase training even if you want to go into industry. A postdoc writes grants, gets their own funding, designs and troubleshoots their own project. Also, postdocs seem to have more roles of training, laboratory management, and lab chores (more than a graduate student or staff scientist). An important end point of a postdoc is one of more impactful papers.

Fundamental issues and challenges

Lack of payment, heaviest workload in the laboratory setting, ambiguity of length of postdocs (is it 1-8 years?!). Is it actually necessary for any jobs outside of academia?

Existing NIH policies, programs, or resources

General support for postdocs. There are academic groups that protect graduate students, but nothing for postdocs. There should be more pay, benefits (including child care).

Proven or promising external resources or approaches

Postdoctoral salary is no competitive at all. The enticement to work in a new lab (new skills, new environment, unset time frame, insecurity of success) for such little pay is nothing unless someone is completely dedicated to be a PI.

Response 2258

Perspectives on the postdoc roles and responsibilities

Training period to expand your expertise and skills either in preparation to run an academic laboratory (+/—teaching) or go to an industry position. Involves mentoring. Doing things independently.like developing projects, training students, getting grants, etc.

Fundamental issues and challenges

Difficult to have children during postdoctoral years. Difficult to have a PI that will let you develop your own projects. The cost of childcare. Having no agency and ability to advocate for yourself.if your are having a toxic interaction with a co-worker, your career if at the discretion of your boss. Not enough postdoctoral opportunities in places that feel safe for marginalized communities. And places that don't feel safe for marginalized communities are not options.

Existing NIH policies, programs, or resources

K award eligibility of 4/5 years of a postdoc excludes people.

K award is limiting when your PI won't let you write a grant on what you are working on in the lab or develop preliminary data on the project you designed.

K award success rates (as well as everything else during your postdoc) are highly dependent on the support from your mentor.

There needs to be a direct communication from the NIH to the PI and postdoc about what is required to get a K99.i.e. the need for preliminary data.otherwise it is just a waste of time.

I would like to apply for MOSAIC K99 but have run out of eligibility. Applied for K99 (before there was MOSAIC) with a new project and no preliminary data and got a great score. Than ran out of eligibility.

How is this situation going to affect my academic job search?

More funding opportunities for postdocs!!! Especially since demonstrating the ability to obtain funding is a major factor in getting an academic job.

Proven or promising external resources or approaches

No response

Response 2259

Perspectives on the postdoc roles and responsibilities

A period to gain independent research skills that will enable one to open their own research group.

Fundamental issues and challenges

Sufficient financial support. People in postdoc training programs typically have dependents or want to have children during their training period. Not having a salary that competes with industry/other opportunities prevents people who lack other financial support (family, partners, etc) from pursuing postdoctoral training. This can disproportionally impact first generation, low income, and URM people.

Existing NIH policies, programs, or resources

Change minimum salary regulations and force institutions to increase pay according to location-specific cost of living. Institutions use the suggested NIH minimum pay guidelines to justify paying postdocs low salaries in cities with high cost of living

Proven or promising external resources or approaches

No response

Response 2260

Perspectives on the postdoc roles and responsibilities

Perform research projects as well as receive scientific training for future career development.

Fundamental issues and challenges

The biggest issue the current postdoc salaries. The next one is the uncertainty and timeline for individuals who would like to pursue academic positions after postdoc training.

Existing NIH policies, programs, or resources

Increase the current postdoc salaries, especially under the financial burden caused by COVID.

More training opportunities for lab management and Human Resources management for postdoc who would like to pursue academia and for early career young investigators.

Proven or promising external resources or approaches

No response

Response 2261

Perspectives on the postdoc roles and responsibilities

My experience with what a post-doc position means is largely defined with my personal experience with post-docs in the lab I work in, and labs I have rotated in. It seems that post-docs serve an often

vague/ambiguous role within their labs (it seems very lab-dependent). The common thread (besides the ambiguity of the role), I have noticed is that they're expected to carry a large burden of the responsibilities of the lab. This includes research-related responsibilities, mentoring-related responsibilities, lab upkeep, etc. When I started in my lab, we had no post-docs. The addition of a post-doc on my project has made a huge difference in my experience in the lab. They've been a wonderful mentor and resource for me, and also, their work has inspired me to move my work in new directions.

Fundamental issues and challenges

I think the vagueness of the role, mixed with the heavy expectations that professors/institutions have for the work a post-doc can/should be producing results in a very unattractive job. How many years of education do post-docs have? In what other fields do people with that much experience and education have to settle for a job that has such few sick/vacation days, such low pay (that does not track with amount of hours worked), and such negligible benefits (retirement?)

Existing NIH policies, programs, or resources

I think, ultimately, the NIH should try to put in more resources towards the goal of strengthening the NIH's public standing/standing amongst academics/scientists. I think if the issue with paying post-docs more is related to lack of funding, this is a doom spiral. The less post-docs make (as other industry-related job's wages go up), the less people will want to become post-docs, the more exclusive the position becomes, the less people think of academia as an open and public place where scientists can grow and build up their future/ career-prospects. The NIH should support more lobbying for supporting the NIH if that is what is necessary to increase funding if funding increases are indeed necessary for improving job-outlook for post-docs.

Proven or promising external resources or approaches

No response

Response 2262

Perspectives on the postdoc roles and responsibilities

More independent research training. Postdoc is the time to get exposed to research in a more independent manner. Postdocs's main job is to generate data and publish papers and drive research directions in the lab. Besides research, it is also the time to get exposed to funding application ect

Fundamental issues and challenges

Underpayment and poor career trajectory. Postdocs are kept longer than they want to (despite publishing well) by their PIs. In some labs postdoc are used as exploitation.

Existing NIH policies, programs, or resources

Please provide more protection on postdocs!

Proven or promising external resources or approaches

No response

Response 2263

Perspectives on the postdoc roles and responsibilities

Postdocs are the project leaders to lead the specific project(s) under the PI's supervision

Fundamental issues and challenges

Those qualified (top 10%) as project leaders often arrive with fellowships, while the rest of the 90% have no own funding nor are qualified to be hired as a project leader at Year 0 at least. It is very difficult for the PI to support this 90% of people with the high salary set up by the NIH. This 90% of people also do not necessarily want to work harder to be paid higher. The young generations (especially US citizens) prefer balancing work and life and end up leaving academia since they realize the current academic system is structured only for the top 10% of people. To conduct research as a group, however, we need more personnel. The NIH may consider setting up another postdoc career/grade for these people (e.g. less paid

but having more vacations and less responsibility). Or, provide more supplements to the PI to retain these postdocs for a longer term.

Existing NIH policies, programs, or resources

There are many international postdocs who are fully qualified to receive the fellowships but not eligible to apply for the NIH fellowships. Providing them with more fellowship opportunities will greatly help the lab's research progress, which lifts up this nation's research level in the end.

Proven or promising external resources or approaches

A website where the PI can post the available postdoc positions in the lab will be helpful.

Response 2264

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Pay. The most daunting aspect of being a postdoc—to me—is pay. I really want to stay in academia, but I am not sure if I can afford to, after spending 5 years making below living wage. I want to have a family and I can't start a family without any substantial income. I am afraid that I will have to choose between having a family and staying in academia when I graduate.

Existing NIH policies, programs, or resources

Please increase minimum wage for postdocs.

Proven or promising external resources or approaches

No response

Response 2265

Perspectives on the postdoc roles and responsibilities

I view my postdoc as a training position intended to prepare me for a long-term career in scientific research. My responsibilities include:

1. moving my field forward and contributing to the scientific literature,
2. training undergraduates and graduate students in my academic lab, and
3. serving my institution and scientific community by serving on organizational committees intended to support the institutional/scientific community in various capacities (e. g. serving on a department diversity and inclusion committee).

Fundamental issues and challenges

Given our level of training (completed PhDs) and expertise, academic postdocs at a national level are severely underpaid compared to what our peers working in similar positions in the private sector are paid. Most postdocs are paid only the NIH recommended minimum salary with no additional adjustments from their PIs or institutions relative to cost of living. Because of growing costs of academic research, many postdocs are expected by their PIs to obtain individual funding; however, these fellowships also do not provide compensation relative to cost of living.

Existing NIH policies, programs, or resources

NIH should expand postdoc fellowship funding; additionally, NIH should increase the value of R01s so that PIs can actually pay their postdocs a living wage based on the cost of living in the surrounding area of the academic lab.

Proven or promising external resources or approaches

No response

Response 2266

Perspectives on the postdoc roles and responsibilities

My role as a postdoctoral fellow involves research conductance and development, mentoring research assistants and graduate students, and contributing to grants writing along with the PI. In addition to exploring career development opportunities, and independent grants writing.

Fundamental issues and challenges

I am, as a postdoc, face major issues; first my hire depends mainly on my PI grants, when my PI didn't get a grant, I have to look for another position. Second, the salary for the postdoc is very low (around $50,000), which does not match the postdoc responsibilities and duties.

Existing NIH policies, programs, or resources

We, as a postdoc, can benefit from training in:

1. Career development
2. Grant writing
3. Understanding Grant mechanisms and opportunities

Proven or promising external resources or approaches

No response

Response 2267

Perspectives on the postdoc roles and responsibilities

I think the role/responsibility of an academic postdoc is to learn new skills in a lab outside of their graduate experience, while also offering some expertise to the lab/lab members on skills that have been developed previously. Also, to develop a research program to pursue in the future after completing the postdoc experience.

Fundamental issues and challenges

I think one of the first fundamental issues is the lack of sufficient pay. At our institution, the graduate students technically make more money per hour than a postdoc does, which definitely does not seem appealing. Additionally, this is supposed to be compensated by instruction/teaching, but depending on the postdoc position, there are various degrees of instruction/teaching that occur. Postdocs have, historically, been expected to work long hours, but in the current environment, work life balance is important. Some PI's do not understand that postdocs need to have a life outside of the lab as well to be successful in their career.

Existing NIH policies, programs, or resources

I think there should be more guidance for both the postdocs and the PI mentors as to what a typical schedule looks like, what the expectations are of the skill(s) being developed, what the expected timeline of the postdoc might be, and what program(s) are available to apply for extra funding or to seek support. In my experience, I started my postdoc and none of this was really clear. I understand that postdocs vary from lab to lab, but anything that can be standardized should be outlined and any recommendations on how to successfully navigate the postdoc space such as things you should be looking for or doing and what point during the postdoc would be helpful.

Proven or promising external resources or approaches

No response

Response 2268

Perspectives on the postdoc roles and responsibilities

Based on my experience as a postdoc and what I have heard/seen from other postdocs, generally speaking postdocs will be expected to fulfil a variety of different roles for the lab. They will need to

formulate new ideas and perform experiments, and also act a source of expertise for younger students and trainees in the lab. They are also expected to quickly generate usable data and be able to publish papers in a relatively short timeframe from when joining a lab. In addition to to their responsibilities as researchers, they also often must secure additional funding for themselves, and so are expected to devote a significant amount of time to applying for grants, awards, and fellowships, particularly early on in their position. They are also expected to contribute to the general management of the lab. However, I think that postdocs are often spread too thin, and that they should be able to focus more on research and gaining new experience and skills instead, as that is the primary purpose of doing a postdoc, in my opinion.

Fundamental issues and challenges

The single greatest thing that could be done to increase the amount of individuals who want to become and stay a postdoc is to increase their pay. Freshly minted PhDs will have a variety of options after graduating, including going to industry, government positions, and the traditional academic postdoc. However, most options both pay significantly more and have a better work-life balance when compared to an academic postdoc. Thus, it makes sense that most individuals would simply choose not to postdoc, as it does not benefit them. Historically, a postdoc would lead to a tenure-track faculty position, but this is becoming increasingly unlikely due to the low number of available faculty positions, making it an unattractive end-goal for the majority of PhD holders. And since other options pay better and have more reasonable schedules and commitments than a postdoc, it makes the entire concept of doing a postdoc feel outdated. From my experience and from what I know about other postdocs, generally the reason for doing a postdoc is because a better job was not immediately available, or to gain a specific set of skills that were not gained during graduate school, but still with the intention to leave academia once those skills are acquired. In addition to this, I think the idea of what a postdoc is actually responsible for doing needs to be more defined, I think some labs use postdocs as highly experienced, but cheap labor. This makes the whole postdoc experience feel very exploitative. To summarize, the absolutely fundamental issue that is preventing people from even wanting to consider a postdoc is the poor pay and poor work-life balance. Without fixing these two critical conditions, I cannot see how individuals will feel compelled to do a postdoc.

Existing NIH policies, programs, or resources

To my knowledge, most existing programs and resources that the NIH provides revolve around assistance for grants and awards. But this may not be helpful for individuals who are not committed to academia. There needs to be more flexibility in postdoctoral training to allow for future career goals other than academia. In addition to this, despite the so called "need" for postdocs currently, having to constantly secure our own funding feels a little backwards. And considering the small number of postdocs who will actually obtain funding through the NIH or related funding agencies, there is not much incentive for individuals to consider doing a postdoc, as you already feel behind from day 1. I will be honest, I don't know what kind of resources the NIH could provide to enhance the postdoctoral training experience. The biggest issues that postdocs face, mainly pay and work load, cannot always be directly regulated by the NIH.

Proven or promising external resources or approaches

I don't know if there is anything that has been proven to work, but several universities, including the University of California, Princeton, and MIT have announced salary increases for postdocs. While the increases are still well below what a PhD holder would make in industry, it is better than nothing. I am not entirely clear what kind of regulations the NIH can enforce when it comes to salary, but at the end of the day if a postdoc struggles to make a livable wage, then postdocs are going to cease to exist. Postdocs want to feel valued, and right now it seems that academia is showing us just how little we are actually appreciated. If nothing changes, or if the changes are not substantial, I just don't see how the idea of "doing a postdoc" is going to survive the next few years.

Response 2269

Perspectives on the postdoc roles and responsibilities

I expect a post-doctoral position to advance my technical skills, mentoring and management skills, and increase my networking circle. A post-doc should be allowed to drive their own project.

Fundamental issues and challenges

From the academic side, the main issue is salary and student loans. We are mostly in our late 20's or early 30's but we cannot afford to raise a family. We are also expected to work over 40 hours a week. Industry positions offer higher salary so we can start paying down student loans and still have some money leftover for living expenses. Industry also offers better working hours. Quality of life is largely dependent on the PI. If the PI has unrealistic expectations or lacks basic compassion/human decency, then your quality of life and work/life balance will be very poor.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2270

Perspectives on the postdoc roles and responsibilities

The postdoc should be a time to hone skills and a program of research. However, how it stands, it places PhDs back into a trainee role where they are often used and taken advantage of by individuals and institutions. Individual "mentors" may use postdocs to further their own work. Institutions may use trainee-related dollars but then refuse to support the hiring of trainees into faculty-level positions.

Fundamental issues and challenges

There needs to be higher pay and support for postdocs. For many places in the US, ~$55,000 is not a very livable wage, especially after the expense of going through graduate school. Additionally, there needs to be better resources and support for postdocs. "Mentors" and institutions often use trainee status to excuse not providing postdocs with the same benefits as regular employees. For example, many postdocs do not get retirement or life insurance benefits. For PhDs with families, this may be heavily considered in whether to stick it out in academia or go find a higher paying position in industry. By not making postdoc positions equally appealing to industry, we truly are missing out on talent that could further society rather than the pocketbooks of the 1%.

Existing NIH policies, programs, or resources

For T32 and like positions, the payback requirement should be eliminated. Additionally, more information about how to complete T taxes and support for how to do them is necessary. I have nearly $4000 in back taxes to pay due to poor communication about the award, and I must pay a tax expert to deal with my unique situation. My T also made it extremely difficulty to be approved for a mortgage —there should be more programs and supports for PhDs to be able to achieve life milestones that those in industry can achieve years ahead of PhDs simply by having steady employment that isn't seen as an "award." Additionally, as a result of the pandemic, I was unable to collect data to make myself marketable for a K99 award (one of the few NIH options available to me) as the guidelines state you must not have more than 4 years of postdoc training, unlike other K mechanisms. Finally, more support for postdocs with families is needed —paid family leave.

Proven or promising external resources or approaches

Better pay, paid leave, advocates for trainee rights

Response 2271

Perspectives on the postdoc roles and responsibilities

I see the postdoctoral phase as a scientist position that should facilitate the transition to an independent scientist.

Fundamental issues and challenges

1. The institute in which I am currently doing the postdoctoral training does not provide easily accessible temporary housing for international students and does not provide at all subsidized housing
2. Until few months ago the current institute was using NIH MININUM salary table as salary table, with very little or no possibility of negotiation. NIH should indicate what are average and median salaries publicly in their website to show transparency and demonstrate to other institutes that those MINIMUM were really MINIMUM and not suggested salaries. Especially for institutes in much more expensive cities like Boston.
3. NIH should support salary transparency to have a more positive completion and fight the offering of minimum salaries. This will be pivotal to retain people into basic science.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Ask IRS to have postdoctoral fellowship to be taxed by the institutes.

Response 2272

Perspectives on the postdoc roles and responsibilities

To me, a postdoctoral position is an opportunity to learn new skills. The goal of which is to complement my graduate training, to create a unique skillset for me as a potential investigator.

Fundamental issues and challenges

Academic postdoctoral salaries are typically very poor compared to other career options, and the expectation of hours worked is much higher. It can be very difficult to justify spending 3-5 years in this environment for the slim chance of obtaining a faculty position.

I joined the Army in 2006, used my GI Bill to attend undergrad, and I still left school with >$100k in student loans. The cost of undergraduate tuition exceeded the per-semester cap set on the GI Bill in my 2nd year of undergrad, and congress de-funded the GI Bill 3 times while I was in undergrad (2012-2016). These loans earned $14k of interest while I was a predoctoral student. If not for the current moratorium on student loan interest, I would not have been comfortable accepting an academic postdoc position last year.

Existing NIH policies, programs, or resources

The NIH LRP program is very helpful toward righting the imbalance between the cost of education and the comparatively poor salaries that most institutions offer. If this program were modified to be automatically awarded with a mandatory payback, I believe it would make academic postdoc positions much more appealing to my generation. If I'm not selected for an LRP award by the end of my second postdoctoral year, I will be leaving academia for a higher-paying position.

Separately, the NIH postdoc salary guidelines need to be adjusted for cost-of-living in several areas. Government postdoc salaries already do this based on zip code, NIH could easily use the same adjustment chart on a per-university basis.

Proven or promising external resources or approaches

This survey is an excellent start. I have often felt that the NIH guidelines are "out of touch" with the experiences of my generation of researchers. I love this job, and I hate that I'm in a position where I feel pressured to choose between my passion and my finances.

Response 2273

Perspectives on the postdoc roles and responsibilities

The postdoctoral (PD) position is an essential and crucial step in the career progression of young scientists. It is a transition phase in which scientists are integrated into an existing laboratory and are encouraged to develop an independent research trajectory that can culminate in several different career

options. It is considered a pre-academic step, where successful post-docs wish to stay in academia and progress their career as principal investigators. I don't think a PD should only be considered as a step into the academic world, but I do agree that it should still be considered a "training" phase rather than employment. Successful graduate students stepping into PD are hopefully trained to be excellent and rigorous scientists; they lack training in several other aspects of academic life. PD should be a phase in which they gain operational experience and are trained in fellowship writing, grant writing, administration, and team leadership.

Fundamental issues and challenges

1. Salary expectations are not met. The increasing cost of living, inflation, mortgages, rent, child-care, etc. etc., make it impossible to plan for a stable life, for a family or just for a serene existence. This is aggravated by some big-hug cities being even more expensive than other regions.
2. Grant money is too little for PIs to significantly increase PD salaries.
3. Quality of life for PDs is scarce. Even if PD should be a phase transition, the number of years required to achieve publishable results is increasing exponentially (aka, top-tier journals require more data and have processing times that can easily reach years from initial submission to acceptance).
4. Available positions in academia are limited, and competition for funding is cut-throat.
5. Private can offer salaries immensely higher, so candidates are not willing anymore to "try it out" given that the rate of success (interpreted as employment in a principal investigator, tenure track position) is so low.
6. Offering additional attractive recruitment perks is unattainable by most investigators. Nothing, from relocation expenses, computers, subscriptions, bonuses, and interview costs, is supported by NIH grants, so it has to be from discretionary money. This pool of money is almost impossible to secure, and most of the time is just offered as a startup to new faculties that need that money to start their activities.

Existing NIH policies, programs, or resources

1. Grant budgets have to be revised. The total direct costs of a standard R01 haven't changed in decades. While PD salaries are rightfully being increased, this comes to the expenses of reagents and other fundamental sources for the laboratories. This not only restricts creativity but also doesn't allow us to make any compelling offers when compared to private industries.
2. Supplement for PD recruitment should be offered where after the selection of proper candidates, interview costs can be covered. Additionally, relocation expenses and other forms of bonuses should be allowed as budgetable costs.
3. Job posting pricing should be regulated, and NIH should be running its own official "job board", cutting out scientific publishers like Nature and Science that charge thousands of dollars per job ad.
4. ESI policy should be revisited given the increasing numbers of PD required to acquire first-name publications. Being ESI during the first rounds of NIH grant submissions is essential to survive.
5. Paid-off maternal/paternal leave should be included in a PD contract.

Proven or promising external resources or approaches

Following Twitter "altac" conversation is an excellent instrument to understand what motivated current PD, or prospective PD that abandon science, to abandon science. This could inform on priorities to be satisfied to make the academic postdoc more compelling. In >80% of the cases, the low salary would be cause number one.

Proven resources are to offer a protected path to tenure positions and compelling fellowship packages, but only big (and few) institutions can do so.

Response 2274

Perspectives on the postdoc roles and responsibilities

I view postdoctoral positions as apprenticeships for becoming full faculty members and running a research lab or performing research in another non-academic capacity. This means further time to build my

publication record, learn new technical skills, and develop the "soft skills" required to run a lab and manage the grant application process necessary to fund a lab.

Fundamental issues and challenges

The largest issue is how little postdocs are paid. Our salaries are massively un-competitive compared to industry and are so low that it is a struggle to survive in any semblance of comfort in many major US cities. I have known that I want to pursue the academic research route since starting my undergrad, and I remain dedicated to this pursuit. However, even I have doubts on the logic of my choice when faced with decisions such as if I can afford to repair my car's AC system or when I can reasonably expect to be stable enough to start a family. This is made worse by the fact that I am aware it will only get worse over the next couple of years if things don't change. My salary increase this year was not even enough to cover my rent increase, meaning that I am effectively getting paid less than last year not even considering the increased cost of other areas of life due to inflation. With this in mind, choosing to pursue a postdoc is an incredibly poor financial decision that comes with costs in many other areas of life. It is understandable that many smart people see this as a losing proposition and choose not to pursue a postdoc position.

Long story short, the exceptionally low pay scale for postdocs (well-trained researchers with PhDs) that is not keeping up with the cost of living is a major challenge in the recruitment and retention of postdocs and dramatically decreases our quality of life.

Existing NIH policies, programs, or resources

Increase the NIH minimum postdoc payscale amounts.

Proven or promising external resources or approaches

No response

Response 2275

Perspectives on the postdoc roles and responsibilities

A postdoc is a training position where you further expand your skillset and experience beyond the phd. Postdocs should have a higher level of independence with their research project.

Fundamental issues and challenges

Poor work life balance. Grossly underpaid for the education-level. Often disrespected and taken advantage of, relative to graduate students who generally get more support and respect. The success of a postdoc is measured solely in publications, which can be inhibitory in advancing in your career. Toxic work environments can exacerbate these issues.

Existing NIH policies, programs, or resources

Better career development opportunities. It's difficult to transition to non-academic careers after an academic postdoc (since you are simultaneously overqualified and underqualified having extensive education/training but only in an academic setting). It would be beneficial to have opportunities to gain direct experience in alternative career paths during the postdoctoral training.

Proven or promising external resources or approaches

No response

Response 2276

Perspectives on the postdoc roles and responsibilities

Although not for all, postdoctoral research is still an essential component of academic training for most graduate students. Postdoctoral research is a period for gaining more independent research experience, e.g. thinking independently, designing experiments, acquire the necessary resources and skills to carry out experiments/analysis. Some graduate students are already experienced—especially those who have done independent research before entering graduate school—thus may not need such an additional period of training. As a lab head and PI, I would like to help postdocs who need additional training to foster their independent research skills so that to achieve their career goals, no matter in academia or industry.

Fundamental issues and challenges

Low income, and the huge social pressure of their peers in other fields. Postdocs are generally ~28-35, at their best age of doing frontline research, and might be forming their own families and possibly having babies. Peers of their age in other fields are all making great contributions to their companies, and are being paid much higher than postdocs. Moreover, research associates who just graduated from college are making the same or similar salaries in many places—how ridiculous! All these experiences are making postdoc research a last option for many great young scientists.

I know many professfors/PIs, including myself, who really want to increase salary for their postdocs, but just cannot do that due to NIH grant restrictions. If NIH does not support for higher salaries in their grant budget (especially those fixed grant amount budget), these PIs just could not increase salaries for their talented postdocs.

Existing NIH policies, programs, or resources

https://www.niaid.nih.gov/grants-contracts/salary-cap-stipends

Attached is the NIH NRSA Stipend Levels for postdocs. The suggested salary is so low that it cannot guarantee a sustainable life for postdocs, especially for people in San Francisco, New York, and Boston. Please increase this suggested salary cap to (a suggested) $75,000/year, and more importantly increase the budget for existing grants. Another suggestion is to set region-specific recommended living costs according to institutions/regions, and to calculate the budget during grant application.

Proven or promising external resources or approaches

https://www.science.org/content/article/postdocs-need-raises-who-will-foot-bill#:~:text=The%20push%20to%20raise%20pay,postdoc%20salary%20will%20be%20%2465%2C000.

Response 2277

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be focused on training academic PhDs to run labs of their own. As a PhD, we do not need to learn basic science techniques because getting this degree proves we can design and execute experiments. I see the postdoc position as a place to gain confidence in securing funding and budgeting. In general, I believe this time is the most important time to further developing your managing and mentoring skills rather than focusing on your research. It shouldn't feel like a second PhD, it should be to train on how to successfully organize a lab and set up your future lab for success.

Fundamental issues and challenges

I think it's fairly obvious majority of PhDs don't stay in academia due to low pay and low quality of life and with inflation this will only add more stress on the system. Healthcare isn't included and most people are one health emergency from adding to their already existing student debt that they haven't been able to pay off on their graduate stipend and won't be able to pay off with their postdoc salary. This results in financial stress. Further, there is no incentive to stay in academia when industry pays more than double and has better benefits and quality of life. On top of that you are not forced to jump through hoops to get funding.

Existing NIH policies, programs, or resources

I think it's clear more money needs to be allocated for postdocs and early career scientists if you want rigorous research programs to be retained by early career scientists.

Proven or promising external resources or approaches

If you pay a livable wage (meaning you can reasonable start paying off student debt, afford to live without roommate, feed your family) this will incentive more PhDs to stay in academia. Everyone worked hard to get a doctorate and then you're welcomed to the world at a salary lower than friends without degrees it's pretty depressing.

Response 2278

Perspectives on the postdoc roles and responsibilities

It is a great opportunity to gain more independence and different skillset from PhD training. For me, it was an opportunity to explore and learn a new field, while considering whether I wanted to pursue a career in academia or industry. I developed new research directions in the lab for myself and mentees. The role of a postdoc is also to provide mentorship to students, which I had many more opportunities for compared to when I was a graduate student.

Fundamental issues and challenges

Lower quality of life, low financial income, and lack of professional development support are all challenges that afflict the postdoc recruitment and retention issues we are facing in academia. We can easily double or triple our income by pursuing a different career with a better work-life balance. Many have family considerations to take into account as well. For international postdocs, fellowship opportunities are severely limited and further disadvantage us in this career path.

Existing NIH policies, programs, or resources

More fellowship, training grants, and professional development programs would help to support positions in lab that are not as well funded. An increase in the NIH postdoc salary scale is urgently needed to address inflation and the rapid increase in cost of living. However, it is also critical that NIH establishes a salary scale that is also adjusted for COL since the majority of departments look to NIH to set postdoc salaries. This also should be reflected in the personnel costs of grant budgets.

More transition and early career investigator awards should be made available to help ECIs succeed in obtaining competitive funding.

Proven or promising external resources or approaches

No response

Response 2279

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a temporary research position that is undertaken after the completion of doctoral studies. This position provides an excellent opportunity to gain additional research experience, develop new skills, work closely with experienced researchers, and most importantly, develop grant-writing skills. During the postdoctoral training period, postdocs are expected to conduct independent research, publish scholarly articles, and often teach or mentor students.

Overall, a postdoctoral position can be a valuable stepping stone in an academic or research career. It provides numerous opportunities for professional growth, networking, and further development of research skills and expertise.

Fundamental issues and challenges

Recruiting and retaining high-quality postdoctoral trainees is essential for the success of academic research. However, there are several Fundamental issues and challenges that hinder recruitment, retention, and the overall quality of life of postdoctoral trainees in academic research.

One major issue is the lack of job security and career advancement opportunities. Many postdocs are hired on research grants, and PIs often expect them to work as graduate students without considering their career development. This creates uncertainty and instability, making it difficult for postdocs to plan their future and make important life decisions.

Another significant issue is the inadequate compensation for postdoctoral trainees. Many postdocs receive low salaries and minimal benefits, making it challenging to afford basic living expenses, particularly in high-cost areas. This causes financial stress, leading to burnout and attrition.

Finally, there is a need for better mentorship and professional development opportunities for postdoctoral trainees. Many postdocs report feeling isolated and unsupported, with a lack of guidance and mentorship to help them navigate their career path and achieve their goals.

Addressing these Fundamental issues and challenges will require a concerted effort from academic institutions, funding agencies, and the broader scientific community. Funding agencies should require progress reports on postdoc career development from PIs if postdocs are hired on funded projects. Additionally, institutions and funding agencies should ensure proper career advancement opportunities, fair and adequate compensation, and provide better mentorship and professional development resources.

By addressing these challenges, we can help ensure that postdoctoral trainees are supported, valued, and able to contribute to the advancement of academic research.

Existing NIH policies, programs, or resources

There are several policies, programs, and resources that the National Institutes of Health (NIH) could modify, expand, or improve to enhance the postdoctoral training ecosystem and academic research career pathways.

One approach could be to require progress reports on postdoctoral career development from principal investigators (PIs) if postdocs are hired on funded projects. This would ensure that PIs are actively supporting the career advancement of their postdocs and provide accountability for their professional development.

NIH could also enhance career development opportunities by offering more resources, such as workshops, training programs, and career counseling services, to help postdocs identify career pathways and acquire necessary skills. Additionally, NIH could promote collaboration between academic institutions and industry partners to expose postdocs to diverse career opportunities and facilitate transitions into non-academic careers.

Another area that NIH could improve is the compensation and benefits for postdoctoral trainees. One way to address this issue is to increase the stipend levels for National Research Service Awards (NRSAs) to better align with the cost of living, as stipend levels have not kept up with inflation. NIH could also expand eligibility criteria for loan repayment programs to include postdocs, and consider other benefits such as health insurance and retirement plans.

Finally, NIH could strengthen the mentorship and professional development resources available to postdocs. This could include requiring PIs to undergo mentorship training, creating networks of postdocs and alumni to provide guidance and support, and establishing mentor-mentee matching programs to promote productive mentor-mentee relationships.

By implementing these changes, NIH could enhance the postdoctoral training ecosystem and help postdocs to achieve their career goals, leading to a more successful and diverse academic research community.

Proven or promising external resources or approaches

There are several proven or promising external resources and approaches that could inform NIH’s efforts to enhance the postdoctoral training ecosystem:

1. The National Postdoctoral Association (NPA): The NPA is a non-profit organization that provides resources, advocacy, and networking opportunities for postdoctoral scholars. NIH could work with the NPA to develop and implement policies and programs that support postdoc career development and job satisfaction.
2. The Postdoc Academy: The Postdoc Academy is an online platform that provides professional development resources for postdocs. The academy offers courses on topics such as grant writing, career planning, and communication skills. NIH could work with the Postdoc Academy to provide postdocs with access to these resources.

By leveraging these external resources and approaches, NIH could enhance the postdoctoral training ecosystem by improving postdoc recruitment, training, working environment, mentoring, and job satisfaction.

Response 2280

Perspectives on the postdoc roles and responsibilities

I went into my current post doc with the intention to develop projects, lead projects, and to produce high quality research.

Fundamental issues and challenges

Most post docs and graduate students want to stay in academia but the pay for a post doc is way to low. When I talk to other post docs their minimum salary to stay in academia starts at around 80000 and more depending on where you live. Also the demand of research is steep compared to non academic jobs and from the horror stories I have heard it is quite understandable that people jump to non academic fields when one is underpaid and over worked. I was interviewed by several PIs that want a researcher to work 70 hour weeks for 56000. This is the reality that I hope gets rectified soon.

Existing NIH policies, programs, or resources

PI training and increase in salary. As biotech is only on the east coast and west coast primarily and academic institutions are all around the country. People want to make a decent salary and live in the city of their choice. As a way to help with cost academic institutions may have to consider removal of overhead cost to the academic institution.

Proven or promising external resources or approaches

No response

Response 2281

Perspectives on the postdoc roles and responsibilities

In response to this RFI, [redacted for anonymity], a public health research and implementation company, is providing our perspective and experience gained from working with postdocs, early-stage investigators, biomedical faculty, and research education program advocates. From our vantage point, we assess the role of the academic postdoc as vital to the research engine of higher education as well as government and commercial scientific enterprises. Without the academic postdoc role, the responsibility of investigative discovery would fall to faculty fully engrossed in the teaching, administrative and mentor responsibilities dictated by colleges and universities. The responsibilities of an academic post doc are traditionally focused preparing for an academic and/or research career. By virtue of this dedicated time and targeted training, a post doc can fully realize their scholarly potential within the academic community. We view postdoc training as a significant pathway to career progression in an individual's chosen field. It provides additional and invaluable preparation and development for academic or research positions under the mentorship of an established and accomplished Principal Investigator (PI). Mentors offer direct experience and guidance to postdocs, helping them to better understand the academic and scientific communities and work environments, as well as the research funding landscape that is so essential to a successful career in research. Advanced training affords postdocs the time to develop or sharpen critical skills to support their research goals and interests, as well as identify and address areas for improvement. The academic postdoc role is and should remain an imperative career stage to ensure scholars, institutions, and society benefit from their enhanced skills, knowledge, and innovation.

Fundamental issues and challenges

Although there are many benefits for postdoc trainees in academic research, there are also issues that challenge postdoc recruitment, retention, and quality of life. In general, the postdoc experience often lacks structure and collaboration across universities and organizations, even within internal departments or research groups, which can result in providing insufficient clarity of role, purpose, and support to postdoc trainees. Furthermore, postdoc status at an institution can be unclear—the postdoc is not regarded as a student but is also not regarded as a faculty or staff member, sometimes even in the Principal Investigator's (PI's) research group. This can result in an identity crisis for the postdoc, professional isolation, and a less than positive experience. In addition, the level and style of mentoring among PIs varies widely regarding research development, guidance, and preparation for work after the postdoc, which can affect career development negatively. Low pay and lack of benefits (postdocs are not always treated as full-time employees in academic settings) also factor into recruitment, retention, and quality of

life issues, as well as treatment of postdocs by PIs and other faculty members. This includes unrealistic expectations about deliverables and timelines, which can lead to extremely long work hours. Recruitment is also impacted by jobs that do not require postdoc training experience. Postdocs, especially those from racial and ethnic minority groups, can often feel isolated in their research groups. Not every institution has PIs or other faculty and researchers who represent minority groups who can serve as role models and demonstrate what career success looks like. In addition, not all institutions have an established community of practice that facilitates information exchange and provides support for postdocs, especially those from racial and ethnic minority groups.

Existing NIH policies, programs, or resources

Policies:

1. Require PIs to submit mentoring plans with NIH proposals for review and evaluation;
2. PIs must provide updates about their postdocs' progress/development in grant reports;
3. Require a suitable postdoc minimum salary supported by NIH funding (research awards);
4. Collect postdoc demographic information (if not already collected) to observe national trends; and
5. Create a database where academic semesters and new PI contact information is stored and exchanged by research agenda and location.

Programs:

1. Provide funding for postdocs as supplemental awards to a research award (Postdoctoral Supplement Award Program). NIH determines logistics for the supplemental awards (postdoc salary, duration of award, cohort training and development). Logistics are similar to the Trainee Fellowships, but the awards are supplemental to the PI (directly associated with a PI's research award);
2. Facilitate a program that funds/supports establishing or strengthening Postdoctoral Support Offices on campuses or at organizations;
3. Biomedical Training Faculty Incentives. Underrepresented Minorities (URM) have an expressed desire to teach but junior faculty roles do not compensate enough to service the enormous student loan debts;
4. Funded URM Biomedical Research Cohorts comprised of multiple academic institutions' junior faculty that provides support for mutual research agendas;
5. Provide funding for innovative multi-disciplined academic postdoc programs;
6. National Research Mentor Corps designed to offer long-term (2 to 5 years) support to URM Biomedical graduate students and postdocs; and
7. Evaluation for postdocs and mentors to determine strengths, opportunities, and areas for improvement regarding the postdoc training system.

Resources:

1. Conduct a long-term study of postdoc program impacts and opportunities for improvements;
2. Consider issuing a contract to adapt pilot/tested approaches for enhancing postdoctoral training, including improving/expanding diversity, equity, and inclusion (DEI) policies at institutions. This could be a RFP or sole-source requirement for 8(a) companies such as Peers.

Proven or promising external resources or approaches

Peers' recommends the development of policies to promote diversity, equity, and inclusion (DEI) to better support underrepresented minority (URM) researchers in seeking federal research funding. This is critical for a successful start to a career, when young researchers are tasked with securing federal funding that can often take one year or more to achieve. Peers partnered with the American Public Health Association's Faculty Development Initiative and developed a framework for mentorship and professional development that increases the scholarly productivity of URM faculty and likelihood for career retention, progression, and success. The project pairs minority faculty researchers at minority serving institutions with faculty at host research institutions who have demonstrated significant success in securing federal funding. The project also creates space for minority faculty to connect (formally and informally) and support each other.

This innovative model can be adapted to improve postdoc training and provide critical support to early career researchers. Other recommendations include:

1. Collaborate with organizations that support and enhance the training experience such as the National Postdoctoral Association;
2. Investigate initiatives at established Postdoctoral Affairs Offices (academia, industry) and recommended by groups such as the National Academies' committees;
3. Conduct a bi-annual national survey of URM graduate students and postdocs on barriers and facilitators to biomedical research careers;
4. Foster public-private partnerships that include interactive forums and collaborative research projects for academic postdocs and
5. Convene an annual meeting that brings new faculty together and fosters an environment that supports exchange of information and experiences.

Response 2282

Perspectives on the postdoc roles and responsibilities

A transition phase to greater and better things, but also a privileged time during which I can use the skills I learned during grad school to perform my most interesting and productive research.

Fundamental issues and challenges

Salary. Compared to industry peers, the salary is often 2-4 times less—to me this is by far the main reason why it has become so difficult to hire postdocs.

Additionally, postdoc who receive training grant funding (among other sources) do not receive W2s. This is a HUGE problem for us because we are at a phase of life during which we start families and often need to buy a home. Lenders do not recognize stipends as income, meaning "successful" postdocs who acquire funding are unfairly penalized and cannot secure home mortgages.

Getting stipends also means we lose eligibility for employee benefits such as health insurance, dental insurance, vision, and importantly, the opportunity to fund retirement 401k accounts.

I have brought up these issues many times with my institution and the answer always is "we can't do anything about it". I hope the NIH can.

Being a postdoc is a lot of work for very little reward—we will soon all be gone if you do not address these issues.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2283

Perspectives on the postdoc roles and responsibilities

Acquisition of highly specific skills and train to become an independent, highly competent scholar in a specific academic topic (research or else).

Fundamental issues and challenges

- Need for child care and long-term support for postdocs including maternal leave, insurance coverage, alternative long-term staff positions (i.e., semi-independendent positions with resources associated to a lab) given the difficulty to obtain faculty jobs.
- Lack of professionalism in many of the young body of postdocs create a mismatch between the demands that postdocs have and what is expected from them. Previous training to match expectances would help/force institutions to match their demands.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2284

Perspectives on the postdoc roles and responsibilities

A transition between PhD student and PI, where research projects are developed more independently but with the support of the PI and without the responsibility of a whole lab on my shoulders

Fundamental issues and challenges

Salary ridiculously low compared to same job in industry, not much evolution possible within the postdoc position itself, and very low chance to get a permanent job in academia.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

I would hope for more permanent research jobs, not just PI positions but permanent scientific positions with competitive salary and benefits. Increasing these positions would also help labs to maintain a pool of permanent researchers, thereby enhancing their stability and making sure the expertise acquired during the training of PhDs and postdocs doesn’t just leave with the people who developed them.

Response 2285

Perspectives on the postdoc roles and responsibilities

My perspective on the role of the academic postdoc is that it is a training position for scientists who already have already accumulated years of experience through their PhD program and usually other research experiences as well. I think that the way academic postdocs are trained is to feed into faculty positions, which few will actually obtain. My own personal experience of being a postdoc is a positive one, as I have used this time to not only further my research skills and bolster my CV, but I have also developed other skills (including doing freelance writing) in an attempt to widen potential career options. Ultimately, I think that the modern academic postdoc position should serve as an incubator period for recent PhDs to further develop and prepare for a wide range of career opportunities. While I am happy with the responsibilities from a research and skill development (written/oral communication, mentoring, etc.) standpoint, I do think that there should be a more conscious effort to help academic postdocs develop realistic career plans and identify opportunities to develop the skills needed for their preferred career options.

Fundamental issues and challenges

From my perspective, finances are the fundamental issue driving PhDs away from the academic postdoc workforce. While many scientists love their work and enjoy the intellectual freedom that academia affords, we are still human. Postdocs have accumulated a high level of skill and experience and put so much of themselves into a demanding position. The compensation for that position should be higher than what it currently is. I have over 11 years of research experience and a doctorate, I should not be making roughly $10,000 more than the technician in our lab who has two years of experience. If my partner and I decide to start a family, I will have to go to industry because my current salary would not cover child care costs. Overall, I believe that the compensation for academic postdocs does not match the the skill/experience that postdocs have earned and their job responsibilities. Coupled with the slim prospects for continuing an academic career after your postdoc and the existence of more lucrative opportunities, an academic postdoc position has become a losing proposition for many PhDs.

Existing NIH policies, programs, or resources

I will focus on two main ways that the existing system can be improved

1. expanding opportunities like K awards that offer experienced postdocs financial support to transition and start their own lab and
2. allowing postdocs to be compensated from multiple funding sources. The first is self-explanatory and would expand the number of postdocs who are competitive for faculty positions, even if the outcome is more postdocs end up transitioning into research assistant professor roles within their postdoc department.

The second part is more nuanced and born out of the idea of wanting to increase postdoc compensation but not wanting to limit the number of fellowships awarded by the NIH and other funding agencies. Therefore, postdocs who receive fellowships should be rewarded by the program by allowing the PI to continue paying some stipend support (ie $20,000/year) alongside the fellowship, thus rewarding that postdoc with a raise. This opportunity would allow PI's to reward deserving postdocs, while providing incentive for the postdoc to remain in their current position.

Proven or promising external resources or approaches

No response

Response 2286

Perspectives on the postdoc roles and responsibilities

Developing an independent research mind

Fundamental issues and challenges

Underpayment and J1 VISA restrictions

Existing NIH policies, programs, or resources

Relax the salary caps

Proven or promising external resources or approaches

No response

Response 2287

Perspectives on the postdoc roles and responsibilities

It is supposed to be a training position to gain valuable experience in independent science. However it is frequently used as a low-paying science job.

Fundamental issues and challenges

Postdocs are frequently hired well below market price for their expertise and do not get to explore their own ideas. Even when they are able to secure external funding they are frequently forced to juggle independent projects with PI projects and are not rewarded sufficiently for the labor provided. International postdocs make up the majority of some fields (despite not being accurately represented at the tenure level) because domestic scientists will leave for industry or other higher-paying fields while international trainees have their visa sponsorship held above their head. Postdocs who have poor relationships with their advisor are frequently given trouble when finding new jobs which creates a systemic power imbalance and leaves postdocs very vulnerable to abuse in their relationship with their advisor.

Existing NIH policies, programs, or resources

Encourage budgeting postdoc wages at least commensurate with your fellowship programs for all NIH-funded grants. Make fellowships, training and career transition awards aimed at postdocs less biased (i.e. a trainee should not be discounted because they do not want to move to a new institution; this discourages postdocs from having personal priorities factor into their living situation).

Proven or promising external resources or approaches

No response

Response 2288

Perspectives on the postdoc roles and responsibilities

I viewed the postdoctoral position as a training ground/environment where the mentor would provide the postdoc trainee with training necessary for the postdoc to become a successful, independent principal investigator. In this environment, the mentor would provide at least one defined project that the trainee can work on and resources for the trainee to develop their own project. The defined project would help the trainee learn new material in the field of study. It would also benefit the mentor as their project can move forward from the trainee's output. It's important for a postdoc to be able to come up with their own project(s) that can be taken into their future career but that is not possible without funding (i.e. from their mentor, because let's face it, there's not enough T32 awards for everyone). This benefits the mentor as well, as they would be co-authors on any publications.

Fundamental issues and challenges

The simple fact of being a junior scientist who didn't come from a well-recognized lab puts any mentor at a disadvantage. Without a track record of mentorship, their trainees are often dinged on their grant training applications (e.g. T32 or the VA Career Development Award). An astute trainee will recognize this problem and seek to join a more affluent lab to advance their career, but much like T32 slots those are far and few in between. So in the end, the trainee will likely remain in that lab despite their potential to become independent at an early stage. This is usually taken advantage of by the mentor because the trainee advances their own projects at a low cost long-term. In the end, the trainee finds themselves as lab managers and their careers as academic researchers is dead. We need to normalize postdoc trainee grant applicants against mentors' track record of trainees, educate postdocs on what their training should look like (make this mandatory for all NIH funded institutions! because most places do not care what happens to postdocs), create career tracks for postdocs (because let's face it, not everybody really wants to or has the potential to do academic research), create better rules that prevent mentors from capitalizing on postdocs (especially at the expense of their career).

Existing NIH policies, programs, or resources

We need to normalize postdoc trainee grant applicants against mentors' track record of trainees, educate postdocs on what their training should look like (make this mandatory for all NIH funded institutions! because most places do not care what happens to postdocs), create meaningful career tracks for postdocs (because let's face it, not everybody really wants to or has the potential to do academic research) so that their career trajectory is obvious in the first few years (don't let them keep busting their chops to climb the ladder of an imaginary ivory tower when it's just not within their capabilities because that is a disservice to them and it wastes resources), create and implement rules that prevent mentors/institutions from capitalizing on postdocs (especially at the expense of the trainee's career), provide more information on the NIH website about what it means to be a postdoc trainee, what their career options are, etc. Create a method of reporting postdoc abuse without fear of retaliation from the mentor. I received an R21/R33 grant and had my mentor as Co-PI since the idea was partly theirs; they did absolutely nothing for the duration of the R21 but took funding from it and claimed percent effort on it, and to this day they are expecting me to include them in follow up grant submissions. I am afraid to say anything because I know how they are and what they can do to ruin my academic research career.

Proven or promising external resources or approaches

Look closely at what has made early-stage investigators successful and remove the impact of their mentor from that, then think about how we can apply that to postdocs who are genuinely interested in an academic-based research career. If I could give you an example of what is proven to enhance the postdoctoral training program, I wouldn't be crying as I write these suggestions. If we can have policies in place to protect research animals (OLAW) and human subjects (OHRP) in research, why can we not have policies in place to protect postdoctoral trainees? Leaving this to the HR of institutions results in very limited actionable options.

Response 2289

Perspectives on the postdoc roles and responsibilities

As a social work PhD interested in translational and interdisciplinary science, having a postdoc has been instrumental in moving me closer toward the goal of being hired on as faculty in an academic medical center rather than in a school of social work. This also has provided me the best opportunity to become an independent scientist since it connects me to phenomenal mentors and helps me launch my career.

Fundamental issues and challenges

I'm a mom of two children under the age of 3 (my youngest is 6 months). I notice that there are very few new moms in the postdoc space because it is so extremely difficult to maintain productivity while trying to care for yourself and your family postpartum. I am lucky that I have a partner whose salary can help support our family, but without that—and without a significant side-job that I do in the evenings after my children are in bed—we would not be financially solvent. I know that it would be difficult, if not impossible, for a number of reasons to just increase the postdoc funding level, but even living in a relatively affordable midwest town I know that there's no way I could provide for my family on a postdoctoral stipend alone. It is stressful because it means that I have to maintain other work and effectively work two jobs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2290

Perspectives on the postdoc roles and responsibilities

I am using a postdoc as a stepping stone between my PhD and starting a company. Therefore, the postdoc position means to me an opportunity to learn about the commercialization process of the university and how to transition the technology outside of the academic space. Along with this, the postdoc position is an opportunity to publish papers and refine any applicable research skills and broaden my network.

Fundamental issues and challenges

Pay compared to cost of living. Comparison of the postdoc salary versus other PhD roles doing very similar tasks. Lack of moving assistance or partner recognition/placement. Lack of signing bonuses which make the transition between jobs attainable.

Existing NIH policies, programs, or resources

The NIH minimum postdoc wage increased. NIH R01 and other PI level grant budget increase to account for inflation and the increase in university overhead percentage taken.

Proven or promising external resources or approaches

No response

Response 2291

Perspectives on the postdoc roles and responsibilities

The role of an academic postdoc is to act as an independent researcher while under the mentorship of an established lab head, in preparation for a future faculty position, or possible role in research outside academia and/or hybrid career encompassing both academia and industry (which should be encouraged to become more common in the future.)

Fundamental issues and challenges

NIH salary cap is not competitive and has not kept up with current economic trends. There is a huge disparity between what is expected of a postdoc and how they are compensated, which can be hard to

reconcile. The demands are high, proper compensation will encourage more postdocs to meet these demands instead of going to industry in search a better effort to reward tradeoff.

Existing NIH policies, programs, or resources

Increase the salary cap to provide a competitive wages to postdocs, preventing talented researchers from going to industry due to monetary concerns.

Proven or promising external resources or approaches

Forge more partnerships with industry, it should not be "either/or", industry should not be so separate from academic research. Provide more training resources at institutions where postdocs are, so that they can learn how to be successful as a postdoc and beyond. Currently these resources are few and can be hard to find, and sometimes are only available to trainees that have been selected for awards.

Response 2292

Perspectives on the postdoc roles and responsibilities

It seems to me that a post-doc is another, very long delay in being an independent and stable academic. The application process is long and arduous, you almost always are not being compensated enough for your incredible level of training, and in many cases it doesn't seem to be all that different from graduate school.

Fundamental issues and challenges

In the institutions I've experienced post docs are not very integrated into the community and the institution doesn't have any hand in changing that. It's the responsibility of the post docs themselves to do it. Academia is taking their own fully trained PhDs and gatekeeping career advancement for an additional 4-7 years AFTER a PhD and that leaves the persons entire young adult life completely unstable and underpaid. Academia should be rewarding those that stay in the environment that trained them more than a job that only requires an undergraduate degree. The entire time a trainee is in grad school and doing a post doc they are losing opportunities and stability in establishing a career elsewhere. The environment is also designed to belittle anyone who hasn't achieved tenure, which extends this problem of instability.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2293

Perspectives on the postdoc roles and responsibilities

Postdocs contributions are important and pivotal in biomedical research. They are the crucial and important workhorses pushing the frontiers of research by developing cutting-edge research techniques needed to put the US at the forefront of global innovative discoveries.

Fundamental issues and challenges

These include poor remuneration. Postdocs have already completed, on average, more than 7 years of training after high school. Unfortunately, they are paid less than fresh undergraduates that had only 4 years of post-high school training. Some universities are not even contributing to the pensions of their postdocs.

The working hours leave no room to engage in leisure activities; therefore, they are stressed while poorly paid.

Lack of upward career mobility (i.e., securing a faculty position) is endemic. Some principal investigators also exploit their postdocs, especially international postdocs.

Existing NIH policies, programs, or resources

The salary scale needs to be reviewed upward to be commensurate with MD fellows and reflect the years of working experience that postdocs have.

More early career awards with eligibility for international postdocs that are yet to have permanent residency or citizenship should be established. The current K99 is not enough for the 4-year post-PhD condition in most NIH organizations. Most of these international postdocs, who make up the bulk of postdocs in the US, are just getting their research started and might not have enough publications in their new lab here in the US to support their K99 application and have a chance at being funded.

PhD's lose their early career status 10 years post-PhD compared to 10 years post-fellowship for MD's. Including the postdoctoral training periods for PhDs is not fair, as they are neither independent nor running their own labs at this stage of their career. This is penalizing PhDs for working as postdocs and discounting their contribution to the biomedical field while being poorly paid. Early career status for both PhDs and MDs should be the same, i.e., until they have a junior faculty position.

Principal investigators should be held accountable for the career trajectory of their postdocs while receiving NIH grants. The lack of intentional and meaningful mentoring is a major contributor to the challenges of recruiting and retaining postdocs.

Proven or promising external resources or approaches

There's a dire need to improve the pay package, mandate payment of a contributory pension by all institutions receiving NIH support and create a way to hold both the principal investigators and the postdocs accountable for their career progress—or lack thereof. A mentoring team, including the primary mentor and other PIs should be set up at each institution. Postdocs should set their career goals for the year in consultation with their primary mentor. This document should be signed by both parties and discussed with the mentoring committee at the beginning of the job year. A progress report should be submitted at the end of the year in a meeting with all members of the mentoring team. This progress report should be included in reports submitted for the renewal of NIH grants that support the postdocs.

Response 2294

Perspectives on the postdoc roles and responsibilities

Academic postdocs are primarily transitional roles to prepare an individual scientist for their independent career. In the past, this career was typically pursued in academia as tenure-track faculty. However, due to the large disparity between available faculty positions and graduate students/postdocs, it has become increasingly normal to complete a postdoc before transitioning to industry. But the primary roles and responsibilities of postdocs remain the same. We pursue and complete scientific endeavors with much greater independence and experience than normal students. We also maintain a responsibility for mentoring and aiding the next generation of undergraduates and graduate students for their future scientific careers.

Fundamental issues and challenges

The answer is simple. Higher salaries. How can any institution expect to retain postdocs when they can pursue alternative paths to more lucrative careers. The minimum postdoc salaries mandated by the NIH are still below $55,000. The average industry salaries for newly minted PhDs are $100k+. This is not rocket science.

Existing NIH policies, programs, or resources

There is still much confusion revolving around what qualifications industry or academia are looking for in their candidates. There is also extremely limited information regarding alternative career paths for new graduates and postdocs. The sheer flexibility and plethora of available choices that one can take is almost paralyzing in its breadth and scope. Without a more standardized system put in place governing postdoc salaries, benefits, expected responsibilities, enforceable rights, and potential career paths, most students will consider becoming a postdoc as a "waste of time and money."

Proven or promising external resources or approaches

The recent salary increases mandated by the postdoc union in the UC system and Harvard/MIT is probably the best example of an approach with a realistic chance of achieving the desired goals. There are plenty of universities where postdoc pay is barely above those of graduate students. Ridiculous.

Response 2295

Perspectives on the postdoc roles and responsibilities

I view postdoctoral positions in the US as transient jobs meant to help make them more competitive for academic and non-academic science positions; however, it seems that these positions are becoming lengthier and more demanding, making them less transient and more draining. Regardless, many use their postdoc position to strengthen their professional network and to publish their work, although neither of these are guaranteed. The responsibility of a postdoc should be to learn to become an independent scientist, and to be able to demonstrate these learned skills through applications and interviews for their next position. Even though they are often called trainees, I do not see them as trainees—they are researchers that produce world-class scientific work. I also view these positions as unnecessary for many, as faculty positions are scarce and training is minimal to non-existent (e.g., postdocs are viewed as workhorses, and receive very little didactic instruction), and advancement in non-academic careers often do not require workers to have completed a postdoctoral position.

Fundamental issues and challenges

The most fundamental challenge for postdoc recruitment is salary, both in amount and in classification. Most institutions view the NIH minimum salary as a de facto standard, whether the NIH agrees with this practice or not. This means that many postdocs, many whom are family planning at this stage in their lives, often do not make enough money to support one child in their respective city (see MIT living wage calculator). What other field pays so little after >5 years of training and a terminal degree? Additionally, being awarded an NIH fellowship often leads to increased taxes (due to employment reclassification), and loss of already abysmal retirement options (often no contribution matching before the award, and then no employer retirement option after the award). I know many postdocs are nearing their 40s and have yet to contribute to retirement during these most crucial years of financial life. As for retention, since being a postdoc, I've been inundated with personalized industry job interview requests offering over three times my current postdoc salary—it is very tempting. In fact, many of the best early-stage scientists that I know have left for non-academic positions and it makes me question my current situation constantly. Am I making a poor decision by choosing to stay in academia? On top of it, there is often no help with moving expenses, costing many postdocs thousands of dollars just for the privilege of working in a lab that is not at the same institution where they trained as a graduate student. In a nutshell, the postdoc position selects for those who already have some financial advantage or are willing to place themselves at a financial risk—and because of this inherently selects against URMs.

Existing NIH policies, programs, or resources

NIH could alter the minimum postdoc salary to be city-dependent (this is already done for federal per diem rates, for example). In fact, the NIH pays its intramural postdocs more than the extramural minimum, demonstrating that even the NIH acknowledges that the current minimum is not enough pay their own postdoctoral workers. NIH policy could also stop referring to postdocs as "trainees" and instead acknowledge that they are highly trained scientists that complete work for the NIH by conducting science for the grants or fellowships that pay their salary, and often serve mentorship roles for graduate students, research assistants, etc. Additionally, the payback obligation for the postdoctoral NRSA is downright draconian, and only serves to punish individuals who are likely already in extreme situations—this policy needs to be abolished immediately. It's worth underscoring this point: at my institution, if I was awarded an NRSA, I would now have to pay additional taxes on my health benefits, would not experience a pay bump, and would lose access to employee retirement plans. Further, if this became too much of a financial burden (e.g., health, family) I would be obligated to pay my salary back to the NIH depending on my overall time as a fellow. Why would I put myself in that situation? NIH could also require institutions on T grants to create postdoctoral committees that consist of their mentor and other faculty at their institution. Doing so would increase postdoc success by providing more diverse mentorship and would increase networking and collaboration opportunities. This is important because many postdocs are at new

institutions and in new environments that lack the community building often found in graduate school and even at the faculty level.

Proven or promising external resources or approaches

The most effective approaches to bolster career retention have been implemented in non-academic (e.g., industry) positions, which, non-coincidentally, are the positions that most new PhD graduates pursue in lieu of a postdoctoral position. In fact, all five of the PhD students in our lab do not plan to pursue an academic position after graduation. Most of them have competitive publications and fellowships (e.g. NIH NRSA, HHMI Gilliam Fellowship, NSF GRFP), yet the fear of financial insecurity is so rampant that even these metrics of success are not enough to retain these students. I believe that the reason new PhD holders favor non-academic environments are the following:

1. guaranteed paid parental leave, often for 6 weeks or more;
2. competitive (>$100K) salaries;
3. more reasonable hours in larger companies (i.e., "9 to 5"); and
4. employment status (salaried employee vs contractor).

The reason why postdoc retention and recruitment are at an all-time low is abundantly clear: postdocs are paid too little for the amount of work we are expected to complete (see https://doi.org/10.1038/d41586-023-00332-6, and doi.org/10.1038/s41587-023-01656-4). I do not believe that the issue of retention and recruitment is greater than this singular fact. While improvements in training, working environment, mentoring, and job satisfaction would be a boon to academic postdocs, unless we are provided financial stability that is equivalent to industry careers—and soon—postdoctoral interest will continue to decline.

Response 2296

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should help you find your topic of interest and should encompass a learning environment for your future career.

Fundamental issues and challenges

Salary is the biggest current issue, affecting quality of life. Not knowing if you will be able to obtain an academic posterior after completing the post doc is also a big issue. Benefits during your postdoc are also affecting quality of life. Unknown expectations or unattainable expectations for PI's while salaries are so low is also an issue.

Existing NIH policies, programs, or resources

Modify and establish a higher minimum salary for postdocs.

Proven or promising external resources or approaches

HHMI and other fellowships that have clear paths for postdocs and guarantee a good quality of life.

Response 2297

Perspectives on the postdoc roles and responsibilities

A postdoc is a position to continue researching and to prepare yourself for an independent tenure track position

Fundamental issues and challenges

Postdocs are ridiculously underpaid

Existing NIH policies, programs, or resources

Pay us more

Proven or promising external resources or approaches

Raise the minimum salary

Response 2298

Perspectives on the postdoc roles and responsibilities

Postdoc is doing graduate school again, but more is expected of you. It means terrible pay, long hours, and sacrificing what should be the best years of your life in the pursuit of publications. Without a productive post-doc that consumes your life, your hopes of ever becoming a professor is near 0. And even if it does consume your life, circumstances will often fail you.

Fundamental issues and challenges

Terrible pay, long hours, incredible pressure to publish, and uncertain outcomes afterwards.

Existing NIH policies, programs, or resources

Increase the pay.

Not (essentially) requiring previous funding to get funding from the NIH.

Proven or promising external resources or approaches

Higher pay improved retention and wellbeing across jobs.

Response 2299

Perspectives on the postdoc roles and responsibilities

I am a late-stage graduate student. I defended my dissertation last week and have secured a postdoc position at an academic institution. I see the academic postdoc as a pathway to gain greater expertise in a chosen field. If a trainee wants to learn specific skills in a chosen field, it is going to be easier to justify this goal in academia than it would be in an entry level position at a company. Perhaps the greatest merit of academic science is the independence and individuality that it provides the scientist. I see the responsibilities of a postdoc as similar to that of a graduate student, but with greater independence. There is more freedom to establish ones own collaborations and side projects. There is an expectation that the postdoc can work more independently on grant and paper writing. The conceptualization for a paper should be done by the postdoc with supplemental input from the mentor.

Fundamental issues and challenges

While technically any person from any background should be able to access and succeed in academia, we all know this is not the case practically. Low wages during graduate school are a deterrent, and do not provide any kind of safety net for emergencies. If a student is not fortunate enough to have a generous family member to help with unexpected expenses, this can mean 5-7 years of counting pennies, never traveling, missing weddings and other fun events. Additionally, it forces the trainee to put off family planning home buying. While the postdoc salary is better than the student stipend, it is still far, far less than what a PhD level scientist can make in industry. Again, we see trainees choosing not to have children, or to have them and deal with the immense stress and cost of childcare on a 55 k per year salary. With inflation, the times are getting tougher. Meanwhile, just over the fence lies the green, green grass of industry, promising a better work life balance and better compensation. However, if a trainee leaves academia, they give up the incredible opportunity to work on what is most meaningful to them scientifically. This is why I chose to stay in academic for a postdoc. But I am painfully aware of the sacrifices required to do this. If not for the financial strain, I would absolutely want to be on the faculty track. Realistically, I doubt I will be able to do that.

Existing NIH policies, programs, or resources

The NIH should increase the recommended salaries for postdoc fellows.

Proven or promising external resources or approaches

No response

Response 2300

Perspectives on the postdoc roles and responsibilities

The postdoctoral phase is a critical role in the development of researchers, and it is incumbent upon us to provide the resources, tools, and support that people need to thrive in their careers. Because postdoctoral researchers are responsible for advancing research and scholarship, effective communication is important to their work.

Fundamental issues and challenges

There is a lack of research-based science communication training opportunities for postdoctoral researchers. As [redacted for anonymity], I understand how important it is to provide well designed, research based science communication. My organization supports thousands of scientists to learn how to communicate more effectively with diverse audiences. Science communication training is essential for interdisciplinary collaboration, reaching diverse public audiences, supporting leadership development, enhancing teamwork, and working effectively across a range of institutions. We can no longer afford to leave it to chance that scientists learn to communicate effectively on their own—science communication training should be part and parcel of how we build the future scientific workforce.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

All junior scientists need to receive science communication training as part of their NIH awards. Creating standards based in the research on science communication should undergird training efforts so that postdocs receive training that has been developed and assessed by experts. It is hard to overstate the importance of science communication, especially in areas of research funded by NIH.

Response 2301

Perspectives on the postdoc roles and responsibilities

- I view the PostDoc position as someone who is experienced well enough that s/he can run their project independently. With their wider knowledge of the subject they have gained during their grad program, they are equipped to run high-risk long term projects.
- They are are also a step closure to their PIs and are well equipped to carry their extra load by helping them in writing research grants, guiding the grad students and handling the lab duties.
- It is also the time they are trained to understand the duties **and responsibilities** an independent faculty carries.
- It the best phase of a researcher when s/he has a lot of new ideas to implement and execute them by themselves.
- It is the time they can produce their best results in terms of publications. They are energetic and experienced both at the same time and do not carry the extra responsibilities of a young faculty member. That allows them to spend their time in executing their projects.
- But this should not go beyond 3 years, otherwise this can steadily inculcate the depression in absence of career advancement.

Fundamental issues and challenges

- PostDoc life is delicate in terms of job security. While NIH frequently uses the term “trainee” but PIs don’t see it that way. They see PostDoc as an employee whose job is to work for them so that they can advance their own career. Their is no room for exploration or research. They often say—Publish or Perish in a limited time! Things are worse for international scholars whose visa is tied to the position. The moment they are fired, they need to pack up. I was fired by my PI in the middle of the pandemic despite I worked with him for more than four years and had published numerous papers. He did not like paying someone when lab was closed due to lockdown.

- Corporate often have a norm to pay 2 to 3 months extra salaries after an employee is laid off as a compensation. The Postdocs don't get that financial security. NIH can think of implementing such norms.
- The PostDocs are highly underpaid. If one compares with their peers in the industry, they feel less worthy to the society. Considering most of the Postdocs are married and are in the phase of having children, they find it hard to meet their ends financially. On top of that managing an expensive health insurance for the family, particularly when one of the parents is home maker, is super hard.

Existing NIH policies, programs, or resources

- The first and foremost step NIH should do is to raise the compensation.
- A big problem that all the postdocs face is to get a faculty position. The vacancies at the level of Assistant Professor/Independent PI is disproportionately low in comparison to the number of PostDocs. Quite clear, not everyone is going to be absorbed into academia/scientific institutions. Academia doesn't have a clear career path for them. What will they do if they do not get a position of an independent PI? There is no escaping route for postdocs, they are trapped in the vicious cycle.
- Oftentimes, the faculty/research track positions in the academia go to grads and PostDocs from big brand universities. NIH can help create and fund more positions of independent careers for the senior PostDocs working in the tier 2 and tier 3 universities.
- The new grad students when they see our situation, our low pay, our day-to-day struggles they feel discouraged to join postdoc. That when coupled with no clear career pathway after a certain years of experience, they become inclined to join industry where annual raise is much higher and job securities are better than a postdoc's.
- PIs often find ways to not continue with a senior Postdoc after certain number of years as they have to pay more to them per university rules. NIH should find ways, if needed support the PI/Postdoc with extra funds that will keep save their career until they find secured positions.

Proven or promising external resources or approaches

Well, I don't really understand what this question is expecting. I am answering based on my best understanding.

- NIH when funding or paying for grad or postdocs in a lab, always seek their report that details about the next job they have taken up when they have moved out and if they are satisfied with their career progress.
- Did they get enough support from their PIs? The role of PI is important in academia as it is highly driven by reference/ network/ personal connections.
- If they are in the Postdoc for too long, always ask what holds up them. What are their future plans?
- Open a channel in NIH where PostDocs can seek their advice on career related questions.
- A big shortcoming of the academia is that it is highly Reference letter driven system. You can not seek a new position unless you produce a letter of recommendation from your past supervisor. This further limits the career options for the postdocs.
- Try to mitigate this culture of reference letter. This provides a tool of exploitation and generates a system of sycophancy in the hierarchy. PostDocs are hesitant in asking for a letter from their PI every time they apply to a new place. If you ask me one immediate step that NIH must take to help PostDoc, I would suggest you to get rid of reference letter culture!

Response 2302

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a pathway to doing scientific research, which I enjoy doing. In order to stay in academia to do research, I must be passionate about science. The position requires me to use skills acquired through my postgraduate study to find solutions or insight into complex problems.

Fundamental issues and challenges

Relocation for a temporary position (one or two years) with low pay and lack of retirement contribution matching is discouraging.

Existing NIH policies, programs, or resources

Higher salaries, better benefits and mandatory retirement contribution matching.

Proven or promising external resources or approaches

Higher salaries would improve recruitment. More benefits packages would improve retention.

Response 2303

Perspectives on the postdoc roles and responsibilities

I see the postdoc as the primary driver of biomedical academic research progress. Without postdoctoral researchers, the development and implementation of new technologies in the neuroscience field would be significantly reduced. Currently, cutting edge techniques require significant technical skills that can only be developed by years of academic training. Without researchers who have this training, we would not see the developments we are currently experiencing.

Fundamental issues and challenges

I am constantly having to choose between forwarding my progress in life (securing housing, financial stability, having children) and my career. I don't expect all careers to compensate equally, but leaving graduate school with in demand skills it is becoming more difficult to justify a career in academic research. Current and future prospective postdoctoral researchers are aware of the significant opportunity cost of a postdoctoral position, and are increasingly pessimistic about the upside. The majority of trainees in my graduate cohort did not consider a future in academic research even in their first year of graduate school. I don't think this is a bad thing, as higher-level education is and will continue to be a major economic driver in our technology and service-centered economy. However, I do think that academic research will need to at least attempt to compete for recruitment if there is any interest in maintaining a fraction of the current biomedical research pipeline.

Existing NIH policies, programs, or resources

NIH salary guidelines for postdoctoral researchers need to be increased. The current level is not sufficient to retain or recruit talented, in demand researchers. In addition, there needs to be clarification of the difference between a guideline and a minimum. The NIH minimum salary is often communicated by University staff as a "guideline", and I have been told that they cannot pay more than that salary. This is obviously false, but inaccurate communication from NIH allows this obfuscation. Additionally, NIH salary guidelines should be changed based on cost of living. This could be tied to indirect cost negotiating. While NIH does not negotiate indirect costs, my understanding is that institutions receive different indirect costs based on their own negotiations. The same institution should not be requesting higher indirect costs while turning around and paying researchers the NIH minimum in a high cost of living area. I think that it would be wise for NIH to reexamine how indirect costs are awarded if it is interested in maintaining this form of research support. Changes to indirect costs has had support in both Democratic and Republican White House administrations. If I were interested in reducing budget expenditures or moving money to where it could be better used, I would go straight for that money. Some institutions are pulling in billion dollar returns on their endowment while pocketing 62% of a federal grant. Imagine the political support for reducing that money.

Proven or promising external resources or approaches

You can work as hard as you want increasing training, mentoring, work environment, but you will get very little return compared to what you would get from increasing salaries. In my experience, initiatives focused on increasing these aspects at both the federal and university level are a complete waste of money that could go toward paying researchers what they are worth.

Response 2304

Perspectives on the postdoc roles and responsibilities

At [redacted for anonymity], postdoctoral positions provide up to five years of mentorship and training under the supervision of a principal investigator. The primary goal of postdoctoral fellows at [redacted for anonymity] is to develop and implement an independent research project that expands the postdoc's technical and intellectual expertise. Together with opportunities to engage in service, teaching, and professional development activities, the postdoctoral training program at [redacted for anonymity], aims to provide the experience and knowledge essential for career advancement.

The purpose of the postdoctoral position is twofold—training and research. Postdocs are simultaneously trainees and highly skilled professionals. They design, execute, analyze and disseminate research. Their innovative ideas and their skilled work are critical to the U.S. biomedical research enterprise and to our institution.

Because of the high value we place on postdocs and their contributions, [redacted for anonymity], provides competitive compensation, benefits and professional development to all our postdocs. We pay well above the NIH NRSA minimum levels, offer the same benefits we offer other employees, and fund a multi-person Office of Postdoctoral Affairs to ensure our postdocs receive rigorous, comprehensive and personalized training.

Fundamental issues and challenges

[redacted for anonymity], has struggled to recruit postdocs for the past few years. The decline in applications started a bit before the COVID-19 pandemic but was certainly exacerbated by it. From our experience, new biomedical science PhDs are now asking how specifically postdoctoral training will benefit them and their careers. Whereas it used to be a default career stage, graduate students are now approaching the postdoc more intentionally.

This intentionality is a good thing; we want postdocs who are at [redacted for anonymity], purposefully. However, prospective postdocs are now much less likely to accept issues that have existed in U.S. postdoctoral training for a long time—low pay, meager benefits, poor work-life balance, exploitation, and unclear job prospects. [redacted for anonymity], has worked very hard to fix these problems through high pay, good benefits, appropriate oversight of postdoc training, comprehensive career development, and career paths for scientists with postdoc training. However, many institutions have not, and this impacts all of academia as graduate students decide not to pursue postdoctoral training.

Existing NIH policies, programs, or resources

Postdocs should be paid more than a living wage. They are highly skilled professionals critical to the biomedical research enterprise. Academic science is heavily government-funded and not-for-profit, so we do not think postdocs can expect salaries commensurate with industry. However, they certainly should be paid more than the current NIH NRSA minimum, which is commonly used by many institutions. We recommend that NIH consider increasing the NRSA levels with cost-of-living adjustments based on geographic location (e.g., in similar fashion to the OPM salary locality tables). We also recommend that, for postdoc NRSA awards, NIH consider decreasing the allocation for training-related expenses and adding this to the stipend amount.

Postdocs are typically in their 20s and 30s. Many are married with working spouses, have children and/or are supporting relatives. They should receive the same benefits as other employees. NIH policy has made this particularly difficult for [redacted for anonymity],. We want to employ all our postdocs and offer them our comprehensive benefits package, but NIH's ambiguous policy on NRSAs precludes us from doing so. We recommend that NIH update the NRSA policy to explicitly allow institutions to employ NRSA postdoctoral fellows.

Multiple reports have called for more permanent, doctoral-level research positions (e.g., research or staff scientists). [redacted for anonymity], greatly values our research scientists, and this is a clear and well-used next step for our postdoctoral fellows. We recommend that NIH expand the R50 mechanism to recognize and explicitly fund this important position.

Proven or promising external resources or approaches

One of the best approaches to improving working environment and job satisfaction is happening right at NIH in OITE. OITE has developed an outstanding model for supporting intramural postdocs and disseminating effective approaches outside NIH. [redacted for anonymity], who leads our postdoc office, has attended train-the-trainers sessions on facilitation and on advising, and has implemented what she learned at [redacted for anonymity],. We recommend NIH continue and expand this type of programming, which is of great benefit to extramural institutions.

The Entering Mentoring program from the University of Wisconsin Center for the Improvement of Mentored Experiences in Research (CIMER) is an evidence-based training program that has been shown to improve mentoring. At [redacted for anonymity],, we offer this training to both PIs and postdocs. We realize that requiring training for PIs places an additional burden on institutions and on PIs, who are already overburdened. However, CIMER's recommended training modules are eight hours and cover key topics such as setting expectations, providing feedback and culturally responsive mentoring. We believe this training is worth the time, money and effort because it improves our postdocs' job satisfaction and working environments. Our PIs who have completed this training indicated upon evaluation that it was a valuable use of their time as well.

Response 2305

Perspectives on the postdoc roles and responsibilities

It is like a training and learning new skill and advancing the already known skills.

Fundamental issues and challenges

Salary is very less.

Existing NIH policies, programs, or resources

Should consider the competitive salary as per the market.

Proven or promising external resources or approaches

Should implement the timing and if working extra hours than should be paid for that.

Response 2306

Perspectives on the postdoc roles and responsibilities

I view my role as a semi-independent researcher. I have to have ownership and take responsibility for my projects, and learn what it means to be truly independent.

I need to figure out my strengths and weaknesses, and improve upon them.

I should learn as many techniques as I can, attend meetings to network, and become a specialist in my field.

Fundamental issues and challenges

1. Almost every graduate student and postdoc I have ever talked to feel that PIs see postdocs as cheap labor. Did I go through 6 years of a PhD to get paid 55K? It feels like schools specialize in ways to avoid paying NIH minimum anyway, but maybe those are post-docs who started before NIH minimum was raised.
2. Most postdocs are in their 30's, have been putting off having children, and there is a lot of social and biological pressure to have children at this stage. If you are a bench scientist and want to have children, few PIs will accept you.
3. PIs seem to fondly remember the few weeks where their projects required them to work 80+ hours and carry that expectation forward for everyone who works for them. It is not realistic to support a whole family or pay for childcare on a postdoc salary.

Existing NIH policies, programs, or resources

Universities primarily select PIs based on their ability to get grant funding. Other traits seem to be marginal. I think there have to be required trainings on how to be a mentor. I think a lot of PIs truly do not know, and schools don't care because there is always a fresh crop of bright-eyed students and postdocs who think they can avoid previous problems. Mandatory trainings on mentorship that someone from NIH sits in on or leads, are the only reasonable thing I can come up with.

Proven or promising external resources or approaches

No response

Response 2307

Perspectives on the postdoc roles and responsibilities

The role of post-doc is designed to fill any gaps in training necessary for someone to become an independent investigator in their own right. This typically means taking on larger project administration roles (and if someone is lucky, project design roles), as well as mentorship. Postdocs are often also beginning seeking independent funding for their future roles. That's the best version—in the worst version, it's an exploitation of someone's expertise in service of a "mentor's" needs for underfunded labor.

Fundamental issues and challenges

The three primary issues in quality of life of post-doctoral training are

1. funding;
2. requirements for relocation;
3. irrelevance for many career paths.

First and foremost, the funding for NIH postdocs is abysmal. Generally speaking, postdocs are incredibly underpaid for the level of expertise that a person brings to the role, and the funding has not nearly kept up with cost of living/inflation. Especially given that so many graduate programs are severely underpaid and many post-docs start with either debt or significant financial instability, such low salaries can impede financial stability, retirement, and the ability for post-docs to progress in other domains of their lives (e.g. starting a family, caring for aging relatives). These are compounded by the requirements for relocation, which also bring social disconnection, and impair research grounded in community. Finally, postdocs are becoming increasingly irrelevant for many career paths that graduate students take. Further, many of those paths are accessible immediately out of graduate school, and don't require relocation (or if they do, they promise much more permanence than a postdoc does), and are often compensated around twice as much as a postdoc would be. All in all, the opportunity cost of a postdoc is becoming less and less worth the slim chance that someone will progress to tenure-track faculty.

Existing NIH policies, programs, or resources

Substantially better pay (think a minimum of a 20,000$ increase to be remotely competitive). Shorter turn around for funding cycles (e.g. I applied for an F32 December 2022, but won't find out until May 2023 if I received it—which makes it difficult for me to line up other positions when my current graduate position ends July 2023 and I'm stuck in limbo—I'd like to take it if I get it, but I need to have alternative options, but may end up leaving them in a bind).

Proven or promising external resources or approaches

No response

Response 2308

Perspectives on the postdoc roles and responsibilities

Post-docs should be viewed as apprentices. I do my best to set them up for success, either by giving them (supervised) leadership roles on projects/grants or empowering them to take their next steps with confidence in whatever task/role/capacity they believe is consistent with their own personal career goals (not mine).

Fundamental issues and challenges

There are proximal and distal challenges: NIH-set stipends that do not meet the cost of living in the local area, the bleak prospects of academic careers (low supply of positions), and availability of alternative careers. I think my trainees are just more knowledgeable of and confident in their value outside the typical academic career path, and many other trainees are taking advantage of it. There are a lot of pluses to academia (flexible schedules, intellectual freedom) so I try to be as transparent about those things.

Existing NIH policies, programs, or resources

- Improve stipends to reflect local cost of living
- More pathways to academia (more funding for F/K awards)
- More pathways for physicians to engage in research (without institutional punishment for not meeting RVU targets)
- More opportunities for physicians-in-training to compete for research funding

Proven or promising external resources or approaches

No response

Response 2309

Perspectives on the postdoc roles and responsibilities

Take my career to higher levels.

Fundamental issues and challenges

- Matching retirement benefits (Postdocs at [redacted for anonymity] are not eligible for retirement benefits)
- DS2019 which is issued only for 1 year at [redacted for anonymity], creates a lot of complications and stress surrounding visas for international postdocs
- The salary increases each year, according to the postdoctoral NIH table do not accompany inflation. Moreover, Postdocs pay many taxes, mainly the Federal tax, which becomes the academic salary minus attractive if compared to the industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2310

Perspectives on the postdoc roles and responsibilities

As a postdoc I independently led and pioneered many avenues of research leading to high profile publications while receiving F32 funding. I had a very successful postdoc, a great advisor, awesome results. So I hope you can take this perspective as the clear-eyed assessment that it is. Like most, I was more or less prepared to be a professor after my PhD training (as we can agree historically is the case, and remains the case in many disciplines), but we know that's not how the game is played any more. Too many PhDs, too few positions. So to me, the postdoctoral position is a holding place and a job. A PhD is training (arguably also severely underpaid), but a postdoc is your job. And it is not a great job for having a rich life and it is generally a bad return on investment. You do research, as much as humanly possible, and you wait. It is essentially a way to exploit more labor out of young scientists for less pay for longer. See also: the rise of the postbach. I thank God that postbachs were not normative in my undergraduate days. But now I see great students forced into postbachs to the NIH's glee. In neuroscience, very few areas in industry take a postdoc into consideration. It's basically like it didn't happen. So, what makes it a training position? Well, maybe if we consider living your life and the lessons that provides. sure. then under that definition I agree. The postdoc is a training position. However, using this logic. a job that pays

a living wage, a job that allows you to have time for a family. that is a training position too. Arguably you would learn more in the latter.

Fundamental issues and challenges

THERE IS NO NON-ACADEMIC TRAINING IN A CAREER PATH WHERE FEWER THAN 10% OF PEOPLE HAVE A TENURE TRACK POSITION AVAILABLE TO THEM. REQUIRE NON-ACADEMIC TRAINING. REQUIRE IT. IT'S SO OBVIOUS YOU COULD PROBABLY ASK 5 PEOPLE.

Sorry for shouting, just want to make sure the obvious thing is available to you. Now maybe a bit of satire?

40 years ago. somehow. people in biology created labs, published high profile papers, won Nobel Prizes. and nobody received "postdoctoral training"! Isn't that something? Isn't that. incredible? The NIH must really wonder how that was possible! It's almost like.modern day postdoctoral positions are completely fabricated to allow passion exploitation and wage suppression, sometimes indefinitely, on highly trained, highly skilled scientists? No. Surely, SURELY not. Imagine how much money in training the NIH would save if you could recreate a system that didn't require postdocs! I think it's worth setting up a few Funding Calls about. Hiring a few program officers to sort out. It could amount to billions of dollars saved in a short period of time. It could even have trickle down effects to over-sized PhD programs. and knock-on savings! In addition, imagine the improved quality of life: fewer people paid $30,000 / year for 5-7 years in the most expensive cities in the world before being forced into an arbitrary system of prolonged "training" until the age of 40! Could NIMH fund a study on the mental health benefits of such a plan? Is it possible that a less exploitative system would also lead to less sexual harassment and psychological abuse? It's a fundable hypothesis.

Existing NIH policies, programs, or resources

REQUIRE NON-ACADEMIC TRAINING IN F31/F32 GRANT SERIES. REQUIRE NON-ACADEMIC TRAINING IN DOCTORAL TRAINING GRANTS. REQUIRE NON-ACADEMIC TRAINING IN K SERIES. REQUIRE NON-ACADEMIC INTERNSHIPS. WHO IS RUNNING THIS SYSTEM? YOU ARE.

Proven or promising external resources or approaches

1. Pay more.
2. Adjust for cost of living in the pay.
3. REQUIRE NON-ACADEMIC TRAINING. REQUIRE IT. It's not a little line item somewhere. REQUIRE IT.

Response 2311

Perspectives on the postdoc roles and responsibilities

I think a postdoc period should be purely about de-risking ideas that will start an academic lab or perhaps a biomedical startup. I think in an ideal world, a postdoc would not need to publish papers to successfully de-risk a future research plan, and that the implicit requirements that postdocs publish papers before looking for their next job forces the postdoc period to be unnecessarily long.

Fundamental issues and challenges

1. retention—it's really hard to raise a family with an academic salary & workload, or even 2 academic salaries, until one parent has a faculty salary and/or a career stage where their research doesn't require 7-day x 12-hour attention.
2. quality of life—I am facing the reality that I will be a very successful postdoc and get a great faculty job and STILL not have a realistic chance of living where I want to live. it's very hard to picture the next phase of my life without knowing where I'll live, and so I have been hesitant to start a family without knowing what network / resources will be available to my family when I move to a faculty job.
3. quality of life—there is no "cohort" mentality, and it's difficult to identify peers who can support me intellectually or professional. I think perhaps some training grant programs for postdocs could assuage that problem, i.e. encourage universities to develop some kind of postdoc curriculum that helps postdocs identify collaborators among their peers.
4. general thoughts —I think that most postdocs hit a point ~3 years in where they have gotten maximum value out of their postdoc time, and the rest of the time after that point comes at considerable personal cost (low wages, long hours) but doesn't make a postdoc a better scientist. after postdocs hit that point of diminishing returns, they should either transition to academic jobs or staff scientist jobs, but the zombie-phase of a postdoc (i.e. ~3-6 years) is just extractive. postdocs in that phase are working in lousy conditions, and their labor benefits their boss more than it does their own education.

Existing NIH policies, programs, or resources

I think the path to early independence award could be restructured to discourage unnecessarily long postdocs. I think the first ~2-3 years of a my postdoc were extremely high-value —I learned a LOT about a new field in biology, I developed new technology to de-risk future experiments, I networked with tons of people in my new field and I started to make some surprising discoveries using the new technology I developed. But it will still take ~1-2 years to turn my progress into an academic paper, and build the kind of CV that would get me a good faculty job. I think there should be a way for candidates like me to apply for faculty jobs, and re-purposing the early independence awards could help. I'm at Whitehead, and I have a very negative impression of the whitehead fellows program, which takes new PhD grads and lets gives them an independent lab, but does not place them on a tenure track or let them advise PhD theses. even though the biology community considers un-mentored whitehead fellows to be highly accomplished, I have found their ideas generally immature or uninteresting. By contrast, I think that many 3rd year postdocs who have the benefit of mentorship have extremely mature and well-developed ideas, and would be much more prepared to start an independent career than the people who took unmonitored fellows positions. I think that the NIH's "early independence award" should be a grant given to a university to hire unconventional applicants, i.e. people with only 2-3 years of postdoc experience and no publications. the jobs would be tenure-track and eligible to advice PhD theses, but would come with an extra ~2 years of deferred academic responsibilities and a ~2-year delayed tenure clock.

Proven or promising external resources or approaches

No response

Response 2312

Perspectives on the postdoc roles and responsibilities

I view postdoctoral positions—especially those via T32s—to be protected periods for individuals to REFINE their skill sets and research programs, not as periods of extended or continued training.

The larger context to this sentiment is the ongoing 'role creep' or 'job creep' in academia; given both economic constraints and exponential growth of methodology and scientific knowledge, the roles and responsibilities are sliding. For example, graduate students today are asked meet the metrics and responsibilities of postdocs 10-15 years ago, postdocs are asked to meet the metrics of early career faculty, etc. As such, graduate students are exiting PhD programs with more skills, experiences, expertise than in previous years. For success as an independent researcher, the postdoc period offers protect time and (perhaps) additional mentoring or economic/institutional support to further refine and practice various skill sets (e.g., methods, grant writing, mentorship) and establish themselves in their substantive area of

interest (e.g., via publications, talks, service). In some cases, where an individual is shifting to a new substantive area, more formalized training will be necessary. Even in non-T32 settings, where perhaps the postdoc requires working on grant specific aims, the postdoctoral position again offers opportunity for refinement & honing of already developed skill sets.

I believe the categorization of postdocs as "trainees" is a hindrance to equitable conditions for postdocs overall, as it devalues their labor, expertise, and abilities.

Fundamental issues and challenges

Compensation is the number one issue that inhibits recruitment, retention, and overall quality of life for postdocs. To be frank, I believe the NIH is already aware of compensation related issues. Various associations and unions have been advocating for improved compensation for postdocs for over 10 years. A compounding concern is graduate student stipends, including the NIH graduate student pay cap. Graduate students nationally eke out a living on low stipends, weathering economic shocks, enduring periods of psychosocial stress related to low compensation all while developing skills and expertise. Postdoc positions used to be a reasonable risk—another 2-3 years of depressed compensation traded for the opportunity to land a tenure track position with high job security. With the decline in availability tenure track positions, decline in tenure, and depressed compensation of at the faculty level, postdoc positions are no longer a reasonable risk. It is is simply too little pay compared to industry positions where PhD graduates are being adequately compensated for their skills and expertise. For example, I have received an offer for a postdoc position next year with a compensation of $54,000 (NIH pay), while my two industry offers are $120-160,000/year. With longer time to degree and more individuals working between undergrad and graduate school, the graduate & postdoc work force is older than in years past. We have young children, elderly parents, are more enmeshed in communities. We cannot ignore or further postpone financial security. The low pay only increase moral injury and burn out—why stay, why contribute to a system that does not value you?

Additional factors include expectations of moving/transiency for short term positions, lack of health care benefits, and low supplementary funds (e.g., training related expense funds that cover health insurance or small research costs, but not both).

Existing NIH policies, programs, or resources

If the NIH will not broadly increase the pay scale, the pay scale can be adapted for place of residence and cost of living. For in-residence postdoctoral positions the NIH could offer pay at X% above living wage for that area. The starting postdoctoral pay of $54-55,000 in the midwest may be $10-15K above living wage, but for large, urban centers in California, New York, or Washington the pay is only barely above living wage status (see: https://livingwage.mit.edu).

NIH T32 could offer separate pots of money to fund health insurance and research-related expenses. T32 programs includes support for training-related expenses which can be used to cover such things as health insurance, travel expenses to professional meetings, textbooks, software, computer, or other research-related expenses. Individuals who require health insurance may have little to no additional funds to cover other actual research/"training" related expenses for program required activities. By only having one pot of funds for both health insurance and research-related expenses, the policies of the T32 benefits postdocs with spouses over single individuals as they may be able to use spousal health insurance and preserve more research funds.

Proven or promising external resources or approaches

No response

Response 2313

Perspectives on the postdoc roles and responsibilities

Time to learn new skills while exploring additional research interests beyond the scope of my dissertation. Also, building up my CV for another shot at tenure-track faculty job postings.

Fundamental issues and challenges

I have a family, so needing to relocate for an ideally short term (i.e., 2 year) position was a deal-breaker for me. I was very lucky to find a fitting postdoc position (via a previous collaborator) that is mostly

remote. However, I have a 1.5 hour commute and need to pay for expensive parking on days when I need to be in person. The pay is also quite disappointing and provides selection pressure against choosing a postdoc. Though I enjoy my current position, I simply would not have taken it if I did not desire a tenure-track job, as I could otherwise be making at least $120k in industry for my field. I can only afford to do the postdoc because my spouse make a reasonable salary.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2314

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Insufficient funds! My time is worth more than the 50k or so that I would be paid. Having a minimum salary for post docs that is adjusted for cost of living would certainly help.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2315

Perspectives on the postdoc roles and responsibilities

I am a postdoc and love academic science but the salary is too low for our position. We have high qualification and poor salary.

Fundamental issues and challenges

The salary is ridiculously low.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2316

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is an important stepping stone for transitioning between a graduate student role to a faculty position. During this time one can gain soft skills such as refining their grant writing skills and honing their mentorship and leadership skills.

Fundamental issues and challenges

Pay scales that do not account for the cost of living in major cities, nor inflation. Indeed, NIH pay scales, though intended as a minimum, are often used by institutions as a “maximum” for what is deemed an acceptable salary.

Existing NIH policies, programs, or resources

NIH policies regarding minimum pay, should ideally control for the fact that certain cities have a higher cost of living and be adjusted for inflation.

Proven or promising external resources or approaches

Funding opportunities that are not limited to US citizens or permanent residents, and moreover empowering international postdocs to more easily move between labs (as right now most are hired on a J1 visa which makes this impossible).

Response 2317

Perspectives on the postdoc roles and responsibilities

Training to become an independent researcher

Fundamental issues and challenges

Low pay

Existing NIH policies, programs, or resources

Increase salary

Proven or promising external resources or approaches

Increase salary

Response 2318

Perspectives on the postdoc roles and responsibilities

Robust designing of experiments and ensuring that relevant animal colonies are maintained, by liaising with the technician that handles animal husbandry of high quality in ICM. In addition, train my juniors, technicians, summer interns, medical students and Master's students from [redacted for anonymity] or other universities in affiliation or collaboration with [redacted for anonymity] and bring them up to speed in terms of conceptual foundation, technique, analysis and other required skills that will help wrap up our projects within the justified time in our project proposals. And to finally put together the results and analyses by getting the content together for the manuscript to be submitted in relevant and high-quality journals. My other pivotal duties comprise of presenting the summary of findings from aforementioned projects at conferences/webinars/ symposiums and related platforms. Lastly, to put together grant proposals and fellowships for securing funds to keep the existing projects rolling until required and for additional/ auxiliary projects that will keep the lab functioning and flourishing.

Fundamental issues and challenges

Recruiting excessive number of PhDs than required. Not enough mentorship/exposure for candidates who are interested in non-tenure track paths so that they can plan their modus operandi of being successful in non-tenure track options as well, Inadequate funds and benefits allocated for postdoc salary, misplaced priorities towards various categories of workforce within academia, not enough protection against visa restrictions for international scholars

Existing NIH policies, programs, or resources

Liaison with USCIS or appropriate regulations for visa related restrictions for international scholars

Doubling funds for postdoc and phd salaries, especially postdocs

Mandatory time allotted to postdocs to spend time in projects/ experiments that will help them carve their niche instead of arduously being involved only in the grants of the PIs which will deter their path to independence by not trying anything new

Proven or promising external resources or approaches

Mandatory collaboration with industry so that more funds can be furnished and additional technologies can be utilized that will expedite the process

Obviously double the salary for postdocs and please do not act like this is an unreasonable request; bad quality of life is the mother of bad creativity due to lack of calm and peace and stability; if one is constantly in the survival mode, there will be zero creativity and there will be not much breakthrough regardless of millions being pumped into the project. So better housing, doubled salaries, more protection for international scholars (or don't recruit them at all if you cannot do the needful to international scholars)

Response 2319

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low income

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2320

Perspectives on the postdoc roles and responsibilities

Cheap labor

Fundamental issues and challenges

Low pay

Long work hours

Limited benefits compare to staff and graduate students.

Existing NIH policies, programs, or resources

We need to be better paied from NIH, nothing else.

Proven or promising external resources or approaches

University is full of empty promises, we don't need any trainings all we need is to better pay. The is inflation going on for years. we want to be treated just like other workers. Increase our salaries.

Response 2321

Perspectives on the postdoc roles and responsibilities

Postdocs are meant to be independent, highly trained researchers in the sciences.

Fundamental issues and challenges

The primary issue with postdoc recruitment is the extremely low value placed by the NIH and institutions on having a PhD. A salary of approximately 55k is not adequate, especially for members of marginalized groups who may not have a stable financial foundation after several years of slave wages in graduate school. In the biomedical sciences, a six-figure salary is not uncommon for fresh PhD graduates, especially those with valuable skills or live in high cost of living areas. As a postdoc who started when I did in 2022, my salaries for the first 3 years would be 54.8k, then 55.2k, then 55.6k. While the starting salary is already poor, the total absence of salary growth in these years makes a postdoc position even harder to swallow versus an industry one. I am fortunate in that I do not have student loan debt, children, car payments, or other financial obligations, though I do live in a high cost of living area (Chicagoland). I am able to make ends meet, but I am not able to meaningfully save for retirement, a house down payment,

or achieve other financial goals. The presence of even one additional financial obligation would be completely crippling to my ability to maintain a reasonable quality of life here.

There is a secondary issue which does not directly affect me, but pertains to the penchant of some advisors to use postdoctoral scientists as an excuse to underpay skilled workers in glorified technician roles. These postdocs receive little to no mentorship, no training opportunities, and their career goals are deprioritized to suit the current needs of the PI or lab project. This is also a huge problem, but the fault lies with the PIs and thus would be challenging to solve by simply changing the postdoc programs.

Existing NIH policies, programs, or resources

NIH needs to fund more early stage investigator programs—the ESI-MIRA is a good program for this, but it should be far easier for PIs to obtain these sorts of grants. This would further fatten the academic pipeline and help support the development of more tenure-track positions, which would make postdoctoral training have a greater purpose.

Proven or promising external resources or approaches

No response

Response 2322

Perspectives on the postdoc roles and responsibilities

Research role

Training role for future academic prospect t

Fundamental issues and challenges

People may not be interested due to funds

Existing NIH policies, programs, or resources

Stipend needs increment

Funds for research needs etc. has a strict timeline that you are almost unable to use it for anything. For example, mine goes away by February while the year ends in June. Money is not well utilized.

Proven or promising external resources or approaches

More resources are needed for training.

Accountability is needed for both mentors and mentees.

Response 2323

Perspectives on the postdoc roles and responsibilities

Assisting PI with ongoing grants and studies, while also forging independent research interests. This includes writing grants and manuscripts for publication, conducting data analysis and preprocessing, running experiments, and mentoring graduate and undergraduate students.

Fundamental issues and challenges

The largest challenge is fair pay. Right now, the NIH sets a nation-wide rate for how much postdocs can be paid off of NIH grants. This leads to unequal pay, since different places in the country have a large variability in cost-of-living. This effectively leads to less expensive places getting favored over more expensive places. It also exacerbates economic inequalities (see https://www.nature.com/articles/d41586-019-00587-y). Moreover, as a postdoc, it is often extremely difficult to convince graduate students to pursue academia given how low the NIH set salary is, even for inexpensive cost-of-living places. The incoming pay for a first year postdoc works out to be about $29 an hour, compared to about $39 in industry (https://www.science.org/content/article/price-doing-postdoc). Finally, the relatively low salary set by the NIH sends a significant message to the public, and does little to motivate youth from wanting to pursue science. While I understand that this will require some effort (see https://www.science.org/content/article/postdocs-need-raises-who-will-foot-bill), it seems that scientists are all united in an awareness that postdocs, frankly, get paid too little.

Existing NIH policies, programs, or resources

The NIH postdoctoral salary is in dire need of a raise, particularly given recent inflation in the US.

Proven or promising external resources or approaches

https://www.nature.com/articles/d41586-019-00587-y

https://www.science.org/content/article/new-phd-incomes-surprisingly-low

https://www.science.org/content/article/postdocs-need-raises-who-will-foot-bill

https://www.science.org/content/article/price-doing-postdoc

Response 2324

Perspectives on the postdoc roles and responsibilities

To develop research projects alongside the PI, gaining more and more independence as the years go by, with the possibility of pursuing own research interests. Learning how to apply for funding. Training graduate and undergraduate students.

Fundamental issues and challenges

Cost of life versus salary is a problem. Sometimes salary falls short and there is no time to get a second job to be able to get more money. Also, the uncertainty of having a secure job once the post doc years are over. Another issue for international people is support and help to transition between visa status or even residency.

Existing NIH policies, programs, or resources

Perhaps enforcing the salary guidelines for universities.

More accessibility to the current policies, programs and resources. Some of us don’t know they exist.

Proven or promising external resources or approaches

Keeping a competitive salary with benefits would improve things.

Response 2325

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2326

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Even with the childcare award, which I am thankful for, the salary is difficult for postdocs who have children.

Existing NIH policies, programs, or resources

I think the covid extension should be extended

Proven or promising external resources or approaches

No response

Response 2327

Perspectives on the postdoc roles and responsibilities

Postdoc position is inherently a training period to prepare an individual as an independent scientist/researcher in their respective field. This requires to have a fundamental knowledge from not just an academic research but also the managerial skills that encompasses wide range of skills from managing funding, prepare and acquire funding for their own future works, managing lab and people associated with the work including time management. Moreover, one requires to have a good creative thinking ability to find the niche in their own area of research that is unique and novel in itself that has a therapeutic potential in the long run.

Fundamental issues and challenges

Financial

Postdocs are creative thinkers and are mostly the people who are married and have children and this means it comes with a whole lots of responsibilities and supporting them —either it be a national or international postdocs. Managing both work and life balance does not just mean time management but also financially and emotionally and this requires to have a balanced mind —as everything originates from there —from the creative thinking for the research pathways, funding and other things to emotional wellbeing. This critical not just for the postdocs but for all those who are associated with them and this requires good finical support so that they do not have to struggle thinking about everything and anything related to money —from visa fees, status, EAD for the dependents, schooling kids and expenses associated with all these. However, unfortunately, the salary of the postdoc is so meagre that they could barely support their family and their basic needs. This becomes even more difficult if the position is secured in a very high expensive cities like California, New York, Boston, Chicago and others. And, because of this everything goes haywire as they can’t think anything creative with that kind of enormous pressure. Basically, the first thing that needs to be fixed is a descent salary that they can easily support their family without struggling financially too much.

Work

Believe it or not, the common shared story of all the postdocs are that they are unfairly treated —and they are treated worse than even a graduate students (PhD).

Existing NIH policies, programs, or resources

Fair salary, fair treatment as a colleague and fair working hours flexibility. Since, this also depends on the area of research, biological postdocs that have wet lab associated should have a flexible working time so that they can manage it themselves and should not be restricted by the 9am—5 pm working culture. Even though this is in the written statements, basically they are expected to work during the weekends to produce the results —this means sacrificing their family and social life. I would personally like to work in the lab for the wet lab works, while I would prefer to go and do the writing and reading stuffs from home or somewhere quite while not being judged that I am not in the lab. Basically, this means they need space to be more productive. There should not be one-size-fit-all methods to treat them.

Proven or promising external resources or approaches

None for now.

Response 2328

Perspectives on the postdoc roles and responsibilities

Perform the necessary experiments/simulations to achieve the research project goals. Additionally, be a supporting figure for the grad student in the research group

Fundamental issues and challenges

From the perspective of a foreign postdoctoral fellow the fundamental issues are essentially two:

1. The economic instability
2. The uncertainty due to immigration policies.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2329

Perspectives on the postdoc roles and responsibilities

It's honestly not very clear what a postdoc is or should be. I spent a lot of time working on my mentor's projects. It was difficult to put time, energy, and resources to developing my own. I also split clinical and postdoc fellowships and this made it very complicated to manage my time.

Fundamental issues and challenges

I am a clinician and a researcher. There is not enough support for physicians to do research, period. Academic institutions do not provide structure for training or administrative support. They do not make clear career paths accessible for physician scientists. Physician scientists need additional support staff because otherwise they spend all their time doing the administrative work of submitting papers, grants, etc. It is never clear what is the responsibility of the physician scientist postdoc and when it should fall on someone else, so it always seems like everything is their responsibility, head to toe, in nearly everything and it's very overwhelming and difficult to be productive and advance your career and move the science forward.

Existing NIH policies, programs, or resources

Programs dedicated to developing physician scientists seem pretty sparse. The ones that are available don't always have a lot of MDs that can actually provide longitudinal support for new physician scientists.

Proven or promising external resources or approaches

No response

Response 2330

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low pay. No sponsorship for green card. Little to no accountability for PIs who are abusive and/or allow for a toxic work environment within the lab.

Existing NIH policies, programs, or resources

More pay.

Proven or promising external resources or approaches

More pay.

Response 2331

Perspectives on the postdoc roles and responsibilities

Post-doc position is a really very hard job because you need to cope with mental as well as physical stress, so many responsibilities, no stability, and are usually underpaid!

Fundamental issues and challenges

There are lots of challenges in postdoc life, they do not have stability in their life especially because of the nature of their job, after every 2-3 years they need to look for a new job, and opportunities. They are paid very less, if we compare the level of mental and physical work they are doing.

Existing NIH policies, programs, or resources

I would recommend maybe they should get a good salary

Proven or promising external resources or approaches

No response

Response 2332

Perspectives on the postdoc roles and responsibilities

A postdoc is a professional position that should be viewed similarly as a senior scientist position in industry. A postdoc should be given considerable autonomy in their work, coupled with thoughtful mentorship from a faculty advisor. They should be financially compensated in a way that is competitive with comparable industry positions.

Fundamental issues and challenges

Extremely poor financial compensation and the notion that postdocs are "soft money" employees. Universities and the NIH need to provide more financial support to postdocs, both in annual salary and in duration of commitment to funding.

Existing NIH policies, programs, or resources

Training grants and individual fellowships should provide more money (at least 80k/yr) and greater duration of funding that is consistent with the length of a typical postdoctoral position in biomedical science (5-6 yrs). Support for childcare is also currently minimal (e.g., in [redacted for anonymity], the childcare support provided by NIH covers ~8.5% of annual daycare costs).

Proven or promising external resources or approaches

St. Jude.

New PhDs will continue to leave academia until they are appropriately valued.

Response 2333

Perspectives on the postdoc roles and responsibilities

It is a bridge program to help newly trained scientists think through the logistics of being a principal investigator. Even if you're very good at the science, there is a need to be further trained in grant writing, managing students, running a lab, hiring and firing of people etc.

Fundamental issues and challenges

Largely money and guarantee, the academic track right now is low paying and unstable, meaning you can train as a post doc making no money and not be guaranteed a faculty position in a location that you like. Even if there is a position you like and you're on tenure track, there is a possibility you might not achieve tenure track, and then you're out of a position after sacrificing so much time, money and effort.

Existing NIH policies, programs, or resources

Raising the salary to be competitive with industry scientists, encouraging tenure track to include industry partnerships, could bring in more money that could pay post docs and could incentivize more PhDs to stay in academia.

Proven or promising external resources or approaches

No response

Response 2334

Perspectives on the postdoc roles and responsibilities

My view of a postdoctoral position is as a research fellow part of the institution, and they should not be considered as trainees. The postdocs are essential players in academic research and they consist the main qualified work force in the field.

Fundamental issues and challenges

The main issue that inhibit recruitment and retention of postdocs is in line with I described above. As they are considered trainees, they have no benefits and the salary is not adjusted according to high cost of living. For example, there is no automatic/mandatory retirement contribution from the employer side. Additionally, a postdoc living inexpensive big cities doesn`t earn enough to live. The main reason for the lack of postdocs applying and the increase of postdocs leaving is that the salaries are too low.

Existing NIH policies, programs, or resources

Retirement contribution from the employer and increase the salaries according to the city living costs.

Proven or promising external resources or approaches

The mentoring is also a key factor to support postdocs in their career paths.

Response 2335

Perspectives on the postdoc roles and responsibilities

I believe postdoc position should offer all those expertise to the individual to be able to conduct research independently. PI should not look at the postdocs as skilled laborer. Everyone should promote and encourage an inclusive environment. Otherwise, what's the point of achieving academic excellence but at the personality level if a person is not empathetic enough to understand and lead a group of people.

Fundamental issues and challenges

Low Salary, No work life balance, dissatisfaction at the workplace

Existing NIH policies, programs, or resources

Financial stability is very much needed. If a person cannot be able to feed and fulfill basic requirement for his/her family at the age of 32-25, then romanticizing science sounds shallow and hollow in real.

Proven or promising external resources or approaches

Problems are real and existing widely everywhere, but I am very hopeful NIH would take appropriate steps to improve the conditions.

Response 2336

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are highly responsible, and their training and work dictate the country's future. Postdocs are exceptional individuals who are enthusiastic to discover new information and wish to significantly alter the world by scarifying their best years of life.

Fundamental issues and challenges

Given their existing funding and salaries, postdoctoral fellows are constantly weighing their options and leaving research. A postdoc's existence is not normal, even after earning the highest degree possible. Due to the nature of research, it is a well-known fact that most science PhD and postdoctoral students work more than 40 hours per week, often as much as 65 hours per week. Despite their best efforts, most postdocs simply cannot afford even a one-bedroom apartment within walking distance of their laboratories, which is very important for the research work. Salary increases for postdocs are typically in the range of 150-200 USD a month (in hand amount), but rent hikes alone typically run between $100 and $200 per month. A simple calculation reveals that postdocs' salaries actually drop on an annual basis since their raises are far lower than the cost of living increases. It's strange that the NIH, which knows all

this very well, has chosen to remain silent for so long. Postdocs are typically paid less than other employees with fewer qualifications and skills. Postdocs who are hungry for research and want to pursue a career in science are being forced to shift into the industry because of these inequalities. The current situation is so dire that principal investigators have started suggesting to their postdocs that they look for jobs in the industry.

Existing NIH policies, programs, or resources

Increase salaries by at least $15,000 per year over the current salaries of postdocs at every level. Postdocs do not expect a luxurious life, but at least give them enough money to survive and let them focus on research and not on their monthly rent, food, bus passes, and clothes.

Most researchers experience various levels of exploitation from their PIs, which begins with the doctorate and continues through postdoctoral training. There must be a publicly visible internet portal where postdocs can rate their PI's lab environments on a 1-5 scale after leaving the PI's lab for a year on the following questions:

1. Does the PI require/wish for their lab researchers to work overtime?
2. Does the PI take advantage of their researchers by delaying manuscript submissions and other paperwork?
3. Does the PI help postdocs advance their careers or just use them for specific tasks?
4. Does the PI consider and listen to postdoctoral research challenges and fresh research ideas?

This will compel PIs to provide a conducive learning environment in their laboratories, which will create better scientists for the future. It will also prevent researchers from being imprisoned with poisonous PIs.

Proven or promising external resources or approaches

15 days of training per year on cutting-edge technologies should be mandatory for postdocs. They must attend one conference or workshop located outside of their home country.

Response 2337

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The NIH stipend levels for postdocs (and predocs) are way too low. Many faculty would like to pay TG-funded postdocs more than the NIH stipend levels, but the majority of their funding is NIH grants and can't pay a postdoc more from those funds. I work as an administrator and don't even do science, and it's really disheartening to see that salaries are so low for people who have spent an enormous amount of time and energy earning a PhD—especially a STEM PhD, which is supposedly a "more secure" field of study. Many students and postdocs leave academia to go to industry because they can get paid so much more working in industry; they're basically turned off of academia at the start of their career. We had vaccines for the COVID-19 pandemic pretty quickly because there were scientists who were able to work on research that contributed to the development of the vaccines, and that work took place for years before "COVID" was even in our lexicon. It's disappointing and frankly insulting to see that the people trained to do important scientific research that will benefit everyone in our society are being offered incredibly low salaries, still, after we all just saw how we benefitted from their work with fast vaccines after the entire world shut down due to the pandemic.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2338

Perspectives on the postdoc roles and responsibilities

Gain more experience (e.g., research, grant application, mentoring) that would lead to an independent career.

Fundamental issues and challenges

The postdoc salary is quite low, especially considering the cost of living is really high in cities.

Existing NIH policies, programs, or resources

Increase the salary cap

Proven or promising external resources or approaches

No response

Response 2339

Perspectives on the postdoc roles and responsibilities

It is a step to try novel research ideas and use your skills from PhD in a different field. It 'should' be a step to advance your career in research whether in academia or industry. It also could be trying ideas in advancing the same research field as your PhD. It is an opportunity to expand your skillset by mentoring students, involve in lab/personnel management, grant writing. However, unfortunately, all of this is not guaranteed in all the lab and most of the positions offer only a place to perform research. In addition, in some cases, you already get exposed to certain degrees to grant writing, mentoring, supervising at the PhD level.

Fundamental issues and challenges

Lack of financial stability by providing inadequate salary is a huge challenge. The model of providing NIH postdoc salary across all the cities and states in US just does not work. People with just undergraduate degree earn almost twice as much in industry in comparison to a postdoc. One gets a debilitating feeling to have to work more than their industry peers and earn so much less than them? The current model clearly needs replacement with a better one.

I would just not use the word 'trainee' for a postdoc. I am not sure why this word is being used for a postdoc? What is it that i am learning as a trainee?

You learn so much more by yourself, fortunately from PI if you have a good one or from the surroundings during your PhD. From that pool, exceptional PhDs already have the capability of directly being group leaders/assistant professors. So, I do not understand the justification of 'trainee' word being used for a postdoc. In my experience, I am not learning anything new from my postdoc.

Most of the PIs are not interested in mentoring and/or helping in advancing career of their postdoc. There is no clear direction from the mentors on how to plan for the next steps in a postdoc's career.

Existing NIH policies, programs, or resources

NIH salary policy.

NIH policy that gives directives to institutions and PIs on their responsibilities towards a postdoc.

There is a clear lack of awareness of NIH resources available to a postdoc. Better awareness campaigns might help.

Provision of flexibility to move labs with the projects that the postdocs intitiate to other academic labs. Currently, the institution policy dictates the ownership of ideas of a postdoc. Postdoc should have some power and say.

What trainee word entails? What is the postdoc learning? Is there a way to ensure that the training is being undertaken as expected? IS there a policy and if yes do the stakeholders know about it?

Proven or promising external resources or approaches

No response

Response 2340

Perspectives on the postdoc roles and responsibilities

As an international. non-native speaker of English language, it means being an underdog in negotiations and collaborative efforts. Do what you're told! Being kept on my toes all the time and feeling like walking on egg shells and feeling afraid of raising any issues because contracts are linked with visas.

Fundamental issues and challenges

Long working hours, toxic culture of churn churn churn.

Existing NIH policies, programs, or resources

Standardize contracts. At the moment there is a huge variation in terms of salary and benefits. Especially many international postdocs are treated unfairly.

Proven or promising external resources or approaches

Promote the right to switch off, and healthy work-life balance.

Response 2341

Perspectives on the postdoc roles and responsibilities

NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills. Postdocs should be required to develop a plan with their PI to develop specific expectations around these training goals (different time and energy allocations to each area plus research depending on the career goals of the postdoc) and be supported throughout their training period. Postdocs should work in an environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth. Postdocs are usually intent on entering different positions after a defined period of time unlike permanent staff. Establishing clear expectations at the offer of appointment for both postdocs and their PI's regarding their role and how it differs from staff scientists will alleviate misunderstandings.

Fundamental issues and challenges

The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas 2with defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step. Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit. Academia contains remnants of structural biases and institutional barriers that hinder the success of scholars from historically-marginalized groups still today. Postdocs from historically-marginalized groups and international postdocs face increased structural and implicit barriers including: lack of inclusion, reduced resources, implicit bias, and loss of community, while often managing increased familial commitments and additional financial responsibilities. Examining and acting on these power imbalances is key to creating a more inclusive and safe environment. Postdoc training often falls within the optimal fertility window for childbearing/family planning. The NIH should increase support and develop enforceable guidelines for paid, protected parental leave (6 weeks minimum) and increase support for all postdocs who provide child or family care.

Existing NIH policies, programs, or resources

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. (Other implications, such as tax, do not stem

from NIH.) Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible. NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. The NIH should expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income. To increase equity, NIH should provide NIH-funded postdocs with moving allowances. Moving costs can be especially cost-prohibitive for researchers from low socioeconomic backgrounds, those with increased familial commitments and internationals. Postdocs' difficulties to remain in academia due to limited faculty positions contributes to dissatisfaction. To retain top research talent, NIH should create or expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining continuity of lab knowledge, providing additional career options for postdocs, while providing clear differentiation between these positions and postdocs.

Proven or promising external resources or approaches

The NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library. We sincerely thank NIH for the platform to share our vision for postdoctoral training in the biomedical sciences. We applaud NIH's policies and programs that have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps.

Response 2342

Perspectives on the postdoc roles and responsibilities

Fundamentally, postdocs (and PhD students) do the research. We actually implement it. The PI directs us and sometimes tells us *what* to do, but we are the ones who do it.

Fundamental issues and challenges

I am leaving my postdoctoral position at the end of this week because of some of the issues I'm about to describe.

Primarily: low pay, poor benefits, complicated taxes, the persistent messaging that I am a "trainee" (despite 23+ years of education including 6 years of PhD and 2 years of postdoc). I feel that my skills are taken advantage of in the academic system. I have more skills than academia gives me credit for, financial or otherwise. I was offered a salary 2.5x what I'm currently getting when I applied places in industry, and I feel that this is a better reflection of my worth as a worker and employee than what I'm being offered now. I would like to start a family in the near future, and I'm not able to do that on my current salary in the area where I am living. I am unwilling to sacrifice this in order to pursue academic research.

There is also an issue of mentorship. I get along well with my PI, but I feel dependent on her because she is my only supervisor. I do not feel that there is a system other than my PI that supports me. I'm afraid that if my relationship with my PI turns sour for some reason, there would be nothing I could do about it. The power imbalance--along with lack of checks-and-balances--makes me fear for both my short-term and long-term career security. I refuse to be dependent on a single person.

Existing NIH policies, programs, or resources

Raise NIH standard. Other than that, I'm not sure. These are structural, systemic, institutional problems that are larger than any one committee, mandatory training session, or zoom meeting.

Note: word limit exceeded for my description of fundamental issues, so I'm continuing that here

When my father was dying of cancer, I was told by the benefits office that I was not eligible for paid family leave because I am not an employee of the university. I had to rely on the generosity of my PI in order to

care for my dying father. After my father passed, I was told that I "officially" had 5 days of paid bereavement. Again, I had to rely on the generosity of my PI in order to mourn my father. I am not OK relying on a single person in this way. Even though my PI was supportive, this is not enough. I need an institution that supports me.

Proven or promising external resources or approaches

Take a lesson from industry. I can't point to specifics, but the feeling I get interacting with those bureaucracies is much better than academics. We are valued there. We are given director-level roles, run teams, and get paid commiserate with that. My new salary is 126k (as opposed to 54k that I started with as a postdoc at a university). We are treated like real employees, rather than this nebulous "trainee," "fellow," or otherwise non-employee-non-student-functioning-as-an-employee.

Response 2343

Perspectives on the postdoc roles and responsibilities

To me, a postdoc position is a training position preparing you to be an independent investigator and move into a faculty position or scientist position. The role should involve developing your own research projects, at least one of which you can take with you as you start your independent laboratory. You should be gaining skills in grant writing, manuscript preparation, mentoring, and teaching during this time. You should *not* be in a lab manager role or doing service line work.

Fundamental issues and challenges

The number one obstacle for recruitment, retention, and quality of life is salary. Postdocs are severely underpaid. At this point it's possible to have a research role outside of academia, and the pay there is substantially higher, so it makes zero sense for anyone who is not specifically aiming for a faculty position to do a postdoc. And in many cases, there are industry supported postdocs as well, which can lead to faculty positions eventually. Unless the pay increases, academia will be losing this labor force.

The number two obstacle is likely poor treatment of postdocs. Unfortunately there is very little oversight of PIs, and there is rampant abuse of postdocs, particularly international postdocs. This is yet another reason people flee to industry, as professionalism and ethical treatment of employees is more enforced there. I think the NIH would do well to model some of the strategies implemented by our MD colleagues and the ACGME, such as institution wide survey's of postdocs that ask about work environment, duty hours, obstacles to training, etc and then programs with failing ratings can be put on probation and potentially face loss of funding.

Existing NIH policies, programs, or resources

If the NIH has existing programs targeting postdoc wellbeing they need to advertise them better, as I've been a postdoc for 3 years and am unaware of any. If by resources you mean things such as F32 training grants, there are a few areas these can be improved--do not weight PI funding as heavily, as this severely limits those from smaller labs or labs without substantial NIH funding. In some cases, those who obtain an F32 are no longer eligible for benefits at their own institution since their employment status changes. This is a huge problem that should be addressed.

Proven or promising external resources or approaches

As I mentioned above, I think the NIH would do well to model some of the strategies implemented by our MD colleagues and the ACGME, such as institution wide survey's of postdocs that ask about work environment, duty hours, obstacles to training, etc and then programs with failing ratings can be put on probation and potentially face loss of funding. Unless there is some sort of negative punishment associated with poor treatment of postdocs, the current working environment will not change.

And I would mention again that salary is the number one obstacle for postdoc recruitment, retention, and well-being. A newly minted PhD can make double in the industry what they'd make as a postdoc.

Response 2344

Perspectives on the postdoc roles and responsibilities

The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities. This will assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Fundamental issues and challenges

Per the NPA's 2023 Postdoctoral Barriers to Success report, more than 90% of postdocs are negatively affected by the lack of clarity in transitioning to next positions. More than ever, postdocs are paying a significant opportunity cost for limited faculty positions and 86.6% are impacted by job security concerns. Additionally, 'disenchantment with academia' is trickling down from overburdened faculty, making these positions less desirable to early career researchers. Career outcomes and tangible benefits of pursuing a postdoc are often misunderstood. NIH should provide early career scientists with actionable information and transparent data to make informed career choices before and during their postdoc periods, including increased awareness of career options (e.g., academia, industry, government).

Existing NIH policies, programs, or resources

Many PIs lack formal training in mentoring and personnel management. Likewise, many postdocs lack understanding of how to succeed as mentees. To address this gap, NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding, similar to those provided under NIH mentored training programs. Such training should be offered to non-PI's acting as postdoc mentors. I personally have experienced damaging mentorship with a former-PI on an NIH training award, and I believe that improved oversight of and accountability for mentors and PIs is necessary.

Proven or promising external resources or approaches

Currently, institutions and NIH IC's each develop their own professional development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In an increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources.

Response 2345

Perspectives on the postdoc roles and responsibilities

The postdoctoral fellowship should be appropriate as a learning opportunity, limited in scope and time, for obtaining additional skills which will aide in advancement through a career in academia.

Fundamental issues and challenges

Postdoctoral fellows are not treated as early investigators in many cases, they are treated as cheap labor, asked to perform mundane tasks (which are not limited in scope to the skills which they are seeking to learn as part of the fellowship), asked to commit to long term projects (which are not limited in time) which decrease long term quality of life by financial stagnation, and asked to work significantly long hours. The stipend amounts should be in line with the degree status, or the position should be clearly demarked and treated as a short term learning opportunity.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

The stipend amounts should be in line with the degree status, or the position should be clearly demarked and treated as a short term learning opportunity. By ensuring that the positions are learning experiences limited in scope and time you will avoid young investigators "burning out" and improve job satisfaction.

Alternatively by increasing stipend amounts to be in line with degree status you will ensure that PIs and institutions value the time and current experience of postdoctoral fellows and stop viewing them as catch all cheap labor to use for any purpose that pops into their little minds, ad infinitum, all hours of the day, without benefit in any way to the fellow.

Response 2346

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Most postdoctoral positions offer salaries that are minimal and low, especially for international citizens.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2347

Perspectives on the postdoc roles and responsibilities

An international Ph.D. (in the Biomedical field) may not have the same exposure and expertise as a Ph.D. in the US. Therefore, a postdoctoral position in the US is a gateway to exposure and exploring different career paths while learning new skills or improving the ones already gained. These skills could be benchwork-related or soft skills like project management, grant writing, etc. Therefore, an academic postdoc should include these experiences when working on an NIH-funded grant/ fellowship.

Fundamental issues and challenges

Two major challenges are being faced by postdoctoral trainees in academic research. The first is a lack of a mandate to ensure that all postdocs being funded through an NIH grant are being paid at least the stipends at amounts being prescribed for NRSA fellowship awardees. Such a mandate will help to increase recruitment and improve the overall quality of life of postdoctoral trainees. The second challenge is the lack of funding avenues to obtain a postdoctoral fellowship or a career development grant. The eligibility to apply for an NRSA fellowship or the K99/R00 MOSAIC awards is restricted to US residents only. While the majority of the postdocs working on NIH-funded grants in the US are internationals, who may still not be US residents, such restrictive eligibility criteria are counter-indicative of NIH's otherwise agency-wise push to improve Diversity, Equity, and Inclusion. Therefore, widening the eligibility criteria for these funding avenues to include anyone who is working in a US-based institution would significantly improve the retention of postdoctoral trainees.

Existing NIH policies, programs, or resources

Two significant programs that could be expanded to enhance the postdoctoral training ecosystem are the F32 and the K99/R00 Awards. The first area that could be modified in both these programs is widening the eligibility criteria to apply for these awards to anyone who is working in a US-based institution. Currently, both awards are restricted to be applied by US residents only (F32 and K99/R00 MOSAIC award). The second area where the current programs could be modified is increasing the cap on the number of years as a postdoctoral researcher for the K99/R00 award. Many of the postdoctoral researchers applying for these awards experience life-events like childbirth during their tenure as postdoctoral researchers. Such events result in the individual (woman or man) not being able to make significant progress during that time. Therefore, increasing the cap for both women and men who have experienced childbirth during their initial years as postdoctoral researchers would help to augment the ecosystem. Another reason supporting

such an increase in the cap is the amount of time required by postdoctoral researchers to demonstrate excellence and develop their expertise in a newly established lab. The increase in the number of NIH-funded early-career independent researchers is excellent for the research ecosystem. However such independent researchers take a significant amount of time to successfully establish their research program in the new institution, usually with the aid of postdoctoral researchers. However, this results in the postdoctoral researcher falling behind their peers, who may have joined an already established lab, in terms of their ability to develop a grant for the career development awards. Therefore, increasing the cap on the number of postdoctoral years, especially for those applicants who may have been mentored by an early-career independent researcher helps to level the playing field against applicants mentored by established researchers.

Proven or promising external resources or approaches

Collaborating with or utilizing guidelines shared by associations representing a large number of postdoctoral researchers like the National Postdoc Association (NPA). The NPA continues to provide resources to enhance postdoctoral training experience on its own. A joint exercise with the NPA would help NIH better understand the needs and aspirations of the postdoctoral trainees and improve or modify its policies accordingly to benefit the postdoctoral training ecosystem.

Response 2348

Perspectives on the postdoc roles and responsibilities

Enhancing the potential to carry out independent projects, venturing into colloborative research, increasing the academic network, writing grants, perfecting and increasing technical skills.

Fundamental issues and challenges

Low pay, job insecurity, visa problems, less work—family balance.

Existing NIH policies, programs, or resources

Elevating the pay scale for postdocs, increasing the number of grants that can be applied by non-immigrant visa holders.

Proven or promising external resources or approaches

Improve the training, a system for mentorship access, a quality check of job satisfaction, subsidized access to workshops and conferences for postdoctoral researchers.

Response 2349

Perspectives on the postdoc roles and responsibilities

1. A career step necessary to become an independent PI
2. An opportunity to find/define one’s own scientific niche; gain additional scientific skills / leadership / teaching skills; build a professional network

Fundamental issues and challenges

1. Work life balance: I am in academic science because I enjoy it. Nonetheless, I also appreciate "non-productive" time outside of the lab. However, I currently experience academia as a hypercompetitive environment where one's met with an (un)spoken expectation of being available 24/7, "sacrifice" everything for the greater scientific good, and where—at least I perceive it that way—it's almost a badge of honour if one doesn't have a non-lab life. Other interests are almost proof that one doesn't truly care about science—it's either an all-in passion, or one isn't serious about it. For me this creates constant guilt: when not doing anything lab-related—I should be, am I not dedicated enough? But then also when I am in the lab at midnight because I rationally know that this is unsustainable in the long run. That said, I think this issue is not limited to the postdoctoral level. It's maybe exacerbated at this career level because one has to answer to a PI and is more dependent. Also, I say this w/o even having to manage a family and/or children.
2. Financial: As I don't have anybody who is financially dependent on me, I am ok with the current salary. That said, my institution is in NYC i.e. cost of living is very high for even a moderate standard. Long commutes outside of the city for cheaper rent is adding to the above mentioned work life balance issue. Talking to colleagues with families, financial concerns paired with limited job security and massive time constraints are the main reason for leaving academia for a higher-paid 9-5pm industry job. It becomes a question of if one can justify a lower family income (e.g. no college fund for the kids) "just" to follow one's academic dream.

Existing NIH policies, programs, or resources

I appreciate all the opportunities and programs provided by the NIH that I have had the opportunity to profit from (e.g. career development sessions, grant writing courses etc). For me personally, it's more a mentality shift on the institutional level that has to happen rather than an expansion of NIH programs/policies as such. Where science is recognized as an important part in someone's life but is not equaled to one's life. Where we move away from this perception that science and the pursuit thereof has to be ones greatest (and only) passion, otherwise one isn't a legit scientist. I think this might help to improve work life balance, in the long run might also help e.g. women to not having to decide between a family and a scientific career, and where it becomes ok to say that one requires adequate compensation for long working hours & an expensive education (and is not met with the "oh well if you only do it for money." stigma).

Proven or promising external resources or approaches

No response

Response 2350

Perspectives on the postdoc roles and responsibilities

Postdoctoral position means training after your doctoral degree which includes advancing your skills, knowledge and more importantly professional development. It comes with different roles and responsibilities, like

a) a key player to execute a project;

b) mentor and train new employees in the group/department; c) managerial quality to lead the team; d) friendly with colleagues (inclusive) and so-on and so-forth.

Fundamental issues and challenges

Fundamental issues postdoctoral trainees are facing in academic research:

1. Most of the US academic postdocs are immigrants, so they come into the US with lot of expectations, personally and professionally. Therefore, they need that surety that their position should be fixed (or not terminated by PIs using their favorite "at-will" phrase) for at-least 2 years during initial recruitment because taking a new project and adjusting to a new place takes a time, and most PIs lose their patience and are expecting them to publish or show positive results. This leads them to frustration and they feel vulnerable or insecure.
2. Salary is another issue. Most institutions/PIs follow NIH guidelines for salary, but not all. So, there should One salary (according to experience) for all Institutions/PIs, without any bias.
3. Work-family balance is another issue. Most of the postdocs start their postdoc position by the age they are married or reach marriage age, so there should be immigration law to allow their spouses live their life freely rather than restricting them to four-walled room and get frustrated and home-sick all time, which in-turn causes negativity to the spouse who comes to the US for working on postdoc position with high expectations in every aspect.
4. After years of experience in their respective fields, most of the institutions should adopt the policies to recruit the best ones who served their institutions for a longer period.
5. Also, Institutions should involve them in different extra-curricular activities by which they exchange ideas and meet different cultural people and develop personally-This should be adopted without needing the permission from PIs, because most of them won't allow.

Existing NIH policies, programs, or resources

Career awards for postdoctoral applicants should not be time bound, because most postdocs take 2-4 years to completely execute a project and publish in reputed journals and by the time they feel confident to advance in their careers especially in academia, they want to write their own grants, their postdoctoral training is over the required eligibility years for all these career grants.

Salary should be improved for sure-And should be one for all institutions/PIs without any bias.

Proven or promising external resources or approaches

Immigration documentation should be eased, rather than making it complex.

Response 2351

Perspectives on the postdoc roles and responsibilities

Training position to learn specific skills in a certain field of academia, how to work and manage projects independently, mentor others, develop new ideas and critical thinking skills, space/time/opportunities to network with scientists in and beyond academia, and to identify a research niche that I can develop as my own, be it in an academic or non-academic space.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Increase postdoc salaries. I shouldn't have to look for part-time jobs to have a decent quality of life in Boston. Salaries should be adjusted for cost-of-living in different places.

Training for supervisors/mentors. This seems to be a leading cause for satisfaction/dissatisfaction (at least in my case), and it has a huge impact on the productivity of postdocs and where they go.

Ultimately, there simply aren't enough academic positions for all postdocs. So more training and eduction of postdocs for non-academic roles is necessary.

Proven or promising external resources or approaches

No response

Response 2352

Perspectives on the postdoc roles and responsibilities

On behalf of the National Center for Science Education (NCSE):

NCSE encourages scientists at all career levels to engage in outreach activities that help ensure K-12 students across the country get the accurate, effective evolution and climate science education they deserve. Giving K-12 students the opportunity to interact with research scientists helps students understand how science works and imagine the possibility of becoming scientists themselves. Furthermore, in an era of science skepticism, direct interaction with scientists is an important way to build trust in science among young people. The younger the scientists, the easier it is for students to relate, so postdocs and other junior scientists are especially valuable in this role. But interacting with K-12 students is very different from communication with fellow research scientists; specialized training in science communication would make these scientists more effective and more confident in interacting with K-12 science teachers and students.

Fundamental issues and challenges

On behalf of the National Center for Science Education (NCSE):

NCSE is frequently contacted by young scientists who would like to visit K-12 classrooms. But the scientists have little training in how to communicate with young learners. Optimal outreach is achieved when a scientist accrues science communication skills before engaging in outreach activities. Right now, science communication training for most postdocs is often informal, infrequent, sporadic, or entirely missing. Building relationships with local schools and teachers is a source of pride and satisfaction for scientists; poor communication skills inhibit their ability to succeed at this kind of outreach. Learning to communicate well helps the researcher think clearly, explain science clearly, and build trust with the audience. These skills are essential to combat science disinformation and misinformation in or outside K-12 science classrooms. Scientists trained to communicate with the public and teach students are better prepared to stand up for evidence-based scientific data that informs policy and public health. Scientists can be taught to be clear, confident speakers, but this takes coursework and practice. A fear of public speaking (and engaging in outreach activities) is a disincentive for scientists to interact with K-12 students and teachers. A scientist with good communication skills improves the overall image of the university or corporation and of the scientific enterprise in general.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

On behalf of the National Center for Science Education (NCSE):

A recent Research!America poll indicates that the public wants to hear researchers talk about their science and careers in science. Americans are concerned about the impact of misinformation/disinformation on public health (88%), climate change (79%), and stable democracy (85%). NCSE's ability to help scientists become better teachers is elevated when the scientists already have good communication skills. Scientists who have good communication skills can better serve as outstanding resources in combatting misinformation and disinformation to K-12 students and the general public. Distrust and denial of science threatens support for all of science. Scientists must learn the skills to be seen as trusted and truthful. This is particularly salient with regard to climate change. Ignoring the solid evidence of climate change can block timely actions to stop it. Effective communication skills are needed to overcome this disregard. Direct interaction with climate scientists is especially effective, but personal interactions with scientists from other specialties who can effectively communicate how science works and why they accept the reality of climate change is also valuable.

Some universities and research centers already have science communication programs that offer formal courses, certificates, or graduate degrees, which could serve as models. Examples are:

Harvard Chan's Center for Health Communication

Rutgers Science Communication Initiative

Duke University STEAHM Forum

University of Maryland Science Communication

University of Oregon Center for Science Communication Research (SCR)

Stony Brook Alan Alda Center for Science Communication

Response 2353

Perspectives on the postdoc roles and responsibilities

A postdoc role is that of a scientist who has protected time to perform research and hone the skills they learned as a graduate student through additional training. I no longer view this position as training to become faculty, although that is what it is most widely used for (including myself). There are just not enough faculty positions within academia to accommodate postdocs who wish to transition to that role. However, they are the workhorse of the academic research pipeline. This means that mentors often hold onto their postdoc trainees for as long as they can, de-incentivizing the transition of postdocs to faculty or other positions.

A postdoc should be a short-period extension of training after a PhD. "Postdocing" for periods longer than 5-6 years occurs far too often, even for highly qualified postdocs who should transition to faculty. There just seems to be no incentives to advance promising trainees.

The time it takes to become faculty, and then receive first R01s, has continued to lengthen. This starts even before grad school, which requires more research experience for admittance (i.e. 2-4 year stints as research techs, post-bacc programs, etc.). Then graduate programs require 5-6 years, with an additional 5-6 years of postdoc experience. Thus, the training time before "independence" could take upwards of 15-20 years. This is unheard of in nearly every other industry outside of academia. While the drift seems small, it adds up over time with a loss of lifetime earnings and career opportunities.

Fundamental issues and challenges

Salary and benefits are (and have been) the fundamental issues. The idea is that postdocs are trained scientists able to execute the research vision of their mentor (occasionally including their own). Postdocs are relatively low-cost for their level of training; most postdocs take on this low compensation because they believe that the postdoc position will set them up for future success. However, this is no longer the case. Individuals that transition to industry immediately following their PhD actually make significantly more compensation over their lifetime/career than if they completed a postdoc first. Thus, the vast majority of postdocs are losing out on lifetime income (~25%). This does not even account for the lack of retirement savings. Between my PhD and now postdoc, I have lost out on 10 years of retirement savings. Neither my time as a PhD student nor postdoc paid well enough to put my own money towards retirement, especially since neither institution match any savings. So much compound interest lost.

Further, most individuals (myself included) choose a postdoc based on a mentor/lab. Many great labs are in metropolitan areas with a high cost of living. I chose my postdoc mentor's lab in NYC due to what it could do for my training and career. but this meant taking a huge hit in the cost of living compared to a postdoc in many other locations. Mandate cost of living adjustments for postdoc salaries.

A cost of living adjustment and increase in salary based on years of experience should also be implemented for graduate trainees. This could help incentivize mentors to transition their trainees to the next phase instead of keeping them held in a position longer than needed due to the cheap cost of their labor.

Existing NIH policies, programs, or resources

Expand F32 fellowship and K transition award programs. Remove the 4-year timeframe for applying for a K99/R00. Time limits without exceptions only hurt those that suffer such misfortune. Generate a specialized funding program for trainees experiencing hardships during their training that derailed their promising careers.

Expand the childcare stipends for postdoctoral trainees. This was an excellent choice by the NIH to help defray the cost of childcare and support scientists that are starting (or started) families. It should be raised to at least 4-5K per year.

Expand research support for Research Scientists positions, who may not wish to move to independent faculty positions themselves but want to stay in academia. Much of the NIH funding is for "training" but

not necessarily "sustaining" research careers outside of established/independent PIs. The research scientists I have worked with were important contributors to lab culture, resourceful, and capable of leading their own projects. Some of these scientists choose to stay in such roles, and academic research would benefit from expanding funding to sustain and retain these individuals. Generating research programs so these individuals could apply for funding not only for salary but also to fund projects (or maybe sub-projects under an established PI/R01) could help facilitate their transition to independent faculty positions should they choose to one day lead their own research program.

In addition to plans for fellowship training that are included in application materials for fellowships (i.e. F32s for example), maybe add (or alter to include) a "plan for transition" in which mentors actively discuss what the expectations for "completing" the postdoc are and their plans to help facilitate the transition to the postdoc's stated career path. This would help actively encourage the difficult dialogue between postdocs and mentors in terms of expectations and goals.

Proven or promising external resources or approaches

McConnel et al. United States National Postdoc Survey results and the interaction of gender, career choice and mentor impact. eLife, 2018.

Kahn & Ginther. The impact of postdoctoral training on early careers in biomedicine. Nature Biotechnology, 2017.

The postdoctoral experience revisited. National Academies Press, 2014. (advocates for increased salary and implementing cost of living adjustments)

https://nexus.od.nih.gov/all/2021/11/18/long-term-trends-in-the-age-of-principal-investigators-supported-for-the-first-time-on-nih-r01-awards/

https://www.nature.com/articles/d41586-020-03191-7

https://www.nature.com/articles/d41586-023-00332-6

Response 2354

Perspectives on the postdoc roles and responsibilities

A postdoctoral position can still be a good start of an academic career, in particular for candidates on a training grant that allows them explore their own interests rather than performing work for their mentor.

Fundamental issues and challenges

On the training grants (T32, F grants), the pay offered to the postdocs is completely insufficient to support them in any metropolitan city on the East and West Coast and in Hawaii. Not only is the overall pay not sufficient, but the stipend should be replaced with a salary and appropriate fringe benefits.

The second major challenge is the pay line for R grants, anything below 20th percentile is intimidating and makes it impossible for a large proportion of postdoc to be successful researchers.

Existing NIH policies, programs, or resources

Please see above: change stipends to salaries on institutional training grants, offer pay that allows postdocs to be above the poverty line in all parts of the US.

Proven or promising external resources or approaches

No response

Response 2355

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions in academia are a "requirement" to enter academia. The role of a postdoc is much like a grad student, assist in writing grants, train new lab members, complete research, and assist with general lab duties. A postdoctoral position to me means becoming more specialized in a different field to "prove" that you have an academic research-focused mindset. I view it as a step in enter academia but not one that I personally would like to take.

Fundamental issues and challenges

Funding requirements (being required to apply for funding to enter a program), stipend (pay is much lower than entry level industry), grant writing (writing grants in my PhD has taught me that I do not enjoy this portion of science). Among my peers, the main issue I've heard is making a survivable independent living. A postdoc is do-able with financial support (for example a parent/spouse) but without it does not seem reasonable. Also low pay and long hours (much like grad school) is not ideal, a 9-5 industry job with a higher pay sounds much better than continuing to work weekends post-PhD.

Existing NIH policies, programs, or resources

More programs that support postdocs and train them to become something other than a researcher. More programs focused on leadership/mentoring/finance. government groups hiring PhDs to build future leaders instead of focusing on benchwork.

Proven or promising external resources or approaches

Improve postdoctoral working environments by setting reasonable hours, obviously this varies from lab to lab, but my understanding is that it seems to be more of an extension of a PhD and after 4-5 years of working 50 hour weeks/weekends, it becomes exhausting.

Response 2356

Perspectives on the postdoc roles and responsibilities

As a postdoc, I have multiple roles and responsibilities. First, I need to be an independent researcher capable of conceptualizing and executing a relevant project. Second, I am part of a lab, a team. I might also work closely with collaborators in different institutions. I am also a mentor to some young colleagues. Finally, I have responsibilities as a part of the larger scientific and academic community.

Fundamental issues and challenges

The first issue I would like to stress is retention. Many costs are involved with moving to different institutions (in my case, on different continents) that range from finance to time, relationships and other resources. With all that, we don't get job security and usually are paid less than our counterparts in the industry. So I would like to see universities offering more job security and opportunities for permanent positions once you are recruited as a postdoc.

Existing NIH policies, programs, or resources

I am not very familiar with NIH yet, so I will have an answer once I know more.

Proven or promising external resources or approaches

Job security and providing support for financial costs associated with scholars moving cities and countries.

Response 2357

Perspectives on the postdoc roles and responsibilities

I view the academic postdoc as a staff member that works on the lab conducting their own experiments, trains students, and applies for grants to become an independent researcher. Hence, the postdoc responsibilities would include conducting their experiments, mentoring students, and applying for funding (hopefully getting it).

Ideally, since the postdoc position is a training position, the postdoc would get technical training in the techniques or procedures they are conducting.

Ideally, the postdoc would also get training on how to become attractive to get a job in industry, since 90% of postdocs end up leaving Academia.

Fundamental issues and challenges

As a postdoc that has been recently looking to start another postdoc, I can tell you what inhibited my recruitment:

1. Unreasonable requirements from the PI: A PI from one of the labs that reached back to me told me they needed every postdoc joining their lab to have their own research line before joining the lab. Since I do not have any useful preliminary data from my first postdoc, I could not join that lab.
2. Inability to fund H-1B visas: Several of the labs I applied to, told me upfront that they did not sponsor H-1B visas. Most postdocs are foreigners, so this may be an issue to consider.

About retention:

1. Salary: Overall, the postdoc salary is way lower than the salary of a scientist in industry. I would not put much effort into staying at the same institution when I know I don't really have a great position.
2. Lack of training: Postdocs are supposed to be on a training position, but there is generally no training offered to us, or way less training and guidance than what PhD students get. In theory, we get paid less than in industry because we are on a training position. But we are not really getting much or any training. So. we just get paid less. It makes you think.
3. Infantilization/Lack of respect: The examples of infantilization abound. The idea that we are "students" (but without the perks of being a student, and without the training and attention that students get) is prevalent.
4. Gatekeeping: Since we are "students", we depend on our PIs for many things. They get to control a great deal of the opportunities we may get or not. But they don't necessarily think about us and our training (since we are "not really students" and we do not graduate)

Existing NIH policies, programs, or resources

It is almost impossible to apply to any research grants as a foreigner (from NIH, I think only the K awards are available to us). Since most postdocs are foreigners, could it be possible to expand some of the current programs to include us? Notably, I think none of the training grants are available to us, contributing to the lack of training that characterizes our position.

It would be nice to warn foreign postdocs that the FDA and other government organisms don't sponsor H-1B visas, therefore if we want to get that experience, we need to apply within the first 3 years of our J-1 (since the positions tend to last for at least 2 years). Nobody warned me of this, I wanted that experience and now it is too late for me.

I have appreciated the NIH OITE trainings on how to be a Resilient Scientist. I hope it can be offered again, or perhaps having the recordings constantly available.

Proven or promising external resources or approaches

I think it would be great to diffuse the website Cheeky Scientist. It gives really great advice about how to get a job in industry, and it is necessary for us postdocs, considering that about 90% of us will not be able to remain in Academia. Part of the training that we don't get is comprehensive training about applying to jobs and going through the whole application process. Cheeky Scientist explains that and gives useful tips to use on each stage of the process.

Response 2358

Perspectives on the postdoc roles and responsibilities

Postdocs are in their final period of training to become independent scientists, they direct their own research agenda and are often listed as PIs on their fellowships, and they assist in training graduate students, technicians, etc.

Fundamental issues and challenges

Salary, salary, salary, you must increase to the minimums suggested by st judes/hhmi/stanford, etc.

Existing NIH policies, programs, or resources

Increase the federal budget to cover this, as it will be impossible to use a current grant to cover these additional costs, supplements will be required short term.

Proven or promising external resources or approaches

Recruitment and job satisfaction will be substantively improved.

Response 2359

Perspectives on the postdoc roles and responsibilities

Post-doc training is critical to success in my field, and offers and opportunity for people to develop deeper and broader insights into their field to prepare themselves for future work.

Fundamental issues and challenges

In my view, the key challenges are salary and mentoring. Post-docs need to be paid enough to afford to live, do their science, start families, etc. In addition, it's critical that post-docs get good mentoring to set them up for success.

Existing NIH policies, programs, or resources

The base salary level should increase to the level that is now set by HHMI: $70k for first year post-docs. It should also be possible to supplement salary from NIH sources from training grants for high cost of living places.

Proven or promising external resources or approaches

Again, raise the salaries. That alone will go a long way.

Response 2360

Perspectives on the postdoc roles and responsibilities

Scientists are moving to private industry instead of working as researchers.

Fundamental issues and challenges

Very low salaries of post-docs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2361

Perspectives on the postdoc roles and responsibilities

Postdocs play an absolutely crucial role in the research of the US and in the training of future scientists.

Fundamental issues and challenges

The NIH salary scale must be increased to match, for example, the HHMI scale.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2362

Perspectives on the postdoc roles and responsibilities

Academic postdocs are essential to academic science as they represent the pipeline for future faculty.

Fundamental issues and challenges

Salary—Postdoc salaries need to be raised to a higher scale starting around 70K, as recently outlined by HHMI, and R01 budgets need to be expanded to fund the new scale

Existing NIH policies, programs, or resources

Postdoctoral fellowships and K99 grants—expanded to allow for higher salaries

Proven or promising external resources or approaches

No response

Response 2363

Perspectives on the postdoc roles and responsibilities

Postdocs are not just the workhorse scientists in the lab, but they are the next generation of independent PIs. If we do not deal with the issue of diminishing scientists entering academic science, American science will eventually fail.

Fundamental issues and challenges

Perhaps the most pressing issue is the low salaries that postdocs are currently paid. This needs to change if we are increase recruitment, retention, and their quality of life.

Existing NIH policies, programs, or resources

Two things MUST happen. First, the NIH scale for salaries must be increased significantly (similar to what HHMI is now doing). Second, and perhaps even more importantly, NIH grant support must be increased significantly beyond the current $250,000 modular limit. This has been the limit for the past 3 decades and it is becoming no longer feasible to run a productive laboratory with grant support that has not kept up with inflation and salary increases (not just for postdocs, but for everyone!).

Proven or promising external resources or approaches

The Howard Hughes Medical Institute’s new initiative for enhancing the postdoc experience is the place to start.

Response 2364

Perspectives on the postdoc roles and responsibilities

Postdocs are crucial for running an academic lab and making the fundamental discoveries that drive biomedical advances.

Fundamental issues and challenges

I have not been able to recruit a talented postdoc in the last two years; the high cost of living in the Bay Area and the competition with industry means that we are no longer seeing graduates doing postdocs as frequently as in the past. Also, my last 2 postdocs left early because they had families and were tempted away by higher paying industry jobs. Both postdocs expressed that if the salaries were higher, they would have considered staying in academia.

Existing NIH policies, programs, or resources

A modular budget at NIH no longer can support postdocs on a project, given the recent needed increases in postdoctoral salaries.

Proven or promising external resources or approaches

We need to be able to pay postdocs higher salaries. That is the number one factor that will keep talented scientists in academia where they can make important contributions to fundamental science.

Response 2365

Perspectives on the postdoc roles and responsibilities

As someone who has been interviewing the experiences of postdocs from a higher education perspective, I see the postdoc as in need of overhaul. I have presented at multiple conferences and published papers related to these experiences and have more in my research agenda.

Fundamental issues and challenges

Isolation and lack of sense of belonging

Existing NIH policies, programs, or resources

The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas with defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step.

Similarly, the NIH should promote minimum salary that provide a living wage adjusted annually for inflation, location, tenure and merit.

Academia contains remnants of structural biases and institutional barriers that hinder the success of scholars from historically-marginalized groups. Postdocs from historically-marginalized groups and international postdocs face increased structural and implicit barriers including: lack of inclusion, reduced resources, implicit bias, and loss of community, while often managing increased familial commitments and additional financial responsibilities. Examining and acting on these power imbalances is key to creating a more inclusive and safe environment.

The NPA's 2023 report shows a majority of postdocs are negatively impacted by a lack of healthy workplace culture (70.8%) and harassment/abuse (54.9%). Postdocs often cite high instances of isolation and poor mental health. NIH should hold institutions accountable for fostering inclusive and supportive training environments, including expanding the current requirement for institutional commitment to preventing discrimination and harassment (https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-056.html) to include provisions for mental health and wellbeing support.

Postdocs deserve equitable benefits regardless of funding source. NIH should work with the State Department and USCIS to simplify the visa and immigration process world-class early-career researchers.

Proven or promising external resources or approaches

Effective mentoring, professional development, better salary and benefits, support offices, postdoc associations at the institution level, clear pathways to career

Response 2366

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant writing, new experimental techniques, career exploration, and other transferable skills. Postdocs should work in an inclusive and equitable environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth. Postdocs should have protected time and funds to attend at least 1 scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network. Postdocs are usually intent on entering different positions after a defined period of time unlike permanent staff. Establishing clear expectations at the offer of appointment for both postdocs and their PIs regarding their role and how it differs from staff scientists will alleviate misunderstandings. Requiring postdoc and PI participation in formal performance reviews as part of an NIH award will better define, formalize and

evaluate factors of role, mentorship, and professional development, while differentiating postdocs from staff scientists. The National Postdoc Associations' 2023 Postdoctoral Barriers to Success reported most postdocs are negatively impacted by a lack of professional development opportunities and intellectual freedom. NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring, and professional development activities. This will assist postdocs, principal investigators, mentors, and postdoc office leaders in creating a climate for and of success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Fundamental issues and challenges

Compensation, insufficient DEIA, hostile work environments, and lack of support for international postdocs are some of the fundamental issues inhibiting recruitment and retention of postdoctoral trainees. Higher postdoc salaries will benefit those who wish to continue conducting research but struggle with supporting themselves and their families, especially in high cost of living areas. Therefore, the NIH should increase its stipends to postdocs on NIH training/grants/fellowships to match GS-10 federal pay schedule including locality pay for the year of award. Also, the NIH should pay postdocs a living wage that is adjusted annually for inflation, location, tenure and merit. With regards to DEIA, academia continues to contain structural biases and institutional barriers that hinder the success of scholars from historically-excluded and marginalized groups. Therefore, examining and acting on the power imbalances (lack of inclusion, reduced resources, implicit biases, loss of community) is key to creating a more inclusive and safe environment. The NIH should continue to expand its DEIA initiatives and instate rigorous and impactful annual mandatory DEIA training for postdocs, mentors, principal investigators, and postdoc office personnel. NIH should ensure that DEIA training materials are current and evidence-based, while developing accountability and outcome measurements. The NIH should also hold institutions accountable for fostering inclusive and supportive work and training environments for postdocs. Additionally, the NIH should require a percentage of indirect costs on all NIH grants to support postdocs with postdoc offices that foster stronger postdoc communities with healthier sustainable cultures.

Existing NIH policies, programs, or resources

Postdocs need equitable benefits, quality mentorship, and increased opportunities regardless of funding sources. NIH should issue written guidance explaining that postdocs receiving NIH grants or fellowships should be categorized as an employee at the host institution. Currently, postdocs can lose employee benefits when accepting NIH grants or fellowships, making these prestigious awards less feasible. NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship/grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. Also, NIH should allow PIs to supplement fellowships from their NIH funds/grants, especially to accommodate differences in cost of living that vary by state. NIH should also expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. To increase equity, NIH should provide postdocs with moving allowances. With regards to mentorship, because many PIs lack formal mentoring and personnel management training, the NIH should institute reportable grant requirements for mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding. Also, postdocs should develop essential skills for their career transition and the NIH should mandate all NIH-funded postdocs develop an IDP and PIs should support and submit documentation of progress. With regards to increasing opportunities, the NIH should create and expand programs, like MOSAIC and IRACDA, to support postdoctoral training. Metrics should also be collected on postdoc satisfaction on an annual basis to allow the NIH to adjust policies accordingly based on postdocs needs. Additionally, collecting postdoc satisfaction data anonymously will provide key insights that can help determine if policy changes are effective without postdocs fearing retaliation.

Proven or promising external resources or approaches

The National Postdoc Association (NPA) has a wealth of resources developed by committees consisting of postdocs, postdoc office leaders, and other contributors.The NIH working group should refer to the following resources: NPA Recommended Postdoctoral Policies and Practices, the triennial NPA Institutional Policy Surveys from the last decade, and other pieces within the NPA Resource Library. Currently, academic institutions and the NIH each develop their own professional development resources, leading to inequities. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual universities. In an increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance postdocs' personal,

scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources. I encourage the NIH to work closely with key stakeholders, and institutions, that host postdocs to consult on institutional policy adjustments and tool development that is needed to complement public policy change. There is a need for increased policies and programs that train postdocs, like MOSAIC and IRACDA as well as opportunities that support reentry and reintegration supplements for scientists with careers gaps. I also want to thank the NIH for this platform that allows the scientific community to come together to share on how postdoc training can be improved.

Response 2367

Perspectives on the postdoc roles and responsibilities

Experience, independence, flexibility, freedom, excellent science

Fundamental issues and challenges

Salary, paid-time off, maternity leave, retirement, work-life balance

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase in salary will also help mental health, postdocs having families struggle to earn enough money and provide for their kids

Postdocs that do not have kids yet will not consider starting a family due to the inability to provide enough and have a proper work-life balance

Response 2368

Perspectives on the postdoc roles and responsibilities

Conduct original research with some supervision by a mentor. Disseminate results and publish in peer-reviewed journals as well as present at national conferences. Submit funding applications to obtain grant funding. Hone in on research area of interest. Prepare for next role as independent investigator.

Fundamental issues and challenges

The salary of a postdoctoral is less than many entry level positions in research that do not require an advanced degree. Many PhD level positions include a relocation stipend, which would help with recruitment. No computer is included in the T32 grant.

Existing NIH policies, programs, or resources

Resources: Update and increase the stipend to an appropriate living wage. Modify to include relocation expenses.

Proven or promising external resources or approaches

Competitive wages would improve job satisfaction.

Response 2369

Perspectives on the postdoc roles and responsibilities

Postdocs (along with graduate students) are the primary generators of experimental data and analysis that support virtually all academic research publications and funding. Postdocs are highly skilled and experienced scientists who are central to the success of most labs. In theory, the academic postdoc should be a time of extended training and support that equips you for an independent research career--whether or not your end goal is to become a PI. In practice, this “training” is not enforced or even supervised, so postdocs are often expected to focus entirely on generating data and aren’t particularly supported in expanding their skills/knowledge or building their network for future career success. The degree of actual

training and support is highly dependent on the individual lab environment, and I think "the roles and responsibilities of the academic postdoc" are quite variable and poorly defined in general.

Fundamental issues and challenges

1. The pay scale! Academic postdocs come in with many (often 10+) years of research experience already under their belt. It is difficult to support such a long period of "investment" in one's future career while continuing to get paid far less than your experience--and the value of your contributions to the research enterprise--should merit. I love doing science, but I'm not sure I could choose this career if I didn't have a partner who earned a very good salary, family financial support that left me debt-free after college, and no kids or other family members to support. I see this as a huge barrier to diversifying the workforce as well.
2. Work-life balance. Academic research has a pervasive culture of prioritizing work above all else. I have heard senior women scientists advising younger women not to have children if they want a successful research career. It is also true that most of the senior women scientists I know either
    a) do not have kids, or
    b) have a stay-at-home partner. Spending 10-15+ years in training to become an independent scientist overlaps with prime childbearing years for women, and there is very little allowance for taking time away from research to have children. In fact, there can be major penalties for anything that is perceived to negatively impact research productivity (e.g., a longer gap between publications can hurt grant scores).
3. Insufficient employee protections. Postdocs at my university have different (more expensive) benefit options than other employees. Before this, NRSA-funded postdocs had to change their benefits due to the change in funding source, which is very disruptive. PIs receive W2 income and standardized benefits regardless of their funding source. Postdocs should too. My peers at other institutions have highlighted similar concerns, so this is a general issue.

Existing NIH policies, programs, or resources

I think the 4-year clock for K99 eligibility is too limiting--particularly given that COVID caused disruptions for several years. And why not allow eligibility extension for lab circumstances that delay research productivity? Many postdocs will be negatively impacted by this, and the value of imposing a 4-year time limit is not entirely clear to me. The K01 award is a helpful alternative, but it does not offer the same level of support during the independent faculty phase as the K99 does, and it is therefore potentially less helpful for landing a faculty job.

Some universities use the NIH NRSA pay scale to determine what their postdocs get paid (whether or not they are supported by an NRSA). NIH should increase this funding scale to $65-70,000 minimum for a year 0 postdoc. NIH could additionally mandate that postdocs supported by any NIH grant receive salaries that are in line with the NRSA pay scale.

Proven or promising external resources or approaches

It would be nice to see NIH implement some kind of oversight process for the training of postdocs (at least those who are supported by NIH grants). For example, requiring yearly IDPs or some other form of documented career progress check ins would encourage at least some amount of training and investment from the PI. As it stands, some PIs really make an effort to support their postdocs' development and others make no effort whatsoever. Narrowing the gap between what academic postdocs get paid vs. people with a PhD who move on to different careers is also absolutely crucial to enhance recruitment and retention of academic postdocs. Such changes would demonstrate to postdocs that they are truly valued in the overall research ecosystem, rather than sending the message that a postdoc is just one more period of suffering (financial and otherwise) one must endure if they want to be an independent academic researcher.

Response 2370

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an opportunity to expand one's research experience and skills coming out of PhD training. It also offers the opportunity to hone one's research trajectory, which is critical for ESIs who

are seeking academic research positions at R1 institutions. I think of it as a bridge to an early career faculty position.

Fundamental issues and challenges

Coming from a PhD program at a teaching-heavy institution, I wasn't quite prepared for how quickly I needed to narrow down my methodological research interests. I applied for training grants within my first postdoctoral year in new skills areas that were interesting and competitive, but which I've found over time that I have little interest in. I felt that I needed to apply to training grants quickly because living on a postdoctoral salary was unsustainable for me as a primary breadwinner in my 30s. Also, because postdocs tend to run for a 2-year period, I was trying to avoid immediately moving to another institution; both because moving my family is a logistical challenge and because moving interstate as a postdoc is expensive.

As such, I wanted to attain more stable funding as soon as possible, so that I could compete for a hard-money supported faculty position. I successfully received funding in a substantive area that I am very passionate about. However, I may have set myself on a methodological trajectory that may feel less satisfying for me in the long run, which could contribute to burnout. If I'd felt more secure in my position, with competitive salary and benefits as a postdoc, I think I would've slowed down and thought more about my long-term research program.

I benefitted as a postdoc from having an involved mentor who brought me onto projects and connected me with other researchers. As such, I've done fairly well in publishing and have made solid progress toward grant writing/awards within my first year as a faculty member. However, it was challenging advancing my own research as a postdoc without the funding to support student researchers or other staff. "Doing it all" isn't sustainable.

Existing NIH policies, programs, or resources

I have found the NIH training, career development, and loan repayment programs to be additive to my career. They supported my postdoc training and transition into early career faculty.

With respect to the K99, I've heard mixed experiences with respect to the timeline. Committing to an additional two years as a postdoc can be a financial challenge. However, it seems like most applicants are encouraged to apply for 2 years on the K99 and 3 years on the R00—even if they go on the faculty market early. In the event of an early transition to a faculty position (e.g., after 1 year on the K99), it would be helpful if the R00 could transition to a 4-year award, so that research aims could be completed on the original timeline. Otherwise, we risk sacrificing the robustness of the original aims, or unduly burdening ESIs who are now completing aims initially proposed over a 5-year trajectory in a compressed 4-year timeframe. Even with additional financial and staffing resources, it's a stretch.

Another concern I've seen colleagues experience as postdocs and early career trainees, is the strain of not knowing how personal events (personal or family illness, parental leave, etc.) are supported (or not) under NIH training grants or career development grants. In my early postdoc, on a training grant, I had no PTO benefits. When COVID hit, I was constantly worried about what I'd do if a family member fell seriously ill or developed long COVID. Having guidance for training grant recipient institutions for sick time/PTO/short-term disability for postdocs could ease that burden on individuals.

Proven or promising external resources or approaches

Early training/coaching on developing a long-term program or research, and how to leverage postdoctoral training grants and career development grants to that end, would be additive.

Opportunities to connect with mentors at NIH (perhaps POs?) outside of a specific grant application to talk about trends in research and NIH funding, developing fundable research programs, and strategies for maintaining a competitive work life / healthy home life, would be also be appreciated. I think that having exposure to the training, mentoring, and work environments outside of our home institutions could help postdocs/ESIs to better imagine how they want to put together their future research programs and the types of academic and research positions that might be best suited for them.

Response 2371

Perspectives on the postdoc roles and responsibilities

This is a time to both develop new skills that will be relevant to your future roles and to begin to establish your independence in your future area of study. Do to already gained expertise in a given area as well as from your academic journey, the role of postdoc can also make you almost like an assistant manager to your PI in also helping with certain aspects of the group development. For this reason postdocs wear many hats. Skill development in this role happens at an accelerated level that is more targeted than conventional learning during a PhD. This aligns more with the development seen for any new position (academic or industry), which is why postdocs should not be considered students. Professional development in this position goes hand in hand with the types of responsibilities that postdocs typically have within a group. This can include training and/or supervising undergraduate and graduate students, maintenance of certain administrative aspects (group documentation, etc.), and aiding in general group morale. In addition postdocs should be leading their own projects that align with their own research interests.

Fundamental issues and challenges

The largest challenges are short contracts and low pay. In order to maintain a healthy lifestyle and be successful postdocs must have a certain level of stability. This means an income and/or benefits that allow them and their potential family to comfortably live in a given geographical location. Postdocs should not have to choose between their academic career and having a family, getting necessary medical care, or being financially stable. The current standards in relation to this are absolutely unacceptable and embarrassing compared to other countries or industry standards. Standards made by the NIH should include clear suggested guidelines for COLA expenses. If these issues are not addressed there will continue to be a decline in the number of PhDs who decide to continue with academia.

Existing NIH policies, programs, or resources

Increased guidelines for how salaries should incorporate COLA nationwide and minimum standards for benefits. This includes outlining expectations of familial leave. Increased communication that postdocs are NOT students and their salary should NOT be reduced for their this reason.

Proven or promising external resources or approaches

Not sure if I understand the question. It would be interesting to see a study that compared life satisfaction (not job) and productivity.

Response 2372

Perspectives on the postdoc roles and responsibilities

Temporary position to extend US visa until a proper job position was applied and accepted.

Fundamental issues and challenges

A post doctoral fellow is a highly educated individual in 30 to 40 years old likely with a family to support. However, the salary is not even enough to pay the day to day life cost and there is no savings for future and retirement. Post doc position is very different than the phd positions where the goal is to learn as a young individual. In post doc the goal is not to only learn but also the goal is to achieve a scientific break through and either promote to a faculty position or join the industry within a year or two. Despite the low salary and vague future, there is a high pressure work, most of the time more than 8 hours a day, with no breaks or vacations to meet deadlines. There is very few opportunities to apply for a grant as a non US residents and no guarantee support from the employers for the opportunities after joining as a post doc. The length of the post doc position is not set. There is no promotions after a year and very few courage to continue fighting for a position in academia. There is no guarantee support for affordable physical and mental health insurances from the universities. Affordable housing or rental locations are not possible in many cities including cities in California.

Existing NIH policies, programs, or resources

The minimum salary for postdoc has different meaning for HR in universities. Even the faculty want to pay more than the minimum salary set by NIH, the University HR doesn't allow it. The cost of living is different across US and need to be modified accordingly.

Considering that major population of postdocs are internationals, there should be more opportunities for grants for non us residents.

Proven or promising external resources or approaches

No response

Response 2373

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I am an international postdoc in the US. I have lived in the US for almost eight years now, but originally from what people in the developed world call a "third-world country". I am a first-generation student. My parents didn't graduate high school and we lived in poverty growing up. We thought the only way out of our poverty was to save our money to provide me an education in what's considered to be the best place in the world and where hard work pays off and the system is fair-—US. Although there have been many wonderful aspects of being a scientist here and I am not gonna discount any of these, I don't understand why a woman of color from a developing nation is not considered an underrepresented minority. Why is NIH's definition of diversity so politically driven?! I am sure if I ask each one of you individually to answer if a person like me is considered underrepresented, you will say yes. so why as a system we are punishing internationals for something that is not even in their control. I didn't have any control over where I was born but I do have control over how hard I work and I know I deserve to be a scientist here. So why am I still being punished because of my citizenship? Why am I competing with people who have way more resources and opportunities than I do? The argument is usually these are tax dollars but I am sure I have paid as much taxes (if not more) as someone my age and a US citizen. I wanna leave by asking you all by asking. Do you really think you are being inclusive?

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2374

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs are dramatically underpaid for the work that we do and the areas we live, which creates a huge amount of stress surrounding finances that takes away from our work. Postdoc compensation needs to be tied to actual cost of living in the area surrounding a university/institute, as well as include benefits that allow postdocs to live on the relatively low salary, such as fully-funded childcare options, low-cost health insurance, transit subsidies, and subsidized housing. Being a postdoc is already hard and often demeaning, we should at least be paid enough to afford to live.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2375

Perspectives on the postdoc roles and responsibilities

Independent researcher working to further personal research project and support greater lab/group efforts

Fundamental issues and challenges

Pay—just moving to an industry job in my area would be an approx. $30,000 annual pay raise, with better benefits like retirement and stock options.

Existing NIH policies, programs, or resources

Open up more potential to pay research staff positions for higher trained professionals, like PhDs, in labs run by current PIs. Provide competitive wages and benefits that other university staff receive like percent-matched retirement contributions, etc.

Proven or promising external resources or approaches

Open and develop upper level positions that are not PI-centric.

Response 2376

Perspectives on the postdoc roles and responsibilities

The are the driving force of most biomedical research labs.

Fundamental issues and challenges

Poor salaries that barely allow them to make a living in most regions on the USA. This is particularly critical for those that want to start a family. The NIH and the federal government appreciate research and scientists, a highly skilled work force that keeps USA at the cutting edge, they have to be able to compensate them appropriately. Given alternatives, PhDs are now moving to industry and basic research is going to suffer. USA risks loosing the science race to other countries

Existing NIH policies, programs, or resources

I do not know

Proven or promising external resources or approaches

A number of institutions have now increased the stipends of their postdocs. With a few exceptions, though, the cost will have to be accommodated by individual labs with budgets that will not increase accordingly. So, the number of researchers will have to be reduced and the scientific output will suffer the same fate. NIH needs to see an increase in its budget to assimilate the cost of increasing postdoctoral and graduate student wages. No one can do the same with less. Something has to give.

If we do not want to see the American scientific out decline, the right investment in people has to be made and the time is ticking.

Response 2377

Perspectives on the postdoc roles and responsibilities

To me, a postdoc is the final stage or refinement for a researcher so that they can become a leader in scientific field.

Fundamental issues and challenges

Postdocs are laughably and egregiously underpaid. This is *THE* fundamental issue causing the decreasing recruitment, retention, and quality of life we see today. To pursue a postdoc at an elite coastal university is to knowingly sacrifice hundreds of thousands of dollars in future income for a chance to pursue a passion. This currently means living in substandard and sometimes unsafe housing, putting off having children, not taking care of your health, and placing your own financial burdens on the shoulders of partners and loved ones. That a person with least 22 years of schooling at elite institutions in lucrative STEM fields is only payed 50,000-60,000 dollars can only be described as cruel and sadistic comedy.

Existing NIH policies, programs, or resources

Pay postdocs 100,000 dollars a year. Adjust all RO1 grants for the inflation of the past 25 years to accommodate this. Everything else is a band-aid on a bullet wound.

Proven or promising external resources or approaches

Pay postdocs 100,000 dollars a year. Adjust all RO1 grants for the inflation of the past 25 years to accommodate this. Everything else is a band-aid on a bullet wound.

Response 2378

Perspectives on the postdoc roles and responsibilities

The academic postdoc should conduct rigorous science in a stimulating environment toward the goal of becoming an independent investigator. Postdocs are not cheap labor to promote the goals of principal investigators.

Fundamental issues and challenges

Pay is too low. Expectations of individual productivity are too high. Collaborative support structure is lacking, such that too much is expected from postdocs in terms of physical work hours, rather than building sufficient infrastructure and support to foster a productive working environment. Benefits are not guaranteed. Collaboration among postdocs is not sufficiently incentivized.

Existing NIH policies, programs, or resources

Funding mechanisms for collaborations among postdocs across disciplines should be created. Letters of support from principal investigators are often not sufficient, as postdocs in the systems neuroscience field typically provide the plurality of intellectual, technical, and analytical contributions to their projects.

Pathways for training postdocs to become full-time scientists and funding mechanisms to retain those scientists should be created. Often postdocs lose support or are forced out of academia at the peak of their technical skill, expertise, and productivity. Academic labs can thus be incentivized to build collaborative teams of experts and build momentum to solve difficult problems in their field.

Proven or promising external resources or approaches

No response

Response 2379

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs are essential to our research but because of the funding allotted to us as investigators, we can’t recruit and retain them. The best students now go to industry because the postdoc salary doesn’t allow them to pay their bills. Meanwhile, my grant size doesn’t allow me to pay postdocs even at a sub-ideal level. We can’t match industry salaries but this isn’t needed. We just need to give PIs enough that they can pay postdocs enough to live. NIH must increase grant size for this purpose. We are now at the breaking point where asking young Pis to figure out how to do keep doing more with less is no longer possible

Existing NIH policies, programs, or resources

Increase grant size to allow us to pay trainees and do research

Proven or promising external resources or approaches

Increase grant size so that postdocs can be paid enough to live

Response 2380

Perspectives on the postdoc roles and responsibilities

The postdoctoral position entails managing projects independently, obtaining grant/fellowship writing experience, and developing a mentorship style (by mentoring trainees on your project(s)).

Fundamental issues and challenges

1. Salary
2. Success rate of getting an academic faculty position after training

Existing NIH policies, programs, or resources

Regarding issue #1 listed in the previous question, the top-ranked institutions for biomedical research in the United States are in major cities. It is more expensive to live in any of the major cities compared to other parts of the country. Further to that, inflation has resulted in an even higher cost of living in the country in general. NIH should increase the average postdoc salary to overcome this fundamental issue.

Regarding issue #2 listed in the previous question, I think it is exacerbated because of 2 things:

1. There is no formal training on how to successfully become a tenured faculty member at an academic institution, and
2. There is no "cap" on years of service as a faculty member/Principal Investigator (PI).

If there were both formal training for postdocs and a system in place similar to a service retirement pension system, then there would be more positions available due to a higher turnover rate and likely more successful applicants for these positions.

Proven or promising external resources or approaches

No response

Response 2381

Perspectives on the postdoc roles and responsibilities

As a professional research scientist. My role was to develop and take a practical leading role on the progression of projects of my own, as well as mentoring and training of junior trainees. In most labs it is not practically feasible for the PI to take on project management of all projects in the lab. This role is almost always assumed by the post doc. I also mentored junior postdocs and graduate students in addition to my own research projects. A postdoc felt like a senior scientist role. I think we should view it through this lens. In no other career does the fact that a person may in the future assume additional responsibilities devalue the current role. Post-PhD should be staff scientist, with some moving on to lead their own labs and others staying at that position.

Fundamental issues and challenges

The pay was too low for me to sustain my family alone. We were only able to do this because my husband also had another, higher paid job. This was a practical decision, he had previously also considered a postdoc position, but it was not a tenable option for our family. It also felt devaluing to feel like I was a highly skilled researcher leading novel and dynamic projects, getting paid less than half of what he was being paid in a position with much less responsibility. Colleagues who would have stayed in academia, chose to pursue industry jobs, which was not their first choice, because the pay discrepancy was so high. This is particularly true for colleagues with computational experience.

Now as a PI in a computational field I am finding it extremely difficult to attract postdocs with the appropriate skills due to the pay discrepancy. When the [redacted for anonymity] mandated pay raises arrive, I am unlikely to be able to afford to pay them and also pay for other items in the lab with the current per annum funds available from the NIH. The dollar amount per NIH grant needs to increase to cover this cost.

Existing NIH policies, programs, or resources

Increase the per annum funding for RO1s so that it is possible to fund postdocs at a higher level. The current funding level does not allow for this option. Provide location adjusted payscales that actually account for differences in the costs of living in different areas.

Proven or promising external resources or approaches

HHMI postdocs have the option of becoming staff. Having the ability to recognize postdocs who are contributing as leaders to the lab with additional titles and pay makes a huge difference to retaining excellent postdocs who are not ready or interested in setting up their own labs. This whole structure of "up or out" is really hurting science. We need ways to allow for progress in place. When people view that they have no options or hope for progression it is hugely demotivating and demoralizing.

Response 2382

Perspectives on the postdoc roles and responsibilities

Academic postdoc is a more advanced training period to gain more experience in experimental design, techniques and mentoring.

Fundamental issues and challenges

The main issue that we are facing the Bay Area of California is the competition with industrial salaries. Many graduating Ph.D. students are forgoing postdoctoral training to get jobs in biotech right after graduate school. Not fixing this problem will prevent the training of the next generation of academic scientists and teachers.

Existing NIH policies, programs, or resources

Both the pre-doctoral and post-doctoral stipends need to be raised to be more competitive with the private sector. The NIH funded training grants only support about half the stipend that we need to pay to be competitive with UCSF and Stanford. Moreover, HHMI just raised their postdoctoral stipends to $70K, while first year NIH postdoctoral stipends are $56K.

Proven or promising external resources or approaches

Look to the private sector and philanthropy (e.g. HHMI)—this will also be a problem for the NIH intramural program.

Response 2383

Perspectives on the postdoc roles and responsibilities

Postdoctoral research and training is essential to broaden and deepen the scientific skill set of a newly-minted Ph.D. and, for those who elect to do so at an institution or institute different from the one that awarded their doctoral degree, the postdoctoral experience is an opportunity to be exposed to a fresh and distinct scientific culture and environment, as well as to a new constellation of individual investigators / mentors and their novel research problems.

Fundamental issues and challenges

Many newly-minted Ph.D.'s are attracted to employment in the biotech, pharmaceutical, chemical and related commercial sectors because of the ENORMOUS differential between the compensation they can receive in industry and the pittance, relatively speaking, that they can be paid in a typical lab at most academic institutions. Thus, instead of replenishing the ranks of academic scientists, many of the best and brightest are abandoning any interest in becoming academic investigators. I've heard it said that many Ph.D.'s these days view an academic career path as a "vow of perpetual poverty."

Existing NIH policies, programs, or resources

If a candidate is able to garner a competitive NIH Postdoctoral Fellowship, the annual stipend should come within at least 5-10% of what the going salary rate would be for a comparable starting staff scientist position, averaged over, say, 20 of the most stable and well known corporations in the life science sector (Merck, Pfizer, Lilly, Genentech, Amgen, etc. etc.).

Proven or promising external resources or approaches

Extra funding for childcare services would go a long way to attracting outstanding young persons into a postdoc track in academia, rather than industry.

Response 2384

Perspectives on the postdoc roles and responsibilities

I view it as a way to gain skills that can distinguish you from your grad lab and transition to independence, skill wise, mentorship wise, and research topic wise

Fundamental issues and challenges

Money. People can not be good scientists if they are worried about resources needed to survive. Work life balance, if people do not have the time and space (and money) to grow as people, what is the point of any of this.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2385

Perspectives on the postdoc roles and responsibilities

Postdocs are vital to the academic research enterprise. It is also a critical training period, as it is often the first time in a scientist's career when they are ready to tackle a largely independent research project (e.g., as opposed to graduate school). Postdoctoral training also provides an opportunity for scientists to pivot in their focus area, to broaden their experience beyond their doctoral research.

Fundamental issues and challenges

I think postdocs have been underpaid for many years. This financial stress comes during the time of life when many postdocs are starting a family. For those without additional financial support, the situation can be untenable, forcing many to leave for positions that pay more. Postdoc salaries are finally rising at some institutions, but NIH budgets do not reflect these increases. Thus, PIs are asked to the same work with fewer personnel.

Existing NIH policies, programs, or resources

The NIH should increase the modular budget to reflect increased costs of research and to support higher salaries for postdocs. The amount of support for F32 fellowships should also be increased.

Proven or promising external resources or approaches

No response

Response 2386

Perspectives on the postdoc roles and responsibilities

Postdocs design, carry out, analyze, and publish cutting edge research. They write grants on behalf of their PIs and train graduate students and undergraduates on behalf of their PI. They are responsible for the day to day success of research in America.

Fundamental issues and challenges

The only issue is pay. Everything else stems from that. NIH needs to at a minimum double the postdoctoral minimum. Not one single other thing written here is important and all others can be solved with increased pay.

Existing NIH policies, programs, or resources

Increase the postdoc minimum salary to 110000. That way we can find housing. Take the risk of doing a postdoc and failing to get a tenure track position and not be 40 with 0 dollars in savings. We can not have to defer having children into our 40s for the hope of a tenured position.

Proven or promising external resources or approaches

Pay pay pay pay pay nothing else matters. Double our salary spend every single dollar this survey cost on post doc salary.

Response 2387

Perspectives on the postdoc roles and responsibilities

Postdocs are the workhorses of academia: they are highly skilled in science, already trained during their PhD. It is a misconception and belittling to consider postdocs as trainees: they are highly skilled workers who perform at the most productive time at their career. A postdoc is currently not a training position, unfortunately it is an underpaid mid-career stage necessary to become an academic faculty member. The current system is tailored to keeping postdocs in their position for too long with limited chances of progressing their career.

Fundamental issues and challenges

The academic postdoc salary is too low given their level of skill. Also their growth opportunities into academic faculty / Principal Investigator (PI) positions are too limited / competitive, simply because the ratio of postdocs to PI positions too high.

Existing NIH policies, programs, or resources

The NIH minimum salary needs to increase with at least 50%. Furthermore, the salary could be made dependent on the living location, since postdocs in the big cities (e.g. NY, SF, LA, Boston) have a lower standard of living due to their salary than postdocs who live in areas where the cost of living is lower. Childcare support, either financial but even better through free of charge daycare facilities organized within research institutions, would also help a lot, since many postdocs postpone having children due to the financial burden it imposes. It is also necessary to support postdocs financially in their savings for retirement, which is currently lacking.

Proven or promising external resources or approaches

Yalcin, E., Martinez-Corral, R. & Chugh, M. Retaining postdocs by recognizing their worth. Nat Biotechnol 41, 296-298 (2023). https://doi.org/10.1038/s41587-023-01656-4

Response 2388

Perspectives on the postdoc roles and responsibilities

A postdoctoral position offers a scientists the opportunity to pursue independent research questions without financial risk so they can gain the experience necessary to run an independent lab.

Fundamental issues and challenges

Salaries are just too low when the chance of a tenure track faculty position is also low. Actually at this point, salaries are so low that postdocs need some other source of income to live a decent quality of like in expensive markets. I just learned that my new postdoc paid at NIH scale was getting food from the food pantry set up for food insecure students on campus.

Existing NIH policies, programs, or resources

Higher salaries would help relieve the stress postdocs feel while pursuing their training,

Proven or promising external resources or approaches

F32 and K99 are fantastic resources for postdocs to give them some confidence that they are on track.

Response 2389

Perspectives on the postdoc roles and responsibilities

To examine and research the field that I wanted to study.

Fundamental issues and challenges

Culture differences, but really minor one

Existing NIH policies, programs, or resources

Sounds good

Proven or promising external resources or approaches

NIH helps a lot to settle in US for foreigner researchers.

Response 2390

Perspectives on the postdoc roles and responsibilities

Related to NIH goals, temporary training period to prepare a PhD-level trainee for a career that will impact biomedical sciences and engineering.

Fundamental issues and challenges

Salaries are too low for trainees with this expertise and enter into phases of life with added responsibility for family, from children to caring for aging parents and grandparents, particularly as PhD degrees and postdoc training is taking longer and longer

Existing NIH policies, programs, or resources

NIH needs to increase R01 and MIRA R35 support to PIs to cover increased costs, as well as minimum stipend for NRSA and K99 grants. International applicants, particularly ones that did their PhD degrees in the US, should be eligible for F32 NSRA and related awards

Proven or promising external resources or approaches

Mentor training, and funds to support moving costs, short courses for career development

Response 2391

Perspectives on the postdoc roles and responsibilities

It is weird that we are considered in training yet we write the grant, form the students, manage our projects with our ideas. Work full time after years of grad school, stress and tuition fees yet we make less than most and can barely live

Fundamental issues and challenges

Money, stress, respect

Existing NIH policies, programs, or resources

More money, more defined tasks that fit what a postdoc is considered. Now we run labs and are treated as "in training"

Proven or promising external resources or approaches

Unions are a start. defining clearly what our tasks are ment to be so we dont do all the PIs work

Response 2392

Perspectives on the postdoc roles and responsibilities

For me, a post-doctoral fellowship is a period of higher academic training after completing a doctoral program.

Fundamental issues and challenges

I believe that the biggest problem with postdoctoral research is that the postdoctoral position is fixed-term and the salary is not sufficient.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2393

Perspectives on the postdoc roles and responsibilities

Post doc is similar to grad school, but without a clear goal and little input about improving one's skills.

Fundamental issues and challenges

Low wages and very little 'training' for the post doc.

Existing NIH policies, programs, or resources

Have a longer window of time to be eligible for certain grants as a post doc.

Proven or promising external resources or approaches

There have been post doc offices at both universities that have had some activities and career advice, but the offices are small and didn't focus on policies.

Response 2394

Perspectives on the postdoc roles and responsibilities

As a postdoc, you are the day-to-day lead of the lab. You contribute ideas, train graduate students, techs, and undergraduates, and write grants. We are the primary driver of the day-to-day activity and discourse in the lab, and yet underpaid, in many cases half as much as an industry equivalent position.

Fundamental issues and challenges

Pay. We are expected to take leadership roles in the lab, roles comparable to research scientists in industry, and are woefully underpaid in comparison. It is the main reason my peers have left academia, and the main issue I have in wanting to stay.

Existing NIH policies, programs, or resources

Postdoc minimum salaries should reflect industry salaries if academia wants to retain high quality candidates. More funding opportunities for postdocs and opportunities that cover both salary and benefits. Postdoc often lose salary and benefits if they are successful in the grant application process.

Proven or promising external resources or approaches

People are happier when they are paid what they are worth.

Response 2395

Perspectives on the postdoc roles and responsibilities

As a T-32 post doc at my university and in life, my role is often undefined and feels confusing. It is like I am in purgatory between being a student and being a researcher minus the benefits of either. Please see frustrations section.

Although I am grateful for the opportunity to work on my research, meet some new friends, learn a few new skills, I feel like I have taken a step backward in entering this position. I am constantly frustrated by a lack of organization in my program, negative reaction from administration when we provide feedback on the program, the financial burden of reduced pay by entering the T-32, lack of autonomy in my work that I

enjoyed in my PhD, and juggling health issues with very little PTO. It is not a path I would recommend to others. Several of us in my program have been searching for jobs and are considering leaving before the program is over because of our frustrations.

Fundamental issues and challenges

Financially the T-32 is a killer—especially since I worked full-time during and after completing my PhD. I took a pay cut to be in this program.

Examples of the financial burden:

1. Taxes: not eligible for student tax breaks nor am I eligible to have tax breaks for w2 income.
2. My insurance is more expensive since I'm not eligible to have an HSA.
3. T-32s are not eligible for contributing to retirement.
4. No FMLA, disability, or leave—I had a major surgery and I had to come back to work much earlier than my doctor wanted.
5. At my university, employees are eligible for 50% off classes, fellows are not.
6. As I am no longer fully "employed" , it has affected my PSLF status,
7. Antiquated pay scale that doesn't include pre-doctoral experience,
8. At my university, T-32s are generally not able to be PI's for grants (something I didn't know going into the program),
9. T-32s are not eligible for loan deferral status like students

The T-32 also affects mental health: With ever changing demands, financial burdens, juggling physical health, and our productivity being "pitted" against each other. Despite asking, we did not receive accurate information prior to entering into our program. When we suggested making this change for future T-32s, we received resistance. Constant uncertainty has hurt our motivation and lead to undo stress.

The fact that many universities now have hiring freezes is terrifying.

Many of us are stressed, depressed, or have had issues with anxiety. We discuss this among ourselves and have taken steps to seek help. It does not have to be this way.

Practical factors: Thank you for parental leave but what about other health issues? 4 weeks PTO is not enough for other health issues or for family leave.

Existing NIH policies, programs, or resources

1. There needs to be paid extended health leave BEYOND parental leave
2. Retirement
3. Adjust pay scale for fulltime work prior to PhD
4. DS2019 which is issued only for 1 year at [redacted for anonymity], which creates a lot of complications and stress surrounding visas for international postdocs
5. Require universities to allow post-docs to be PI's to apply for grants that allow it
6. Require universities to issue tax documents (1099 misc) to make taxes easier
7. Establish pathways for careers after the T-32; many of us feel lost—especially since many universities are putting hiring freezes
8. Post-doc programs need to be up-front about benefits and program expectations; no one should have to feel bamboozled like I do (I asked but received inaccurate information)
9. The idea that a mentor must have larger grants is antiquated. My secondary mentor who was PI on smaller grants has been the superior mentor to the person who is "more accomplished."

Proven or promising external resources or approaches

No response

Response 2396

Perspectives on the postdoc roles and responsibilities

Postdocs are crucial for academic research laboratories. Even though their numbers are smaller compared to graduate students, their contribution to research is likely equal to that of graduate students. With graduate students, the feeling is that just as you train them to become proficient researchers, then they leave the lab. This is especially true given that biomedical research is becoming increasingly interdisciplinary and requires longer training time. Without postdocs, it is going to be hard to work on something that is challenging and high-impact. Postdocs also help to train graduate students.

Fundamental issues and challenges

In the past five years or so, all my graduate students find pharmaceutical or biotech industry positions without doing postdocs with a starting salary of $120K per year. With this situation, current postdoc salary level is way low to attract postdocs to academia and to become future academia faculty.

Existing NIH policies, programs, or resources

NIH really needs to raise the postdoc minimum salary and accordingly, the funding of regular NIH research grant to make academic research sustainable.

Proven or promising external resources or approaches

No response

Response 2397

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The fundamental difference between working as a postdoc or working at a company is the type of employment offered to you. This is not news to anyone, but the 'fellow' status that is often given to you as a postdoc minimizes benefits and makes it difficult for you to continue life as an adult. The salary is minimal in comparison to your non-academic peers. You can not afford to buy a house, have a child (because of lack of benefits and expensive childcare etc), afford a car or a dog, and you feel a bit stuck as a constant student, even though you have reached your mid thirties.

Existing NIH policies, programs, or resources

I think other types of employments, staff scientists etc, should be promoted by the NIH through grant opportunities etc. Vey few of us postdocs are going to make it in academia as assistant professors, and not everyone wants to go down that path. Right now however, very few other opportunities exist, because PIs can't afford to hire you as a 'regular' scientist.

Proven or promising external resources or approaches

No response

Response 2398

Perspectives on the postdoc roles and responsibilities

Academic postdoc is a temporary training position which should:

1. prepare the postdoc for next career stage by providing enhanced technical training and intellectual support while protecting time to develop independent ideas;
2. help postdoc develop professional skills in management/leadership and the agency to perform at a high level in academic AND non-academic career paths;
3. provide mentor's lab with advanced skills and expertise that come from postdoc's Ph.D. training and contribute to research and training missions of the lab/department.

Fundamental issues and challenges

In my opinion, the biggest current challenges to recruitment/retention and quality of life are:

1. low compensation for postdocs, especially in light of rising inflation and cost of living in larger cities;
2. actual and perceived lack of career advancement in academia vs increased hiring of new PhD graduates by industry (i.e. no staff scientists positions with good/sustainable income);
3. US political climate discouraging international postdocs from coming here;
4. negative social media narrative RE: postdocing and academia in general, which is based on:
5. increased competitiveness of academic career path combined by no adjustment to modular R01 amount in >20yrs and decreasing institutional support of academic investigators

Existing NIH policies, programs, or resources

1. More investigator-initiated R01s with larger budgets. Less moonshots and consortia that seem to routinely go to large labs/institutions and increase the wealth gap between large and small labs. If postdocs are to be supported at equitable rates by PIs, then PIs need grant support that can fund increased postdoc salaries and still run a lab. Current modular R01 is soon to fund only a postdoc, part of the PI's salary, and not enough science to renew the R01.
2. Outreach and training opportunities to reframe postdoc as a chance to develop broad skills that are applicable to academia and industry vs. perception of postdoc as a "academic only" path. PIs need training in how to mentor in this way as well; I think most of us who are starting our careers as faculty now understand the challenges of the current system and want to help trainees succeed regardless of career outcome, but we need a little more guidance on how to facilitate this—and much more importantly, the funding to actually pay postdocs what they're worth. No amount of programming/mentoring will overcome the rapidly declining buying power of the R01.

Proven or promising external resources or approaches

No response

Response 2399

Perspectives on the postdoc roles and responsibilities

Could essentially be described as a (mostly) independent scientist within a research group

Fundamental issues and challenges

Salary is insanely low compared to compensation for the same academic roles 20 years ago. Usually, janitors will make more than scientists in academia now, since salaries have remained stagnant for so long.

There's also the obvious issues with toxic labs, abusive PIs, unfair administration, the entire system essentially being a pyramid scheme etc. but the fact that the salary is so low is literally absurd when you look at it in context.

Existing NIH policies, programs, or resources

You need to pay people more fairly, that's the biggest thing.

Proven or promising external resources or approaches

No response

Response 2400

Perspectives on the postdoc roles and responsibilities

In my view, Post-doctoral students are expected to have a level of expertise in one multiple specific techniques that they bring to the lab for either further development or for application to a different research question that they develop in the lab. The postdoc is at a level of training where the person can work independently in many aspects but need different level of supervision in other areas. Complementary

to this hands-on research training, post-docs should be immersed in the relevant literature and the active neuroscience community to engage with other researchers and clinicians to gain diverse perspectives. They should engage in teaching of students or leading journal clubs to foster the critical thinking and discussion of literature. I view the position as a preparation for a junior faculty position in an academic position running a federally funded lab or obtaining a K—award for additional mentorship in the junior faculty position.

Fundamental issues and challenges

In my experience, graduate students are discouraged from moving on into a postdoctoral position because they witness the high level of competition about funding during their education. They opt for a more secure and better compensated income in industry.

Existing NIH policies, programs, or resources

I think that the training awards for junior faculty and postdocs are very helpful and should be expanded. It would help to create a more financially secure environment for the PI/mentor that would allow the training of postdocs more independent of his or her own funding. This would allow the acceptance of postdocs at times of little funding.

Proven or promising external resources or approaches

No response

Response 2401

Perspectives on the postdoc roles and responsibilities

A genuine postdoctoral fellowship in my opinion is a *pre-faculty position*. A postdoc's responsibilities include project design, management, and execution (with the assistance of junior trainees and technicians in some cases). The key outputs are journal publications (research and reviews). What *should* be included during the postdoc's tenure are resources for future faculty training (grant writing workshops, teaching & mentorship training, lab management training, interview training, etc.).

Fundamental issues and challenges

Many PhD graduates do not want to become faculty, but they are applying for and getting postdoc positions because other options for a post-PhD science career are limited. Instead they want to be career academic scientists. I believe that this has been the case for a long time, before the recent recognition of a "postdoc shortage." I also believe that there is nothing that can be done to change this as long as academic tenure-track faculty responsibilities remain high-stress and hyper-competitive with precarious funding (the feast and famine funding cycle).

The result is a pool of applicants slotting themselves into postdoc jobs, but not actually fulfilling the responsibilities and expectations of a postdoc. They function as 9-to-5 workers (technicians), don't care about the long-term impact of their own publications, and tend to quickly leave the postdoc position to secure an industry job as soon as there is an opportunity. I don't believe they are to blame; non-postdoc post-PhD options would be useful and are in very short supply.

Existing NIH policies, programs, or resources

I am currently running a postdoc search, which includes a "staff scientist" option that is more senior (post-PhD) than an entry-level technician (B.S./ Masters) and offers the same pay as a postdoc, except there is no pre-faculty training or publication expectations. The staff scientist is an official position at my institution with standard salary and promotion policies. My top 5 candidates are currently postdocs at other institutions, are either first—or co-authors on papers, and ALL of them are opting for the staff scientist position. One of them said that they initially chose my postdoc option only because they didn't understand that the staff scientist option was more senior than a typical technician (see my point in the previous section).

There is an opportunity for the NIH to clearly define a non-pre-faculty position with pay commensurate with the postdoc. Staff scientists can serve an extremely valuable role in the academic research ecosystem. They are highly skilled, prefer the academic environment over industry, and their expertise grows alongside the leading-edge scientific advances that are unique to academia. If the NIH establishes

this standard, this would provide a model to be adopted by universities. Pre-faculty postdocs should be the exception, and not the rule. There are too few faculty positions and too many "postdocs" (genuine academic or technician) anyway.

Proven or promising external resources or approaches

No comment.

Response 2402

Perspectives on the postdoc roles and responsibilities

Produce high quality data and learn new skills/techniques that will prepare me to a next higher position in academia or in industry.

Fundamental issues and challenges

For international postdocs, the yearly renovation of DS2019 generates instability and stress. Frequently (if not the main rule), contracts last for 3-4 years, so the DS2019 renovation becomes only a formality that causes uncertainty.

Existing NIH policies, programs, or resources

Not that I am aware of.

Proven or promising external resources or approaches

An anonymous online tool where mentors (and why not postdocs too?) could be evaluated. This could be a revenue for information that is not in recommendation letters and formal e-mails. A platform like that -if well administered—could guide recruiting and better job choices.

Response 2403

Perspectives on the postdoc roles and responsibilities

The roles and responsibilities of postdocs have ballooned from a visiting scientist like position where young researcher could network and learn a new technique in 6 months to 1 year to a lab manager/staff scientist that is kept in the position for years. I have done 2 postdocs more than 4 years each and had to bring ideas that my PI would not let me leave with for my new position. This is the second problem with the changing role of postdocs, they are now used for the generation of ideas, which should be squarely on the PI.

Fundamental issues and challenges

Science in general needs more staff scientists. Postdocs should not replace these vital workers. They are looking to become professors not technicians. As someone who has spent 8 years as a postdoc, it is not ok to dangle professorship in front of a student for years only to pull the rug out from a hard working student. I think the problem comes down to a lack of mentorship or understanding about the relationship between a postdoc and PI. There used to be an investment in academic progeny, PIs should be selling their students (postdocs and graduate students) for their next position. Taking them to conferences to network, connecting them with people hiring positions but I do not see this. I only see increasing demands and fewer payoffs for students. It looks like an entitled one way street, where the people in power are exploiting scientists interested in research.

If postdocs remain in this new exploitative role then they should be paid similar wages to industry and not expected to work exorbitant hours. At [redacted for anonymity], my PI required me to be in from 8-5 everyday even if I worked weekend or overnight for experiments. That is abuse.

Existing NIH policies, programs, or resources

There should be oversight. If a PI is blowing through postdocs and does not place them into academic positions ever, then the universities or NIH should consider if funding for such position under the PI can continue. Clearly the old incentives of research legacies are no longer working as research has pivoted to only being interested in funding. Making mentorship contingent on dollars would be the best way to change attitudes.

Proven or promising external resources or approaches

Allow postdocs to unionize and discuss their situations with one another. At [redacted for anonymity] I was part of a [redacted for anonymity] program which allowed me to see how other postdocs were being manipulated or mistreated, including visa treats for non-citizen scientists, this let me reflect on my own relationship with my PI. [redacted for anonymity] was an extremely toxic place for postdocs, as the PIs were people of substantial power within their respective fields. My PI retaliated considerably when anyone tried to leave her group (for faculty positions or otherwise), myself and then within months of me leaving another postdoc spoke with [redacted for anonymity] but it felt like nothing ever came of it and her behavior of abuse only continues.

Response 2404

Perspectives on the postdoc roles and responsibilities

To me, an academic postdoc is a temporary position that is supposed to offer the postdoc researcher additional time to publish and to build their resume for a professorship. I think it was always a pretty challenging position to be in, especially as the expectations for professorships and publications grow.

Fundamental issues and challenges

I think that a postdoc is an inherently unstable unsecure position which was exacerbated by the COVID-19 pandemic. It made working in the lab much more challenging and less efficient. I think many graduate students were unwilling to take on a position with increased risk during an uncertain time. For graduate students who did decide to become postdocs during the COVID-19, I think that there were not any real accommodations made. Postdocs still operated under the same timeline (i.e. you have 5 years) and now that the pandemic is over, we have to make up for lost ground.

Existing NIH policies, programs, or resources

Extend the length of time that postdocs are eligible for F32 grants

Proven or promising external resources or approaches

I dont know of any, which is damning in and of itself

Response 2405

Perspectives on the postdoc roles and responsibilities

The postdoc position for me in a research space where we have the opportunity to carryout a large research project with minor supervision from our PI. It is also a space where we have the opportunity to learn about leading a lab including grant writing, paper reviews among other things.

Fundamental issues and challenges

The fundamental issues in my opinion is the lack of support for career development from PI. Most postdoc get zero mentorship from PI and the expectations are that you should work 60+ hours in an effort to only support the lab demands and PI needs. Postdoc most of the time have to become, mentors, managers, lab supply techs, technique innovators and still do their work with the expectation that all these additional roles have no effect on the workload.

Existing NIH policies, programs, or resources

The most important will be the minimum postdoc salaries to help cover for cost of living and family needs. The second will be generate more clear instructions for money allowances to ensure postdoc have the ability to seek out opportunities for professional development. Most times PI force their postdoc to use all allowances to cover health insurance policies. Thus, leaving people dependable on the PI to promote their career path.

Proven or promising external resources or approaches

working environments, mentoring and job satisfaction are all crucial to help postdoc feel value. Implementing more postdoc activities and making PI accountable for all development proposal should be crucial to ensure that postdoc are getting some of the training that is proposed in paper.

Response 2406

Perspectives on the postdoc roles and responsibilities

Postdoc is a training phase where a major shift to independence happens. Depending on the field of study, this shift is faster or slower based on how much independence was achieved during doctoral training. The majority of the effort

from all the parties involved in postdoctoral training must be spent on developing the capacity for independent scholarship and research.

Fundamental issues and challenges

Postdoctoral mentors view postdocs as highly skilled laborers to contribute to their own research program. This is the mainstream view and therefore doesn't confer opportunities to grow. This approach should be an exception as opposed to the norm. Until then, postdocs will be exploited, and their mental health will be in jeopardy as they are in a constant battle between developing independent research versus working for the PI.

Existing NIH policies, programs, or resources

PIs must be incentivized to allow the postdocs to grow as independent scientists. Fewer citizenship restrictions on career development grants would certainly be helpful for the large numbers of international postdocs in USA.

Proven or promising external resources or approaches

Elimination of the subtle threat of job insecurity due to the provision of annual contracts would be a great start. Grants that allow postdocs to establish international collaboration would benefit science as a whole. For example Canada's International Development Research Centre has a special grant—Joint Canada-Israel health research program—which has allowed researchers to establish labs in low and middle-income countries with promising prospects of increasing diversity and inclusion in science worldwide. Postdocs have more time and energy than PIs to get involved in such grants, which will boost their experience and capacity and help them foster new collaborations.

Response 2407

Perspectives on the postdoc roles and responsibilities

A postdoc should be an opportunity for scientists to grow in their independence and develop their own ideas as they move forward into whatever career path they choose.

Fundamental issues and challenges

The absolute insanity that a postdoc should only be a certain amount of time, and limiting funding opportunities to years post-PhD is infuriating. Sometimes good science takes time!! Not everyone worthy of a career in science is a hotshot, fast-burning superstar, and that should be okay! There should be more room for slow burns. Sometimes the coolest science comes from the least flashy beginnings, but the system continuously rewards what's "hot" right now, and trainees who have certain pedigrees or have gotten lucky and have a bunch of high impact factor papers in collaboration with other well-supported trainees/PIs. There are so many factors outside of postdocs' control that can impact their ability to check certain boxes of the NIH required for to receive funding, and it's wildly disheartening to feel like you don't have a chance because of a decision you made almost 10 years ago (in a graduate program or a graduate advisor), especially when that decision was not a bad one! Some things are just luck, and by rewarding the only lucky ones, you are not going to retain a lot of people who are frankly just tired of needing to be resilient in the face of failure after failure after failure. At some point, most people I know are just over it, and know they can make wayyyy more money in industry. Also, my PI barely gets to mentor me because he is so consumed with trying to get more funding for the whole lab, then I try and I'm literally single digit points away from the payline to get my own funding and we're all just screwed. We're trying to do good science, and the world just won't let us apparently.

Existing NIH policies, programs, or resources

Get rid of arbitrary time limits to funding. I got my PhD literally a week before reports came out of China about a new respiratory virus, and the entire start to my postdoc was consumed and destroyed by the

pandemic. But now I'm "aging" out of fellowship opportunities, right when I'm starting to hit my stride as a postdoc after years of discombobulation and lack of in-person interaction to begin my postdoc. Allow postdocs more funding opportunities outside the F32. Stop funding only what's "hot" right now. Have more objective standards for grant review, it is so dishearteningly subjective and honestly feels like a crapshoot that depends on the mood of your reviewer the day they read it. Also, someone needs to get the government to increase the NIH budget, because it's a joke. It's literally no wonder at all there's a "postdoc shortage." Especially when in the face of this "shortage" I still won't get funded because I'm a handful of points outside the payline.

Proven or promising external resources or approaches

Industry pays more money! Maybe try that?

Response 2408

Perspectives on the postdoc roles and responsibilities

To me, a postdoctoral research position is meant to be an intermediary position between graduate school and a professorship in which a postdoc gains additional research and publishing experience. Post-docs are often the workhorses in the research of the lab, needing less supervision than graduate students and often mentoring graduate students and/or technicians.

Fundamental issues and challenges

Post-docs are not paid what they are worth, and they are not paid enough to expect them to work long hours independently, publish, assist PIs with grants, and mentor students and trainees. As someone who wants to stay in academia after graduate school, I am hesitating too simply because I want to start a family and that is extremely hard if you don't have a partner who makes significantly more money than a postdoc. Often after a postdoc pays for health insurance for their family they are making approximately as much as graduate students, while they hold a doctoral degree and are experts in their field.

Additionally, they are not given the respect that they deserve as qualified and proficient scientists. I have personally heard PIs say that a postdoc "is not a real job" so they should not expect to get paid a livable wage. Postdocs are not 22-year-olds fresh out of undergrad, these are 30+ year-old adults, experts in their field, who are attempting to start families and save for retirement. An equivalent job in industry would not be given the same disrespect.

Finally, at any career level below a professor there is a massive power imbalance between trainees and their PI. Postdocs in particular are left with little avenue for improving working conditions. By the time you get to the level of a postdoc you are often in an incredibly niche field of study, any "burnt bridges" between a postdoc and toxic PI could leave a scientist essentially exiled from their field. You also rely on letters of recommendation for years to come for grants, jobs, etc, this leaves trainees indebted to their PI no matter the treatment they received while working in their lab.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Pay them more.

Response 2409

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The minimum pay for postdoctoral trainees set by the NIH is not competitive with industry and even other fields within the same institutes. It fails to take into account the expertise a postdoctoral trainee brings to a lab and makes retention and recruitment difficult.

Existing NIH policies, programs, or resources

Provide a stipend levels that reflect the cost of living of cities and reflect the training received during graduate school.

Proven or promising external resources or approaches

No response

Response 2410

Perspectives on the postdoc roles and responsibilities

The postdoctoral position allows one to acquire additional skills outside of the PhD that ought to be used to formulate a solid faculty research plan. The opportunity to experience different mentorship styles outside of your PhD mentor is also a plus.

Fundamental issues and challenges

For me retention issues are focused around the lack of support for parents and families. This could be improved by increased Maternity/paternity leave, better child care support (the benefit from My F32) will not even cover one month of daycare in my area), retirement benefits associated with F awards, and educating institutions on how to design their program to support and not alienate parents i.e. scheduling seminars at times that don't interfere with young children's breakfast/dinner time, holding family-friendly events etc.

Existing NIH policies, programs, or resources

More flexibility with family leave and extended leaves from F awards surrounding birth and early years.

Proven or promising external resources or approaches

No response

Response 2411

Perspectives on the postdoc roles and responsibilities

Finding a job in academia as an assistant professor is difficult for sure.

Fundamental issues and challenges

We are not paid enough, therefore the quality of life and stress levels are high.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2412

Perspectives on the postdoc roles and responsibilities

I view a postdoc as a trainee position, but with a greater managerial role and autonomy than a graduate student. A postdoc should conduct research for a primary investigator, but strive to conduct more independent research as more years are gained. There should be some differentiation between the roles and duties of a postdoc compared with a graduate student, and maybe act with more lab management role and work towards more hands-off in order to gain leadership experience along with adopting more of a principal investigator role later in postdoc stage. A postdoc should be 3-4 years in duration.

Fundamental issues and challenges

There are fewer and fewer job opportunities for a highly trained biomedical scientist with postdoc experience. The amount of experience is really only necessary if seeking a faculty principal investigator position, and there are fewer and fewer of these positions available. The ability to get funding as a

principal investigator is also diminishing, and as a postdoc, we see that, which makes the academic faculty position less appealing. Industry pays much better, has a better work-life-balance, and has more reliable pay, and therefore is becoming much more appealing. Additionally, there is so little pay, and postdocs are supposed to be these highly educated and valuable employees, yet get payed less than many bachelor's type positions. With the increase in number of years a person needs to be in a postdoc position (up to 7!), this is a significant amount of money lost over time, especially with most fellowships not providing retirement. Lastly, many people are at an age during postdoc when, if they are going to have kids, that is the time. There is very little support for parental leave, many research positions are very time-demanding, and returning to position with this high of a time demand having young children is not everyone's cup of tea. These issues, along with the high cost of childcare, the difficulty getting childcare, and most postdocs living in an area with little social/family support, this job becomes nearly impossible.

Existing NIH policies, programs, or resources

Parental leave, increased pay, childcare benefits, reduced duration of support or limits to number of years a person can be considered a postdoc, more leadership training, training for postdoc mentors on roles of a postdoc.

Proven or promising external resources or approaches

Link postdoc positions to faculty positions (similar to industry training positions that lead to a job).

Response 2413

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1. The anti-immigrant posture of the Trump administration and the Congressional GOP caucus are perceived by postdoc candidates in Europe as a deterrent in applying for postdoc positions in the US, according to colleagues in Europe.
2. The anti-US posture of the Xi regime in China has stopped Chinese students from coming to the US.
3. US born graduate students are skipping postdoc training because they prefer careers in biotech rather than academia. Biotech companies hire graduate students without postdoc experiences and pay them twice as much as academia. This generation of students are used to the Jon turnover of a gig economy. They do not value the job security offered by tenure in academia.

Existing NIH policies, programs, or resources

1. Raise the pay levels for postdocs to match those offered by the biotech industry.
2. Provide foreign postdocs with a clear and simplified path to green card and citizenship.

Proven or promising external resources or approaches

No response

Response 2414

Perspectives on the postdoc roles and responsibilities

The shared NIH and NSF postdoc definition is "an individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or her chosen career path."

[redacted for anonymity] believes an academic postdoc position ideally:

- Is a short-term, defined, transitionary period to independence;
- Recognizes the scientific expertise brought by the highly trained individual appointed;
- Has clear expectations between the postdoctoral scholar and research advisor for progress in both research and transferrable skills that enables the postdoc to take the next steps in their desired career pathway in a timely manner;
- Centers development of additional scientific expertise and professional skills as on-the-job training;
- Respects work-life integration and balance, giving appropriate consideration to the human aspect of a healthy, sustainable career in the biological and biomedical sciences enterprise.
- A postdoc may be perceived, but [redacted for anonymity] asserts should not be viewed, as:
- A trainee lacking research proficiency;
- An inexpensive staff scientist;
- An individual automatically assumed to be pursuing a tenure track academic research career.

As NIH further explores the role of academic postdocs and potential changes to the definition and culture, [redacted for anonymity] encourages caution for potential downstream negative effects on vulnerable populations—particularly postdocs who are temporary visa holders.

At present, professional development beyond additional research skills varies widely for academic postdocs across the country by the individual, research advisor, and opportunities at the institution. Participation in such programs and activities may also be limited based on citizenship. Development during the postdoc period should serve as a bridge to the desired career.

Fundamental issues and challenges

A postdoc is not a career, it is a bridge to a career. This relatively undefined period is rife with instability. The "trainee" moniker assigned to postdocs could be harmless, but has routinely been used to justify treating postdocs poorly. Similarly, the "temporary" appointments of postdocs are also sometimes used as an excuse not to invest in postdocs. Some fundamental issues for recruitment, retention, and postdoc quality of life include:

- Variable strategies for employment classification and pay are used for postdocs across and within institutions, usually leading to inequities;
- Postdocs on fellowship, often classified as "trainees," typically lose access to employee benefits, which can create disruptions in health insurance and other benefits;
- Postdocs can be in family planning and child-rearing years, making variable access to benefits, including parental leave and priority access to affordable on-site childcare, a particularly large barrier;
- Some postdocs have reached this life stage without any meaningful financial stability; differences in employment classification, including "temporary" status, may prevent postdocs from having an employer matched retirement account—vital for long term financial health;
- Newly minted PhDs are not treated as trainees in a vast majority of work sectors; this attitude in academia can have harmful effects for the overall inclusivity of the environment;
- There is no robust data on postdocs paid from grants—specifically, data on the national landscape of postdoc salary when not on fellowship and if any clear disparities exist for vulnerable populations;
- One-year contracts for postdocs can create unnecessary hurdles, especially for postdocs on temporary visas;
- Faculty jobs may have decreased appeal in an increasingly competitive funding environment;
- Scholars may feel expected to move institutions to advance their career, and acting on this belief can mean physically moving away from support networks, leading to increased potential for feelings of isolation.

Existing NIH policies, programs, or resources

As the primary funder of biological and biomedical sciences, NIH is well-positioned to create positive change. The current system for funding postdocs is not conducive to a healthy scientific ecosystem. [redacted for anonymity] recognizes many key issues are primarily a result of actions by the employer, yet encourages NIH to explore creative solutions to better support postdocs. For example:

- Adjust the Grants Policy Statement (GPS) to expand allowable costs for benefits beyond health insurance and allow fellows to be supported from multiple federal sources—noting that had they not received the fellowship it is highly likely they would be carrying out the same work/project;
- Clarify GPS language, as possible, such that individual fellows can maintain an employer-employee relationship with the extramural institution and receive standard benefits;
- Change existing fellowship funding mechanisms to include meaningful experimental funds;
- Evaluate the purpose and function of traditional funding mechanisms such as the F32 and T32; following analysis, potentially shift focus to more innovative funding mechanisms;
- Create funding mechanisms that do not tie postdocs directly to individual advisors, and ideally do not require substantial preliminary data, akin to the Katz ESI award, to foster research independence and dampen power dynamics;
- As feasible, create individual funding opportunities for international postdocs;
- Increase community awareness and utilization of NIH Re-entry Supplements Program to support retention and career progression of postdocs with caregiving responsibilities;
- Use IRACDA as a model program for ushering postdocs into a chosen career by further investing in IRACDA and piloting similar programs for transition to other employment sectors;
- Explore methods for senior PhDs to obtain postdoc positions more equitably, relying less on networks of their research advisors;
- When examining potential new programs and funding opportunities, emphasize improving the experience of the postdoc itself rather than only the end career goal.

Proven or promising external resources or approaches

Many impactful resources for postdocs occur at the institutional level: postdoc specific policies pertaining to appointment process and orientation, term limits, salary, benefits, and more; maintaining and funding a postdoc office and postdoc association; tracking postdoc alumni; having family and retirement benefits; and similar. The human aspect of the postdoc, beyond the science, must be respected and supported as possible through benefits that increase work satisfaction such as adequate access to childcare, mental health care, wellness resources, and similar. [redacted for anonymity] recommends NIH consider:

- Strengthening relationships with extramural organizations dedicated to improving postdocs' quality of life, such as the National Postdoctoral Association, and partnering to encourage widespread adoption of already identified recommended policies and practices;
- Working closely with extramural institution partners to ensure updates to the Grants Policy Statement are broadly communicated and appropriately understood, noting that university general counsel typically interprets language as conservatively as possible—often to the detriment of postdocs;
- Revisiting, and potentially altering, the NIH Broadening Experiences in Scientific Training awards with an emphasis on supporting postdocs, to bolster resources and infrastructure that may not otherwise exist at extramural institutions;
- Assess and possibly support institutional programs that emphasize postdoc conversion to tenure track faculty;
- Incentivize extramural employers of postdocs to be true partners—committing to supporting postdocs financially, rather than relying one-hundred percent on soft funds for postdoc stipend/salary—while ensuring this does not result in postdocs being overly concentrated at highly resourced institutions.

Response 2415

Perspectives on the postdoc roles and responsibilities

A post-doc position to me is a way to get more work experience in a lab without having all of the responsibilities of a PI. In this step of your career, you enhance skillsets for project management and development. In addition, you often train younger students, write grants, and contribute vast amounts of intellectual property to a lab. It is a step in a career path, but not a training program.

Fundamental issues and challenges

The biggest challenges inhibiting post-doc recruitment, etc, is money. Post-docs are people that have the highest level of degree and have spent years being educated. However, they are often paid ~$56k. These scientists are often 30+ and looking to start families. The salaries do not allow for this to happen, period. There is no negotiation on salary and Universities fight raising minimums. In addition, while funding is by far the most inhibiting factor, the culture of academia is not supportive to minorities. It is harder to retain and recruit when university policies often make access to higher education harder.

Existing NIH policies, programs, or resources

The pay minimum should be increased. Post-docs are highly trained and often are doing the hands-on work for a lab. Lab managers and other members of the labs that are not "post-docs" often make 1.5-2x more than a post-doc for arguably less work. In addition, mandated guidance on family leave and vacation should be included to protect members of the post-doc community. Post-docs should also be mandated to have insurance as fellowships often strip them of their status even though that are earning a prestigious title and money for a lab.

Proven or promising external resources or approaches

I believe St. Jude's example of raising all post-doc salaries to $70k will provide a strong example of this idea to the NIH

Response 2416

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The main issues are:

1. Postdocs are treated as expendable and are not fairly compensated for labor.
2. Postdoc incomes are low, especially in academia relative to industry. This is especially an issue with cost of living increasing drastically everywhere. If we can't afford to be a postdoc, we won't be a postdoc!
3. Postdoc positions come with fewer benefits than "real jobs". For example, I don't have a retirement program because I'm not "real staff" despite other staff at the university having retirement. Postdocs at my university didn't even get medical leave until recently at my university!
4. Expectations, particularly for "traditional" postdoc positions are toxic, relative to work-life balance. There are all kinds of perspective pieces on this in top-tier journals over the past few years.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2417

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

We can't save for retirement, we're underpaid, there's little guarantee of becoming a PI, and the hours are too long for our compensation.

Existing NIH policies, programs, or resources

Allow for postdocs to put money into retirement. Increase salary to be competitive. Make incentives other than the remote chance of becoming a PI.

Proven or promising external resources or approaches

Don't bother with increasing recruitment until you fix the issues; it will do you no good.

Response 2418

Perspectives on the postdoc roles and responsibilities

I am currently 18 months into my 2-year T32 postdoc. This position has given me invaluable in depth research experience in my area of expertise and has enabled me to fill publication and research training gaps necessary for a research career. However, the landscape of academic research has changed dramatically and no matter how good the training and how qualified I am to be an academic the job market is saturated and extremely competitive. The sacrifices in quality of life required for me to obtain a job in academia (e.g., low pay, long hours, living in undesirable locations) are not worth it for me and my family. I am grateful for my postdoc and the opportunities it has provided but am pursuing a nontraditional career that affords me and my family a better quality of life.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

As mentioned above, adjusting pay to meet cost of living, I think, would be huge in improving recruitment/retention of NIH postdocs. Modifying the payback obligation to expand the definition of what counts as research to encompass industry, clinical, and government work (i.e., the job I turned down was a government position in learning and evaluation where they do not use the term research) and acknowledging that these roles do not operate on an academic calendar in the expanded definition would also help.

Proven or promising external resources or approaches

No response

Response 2419

Perspectives on the postdoc roles and responsibilities

Postdoc position should provide further trainings to improve skills of scientific research. At the same time, postdocs should be allowed to be more independent and considered as a scientist with an advanced degree.

Fundamental issues and challenges

Very low annual income, toxic environment of academia, treated poorly by PI or science community (viewed solely as a continuance of training period instead of an early-stage scientist), and no protection from academia or institution (PhD students/candidates and postdocs are considered as "exceptions" in terms of workhour, compensations, benefits, etc. in most of the cases).

Existing NIH policies, programs, or resources

I am personally not sure where it is written, but I believe the annual income and work environment including benefits of postdocs should be comparable to industry in order to help postdocs debate between academia and industry as one's career path.

Proven or promising external resources or approaches

Same as answers above. A guarantee of better compensations and working environment (including demanded workhour and benefits) would start to attract more PhD graduates to stay in academia in the future. I strongly believe we need to start from there instead of offering more training programs or more competitive or non-appliable fellowships.

Response 2420

Perspectives on the postdoc roles and responsibilities

Postdocs have proven to be an intricate part of every academic lab community. They are mentors, people whom you can seek out for guidance and support. They take on a multitude of tasks outside of their own research—including training graduate students on novel instruments or practices, hosting lab events, helping the PI manage their workload, etc.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2421

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a training position meant to provide further training in the skills required for the next position for that individual. This could mean training for a faculty position or an industry position. Because it is a training position, a large portion of the postdocs effort should be towards career development. Postdoc positions should be somewhat independent, especially for those seeking faculty positions.

Fundamental issues and challenges

Cost of living. I considered offers for postdoc positions in great labs that I turned down because of the high cost of living. This is particularly challenging for people without generational wealth to support them during their postdoc. It is even more challenging for people with children. The cost of childcare can be prohibitive in many areas. The fact that most universities don’t subsidize the cost of childcare for postdocs only adds to the challenge. Related to both of these issues is the poor benefits many postdocs receive. Depending on the institution and how the postdoc is paid, they may be required to pay for their health insurance with out any cost sharing with their institution. Additionally, many institutions have policies that prevent postdocs from contributing towards retirement. Those that allow postdocs to contribute often don’t math their contributions as they would for other employees. This is a huge burden for postdocs without generational wealth. The postdoc years are a time when they really need to be contributing to retirement if they want to have a chance at retiring.

Existing NIH policies, programs, or resources

Childcare benefits for all postdocs on T32s, F32s, K99s. Require faculty paying postdocs through NIH funds to subsidize childcare. Some mechanism to allow for retirement savings.

Proven or promising external resources or approaches

No response

Response 2422

Perspectives on the postdoc roles and responsibilities

The NPA and NIH jointly developed the definition of a postdoc. NIH should adhere to a consistent universal definition of a "postdoc" regardless of funding mechanism. "Trainee" is seen as diminutive by many, and should be avoided, while "scholar" or "fellow" is more appropriate.

NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.

Postdocs should work in an environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth.

Postdocs should have protected time and funds to attend at least one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network.

Postdocs are usually intent on entering different positions after a defined period of time unlike permanent staff. Establishing clear expectations at the offer of appointment for both postdocs and their PI's regarding their role and how it differs from staff scientists will alleviate misunderstandings. Requiring postdoc and PI participation in formal performance reviews as part of an NIH award will better define, formalize, and evaluate factors of role, mentorship, and professional development, while differentiating postdocs from staff scientists.

The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities. This will assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Fundamental issues and challenges

NIH should increase postdoc stipends NIH training and fellowships grants to match GS-10 federal pay schedule including locality pay. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas 2 with defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases to the next GS-10 Step. The NIH should promote these minimum salary requirements for all NIH-supported postdocs.

Postdocs are paying a significant opportunity cost for limited faculty positions and 86.6% are impacted by job security concerns. Academia contains structural biases and institutional barriers that hinder the success of scholars from historically-marginalized groups. These postdocs and international postdocs face increased structural and implicit barriers including: lack of inclusion, reduced resources, implicit bias, and loss of community, while often managing increased familial commitments and additional financial responsibilities. NIH should expand DEIA initiatives and instate rigorous, impactful annual mandatory DEIA training for all those impacting postdocs (mentors/peers/PIs/PDOs) similar to research ethics. NIH should ensure training materials are current and evidence-based, while developing accountability and outcome measurements.

NIH should encourage contracts with lengths commensurate with the intended postdoc periods, longer termination notices, and ties to institutions not PIs. NIH should also support adoption of policies such as vacation accrual rollover to support international travel, subsidized visa costs, and insurance with dependent coverage while prohibiting the use of part-time postdoc positions to avoid provision of benefits.

NIH should work with the State Department and USCIS to accelerate and simplify the visa and immigration process for these world-class early-career researchers. NIH should also expand funding opportunities to visa holders through K99/R00 and new programs.

NIH should require a percentage of indirects on all NIH grants supporting postdocs to go to postdoctoral offices to increase resources and foster healthier postdoctoral communities.

Existing NIH policies, programs, or resources

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the host institution cannot categorize postdocs funded by NIH grants or fellowships as employees. Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible.

NIH should require all postdocs to receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.

NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. NIH should expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.

NIH should provide NIH-funded postdocs with moving allowances. Moving costs can be cost-prohibitive for researchers from low socioeconomic backgrounds, familial commitments, and internationals.

Many PIs lack formal training in mentoring and personnel management, and many postdocs lack an understanding of how to succeed as mentees. NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded PIs and menteeship training for postdocs.

Postdocs need to develop essential skills for their career transition, whether teaching and grant writing for an academic career or program management and public engagement for careers outside of academia—mandating IDP could help.

NIH should create or expand programs to support staff scientist positions in academic labs. This maintains the continuity of lab knowledge and provides career options for postdocs—providing clear differentiation between staff scientists and postdocs.

Collecting metrics on postdoc satisfaction on an annual basis will position NIH to be nimble in its response and adjust policy accordingly based on the needs of postdoctoral researchers.

Proven or promising external resources or approaches

The NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library.

Currently, institutions and NIH IC's each develop their own professional development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In an 5 increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources.

We encourage NIH to work closely with institutions that host postdocs and NPA on an ongoing basis to consult on institutional policy adjustments and tool development that are needed to complement public policy change.

We sincerely thank NIH for the platform to share our vision for postdoctoral training in the biomedical sciences. We applaud NIH's policies and programs that have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps.

Response 2423

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Increasing cost of living for postdocs and compensation costs for research budgets are a severe problem and NIH is not keeping up. Current F32 stipend is 9,000 less than [redacted for anonymity] UAW contract and [redacted for anonymity] and other institutions in higher cost areas, with difference growing to 19,000 over next three years. F32 level needs to increase. Research grant budgets for postdoc salaries should be increased outside of competitive renewals to make up for rapid increases in costs. Max mod 250,000 and pre-approval 500,000 limits should be raised, and NIGMS cap should be raised to allow budgeting for higher postdoc salaries.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2424

Perspectives on the postdoc roles and responsibilities

I use my postdoctoral position to gain new research skills, to make collaboration/networks, and to learn a new field. I use this position to learn all I can before moving on to my next career goal of a tenure-track faculty position. In my opinion, postdocs are university staff akin to staff scientists; however, we are not paid as such. In many places, postdocs are not even considered staff. Postdocs are backbones of research and spend much of their time driving projects AND training others in the laboratory. Because of this, postdocs control most of the day-to-day attitudes and progress in labs, as most PIs are not engaged at this level.

Fundamental issues and challenges

The biggest issue I encounter is pay. I want to use the postdoctoral position to learn as much as I can to support my next career goal (tenure-track faculty position). However, the main reason I consider leaving a postdoc and not pursuing my goal is pay. I have a roommate and I live in a college town, but my roommate and I barely make 3x the rent (combined). This is generally a financial requirement for renting, so my pay as a postdoc is not enough to meet the basic necessity for safe housing. I cannot perform my best and give my all in research if my basic necessities are not met. Money is a constant stress in my life and I live paycheck-to-paycheck. I do not have savings or family money to life off of. I am also considered "underrepresented in science" based off the NIH interest in diversity statement, but myself and my underrepresented peers are not staying in science, and the biggest factor is money.

Existing NIH policies, programs, or resources

The main point is higher pay. In addition, more options for loan repayment for academic researchers, more funding for childcare costs, more opportunities for training and transition awards. It would also be beneficial to have more career support (i.e. making postdocs a staff position rather than a strange position in between student and staff).

Proven or promising external resources or approaches

No response

Response 2425

Perspectives on the postdoc roles and responsibilities

The ideal academic postdoc is meant to contribute to the research goals of the mentor while simultaneously developing an independent research program as a future investigator. Being in the penultimate stage of an independent research career postdocs are the main cogs that drive biomedical research.

Fundamental issues and challenges

The biggest reason is the current compensatory scheme for postdoctoral trainees which is completely out of pace on multiple fronts. While a lot of elite institutions are based in big cities the postdoctoral

fellowships don’t reflect the cost of living differences (especially housing costs) between such cities and smaller university towns. This adds massive and disproportionate financial strain on postdoctoral trainees in big cities compared to those in university towns. This stress is further compounded by the fact that postdoctoral candidates are usually in the age group where they can/want to start families and have to make hard choices about starting a family, affording day care or schooling. All this stress and the resulting compromises distract trainees from their research and career developmental goals which are already quite considerable considering the ever shrinking availability of faculty positions and funding. This leads to pervasive unhappiness, mental health crises and an inevitable retention problem. Since the research done in pharma/biotech industry has ever increasing overlaps with academic research talented postdocs find it to be a rather easy choice to quit their training for better pays and work/life balance. Also, postdoctoral trainees in biomedical sciences who don’t have a medical degree are harder hit due to MD-PhD degree holders being able to secure better compensation. Thus the most effective way to increase recruitment and retention is to make the compensation fair and in line with current living costs.

Existing NIH policies, programs, or resources

Since NIH awards early and late career postdoctoral awards are highly competitive they should also come with an increase in salary compensation to the awardees. This would in itself add motivation in securing these awards and a better post doctoral experience for the awardees.

Proven or promising external resources or approaches

On site low cost childcare in institutions/universities, inflation adjusted salaries, affordable housing especially in major east/west coast cities or a housing allowance.

Response 2426

Perspectives on the postdoc roles and responsibilities

To me, the postdoctoral position is an opportunity to expand my training. This means learning new techniques, acquiring new knowledge in a new or adjacent scientific field, improving on my mentoring skills, and learning the logistics of running a lab. In a sense, this is almost like a graduate school part 2, but without the usual academic requirements (qualifying exams, thesis writing, etc.) This is really an opportunity to get the training and mentoring necessary to step into the role as an academic advisor running an independent lab. Ideally, this would be the focus of an academic postdoctoral position for me. In reality though, I feel as though many postdoctoral positions really don’t emphasize this mentoring and training aspect. Instead, the postdoc is treated like a graduate student that doesn’t need to be mentored and is just expected to get as much data as possible to crank out publications.

Fundamental issues and challenges

Amongst my graduate student peers, the biggest deciding factor that seems to be pushing people away from going for a postdoctoral position is pay. Of the ones who are on the fence between going towards an academic postdoctoral position or going elsewhere, most would be convinced by better paying postdoctoral positions to go for this path. This is something that for myself as well is pushing me towards other career paths. After nearly 7 years of working as a graduate student with about the minimum pay, it seems inconceivable to me to want to spend even close to the same amount of time in an even higher expectation position without better compensation. For myself and many others, we are also starting to have dependents to support—an elderly family member in my case, but I know spouses and children are more common amongst my peers. Without better pay, it just wouldn’t be sustainable for me to pursue a postdoctoral track. To me this is the key to these issues: better pay means better recruitment, higher retention, and better quality of life for postdoctoral trainees.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2427

Perspectives on the postdoc roles and responsibilities

- Defining a postdoc. The AAMC defines an academic postdoctoral researcher (postdoc) as an individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored, advanced training. A postdoc position is undertaken as an intermediate that bridges predoctoral training and an independent career. STEMM doctoral degree recipients enter a wide range of careers in academia, industry and other sectors including academic administration, law/policy, consulting, writing and research. While we recognize that some postdocs have still not decided on their career trajectory, we encourage individuals to pursue postdoctoral positions as an intentional choice to further an academic or industrial research career, rather than as a default 'next step' in the training pathway.
- The time in postdoc positions should be delimited. A postdoc should be utilized as a time-limited position that allows for the development of research, mentoring, and professional skills. We recommend NIH discourage the use of a postdoc position as an ill-defined step without a predetermined end.
- Effective, responsive mentoring and career development is necessary. A postdoc's ability to develop original research and move towards greater independence necessitates a strong mentoring relationship between the postdoc and the principal investigator and other mentors. In addition, postdocs should have career development opportunities to prepare them for multiple career options. NIH should support the development and dissemination of shared program resources and assessment tools to understand what programs work and what does not.
- Research is international. Any solutions for attracting and cultivating postdoc careers must recognize the importance of international talent. In addition to domestic trainees, more than half of the U.S. postdoc population is comprised of talented, international individuals who contribute to the intellectual and cultural vibrancy of the U.S. biomedical enterprise.

Fundamental issues and challenges

- Academic research careers must remain attractive. The research environment is a decisive factor influencing the career choices of young scientists. Despite the benefits of an academic research career, postdocs will be discouraged from academic careers if they see mentors and early career scientists struggling against long-odds in grant support or in sustaining laboratories, coping with excessive administrative burden, and being out-of-balance with work/life matters. NIH should continue to emphasize programs to improve the research environment and support early-stage investigators and recently established investigators. These efforts include monitoring paylines, identifying investigators at risk for losing grant support, and supporting career development and recruitment programs.
- Recognize the value of a postdoc. Postdocs are highly skilled individuals that should be compensated as such. NIH should recommend that research institutions ensure that all postdocs, regardless of funding source, receive at least the NRSA stipend level with experience level increases. NIH should strengthen programs that aid postdocs directly, including childcare benefits.
- Promote a safer and more respectful research environment. NIH should continue to monitor awardee institutions to reduce harassment under various forms and ensure that institutions have a grievance policy in place. There have been too many reports of scientists who left academic research over abusive or unfair work experiences.
- The importance of cultivating the next generation. Not every reform needs a new program or mechanism; the NIH should use its prominence to communicate the excitement of a biomedical research career to those interested in this career. This is especially true for international scientists. The ability of US research to attract international scholars remains one of our most important and distinctive assets. The implementation of research security efforts should protect federal funding and research assets against undue foreign interference without targeting individual scientists based solely on country of origin.

Existing NIH policies, programs, or resources

- Strengthen mentorship. Regardless of funding sources, institutions and mentors should provide scientific guidance and access to professional development opportunities in order to support career development. NIH can encourage strong mentorship by requiring a mentorship plan to be submitted for every postdoc (and graduate student) funded on a research project grant and by providing guidelines on its research awards as to the expectations of the institutions, advisors, and trainees. The [redacted for anonymity] suggests that a percentage of trainee time (5 to 10%) be supported from resources outside of a research grant, or that specific funds be designated in a research grant for training, e.g., toward centralized institutional postdoc support.
- Increase the diversity, equity, and inclusion of the research workforce. The academic research career should be made more attractive and inclusive for scientists underrepresented in research through community building, networking opportunities, and increased transparency. The NIH should consider developing a funding mechanism to promote the development of these activities and create centralized resources that can be shared across institutions.
- Ensure that stipends and benefits are equitable. NRSA-funded postdocs should have the same access to benefits as employee-classified postdoctoral researchers. The NIH should more clearly communicate guidance on how NRSA-funded postdocs are classified, as the current language is being interpreted by many institutions to mean that this subpopulation of postdocs cannot be classified as employees.
- Raise the NIH NRSA stipend scale. The NRSA stipend scale has increased over time, but has not kept up with inflation. In certain US regions, despite institutional supplementation, postdoc compensation does not meet the living wage threshold. Many institutions use the NRSA stipend scale as their institutional scale. AAMC supports an increase while recognizing that by raising the stipend scale there will likely be fewer postdocs in academia without a substantial increase in the overall NIH budget.

Proven or promising external resources or approaches

- Cohort-based postdoctoral programs. The [redacted for anonymity] applauds the NIH for launching the Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) program that brings together a cohort of K99/R00 postdoctoral scholars from diverse backgrounds as they transition from postdocs into academic research faculty positions. Along with MOSAIC, institutional postdoctoral cohort recruitment programs, such as the Stanford University PRISM program and institution-organized postdoctoral research symposiums, such as the Intersections Science Fellows Symposium provide valuable networking, peer-to-peer mentoring, and access to additional career and professional development opportunities. The NIH should consider expanding funding for cohort-based programs, particularly those that touch multiple institutions.
- Targeted fellowship funding. The NIH-funded Institutional Career and Academic Career Development Awards (IRACDA) has been successful in facilitating a diverse group of postdoctoral scholars to develop academic and teaching skills. Using this program as a template, the AAMC encourages the allocation of additional resources to help institutions develop and implement similar programs that may focus on other career development areas.
- Appropriate treatment of research trainees. A working group of the AAMC Group on Research, Education, and Training (GREAT) developed the Appropriate Treatment of Research Trainees (AToRT) guide to promote inclusive and supportive training environments for postdoctoral researchers and graduate students. The [redacted for anonymity] encourages further dissemination of this resource.
- Use of postdoctoral compacts. In recognition of the importance of defining and sustaining the commitments necessary for a high-quality training experience, the AAMC developed and endorsed the Compact Between Postdoctoral Appointees and their Mentors. This document provides program directors, administrators, and faculty with models to help initiate discussions at the local and national levels about the trainee-mentor relationship. It also recognizes the institutional commitment to establishing and maintaining high quality training programs. The NIH should encourage institutions to utilize existing models and resources to engage postdocs in these important conversations.

Response 2428

Perspectives on the postdoc roles and responsibilities

The hybrid professional/trainee position is a tough tightrope to walk. F32 and K99 reviewers seem to expect applicants to have good data with proven methods, but still have significant training components.

The postdoc period is often a fulfilling experience. One has a significant base of experience, expertise, and skill, and can use the postdoc period to simply do science without worrying about coursework or academic standing.

Fundamental issues and challenges

Pay is too low. The NIH minimum is at or below what one might expect with a bachelor's degree. This is compounded by opportunity cost. It is even worse if postdocs are not provided benefits like retirement and health insurance. This is worse for international postdocs who may not be able to speak up.

There are more postdoc positions than there are faculty positions. One could make an argument for a graduate degree being worth it for someone who has no intention of a career in academia, but postdoc positions should be a pathway to an academic position, not grease in the wheels of the machine of science.

There is an assumption that there are two paths to independence, be a rockstar and win an F31, then an F32, then a K99, or endure the low pay of a postdoc position for years until you get lucky. It's demoralizing.

Existing NIH policies, programs, or resources

Increase the base salary

Change the way F32 fellowships are characterized so that fellows do not lose benefits

Require R01s that budget for postdocs to have a pathway to independence plan for all trainees. Require mentoring training on R01s along with CITI and FCOI training. In general, PIs should have more accountability for monitoring the career goals of all of their trainees and working toward those goals.

Limit the number of concurrent postdocs per PI

Limit the number of concurrent R01s per PI.

Increase the number of K99 awards, expand the K01 program

Proven or promising external resources or approaches

No response

Response 2429

Perspectives on the postdoc roles and responsibilities

To me, a postdoc is the early career investigator that aims to transition from being a student towards starting their own research line and group.

To me, a postdoc trajectory is not so much training anymore. I view it more as a stage where you are guided towards independence.

Fundamental issues and challenges

For where I work, at [redacted for anonymity] in the Boston area, truthfully, this paper recently published in Nature says it all: https://doi.org/10.1038/s41587-023-01656-4

The far most important issue is that our salaries are not only not competitive (AT ALL!), they are not even enough to live a normal life in the Boston area. As scientifically studied and very clearly reported in the linked paper.

Existing NIH policies, programs, or resources

The first thing to worry about is the salary.

Proven or promising external resources or approaches

See attached paper.

Response 2430

Perspectives on the postdoc roles and responsibilities

To me the postdoc position is a period of transition. An opportunity to further expand and inch towards an independent researcher. I think your postdoc is suppose to be and feel like you have upgraded in the lifestyle, mindset, capabilities from being a grad student. An expansion of a person's role **and responsibilities** in the lab now as a postdoc. I do think it is a kind of a last opportunity to see academia (decide whether faculty is right for them) hopefully in a more deeper perspective because they may have an opportunity for grant writing, mentoring, teaching, meetings, etc. as a postdoc. While at the same time a chance to figure things out and set yourself up for next steps in a person's career. I think because it will come down to individual lab and/or institution, the postdoc experience is so varied.

Fundamental issues and challenges

A big issue is that in most institutions we are placed in a weird in-between as an employee/not-employee that may be a disservice to us. We are no longer students since we have obtained our degree, but yet not full employees either. When opportunities for career development are brought to campus, they are heavily grad student focused and feel like post-docs get lumped in as an afterthought. At the same time we are still lag behind being able to take advantage of things like retirement saving/employer match, health insurance, etc. because we are not full employees. While we have already delayed such benefits due to us choosing to pursue advanced degrees in the first place. I think more recent worldly events have further shined a light and for those who are able to, pivot towards alternatives early than go through with doing postdoc. The lack of intangibles (full benefits, daycare coverage, relocation fees, etc.) on top of the pay as advanced degree holders especially in high cost of living areas is no longer an attractive sale as previously. Additionally, for those who may not be interested in no-tenure track positions there does not appear to be any effort to promote and/or match those with interested postdocs. The numbers have been pointing in the direction of not enough faculty positions, but yet want to push the narrative of independent researcher/having your own lab. It is madness and not in touch with reality. Sometimes it feels like the blind leading the blind.

Existing NIH policies, programs, or resources

The R01 funding mechanism being adjust to accommodate the possibility of raising postdoc salaries. Expansion of the T32 funding mechanism being offered to more postdocs or even a separate T32 with just postdocs. Establishment of additional funding mechanisms, geared toward those who want remain in academia, just not on the tenure faculty track. Some type of rule/regulation pertaining to the "employee" designation of postdocs; consideration of us being considered full employees. Removing the wording or references to "training" in the language use to describe the position title.

Proven or promising external resources or approaches

No response

Response 2431

Perspectives on the postdoc roles and responsibilities

In my field, postdocs are expected to define and conduct research under the supervision of a faculty mentor or principal investigator.

Postdocs are expected to spend some time running experiments that are not their own to support the lab and/or mentor and train students.

Postdocs in a good institution/location will have a chance to go to conferences and do some networking for the lab and promote research. Some encourage postdocs to have active social media and build their expert voice through that, which can be very time-consuming and uncomfortable for some people.

They also spend some time writing papers and catching up with the scientific outcome of the labs. They do not get help with or are not encouraged to establish new collaborations, especially with industry. They are expected to follow the existing research grant's framework.

The postdocs often act as on-call hands-on experts and are expected to be available for mentoring, supporting teaching courses in case of prof unavailability, and troubleshooting labs' general technical problems.

The postdocs, spatially those in minority groups, are expected to be involved in DEI committees and groups, which is biased. A male postdoc is not often expected to be engaged (practically distracted) with the DEI services.

The postdocs are expected to help with peer-reviewing journal articles, interviewing students, and help with recruiting personnel.

Fundamental issues and challenges

Salary is a big issue. Some areas of the country are more expensive to live in but most of the postdoc salary is based on the NIH table. If the NIH salary range is below the min-wage, the postdoc work experience is not going to take into consideration for the salary!!

EU-postdocs in the US are in a privileged position which is discouraging of US postdocs and the postdocs of other countries. The EU fundings are with higher salary and tax-treaty.

A postdoc salary is less or equal to the yearly cost of childcare!! And PTO is limited.

The travel budget is another issue. Postdocs are expected to build a publication track record, but in practice, community engagement is an important factor in securing an academic job. For this reason, the areas of the country which do not have a dense scientific community (unlike the east coast for example) have higher travel costs and fewer exposers and access to the scientific community. They become isolated and unprivileged.

The postdoc timeline (for example 2 years) is very short for some research areas, making it hard for some postdocs to retain a healthy lifestyle.

Visa can be another issue, with an increased length of postdoctoral research, non-US postdocs are under the stress of extending their work visa in short increments, which is unsecured and distracting.

Mentors are the supervisors and there is a conflict of interest.

Often postdocs turn into research technicians. They may as well leave sooner for a higher salary, job security, and better benefits.

A postdoc is encouraged to define and run independent research and mentor students, but the PI wants ownership of the work. I see often that the postdocs postpone pursuing a timely research idea to when/if they start their lab to be the last author or the grant's PI.

Existing NIH policies, programs, or resources

- The salary range is not competitive.
- The low salary together with a limited PTO policy puts parents, especially mothers, at a disadvantage.
- Postdocs writing grants for the PIs without getting credit because they want to retain the new-investigator status for when(?) they become a PI. Maybe putting a mechanism that would be encouraging the postdocs to pursue their ideas as postdocs would help. K99 has been great but it is a very specific program.
- The postdoc length does not reflect the complexity and the pace of the research fields (primate research takes much more time longer than computational research).
- Most postdocs because of paying taxes are at a disadvantage in comparison to those (such as the EU) with tax-treaty.
- Postdocs with M.D. backgrounds earn more than non-M.D. even without clinical practice. An argument for the salary discrepancy is that they would earn higher than academics outside academia. This argument would also apply to postdocs with computer science backgrounds but they don't earn similarly for the same postdoctoral responsibility. Therefore, some scientists would be encouraged to leave academia for data science or similar positions in the industry.

Proven or promising external resources or approaches

Not sure, but thank you for your effort. NIH is great!

Response 2432

Perspectives on the postdoc roles and responsibilities

The postdoc position was an opportunity to get targeted learning critical for advancing a career in scientific research. I am grateful for mentors, advisors, and the network of folks I have built in the two short years I have been a postdoc. It also gave me an opportunity to focus on reading, honing my scholarly writing and learning from other postdoctoral scientists.

Fundamental issues and challenges

The fundamental challenge is the pay. The more prestigious positions are found at high-ranking institutions that are located in large metro areas where the cost of living is expensive. My biggest challenge, esp as a Black female scientist from a low-resource area, was struggling financially to live in the NY metro area. We were advised to not take on multiple jobs, but that was not a feasible option for me. I found myself either draining my already dismal savings or taking on multiple jobs to be able to live.

Existing NIH policies, programs, or resources

Perhaps pay folks based upon the cost of living for the area in which they have a postdoc. In NYC, one needs to earn $150k just to live. We are paid 1/3 of that, which is below the poverty line in this area of the country. If, however, I had a postdoc in Oregon, I'm living quite well. I think this needs to be taken into account. This was an unnecessary stressor that can be adjusted.

Proven or promising external resources or approaches

Perhaps have the institutions report out on the students and have some sort of forum for the postdocs that are funded by the NIH. There are a variety of experiences among T32s even within the same institution. I guess a way to standardize the experience would be key. Also, some PIs do a great job and publish with their fellows, bring them in on publications while others do not. Perhaps adding in a metric regarding publication would be fundamental to development.

Response 2433

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2434

Perspectives on the postdoc roles and responsibilities

The academic postdoc should be a training position, and include skills in grant writing, lab management etc. There should be more accessible Staff Scientist positions with competitive salaries for research positions.

Fundamental issues and challenges

Salary, salary, salary. Academic track needs to be competitive with non-academic positions.

Existing NIH policies, programs, or resources

The maximum for modular grants need to be $300,000, and there could be special categories on these grants for Postdocs in training.

Proven or promising external resources or approaches

Intramural NIH is competing substantially with the extramural community for postdocs, but not providing them with the skills to compete in the extramural environment.

Response 2435

Perspectives on the postdoc roles and responsibilities

The purpose of doing a postdoc is to get another job. I know the official purpose of a postdoc is to get more training but, in my opinion, many postdocs only need a couple of years of extra training before they have the skills needed to become faculty. However, the job market is such that more and more publications (and therefore longer and longer postdocs) are needed to become faculty. This means that postdocs now primarily exist as a cheap source of highly trained labor for more established labs.

This shift in the purpose of postdocs is also demonstrated by advice I have received from faculty who specifically told me to not seek out more training during my postdoc but instead continue working with populations and methods I'm already highly skilled in because that would let me produce publications at the rate needed to eventually successfully become faculty.

Fundamental issues and challenges

Low Pay: The pay postdocs receive is extremely low compared to

a) significant increases in the cost of living over the years,

b) the income needed to support a family,

c) the pay in industry.

Poor Opportunities for Advancement: Shifting expectations on the faculty job market have resulted in postdocs becoming longer and longer, with no clear end typically in sight for those who want to become faculty. Furthermore, additional stepping stones have started appearing on the way to Assistant Professor positions (e.g., Project Scientist, Instructor). These "super-postdoc" positions mean that the path to becoming an Assistant Professor and having your own lab is becoming even longer than it already is.

Lack of Geographic Stability: Postdoc positions and especially faculty positions allow people very little flexibility in terms of where they can live, which is worsened by academic culture assuming that everyone should only think of their work when choosing where to live and nothing else (e.g., family). This means that people who have preferences for where they live are often driven out of academia. This also negatively impacts diversity in academia because it means that people who want to live in a state that protects their rights (e.g., female-bodied people, LGBTQ+ people) have fewer places they can live and are more likely to leave academia.

Lack of Rights: Many postdocs, including ones on F32s, have no rights as employees because they count as 'students' instead of 'employees'. This means that postdocs have no right to medical disability if they become sick, and postdocs who want children have no federal—or state-protected right to take parental leave. Combined with postdocs' poor pay and the geographic inflexibility, this lack of rights disproportionately drives people away from academia who want a family.

Existing NIH policies, programs, or resources

I am only aware of three NIH policies/programs/resources that support postdocs:

1. T32s,
2. F32s,
3. small childcare supplements to T32s and F32s. From what I have heard from other postdocs, is marketed as though it is easily accessible; however, in reality even people who qualify for have their applications for childcare supplements frequently rejected for reasons that are not made clear.

Proven or promising external resources or approaches

Pay: NIH needs to enforce a minimum pay for postdocs; I know of at least one university which pays postdocs less than the NIH-recommended minimum for postdocs because there is no minimum pay that's enforced. NIH also needs to significantly increase the minimum postdoc pay.

Geographic Stability: NIH should create a funding mechanism that would let postdocs attain a faculty position at a specific university (similar to how F32s can be written to join a specific university). Specifically, the mechanism could be structured as follows:

a) the postdoc works with their university in mind, and

b) the university agrees that, if the postdoc receives funding through this mechanism, they will offer the postdoc a faculty position. This would help retain postdocs who would otherwise leave academia because they have geographical restrictions in where they want to live.

Rights: NIH should require postdocs to have the same rights as other university employees.

Response 2436

Perspectives on the postdoc roles and responsibilities

The postdoc is meant to be a means to intentionally build towards and enable an academic career. There should be fewer postdoc positions (this is your point of gate-keeping rather than graduating too many PhDs/postdocs who cannot be respectably channelized into an academic role. This is especially true of MD/PhD and other unique educational backgrounds.

Fundamental issues and challenges

Poor salaries, in many locations does not even keep up with local cost of living.

Unrealistic expectations from PI and lab heads about hours put into the job.

No 403 support/contribution.

90% postdocs who cannot transition into a faculty position are viewed as losers who essentially are not capable of better positions which is not factual.

PI or lab head has too much control on the fate of the postdoc, the recommendation letter is a farce—it just serves as a check mark for institutions that are not willing to take the responsibility of assessing a faculty applicant's calibre and potential to do good science. Do PIs even write the full drafts of the letter themselves?

Lack of equitable practices in labs—postdocs coming from different countries/nationalities have different opportunities for success (read applying for grants, fellowships, awards), it is also reflected in the stipends/fellowship amounts. It is not a level field especially for international trainees (why would NIH spend money on training these PhDs, then not support them through the postdoc pipeline to a faculty or equivalent position?)

Winner takes all system where only a few labs control the science, only a handful of people become successful and get every recognition while others slog anonymously for years.

Lack of PI-equivalent respectable positions in science at universities or similar institutions.

NIH does not care about harassment in labs. As long as you have the recommendation letter system in academia, PIs will continue to have undue advantage, and few people will dare to report problems.

Focus on impact factors and number of publications = metrics not measuring good science, little incentive for discovery.

PIs are hardly in lab, do little work themselves, it is a slavery system.

Existing NIH policies, programs, or resources

PAY the postdocs a respectable salary, else it is essentially saying that their NIH supported training as grad students is so bad that these people have neither the skills nor are they deserving of earning a living wage.

Institute a committee system for postdocs like the one for graduate students, to oversee and facilitate their progress.

Do away with this recommendation letter system, one person (PI) has too much power over the life of a vulnerable human being (postdoc) in a precarious role.

Each time a grant and progress report is submitted from a lab, get a 360 degree assessment of the PI. Ask lab members to submit a confidential review or assessment of the PI.

Make PIs and institutions more accountable for their actions.

Do an audit of the hours that a PI actually worked for the lab (for what they earn) and did not simply pass the work along to a lab member. This is a feudal system.

Proven or promising external resources or approaches

Make HR accountable in academic institutions supported by NIH to be on par with HR in Industry. Encourage reporting of issues and make this data mandatory reporting for grants and progress reports.

Improve benefits—PI and postdocs should have identical health benefits and follow same rules for retirement benefits within their salary caps.

Collect data—how many women versus men postdocs from a lab ended up in faculty positions? What is the financial gap between different genders and especially for marginalized groups?

If a postdoc had to take parental leave, hardship or a disability, how were they supported? Get data on career outcomes for postdocs with disabilities and first generation candidates.

Design a reportable mentoring rubric and make PIs accountable for systemic failures in labs to support postdocs.

Create more non-PI but PI-equivalent positions in academia.

Protection for whistleblowers, serious repercussions for retaliations.

Postdocs that generate data for grants should be made co-PIs on grants, not simply assigned as personnel.

Current NIH grant system serves the PI, not the science. Invite ideas to change this systemic problem.

Response 2437

Perspectives on the postdoc roles and responsibilities

It’s strictly a training position where people learn how to do research through doing research under supervision of a mentor. It should also provide training in management, mentorship and new skills such as bioinformatics.

Fundamental issues and challenges

There are multiple problems in recruiting and retaining postdocs.

The sources of foreign postdocs, who used to be a significant fraction of the postdoctoral workforce, have almost completely dried up. The reasons for this differ by region of origin. European postdocs do not want to come to the US because they are put off by domestic politics such in limitations on individual rights and fear of violence such as gun violence. Asian postdocs feel like they are targets of anti-asian sentiment and also countries like China are now offering better research resources than the US does and hence is out-competing the US for asian and even European postdocs.

US graduate students are skipping postdoctoral training to enter biotech immediately after receiving their PhDs because of higher salaries, better research resources and a much more uplifting research environment.

Existing NIH policies, programs, or resources

There is only one issue—ADEQUATE FUNDING

For more than 20 years, since the establishment of the modular budget, the NIH has pretended that there is no such thing as inflation. This has simply gutted research budgets, especially for grants that are

competitively renewed. Thus adjusted for inflation, what used to be a 25,000 module should now be a 41,000 module. Forcing lab heads to deal with the reduced funding due to lack of inflation adjustment has poisoned the NIH funded research environment. Simply put, it is hard to convince people they should go down the classic academic research track given the challenges this causes.

Postdoctoral salaries are not competitive. Salaries need to be appropriately increased and adjusted for local cost of living. I know that the NIH has adjusted postdoc salaries from time to time but additional funds are never provided to cover these increases, no matter how inadequate they may be. Forcing lab heads to deal with inappropriate postdoctoral salaries due to lack of inflation adjustment and failure to fund mandated increases has further poisoned the NIH funded research environment.

The lack of state of the art instrumentation also poisons the research environment.

The effect of these problems has simply made the biotech research track more attractive than the academic research tract. If the best opportunities to do state of the art research are in biotech, that is where our students will go. Or have gone.

Proven or promising external resources or approaches

The NIH simply needs to face up to the need to provide adequate funding at the key stages of a scientific career. These include adequate postdoc salaries and enough funding that postdocs have a reasonable chance to start and establish a competitive lab. But providing adequate funding for labs that succeed is also important because if being a successful investigator is unattractive, people will not want to enter the profession even if entry level opportunities are attractive.

Response 2438

Perspectives on the postdoc roles and responsibilities

To me it is a necessary step to get to a faculty position

Fundamental issues and challenges

Postdoctoral life is very unfriendly for people, especially women, with kids. The pay is not enough for childcare expenses, the maternity leave is too short, many places don’t have lactation rooms, childcare can be unreliable, all on top of the bias that women with kids are not serious scientists makes a postdoc life with a kid impossible.

Existing NIH policies, programs, or resources

The fact that extensions for having kids is not combinable with other extensions is unbelievable. With COVID it meant that someone who got stuck without childcare was the only one ineligible for a COVID extension.

Proven or promising external resources or approaches

No response

Response 2439

Perspectives on the postdoc roles and responsibilities

Postdocs are employees responsible to principal investigators. They need to address specific aims in grants. Their level of independence (or laxk thereof) is based on their PI’s attitudes and on their own skills and knowledge.

Fundamental issues and challenges

Postdocs need to be interested in the science and need to get along with their PIs. Postdocs often have a two body problem; their partners need jobs nearby. Postdocs with children need daycare. They should have matched retirement benefits and health insurance. They should be paid as professionals.

Existing NIH policies, programs, or resources

RO1s need to provide additional salary support. Granting agencies should require postdocs get benefits.

Proven or promising external resources or approaches

Also, what about moving costs?

Response 2440

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is ideally a short-term (~4-5 years) appointment in which a PhD grows additional skills, manages their own project(s) with support and advice from their advisor and other mentors and peers, trains others in the lab, takes on riskier projects than a PhD, and ultimately accumulates a body of research and expertise great enough to found their own lab.

Fundamental issues and challenges

Salary and other compensation (e.g. health insurance package, leave, retirement benefits) far lower than industry, consulting, government, and medical writing positions (a.k.a. literally any alternative).

Lack of institutional support and protections.

Little benefit to any future career other than PI, which is very difficult to get.

Existing NIH policies, programs, or resources

Fund research scientist positions for PhDs that are NOT meant as pipelines to the PI job. Many people love doing bench science and have no desire for a managerial role, but have very few options to remain in academia other than perpetual postdocs, which are not sustainable financially or stable.

Proven or promising external resources or approaches

Working environment: systematically require universities to provide HR with teeth and train all postdocs about their rights in the workplace, including sick leave, lack of sexual harassment, right to work without visa coercion (for international postdocs), and how to report any problems. This should also be the case in graduate school. Academia builds structures that refuse to hold prominent people accountable, and after graduate school many of us are already extremely jaded by corrupt systems and wouldn't consider a postdoc in academia even if it actually paid an appropriate amount.

Response 2441

Perspectives on the postdoc roles and responsibilities

Postdocs learn to drive a project forward with their own ideas. They get to learn fundraising through grants, and they need to get mentorship training and expertise. It is a training position hat provides incredibly important experiences for starting their own lab.

Fundamental issues and challenges

Major issue is salary—at times when industry scientists make ~150K right out of grad school and daycare costs are ~30K/yr per infant, a job with ~52K salary per year is not competitive. Limited positions in academia without a chance for midrange positions (like long-term academic scientists with a competitive salary) further decrease the likelihood that postdocs will join labs. In addition, the time it takes to produce a big paper as a starting point for an academic career means that salary shortcomings will be felt over a very long time.

Existing NIH policies, programs, or resources

NIH MUST change the RO1/R35 funding mechanism to allow for competitive postdoc salaries. That's the most important part. You can't fund an RO1 with ~250K/yr and expect progress on three aims (I could pay one postdoc and 50% of a graduate student/tuition plus supplies from this; so expect 1-2 aims to be covered). Salary range must increase with a starting salary at least at 70K/yr without benefits, better would be higher salaries (even a 100K salary means a good graduate student will forge 50-90K salary per year, as they could get 150-190K/yr in industry).

Proven or promising external resources or approaches

No response

Response 2442

Perspectives on the postdoc roles and responsibilities

In graduate school, students learn bench skills and to design and interpret a series of experiments to interrogate a biological process. The postdoctoral position allows the young scientist to add additional technical skillls that broaden their tool set to interrogate biological process. Even more importantly this position gives the young scientist training in how to take the next step as an independent research, the knowledge of how to choose an important biological problem and direct a research program.

Fundamental issues and challenges

A big issue these days are the salaries. Because graduate careers take so long, and postdoctoral positions also now involve a 4-year commitment, many recent Ph.D. students are choosing industry or science-related jobs. In addition, many students no longer choose a career path of a postdoctoral fellow because they see the struggles of faculty to fund their research.

Existing NIH policies, programs, or resources

Raise postdoctoral fellows' salaries. Raise the amount of grant funding for young invesigators. Neither the salaries of postdoctoral fellows or new investigator awards have kept pace with inflation. In many places a postdoctoral fellow makes little more than a graduate student (40K vs 55K). Grants for young investigators have been stuck at 250K for years. This funding barely supports a techniician, one graduate student, and supplies for their research.

Proven or promising external resources or approaches

No response

Response 2443

Perspectives on the postdoc roles and responsibilities

As a t32 director for decades with NIMH and NIDA and Fogarty I have found it increasingly important over the years to train postdocs. They are part of our mentoring mosaic because they have a need for training but also have a lot to give back to trainees themselves. It is an important position.

Fundamental issues and challenges

Stipend is too low. Benefits are too low. Travel offered is too low.

Existing NIH policies, programs, or resources

Make it more prestigious. Offer a competitive wage and more benefits. Allow for a one year and two year program. Not three year. That is too much. And maybe allow for a six month training. Several of our postdocs found a faculty position in their second year and it was detrimental to our program to lose them while also being detrimental to them.

Proven or promising external resources or approaches

No response

Response 2444

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is intended to be a period of continued training, professional development, and preparation for the subsequent career stage. This is a temporary position in which postdocs receive mentorship, training, and guidance to develop skills and knowledge to allow them to succeed as independent researchers.

Fundamental issues and challenges

Major issues inhibiting recruitment of postdoctoral trainees include limited job prospects in academia, limited financial supports, limited benefits, and poor work/life balance. The highly competitive nature of academic positions means that PhD graduates are considering alternative career paths, many of which do

not require postdoctoral training. These other prospects are also appealing to many for the higher earning potential and better work/life balance. Many are seeking other employment opportunities as the postdoctoral salary rates are not competitive compared to other industries, particularly in major cities such as New York. Additionally, the benefits available to postdocs are also limited and varied by institution, including access to employee assistance programs, medical insurance, life insurance, retirement contributions, and housing, among others. Finally, the work/life balance for those in a postdoctoral position have become increasingly skewed with many feeling the need to put personal life "on hold" while completing a postdoc.

Existing NIH policies, programs, or resources

The NIH OITE resilient scientist series has been a great resource that address the well-being component of postdoctoral training. This has been helpful to share with other institutions and continued offering of this resource would likely be beneficial. However, the larger systemic issues of financial and mentorship support would likely still need to be addressed as suggested below.

Proven or promising external resources or approaches

Increased funding that reflects the specific needs of geographical locations and increased accountability for current supervisors and PIs would likely help improve the postdoctoral ecosystem. Increased and appropriate funding rates would likely attract talented postdocs who otherwise feel the need to pursue alternative career opportunities to receive competitive earnings. Increased accountability for supervisors and/or PIs would also likely help improve the working culture for postdoctoral trainees. This could include required annual mentorship training, inclusion of mentorship skills in the tenure process, and/or confidential annual feedback from postdocs to the institution administrators regarding their PI/supervisor.

Response 2445

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Across the majority of academic institutions, obtaining external postdoc funding leads to a loss of benefits (medical, dental, retirement etc.), which are typically covered by the institution. Because of this, externally funded postdocs are penalized compared to non-funded ones, leaving little incentive to compete for funding or stay in academia at a time many of us are starting families and just cannot afford to lose benefits.

The K99/R00 mechanism is deeply flawed. One either "does not have enough preliminary data," but when including preliminary data upon resubmission one is "overqualified and does not need training." Addressing all the comments in a resubmission gets one nowhere because the NIH cannot ensure sufficient reviewer continuity. The R00 is designed to build upon the K99, yet reviewers will penalize the application based on perceived "interdependence."

This issue affects not just postdocs, but the review process seems entirely dysfunctional. So much of grant and manuscript reviewing is just luck of the draw. Reviewers don't get paid. Can't get the same reviewers again.

Existing NIH policies, programs, or resources

The Becoming a Resilient Scientist Program has been helpful to many individuals. However, one wonders whether these individual-targeted programs are the key to resolving what is instead a systematic problem.

Proven or promising external resources or approaches

No response

Response 2446

Perspectives on the postdoc roles and responsibilities

Originally, I had the impression that postdocs were an opportunity/place for new scientific exploration in a field completely different from one's doctoral focus. However, I have found that almost zero PIs want to

take a chance on a postdoc who is looking to pivot (or double pivot) to gain complementary skills/expertise. Instead, PIs look to hire someone with precisely the same background/skillset that they achieved during doctoral training. Thus, a postdoc feels almost like a relic of the past—a required "step" in order to obtain a tenure-track position, even if there are only marginal training/science gains from being in such a "transition" role. I know I am fully qualified to be a professor/PI and, yet, for reasons unknown to me, I "have" to take this pause on my scientific trajectory and growth to tick the postdoc box so I can be considered for faculty positions. Today, a postdoc feels like a way for PIs to get cheap skilled labor, rather than a beneficial training opportunity for me.

Fundamental issues and challenges

Largely financial hardship. Graduate school did not allow me to save any money, plus I am still paying off student loans. It was a really hard decision to not leave academia for a STEM industry role that paid 3-4x the standard NIH postdoc salary, but I have wanted to be a university professor since I was 8. I am really hoping that I don't have to abandon my dreams just to ensure that I have some financial stability after so many years as a student, but I have ~$500 in savings (total) even though I am 32. I cannot afford to stay in a postdoc for more than 1-2 years, maximum.

Existing NIH policies, programs, or resources

I was a predoctoral fellow funded by NIH (3 years; FIC/NIBIB/NCATS) and I am a current postdoctoral fellow funded by NIH (2 years; NIHLB)—I think the pipeline and overall structure for training and mentorship is adequate. Instead, the biggest barrier to the postdoctoral training experience is financial: the minimum postdoctoral salary needs to be increased to match cost-of-living and to reflect the amount of advanced training we have completed. Currently, our postdoc salary does not reflect our value or our educational status. I should not have to live in poverty-—even delaying starting a family--just because I elected to pursue a scientific/academic career. For comparison: my starting industry salary as a 22 year old with just a B.S. (10 years ago in 2013, so not adjusted for inflation!) was ~2x my current postdoc salary. That is ridiculous. I honestly do not know how I survived financially during graduate school and I am not sure I will fully breathe financially until I am a few years into my future tenure track faculty position.

Proven or promising external resources or approaches

While conducted without a thought to the downstream requirements within its academic pipeline, Germany's recent approach to limit the number of postdoc years to 3 is interesting. I am not convinced this is the best solution to deal with our (largely financial) crisis in the US, but I do believe that addressing the number of needless 3-5+ year postdocs is important. Recent efforts by many US universities to increase graduate and postdoctoral stipends—via internal funding or by no longer charging tuition—may also be instructive for how to identify additional funding sources that can bridge the critical salary gap. Still, NIH grant schemes need to be increased to account for this overall increase in salary costs. I also just want to note that postdocs should be eligible for continued loan deferment as long as postdoc status is maintained (aka maximum of 5 years). I think this could perhaps relieve some of the burden since the requirement to make loan payments while making such a low postdoc salary is especially burdensome, including for first generation and BIPOC.

Response 2447

Perspectives on the postdoc roles and responsibilities

While the postdoc is a training experience, I do not view the postdoc as being a trainee in the same way that a graduate student is a trainee. Like any other professional entering into a new job or experience, training is required. Also like every other professional in a job, there are also significant contributions being made by the postdoc, which deserve recognition, compensation, and status. Often postdocs are categorized as students when convenient (when classified for health insurance, for example), and yet also kept from student benefits when convenient (categorized as temporary full-time employees without access to student resources including fitness centers, student IDs, events, etc.). While one could argue that most postdocs are not interested in attending student-focused events, they also do not have the option to benefit either from student resources OR resources given to full time employees. While most understand the trade offs of staying in an academic postdoc compared to pursuing a career outside of academia (industry postdoc, industry job, among others), there is a high cost to staying in the academic arena, one

that is not equitable, just, or fair, and pushes out those who cannot financially or emotionally afford to stay.

Fundamental issues and challenges

To me, the challenges in recruitment, retention, and quality of life all come back to the cost and wages of a postdoctoral trainee. Even as a postdoc at a major R01 institution, I am paid below the "NIH minimum" salary. While peers with arguably similar training—perhaps even with fewer accolades (papers, awards, etc.), have moved into roles that pay twice the salary with retirement benefits, bonuses, and more protected free time. The benefits of pursuing a postdoc are often lost when academic jobs, grant funding, and opportunities are difficult to come by, hard to secure, and dwindling over time. It is difficult to feel like you are a respected professional, even one with an advanced degree, when you are often fighting to have what would be considered the bare minimum in all forms of compensation.

Existing NIH policies, programs, or resources

While the NIH minimum salary is useful in theory, institutions either choose not to follow, or have no motivation to follow these guidelines. Additional oversight is likely needed to ensure that the postdoctoral training position can be maintained. With the decline in individuals willing to spend important years in postdoc positions, it is perhaps unsurprising that this could have a greater effect on the academic system (future faculty, etc.) down the road.

Proven or promising external resources or approaches

No response

Response 2448

Perspectives on the postdoc roles and responsibilities

To me, being a postdoc means being a professional scientist, as I am responsible for designing and conducting research projects, analyzing data, obtaining grant funding, and disseminating research. While I am still learning and developing, I am much more focused on actual research than personal development and training. As such, the use of terms such as 'trainee' to describe my position is somewhat infantilizing and demeaning. Such terms are not used in equivalent industry positions.

The postdoc is a very exciting but challenging position. I am required to build a productive research profile while also preparing for a future independent research career and developing interest and skills in new research areas. This is daunting because although the potential rewards (an independent research position) are big, the odds of obtaining such positions can be small and there is a lot of uncertainty in terms of job security and long-term career prospects.

Fundamental issues and challenges

Two fundamental issues affect the quality of life of postdoctoral trainees (in my experience). Low pay and low job security. Postdocs have gone through many years of surviving on a PhD/graduate student stipend which means they enter their postdoctoral career at a financial disadvantage relative to industry peers. This is further compounded by low pay. I moved to the US in Oct 2021 to begin my postdoc, and since then, my wife and I have lived paycheck to paycheck despite living frugally and both having what would be considered 'good' jobs. This brings enormous stress and worry and I have not been able to fully devote myself to my postdoctoral work as I have been constantly worrying about paying rent, bills, etc. Although an independent academic research position is my dream job, I have given serious thought to moving to industry and I probably would have at this stage, but my visa means that I must keep working in my current position/field or I would have to leave the US. Given this financial insecurity, my wife and I have delayed starting a family. It often feels like the only people who are in a position to succeed in academia are those from wealthy backgrounds and academia effectively enables this by keeping wages low.

Job security, particularly for international postdocs, is a huge concern. While I have a good relationship with my PI, I still sometimes worry that I could be let go at any point and this would mean that my wife and I have to return to our home country immediately and give up our lives here. This is a worry even though I trust my PI. I am sure that there are other postdocs who do not have such supportive PIs who are really worried about this issue.

Existing NIH policies, programs, or resources

Given the large number of international postdocs in the US, the NIH should increase the number of opportunities (training + fellowships) that international postdocs are eligible for. For instance, we are not eligible for T32 grants, F32, K21 or even training programs such as the NIA Butler-Williams Scholars Program. In terms of NIH opportunities, we are limited to the K99/R00 fellowship which may not be suitable for a number of reasons. For instance, in some institutions (including my own) the K99/R00 requires postdocs to transition to a H1-B visa. This would mean that the postdoc's spouse would no longer be eligible to work in the US which essentially rules out this opportunity for many, except those who have enough wealth to survive on a single salary.

Given the many barriers faced by international postdocs, they can be at a disadvantage in terms of productivity in comparison to US citizens at the same career level. For many, this can reduce their competitiveness for the K99/R00 grant, which is often their only option. The ineligibility for many NIH opportunities is yet another barrier and effectively discriminates against international postdocs.

The NIH should make opportunities available for international postdocs specifically or increase the number of total opportunities to which they are eligible.

Proven or promising external resources or approaches

While many approaches may slightly improve the quality of lives and job satisfaction of postdocs, the single issue that would have the biggest effect is improving salaries. Happy and productive postdocs need good salaries. Without that, everything else is just window dressing.

Encourage institutions to allow international postdocs to progress/apply for specific grants while remaining on the J1 visa (as this enables spouses to work).

Increase opportunities for international postdocs.

Response 2449

Perspectives on the postdoc roles and responsibilities

Identifying a problem and designing the solutions in the form of several projects. Handling every different project with due diligence, while training students to work on those projects; Learning how to perform the different duties of a PI

Fundamental issues and challenges

Post docs are heavily overworked and massively underpaid having gone through 5-6 years of intense grad school training. Comparatively, other careers such as industry, consulting, etc. pay the Ph.D. graduates well and offer additional perks as well, which makes new grads choose these careers.

Existing NIH policies, programs, or resources

To significantly increase the pay.

To fix the work hours of post doc to 8-9h per day and pay extra for every hour of overtime work.

Proven or promising external resources or approaches

No response

Response 2450

Perspectives on the postdoc roles and responsibilities

I am a graduate student in the last few months of my PhD program and I am still on the fence between finding a job in industry and pursuing a postdoc. However, from my own perspective and those of my colleagues that have been shared with me, there are a number of anxieties around doing a postdoc that are pushing me away from it. For me, the main fear is that there is no guarantee that the projects you work on as a postdoc will produce high enough impact results to eventually land a job in academia. It's a risk to continue down the academic path because at the end of the day, there is a fair bit of luck involved in to science. Unfortunately, your luck as a postdoc can greatly influence your future career prospects and I think students are not willing to take that risk. Furthermore, even successful postdocs from top

institutions can struggle to find faculty positions, which seem to be a limiting factor at the moment. If you're not in the 10% that end up in faculty positions, more likely than not you will end up in industry anyway, so why not just start there after graduate school. Another anxiety is that around faculty jobs. People become scientists because they enjoy doing science. A postdoc is supposed to be an intermediate step between graduate school and faculty. However, the reputation at the moment is that many faculty are too busy with administrative tasks to do any of their own science, or, in some cases, mentor their students. If the main reason for someone to consider a postdoc is to go into academia, but academics don't have time to be scientists or mentors, what's the point in continuing down that path?

Fundamental issues and challenges

Lack of advising for future career opportunities coming out of a PhD. None of my advisors (either PI, PI of our partner lab, or thesis committee members) has ever really asked me what my career goals, why, or what the best way to pursue those goals is. At a recent committee meeting, one of my committee members asked me what I wanted to do after defending and I mentioned that I was interested in pursuing something in industry. My committee member, and later my PI, responded by saying that maybe I should consider doing a postdoc because at least it kept options open. However, aside from knowing a few postdocs personally, I have never really understood what separates a postdoc from a senior graduate student (apart from obvious program requirements) or how continued postdoc training in the same academic environment would help someone pursue their career goals. I think that having a stated goal for what a postdoc should entail and the kinds of trainees that might enjoy and benefit from it would greatly help with recruitment into academic postdoc roles.

The other obvious issue is compensation. I still want to believe that scientists can and should pursue their career goals out of a love for the science and not for purely financial reasons, but the reality is that the cost of living, particularly in cities with strong academic reputations like Boston and the Bay Area, are extremely expensive to live in. At the same time, companies are offering graduating PhD students double the pay with more of a focus on work-life balance than academia ever has. I don't think it's realistic to match the compensation offered by industry, but at least making it so that people can afford to live in the cities where they work would help.

Existing NIH policies, programs, or resources

I think the biggest thing, especially that the NIH could do, is increase funding. The cost of living in the US is rapidly rising and graduate students and postdocs are asking for more money to be able to live in the cities where they work. On top of that, inflation is increasing the cost of common lab reagents. The result is that academic labs, especially those operating on only one grant, are struggling to get by. Add to that the fact that grants are difficult to get and the impact of low funding on academic research is immediately apparent.

The other issue that I see as a graduate student, which is not necessarily something that the NIH can control, is that faculty are expected to spend a majority of their time on administrative tasks instead of doing research, which is supposedly why they were hired to begin with. I really think there needs to be a systemic change to address this problem and allow researchers to spend more time mentoring and doing research. From the perspective of a potential future postdoc, it's hard to see why pursuing this career path is worth it. Everything I've seen suggests that it will be difficult to land a faculty job (because there are not enough to go around) and even if I do, it will be difficult to get grant funding (which will also be something that I most likely will struggle with for my entire career), and even if I do, the constant anxieties around mundane administrative tasks, finding more funding, and trying to publish enough will probably prevent me from actually doing any science of my own. Faculty need better funding for longer durations and more time to do it or else academic research won't survive.

Proven or promising external resources or approaches

No response

Response 2451

Perspectives on the postdoc roles and responsibilities

For those wishing to become research faculty, postdocs now seem almost uniformly required.

In the best-case scenario, a postdoc provides protected time, mentorship, training and resources to publish papers, develop new collaborations, write grants, and conduct a job search. For clinician-scientists, a postdoc provides needed time develop research skills and practices and to test out a potential career in this area, which has a very different structure than clinical training. For PhD scientists, it provides time to recover from doctoral burnout, publish dissertation papers, and prepare for launching. The ability to develop one's own area of research and obtain additional training/mentoring is more common in fellowships supported by T32s (which have been more altruistic in my experience because they have more faculty and more oversight). Whereas in project postdocs supported by R01s, the experience of postdocs/fellows is much more varied, with little oversight, and subject to the ability of the PI to mentor or manage their own research. Postdocs are more commonly required to do the work promised in the grant rather than able to pursue their own independent projects or develop their own skills.

Fundamental issues and challenges

In the Bay Area, postdoc salaries are challenging to live on while also paying loans. Department/Divisions with limited resources (e.g. where clinical services are provided at a loss, like primary care and geriatrics) and PIs with NIH grants cannot easily supplement salaries and benefits to livable wages. This not only will lead to challenges recruiting candidates but also unduly disadvantages potential candidates from historically excluded or underrepresented backgrounds who may have family they need to financial support. Thus a postdoc is both a requirement for a research career and also a privilege and often illogical choice. Together, if salaries are not increased, it will substantially reduce our ability to diversify our population of investigators.

In addition, the lack of financial support for program directors or faculty in T32 postdocs means taking those roles is also illogical in soft money organizations. It seems like applications often claim there is support from other sources that is not there in reality. It's unreasonable to expect postdoctoral/fellowship programs to have any infrastructure or support trainees in this challenging transitional phase when there is no support/security for the faculty tasked with creating the infrastructure.

With ongoing efforts to increase the racial/ethnic diversity of the pipeline in academia, it will be particularly important to pay for the time of program directors with racial/ethnic minority, as they often are invited to more service opportunities (often unpaid). Paying adequately for program director time would allow faculty from historically excluded populations (whose mission and values aligns with mentorship) to serve in T32 leadership or faculty roles.

Existing NIH policies, programs, or resources

Adjust all NIH grants for area cost-of-living, e.g., both T32s and R01s

Increase salary scales for postdocs

Fund T32/postdoc leadership/faculty and administrators

Provide resources for postdoc training (e.g., coursework/training, funding for attending & presenting at 2 conferences/year, childcare for attending conferences)

For project postdocs (e.g. funded by R01s), require PIs to submit evidence of ability to mentor/train scientists, training plans that support the postdoc progressing towards independence, reporting evidence of postdoc success. Have mechanisms to not fund postdocs for PIs who cannot adequately support/mentor (e.g., change the funding to project staff, not postdocs).

Increase project (R01) caps so that (more) postdocs could be supported and at higher salaries.

Proven or promising external resources or approaches

No response

Response 2452

Perspectives on the postdoc roles and responsibilities

Academic post docs are meant to be roles for providing more expertise to a lab with the skill set you obtained from a PhD. This position can be used as a intermediate step to academic roles, industry roles, or having a more permanent position in the postdoc lab.

Fundamental issues and challenges

First of all, the pay is horrible. It is literally half the salary compared to industry and it is barely enough to save money for a Roth-IRA. That's the main issue at hand.

Other issues following the pay revolve around how the position is viewed as a whole. There seems to be an idea that postdocs are trained during their time in the lab. However, postdocs end up just trying to publish and leave to better jobs with no training from the PI as well. This job is not an apprenticeship, it is just an intermediate required employment. Postdocs provide so much expertise for the lab but are treated like they are first year graduate students. There is also no long term role in the lab that post docs can take. Lastly, the support for gaining skills for industry position as an academic postdoc is nonexistent. The postdoc position feels like a low paying dead end job that feeds into an unsupportive, low-paying, extremely competitive field.

Existing NIH policies, programs, or resources

Funding focused on schools outside of the Ivy leagues or main metropolitan areas (i.e. bay area, Boston, San Diego, New York) would really help broaden the scientific environment. The major schools have enough money to fund themselves, but state schools, MSIs, and HBCUs would seriously benefit from increased funding which would also help postdocs have more viable options for this position.

Proven or promising external resources or approaches

Improving the working environment is absolutely vital. NIH seems to just fund labs based on publications, but the lab environment needs to be seriously considered. Toxic lab environments lead to fabricated data. Just because a lab is highly productive does not mean they are doing good ethical science.

Response 2453

Perspectives on the postdoc roles and responsibilities

I consider my postdoctoral training to be an opportunity to develop my independent research capabilities and mentoring experience. It is highly desirable to increase my number of publications and citations and become more recommendable researcher.

Fundamental issues and challenges

Developing a good rapport with the supervisor is very important. Knowing each other's expectations towards work-life balance is not an easy handle where majority of the time I am stressed. I have a good relationship with my current supervisor but sometimes I feel he does not understand that there is only so much I could in a week. Foreign postdocs are often helpless at situations when they could not sustain the pressure yet trying to win over until they find another institution. Overall quality of life is average or below as the remuneration paid to a postdoc is also much lesser to run a family of four. Average hike every year increases only a couple of hundreds of dollars and makes not much of difference. Adding to work related stress in keeping up with experiments, reading and publishing, being worried about financial depression makes people want to jump to industries or anywhere other than Academia

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2454

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

In this critical moment in time, science communication is one of our nation's most important topics and yet NIH does not require training in science communication for its postdocs. There is a science of science communication that can improve how scientists communicate their own science to each other, to the public, and to our leaders. Mastering science communication skills such as understanding the audience, identifying a communication goal, framing a message, presenting complex data in evidence-based ways, storytelling, and delivery are directly related to their success as scientists, leaders, influencers, and teachers. This success, in turn, should leave to individual and societal benefits, including greater trust in science and use of that science. For the good of science and society, I recommend NIH require formal Instruction in Science Communication for all recipients of training, fellowship, career development, and R25 awards.

[redacted for anonymity]

Response 2455

Perspectives on the postdoc roles and responsibilities

As noted by the National Postdoctoral Association, the NPA and NIH jointly developed the definition of a postdoc to be a mentored research experience to develop skills to pursue a career of their choosing. Calling postdocs trainees during this stage of skill differentiation is diminutive and I think that "Scholars" are more appropriate and more in line with the K awardee nomenclature. Since the lines are often blurred between postdoc stage and K award stage, I would suggest that a reenvisioned postdoctoral training experience synergize those T, F, and K mechanisms to facilitate the development of these scholars in a structured way after receiving their PhDs. This would also allow postdocs to have consistent appointment types regardless of funding mechanism.

Postdocs also lead their research projects and often coordinate collaborations with internal and external stakeholders. NIH should find ways to reward this team science approach to encourage the formation of interdisciplinary research teams, and potentially having mentoring teams for postdocs composed of individuals across areas of expertise.

Fundamental issues and challenges

Echoing remarks from the Association of American Medical Colleges and the National Postdoctoral Association, research training environments need to be free of harassment of any form. I would recommend that NIH require all research funding opportunities that provide funds to potentially hire postdocs to require a section that commits to fostering inclusive and respectful work environments and a plan for conflict resolution.

The unchanged modular NIH R01 budget is very inhibitory to PIs to balance maintaining an adequate enough workforce to move their research along with providing suitable wages to postdocs above the NIH minimum. Furthermore, when postdocs are awarded an NRSA grant, PIs cannot supplement their salaries with federal funds which further exacerbates this issue.

When postdocs win prestigious T or F NRSA awards, their lives are essentially upended in most institutions due to being forced off of the institutions payroll and lose access to benefits.

Existing NIH policies, programs, or resources

Echoing remarks from the Association of American Medical Colleges and the National Postdoctoral Association, NRSA-funded postdocs absolutely need to be allowed to have the same access to benefit as employee-classified postdocs. NIH has put an incredibly unnecessary burden on institutions to normalize access to benefits across the different appointment types. I would suggest leveraging early career funding mechanisms that leverage mentored research experiences, like the K scholar mechanism to apply to Postdoc T32 training grants and individual F grants to allow those postdocs to be classified in a service role.

Proven or promising external resources or approaches

Cohort based programs strengthen community (ie, MOSAIC) and can be tailored toward career paths that reflect the contemporary workforce (ie IRACDA). Cohort based programs can be developed or expanded that allow for protected time to integrate interprofessional skill development into their training experience. For example, the IRACDA paradigm can be replicated for other differentiated career paths in academia to allow for protected time in industry, policy, research administration, technology commercialization or other specialties that would enrich academic environments.

Response 2456

Perspectives on the postdoc roles and responsibilities

Extremely important training to become an effective and well trained biomedical scientist, in academia or in industry

Fundamental issues and challenges

There has been very bad press via primarily social media in recent years suggesting that postdoctoral training is a miserable and unsustainably underpaid experience and should be avoided. This is accompanied and associated with the notion that academia is a similarly miserable experience that should be avoided. As a result the number of postdoctoral trainees has dropped precipitously in recent years. I believe that the poor remuneration of academic postdocs is a major reason for this dropoff, based on discussions with many trainees and what I see written about it online and elswhere.

Existing NIH policies, programs, or resources

I believe that extra NIH funding for remunerating postdocs is essential to stem what will otherwise be a major loss of future talent in discovery science in biomedical fields.

Proven or promising external resources or approaches

I believe that better remuneration is the most important area that NIH can remedy. It is essential!

Response 2457

Perspectives on the postdoc roles and responsibilities

I see a postdoctoral position as a chance to do cutting edge research, and gain new lab skills, project management, and ideally grant writing skills. If you are lucky enough to find and apply for an external grant, it is a chance to show PI skills.

Fundamental issues and challenges

Salary. This is not complicated. Please do not spend millions of dollars on consultants and listening groups and other b.s. trying to be convinced it is anything else. Salaries have barely budged for 20+ years. Many graduates come out of grad school having earned way under market rate for 5-7 years, with UG student loan debt and interest accruing as well. Many likely can’t even afford to take a Postdoc position even if they wanted to. There is a dignity component at play. Salaries are insultingly low, following grad salaries that are insulting low. How long would universities function if their low paid functionaries went on strike? Not long—e.g. [redacted for anonymity]. It is embarrassing that “low skill” workers (who actually are extremely important, skilled,and essential workers-as the pandemic has laid bare) make more than workers with 4 year college degrees or Masters/PhDs. Artificial time-limits (5 years of Post-docing at many institutions) and “suggested” salaries that get taken as immutable gospel by college admins work to depress wages and cycle through workers. Now that compensation is untenable, there is finally a realization there is a crisis, which has been a slow-motion train-wreck for years.

Existing NIH policies, programs, or resources

Crack-down on the ever widening and voracious administrative-industrial complex. Start fining or limiting grants to both for-profit private schools and public schools whose overhead bleeds away at grant dollars. Study the administrative bloat that has occurred over the past 30 + years. Nothing drives grad-students and post-docs more nuts than seeing insane ratios of Workers (Postdocs and grad students) to HR staff, Deans, assistant deans, assistant to the assistant dean and administrative staff ad naseum, who have sane working hours and adequate compensation.

If funding for compensation can't massively be increased, start a multi-year limit and ideally percentage decrease to overhead allowed to be charged per grant. Name and shame the worst actors. All this "excess" funding could go towards compensation for workers. There is also a near criminal lack of cohesive policy on vacation, family leave, paternity/maternity leave, which when left up to individual actors can be abused by either the PI or the Postdoc/grad student (though you can imagine which way this swings). Furthermore, many schools require grads/postdocs to sign contracts that do not allow them to work outside jobs, or be compensated in other ways. This is ridiculous micro-managment. I had friends who had to give up even small hobbies like etsy shops, music writing, ride-sharing etc because of these heavy-handed policies.

Finally, allow funding permanent scientific staff positions as part of grants. This is more just for scientific progress. I can't tell you how many times I've seen scientists try to repeat protocols from a predecessor, and have it takes months. Whereas, if institutional knowledge was valued, these same assays could have been completed in days to weeks with a permanent staff member to go to for help.

Proven or promising external resources or approaches

Open up grant calls to post-doc. There is an extreme lack of available funding mechanisms for post-docs to conduct truly new and groundbreaking research. The status quo is to try to uniquely expand on a PI's existing portfolio of research, while staying in the bounds of the grant. This limits the Postdocs efforts to diversify from the PI (and hopefully make themselves more marketable). It also limits, what could be a high risk high reward strategy for funding breakthrough research.

Response 2458

Perspectives on the postdoc roles and responsibilities

A postdoc should be a training position for PhDs to gain further skills needed for another occupation, not necessarily an academic research position. While research is a component of this, it does not have to be the only component; it can include teaching, legislation, partnerships with industry, or anything else needed to bolster a CV. A postdoc will have more skills than a PhD, but shouldn't be hired based on techniques alone, because then there is functionally no difference (except salary) between a postdoc and a lab technician. Responsibilities should include mentorship, particularly of graduate students; budgets or bureaucratic requirements; writing and editing; and again, any other duties that can benefit both the PI and the postdoctoral trainee. The responsibilities should not only benefit the PI and lessen their or others' workloads.

Fundamental issues and challenges

The major challenge for recruitment/retention is the salary and benefits. Both are better in other job positions, not just industry. My current position does not offer employer contributions to retirement specifically for postdocs; all other employees are included in these benefits, even part-time staff. Another is the workload and work/life balance, which is often ignored for postdocs. My boss expects me to work 60 hour weeks, which is not at all conducive to my mental health. In many places, the "training" is just continuing the mentor's research with little thought given to the postdoc's career development, making them a poorly paid lab technician. Quality of life is of course affected by this research-first mentality, as little time is spent outside of the lab developing community. There is also still a large stigma against mental illness in academia, particularly as it affects performance. At my particular institution, the Office of Postdoctoral Affairs is so small, it is run by one PI with one administrator, and I am in charge of planning the required RCR training for postdocs with no additional pay. As a postdoc myself, I do not have the time to balance my research responsibilities and maintaining the NIH requirements for continued RCR training. This is just indicative of an overall lack of support, that we postdocs are often providing training and support for ourselves, rather than it coming from the NIH or our institutions.

Existing NIH policies, programs, or resources

Policies regarding trainees and expectations of mentorship are not clearly spelled out by the NIH and therefore up to institutions and largely individual labs to decide what is and is not appropriate to ask of trainees, particularly postdocs as even graduate students belong to a larger group (ie graduate programs). While policy prohibits retaliation to reporters, it doesn't do enough to guarantee support to international trainees whose visas depend on their positions and by extension, their mentors. Much abuse goes unreported because of the unspoken threat of having to return to their home country. International

postdocs should be allowed on T32 training grants if they can be supported by their mentors' R grants. Postdoctoral offices should be able to apply for either T32 or a separate training grant classification to support postdoctoral training that is not directly related to their research, including RCR training.

Proven or promising external resources or approaches

No response

Response 2459

Perspectives on the postdoc roles and responsibilities

postdoc is critical to success as an academic researcher. I love the independence and training opportunities it has afforded me. it is an incredible opportunity to build your research portfolio and build collaborations.

Fundamental issues and challenges

Delaying financial security/retirement—institutions should have to have retirement match programs and the same benefits that they would for faculty and staff members for postdocs. It is nearly impossible to meet financial savings goals when you have delayed getting a full-time, salaried job for many years because of graduate school and postdoc. moreover, the salaries for many research positions are significantly less than medical school or law school graduates' starting salaries, even though these individuals sometimes have similar or even fewer years of training (but significantly higher starting salaries).

Salary—these do not compare with peers in the job force who have significantly fewer years of education. Additionally, NIH salaries should increase at least at a rate commensurate with cost of living increases. This year's increase doesn't come close to accounting for the inflation seen this last year.

Existing NIH policies, programs, or resources

it would be great if NIH could distribute these materials at least to T32 postdocs for whom they have access to their emails. I was unaware of a lot of these resources. (also, I would recommend making sure that links in this form open in new pages. I had typed very long responses to the above two questions, but they disappeared after I clicked the links, so i apologize that they are not as detailed as before).

Proven or promising external resources or approaches

No response

Response 2460

Perspectives on the postdoc roles and responsibilities

A postdoctoral position in an academic institution help me transition from a predoctoral trainee to an independent investigator. With funding and fellowships available, I'm able to have protected time to conduct the research that I am interested in, improve my productivity by writing more manuscripts and grants, as well as obtain additional training to complement my skillset.

Fundamental issues and challenges

However, the fundamental issues for postdoc, especially after the COVID-19 pandemic, is salary and compensation. With NIH K00 fellowship, which has a higher postdoc salary compared to other fellowship and training grants, it is not feasible and practical to move across the country to a big city (e.g., New York, Boston, Seattle). Postdocs typically experienced at least 4 years of low income as predoctoral students. To continue pursuing an academic career, eliminating financial burdens for postdocs is essential. It would be helpful to modify postdoc salaries depending on the city of the postdoctoral institution, to allow postdocs to have training opportunities without financial constraints.

Existing NIH policies, programs, or resources

NIH recently promotes the K99/R00 awards to provide postdoctoral support to transition to independent investigators. Although the K99/R00 awards fit most of research field, for public health, population sciences, and behavioral sciences, the K99/R00 actually would delay the transition from postdoc to the

assistant professor for at least 6 months. The typical postdoc for these fields is about 2 years. For the early K99/R00 application, the due date is in February, which is about 6 months of starting a postdoc, but the earliest start date of the awards will be January of the following year, which is about 18 months into the postdoc. The K99/R00 requires at least 1 year of postdoc training, which would push the individual to a 30-month postdoc. With the low salary as a postdoc, and the risk to miss the regular recruiting circle, K99/R00 may not work for trainees in public health, population sciences, and behavioral sciences. It would be nice to modify the program and requirements to eliminate these challenges

Proven or promising external resources or approaches

No response

Response 2461

Perspectives on the postdoc roles and responsibilities

I was a prior Associate Dean for Postdoctoral Programs at a major research intensive university. The postdoctoral position is advanced training in preparation for professional advancement in biomedical science. The obligation of the mentor is to ensure that the training needs are met and to provide hands on professional skill development. The obligation of the postdoctoral trainee is the conscientious discharge of their research duties. Postdocs should not be treated as a PhD technician.

Fundamental issues and challenges

Over 50% of our postdocs are from abroad. The US has a strong dependency on foreign talent to advance its R&D. Yet the complex and often punitive visa process is a disincentive to come in the first place. We need a special visa category for these individuals which can be readily obtained once they provide evidence of a PhD degree. Many institutions have adopted postdoctoral policies to improve stipends and benefits for postdocs. However, postdocs have been traditionally under compensated. There should be a cap on the time in the postdoctoral training period. This is not a job but advanced training. The cap should be 5 years total at which time postdocs should be entering into the next step in their career. For some this may be a staff scientist position and not a faculty appointment. Careers outside academia are now in the majority and so we need to broaden our horizons on the training we provide.

Existing NIH policies, programs, or resources

NIH policies are built to provide inequities. Postdocs supported by research grants can be categorized as employees, be compensated at higher levels and be fully benefited while those on T32’s or F32’s have stipends capped and are not full benefited. This is a disincentive for postdocs to be appointed to a T32 or F32. All postdocs should be treated equally irrespective of source of funding. As many institutions are undergoing market adjustments in postdoctoral compensation NIH should allow grantees to adjust budgets on grants in their out years to cover these extra costs. Failure to do so may be loss of talent and set back research programs which jeopardizes investment. The restriction of T32 and F32 slots to US citizens and permanent residents is outdated and comes from another time. It does not recognize that the majority of postdocs are from abroad. The majority of these will stay in the US and enrich the biomedical workforce. This requires congressional action. NIH needs to increase the number of K99/R00 awards so that postdocs can transition to independence.

Proven or promising external resources or approaches

Institutions have a responsibility to provide the infrastructure for a postdoctoral training. This means polices on standardized compensation and benefits and childcare. I am not a fan of providing retirement benefits since a postdoctoral position is not one to retire from. Institutions should be held accountable to implement these policies and a the same time should provide professional skill development programs and career development/counseling programs. NIH could indicate that as a recipient of federal dollars institutions most provide evidence that these policies and programs exist.

Response 2462

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions should serve as an extension of graduate training. While graduate school teaches you the content and basics of writing, postdoctoral positions should provide training on the duties that will

come with an academic researcher/faculty position. Postdocs need to be trained on how to mentor graduate students and how to teach and mentor undergraduate students. The limited mentor training is feeding into the cycle of a system where everyone is only focused on writing papers and grant proposals and there is very little respect for the individual.

Fundamental issues and challenges

The primary issue facing postdocs is the psychological and emotional abuses from advisors. Many advisors think of and treat their postdocs like cheap labor. This means long work hours, very little time off, and very little support for growth. Postdocs need to not receive the training to advance because advisors want to keep them dependent on the advisor. While many institutions have limits on postdoc terms, however advisors will offer the postdoc a shell title, such as "researcher" or "scientist" but have them continue the same work. This leads to postdocs with low confidence and inadequate skills to be independent.

Existing NIH policies, programs, or resources

The existing NIH policies, programs or resources don't really matter and doesn't make a difference. Advisors are insulated by their organizations and tend to find ways around any NIH policies. Because of this, postdocs have no recourse or support. Advisors also have the power to tarnish their postdoc's reputation; thereby limiting the postdoc's ability to switch positions or apply for an independent position.

Proven or promising external resources or approaches

NIH should work with institutions to create mandatory enrichment programs for postdocs, and this should be tied to grants. If a PI list a postdoc on their grant then that postdoc should be required to attend before some funds will be issued. Advisors and institutions will only improve postdoc conditions if failure to do so is tied to funds.

Response 2463

Perspectives on the postdoc roles and responsibilities

I see the postdoc as continued training with more independence under the guidance of an established investigator. For me, it meant trying something new in a different place to build off what my graduate work had been on.

Fundamental issues and challenges

I know others that have different experiences based on their lab, mentor, and overall environment. My particular lab environment is very poor and I do not feel like a valued member of any team. It's a hard life and within 6 months of my fellowship, I am already looking at leaving for positions that will support me much more and finically compensate me far more fairly for having a PhD. There is very little support for post-docs and no existing community at my institution, even though it's big and established. It honestly feels like more cheap labor, primarily done by internationals, to support the work, grants, and travel of the PI. In terms of my career development, the post doc has only shown me what I don't want to do or become.

Existing NIH policies, programs, or resources

NIH websites are fairly clear but there is a lot of information to learn on your own, perhaps more workshops to educate students and fellows at all levels how it is set up would be beneficial to do before they are already in it.

Proven or promising external resources or approaches

No response

Response 2464

Perspectives on the postdoc roles and responsibilities

The postdoc is a difficult position because very often you are working on the work that is funded—likely from your PI—while simultaneously attempting to publish and secure your own funding.

Fundamental issues and challenges

Salary. If you are single and have student debt it is almost impossible to support yourself on a post doc salary in the US in most major cities.

Securing funding. The US seems to be better about getting early career fellowships to early career people but the NIH review process seems to be the luck of the draw. A resubmitted F32 is not always read by the same reviewers and potentially reviewers are not familiar with the topic area.

Existing NIH policies, programs, or resources

Is it possible to modify the fragrant submission process? The information requested in grants seems to be repetitive.

Is it possible to provide successful F32 applications from clinically based research?

Is it possible to provide a specific funding scheme for clinical research postdocs separate from basic scientists because the current stream seems to favor basic science?

Proven or promising external resources or approaches

Australia pays their postdocs around 100k/year. Plus 10% into retirement and their postdocs don't have the same student debt we do. Australia seems to have less money for research funding in general but they still pay their postdocs a proportionately higher salary.

Thank you for looking into this. It is hard not to think about leaving academia, even as someone who draws a significant amount of joy and meaning from their work. Academia seems to have a dark shadow over it and it is very hard to see a way forward. Mentors have even started telling me to look elsewhere because the grant game is only becoming more and more difficult to navigate successfully. Hopefully these responses are useful.

Response 2465

Perspectives on the postdoc roles and responsibilities

Postdoc should be a LEARNING experience—professional development for the postdoc. All too often, postdocs are viewed as cheap labor on existing projects in the advisor's funding portfolio.

Fundamental issues and challenges

1. Postdoc salaries are too low. These are people in their late 20's and early 30's who have had long (and often costly) educational pathways to their fellowship. They need to earn a fair and equitable wage. As noted above, the cheap labor for advisors is facilitated by low salary levels.
2. Postdocs need a pathway to permanent employment in the academic institutions where they complete their postdocs. This is more feasible in clinical environments that have multiple funding streams, in contrast to academic environments that have strong limits and gatekeeping on assistant professor positions. Acceptance of federal postdoctoral training funds should be contingent on development of such pathways. Postdocs should not be cogs in other people's research machines.
3. There are no standards for quality of mentoring. In my 35 years of postdoc training (30 within T32 programs), I have witnessed more bad mentoring than good mentoring. With current social networking technology, places with bad mentors (and individual bad mentors) quickly become known. There are no consequences for bad postdoc mentoring either at the individual or institutional level.
4. Many disciplines do not need formal postdoctoral training. Yet, this has become a standard (and functionally a barrier to gainful employment). This "standard" reflects both growing institutional bureaucracy as well as desire for a cheap labor pool.

Existing NIH policies, programs, or resources

1. *Meaningful* evaluation of advisor mentoring in institutions that accept federal postdoctoral funding.
2. Requirements for career pathways in institutions that accept federal postdoctoral funding.
3. Postdoctoral funding tied to programmatic training, rather than lab apprenticeships. This presupposes that such training is necessary for the career development of the postdocs (see comment 4 in prior question).
4. Emphasis on F32 over T32 funding—the individually developed goals and training programs provide postdocs with autonomy and agency, as opposed to fitting in with others' goals and needs.
5. Expanded use of the K99 mechanism (or some new analog), with expansion to a postdoc career development/transition approach. The integration of a mentored experience with an eventual R01-type experience within an established employment situation would be highly beneficial to integrating experience with career pathways.

Proven or promising external resources or approaches

1. Postdocs need strong advocates organized at multiple levels. At the national level, there should be an advocacy/ombuds system where postdocs can have help resolving problems frequently encountered in training environments (see also next comment). At a more local level, postdocs have organized into labor unions to advocate for their positions—this should be encouraged and supported (a national postdoc union?.
2. Mentoring in T32 and similar program should have a strong team mentoring model. In particular, postdocs should have *meaningful* mentoring input that provides educational and advocacy beyond the primary advisor.
3. T32 renewals should be contingent on direct feedback from recent postdocs on the quality of mentoring in the program, which should be anonymized in the same way that recommendations for postdocs in F32, K, etc. applications are done.
4. Postdocs are currently tied to a specific program or advisor. When things go poorly, there is little recourse for the postdoc. Some mechanism for a larger pool that allows movement among fellowship opportunities should exist. On recent analog in academia is the transfer portal for NCAA athletes. Postdocs do not fit into the usual model for training pre-doc students (in much the same way as athletes); postdocs have a much smaller space in which to thrive in an academic environment and thus a larger community of opportunities would be beneficial for all involved.
5. As a behavioral science researcher focusing on community interventions, I often emphasize that interventions need to be centered on patient/client needs rather than program needs. The same is true of postdoc training. Too often the focus on what is good for the program, rather than what is good for the trainee—this hierarchy of needs has to be reversed before any meaningful progress in postdoc training will be achieved.

Response 2466

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary and work hours, especially compared to industry salaries.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2467

Perspectives on the postdoc roles and responsibilities

I believe a postodc is the that it is a continuation of scientific training that should include experience with new techniques or analyses, as well as provide an opportunity to continue to publish and gain experience with grant writing. Beyond the specific scientific training, it is an opportunity to experience a different lab environment and its management style, as well as to start taking on more responsibility with supervision and lab management that provides a smooth transition into a faculty position where these skills will be essential.

Fundamental issues and challenges

As faculty positions in academia are becoming increasingly competitive, the need for extended periods of postdoctoral training to develop an equally competitive track record is becoming more apparent. As people start to move forward with their personal lives (growing a family, need for permanency of location etc.) its becoming harder to juggle everything with this extended period of postodcotral training, especially as it can be so demanding of time as responsibilities in the lab environment increase and personal development is prioritized too. I think coupled with relatively low pay for the level of academic qualification provides challenges, which may lead some people to step away from academia and choose a role in industry where this is less problematic.

Existing NIH policies, programs, or resources

Considering increasing the NIH guidelines for postdoc salary may prove beneficial for retaining postdoctoral talent, or at least consider a better weighting system that considers cost of living fro different areas in the US so that someone who is training in a major US city is able to take home the same amount after rent etc. as someone who perhaps lives in a smaller college town (see Tim Sainburg, 2022. "American postdoctoral salaries do not account for growing disparities in cost of living," Papers 2205.12892, arXiv.org, https://ideas.repec.org/p/arx/papers/2205.12892.html). There also seems to be some discord between universities and the NIH "guidelines" for pay. My current university refused a request from my supervisor to increase my salary as they said salaries are set by the NIH and they have no flexibility to change them on that basis.

Proven or promising external resources or approaches

No response

Response 2468

Perspectives on the postdoc roles and responsibilities

To me, the academic postdoctoral fellow position is a "transition state" position:

- It is useful for people who want or need additional technical training and protected time and funding to do so
- It is protected time to publish papers and write grants in anticipation of the next position (e.g., academia, industry, entrepreneurship)
- It is an opportunity to expand one's professional community/network
- For a lot of non-U.S. Citizen postdoctoral fellows, it seems to be a professional holding zone for longer-term visa support.

Fundamental issues and challenges

1. Salary—academic postdoc salaries vs. industry postdoc salaries are worlds apart.
2. Salary—academic postdoc salaries vs. industry postdoc salaries are worlds apart.
3. Salary—academic postdoc salaries vs. industry postdoc salaries are worlds apart.
4. Prospectives for "upward" mobility—scientific research is becoming more and more competitive and resource-intensive. If salaries stay the same, then hiring talent will be difficult. If salaries increase without commensurate resource funding increases, then "out-of-box" thinking will be limited.
5. Academic "toxicity" is not disincentivized.

Existing NIH policies, programs, or resources

1. Increased postdoc salary AND resource funding per grant (even if fewer grants are awarded)
2. More postdoc-initiated resource support—can there be "R01s" for postdocs without losing ESI status or F/K eligibility? E.g., an R03/R21 for postdocs only but postdocs don't lose F/K eligibility.
3. Incentivize career placement/job satisfaction of trainees in funding decision-making.

Proven or promising external resources or approaches

No response

Response 2469

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

There are a number of financial problems that affected my overall quality of life as a postdoc on a T32 training grant and ultimately led to my decision to leave my postdoc 7 months early for a career position. First, NIH stipends are set nationally even though cost of living varies greatly—living in Boston on the NIH stipend was not sufficient to support myself and my family. Second, the parental leave policy permits approximately 8 weeks of paid leave even though the current federal standard is 12 weeks. Third, while the childcare stipend was a much appreciated change, it was insufficient to alleviate the burden of childcare (which is approximately half my postdoctoral stipend annually).

Existing NIH policies, programs, or resources

Add a cost of living adjustment (similar to the GS pay scale) for NIH stipend levels.

Expand the parental leave policy to be equivalent with other federal policies (12 weeks).

Increase the child care stipend.

Require that universities pay trainees through a mechanism that allows for federal taxes and health insurance premiums to be withheld. I am unable to file for the child care tax credit because the "scholarship" mechanism through which I was compensated by my university is not considered qualifying income. We pay over $20,000 annually for child care, so that is a massive deduction that we do not qualify for despite having two full time working parents.

Proven or promising external resources or approaches

No response

Response 2470

Perspectives on the postdoc roles and responsibilities

It doesn't pay and you lose training mindset in time

Fundamental issues and challenges

It was already intolerable and now it's worse with inflation and retention is double worse

Existing NIH policies, programs, or resources

Make it all .gov even icd cpt codes, and open billing to the grant.gov

Proven or promising external resources or approaches

YouTube takeover

Response 2471

Perspectives on the postdoc roles and responsibilities

Leads a project, has to orchestrate each person's role in the study itself. Be up to date with the latest techniques and scientific literature.

Fundamental issues and challenges

Pay would be an issue sometimes. The stipends for postdocs are changing incrementally over the years, but inflation is increasing in a quicker way

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2472

Perspectives on the postdoc roles and responsibilities

A 300 word count limit for each section severely limits the ability to effectively comment on this RFI.

Fundamental issues and challenges

Kidney research requires significant resources and postdoctoral researchers often struggle to secure funding for their projects. NIH can consider providing more grants and funding opportunities tailored to the needs of kidney researchers and increasing salaries to be more competitive with industry standards. This could potentially help to retain talented researchers who may be considering leaving academia due to financial constraints.

One way to address the issue of limited funding for postdoctoral researchers is to consider funding them directly from the NIH. Currently, postdoctoral researchers are typically funded through grants awarded to principal investigators (PIs). By providing independent funding to postdoctoral researchers, the NIH can free up more resources for scientific research, which due to inflation is becoming increasingly expensive. Funding postdoctoral researchers directly could also provide more stability for early career researchers, enabling them to pursue their research interests and develop their skills without worrying about the fluctuations of grant funding. Additionally, this approach could help to diversify the pool of researchers and increase equity in the workforce, particularly for underrepresented groups who may not have access to the same level of funding as others.

Kidney research can be demanding, and postdoctoral researchers may struggle to balance research responsibilities with other personal and professional demands. Alleviating some of the financial burden associated with childcare costs will enable researchers to better balance their work and personal responsibilities. NIH should consider providing resources and support, such as funding to defray the costs of childcare, flexible work arrangements, and mental health services, to help support the work-life balance of postdoctoral kidney researchers.

In order to accomplish these recommendations, NIH to should explore alternative funding sources by partnering with industry, non-profits, or other sectors to strategically align academic research with real-world applications.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Kidney research is a highly specialized field, and early career researchers may benefit from targeted mentorship and networking opportunities with experienced researchers in the field. According to a 2016 survey of more than 7,600 postdoctoral researchers in academic and non-academic institutions, perceived mentor support and conferences attended were positively correlated with a choice to pursue a research-focused academic career and that providing a formal mentorship training for postdoctoral researchers may help prevent losses to industry. NIH can create programs to connect postdoctoral researchers with established scientists and provide training and resources to support mentor-mentee relationships.

Kidney diseases affect individuals from diverse backgrounds, and it is critical that the kidney research community reflects this diversity. According to the AAMC State of Women in Academic Medicine 2018-2019 report, women comprise 46% of postdoctoral students in biological and medical science, well below the 61% of women doctoral students in those fields. And only 6% of postdoctoral researchers are Black and only 9.2% are Hispanic or Latino. NIH must prioritize efforts to promote diversity, equity, and inclusion in kidney research by supporting postdoctoral researchers from underrepresented backgrounds and ensuring that funding opportunities and mentorship programs are accessible and inclusive.

The AAMC State of Women in Academic Medicine 2018-2019 report also notes that just more than half of postdoctoral researchers in the United States are not US citizens. Yet, non-US citizenship applicants face significant barriers to becoming independent investigators, which can limit their ability to advance in the field. NIH must consider addressing these barriers by providing additional funding opportunities or supporting policy changes that enable non-US citizens to become independent investigators.

Response 2473

Perspectives on the postdoc roles and responsibilities

As a physician-scientist, I am responding to this RFI based on over forty-years of experience in training post-doctoral researchers and other learners in basic laboratory research in bacterial pathogenesis. I consider, as does AAMC, "academic postdoctoral researchers (postdocs) as individuals who have received a doctoral degree (or equivalent) and are engaged in a temporary and defined period of mentored, advanced training in biomedical research." My laboratory has since 1983 trained and been the" home" for 24 PhD, MD, or MD PhDs post docs and I have been "key faculty" for T32 training grants. Postdocs are part of the intellectual "glue" creating an environment of inquiry critical for graduate students, other learners and for the PI in an academic laboratory research setting. They contribute to melting pot of diversity that is hallmark on many academic biomedical research laboratories. They need to acquire the knowledge and skills beyond a doctoral degree to pursue careers in the nation's biomedical research workforce. These careers can be in academia—both as independent and dependent faculty or staff-, industry, public health, research foundations or government positions.

Fundamental issues and challenges

A key issue is mentorship for future careers. Postdocs are advanced learners and should have a mentoring and career plan (a committee or group of mentors) as part of their experience. They also need support of an institutional office devoted to the issues of postdocs. I view a postdoc experience as equivalent to a medical residency or fellowship. Other Fundamental issues and challenges are limitations on visas for postdocs outside the US, educational debt especially on the part of MD, MD/PhD candidates, and inadequate postdoc stipends and benefits for postdocs and their families.

Existing NIH policies, programs, or resources

Overall NIH has multiple programs for postdoctoral training, but competition is fierce. More positions and greater communications about the programs are important. A key issue is enhancement of policies for equitable postdoctoral salaries and benefits paid. For a family of four the NIH stipend scale for this skilled workforce is inadequate. Enhancing institutional T-32s or equivalent and expansion of NIH repayment program are also recommended.

Proven or promising external resources or approaches

Enhanced or supplemental support through philanthropy, foundation grants, institutional commitments can reinforce NIH's efforts to enhance the postdoctoral training ecosystem. A strong NIH communications strategy to address the need of postdoctoral training will help garner these external resources. Trainees

are the future of biomedical research future. We should attract and train the brightest and best for postdoc positions.

Response 2474

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as an opportunity to gain further training in research skills and professional development. It provides a space for early career researchers with a PhD to strengthen existing or develop new skills and begin charting their own journey as an independent investigator. A postdoc is not a student position and should therefore be compensated with a salary and benefits competitive with other non-academic positions.

Fundamental issues and challenges

By definition, a postdoctoral fellow is an individual who has spent years of training and gained a doctoral degree. They should be fairly compensated in accordance with competing positions in industry or other non-academic spaces!! A major reason why there is a decline in the number of postdoctoral fellows is likely due to the lack of competitive pay. The current NIH level for someone with a newly minted PhD only makes $56,484. In many places in the United States, that is barely above the estimated salary for cost of living. How could someone be expected to save for their future with that kind of salary?

Existing NIH policies, programs, or resources

NIH needs to adapt their existing stipend levels to be competitive with entry-level PhD positions in non-academic spaces.

Proven or promising external resources or approaches

Improve pay for postdoctoral fellows. Create spaces for postdoctoral fellows within NIH institutes to present their work to each other, which may enhance interdisciplinary collaborations. Create mentoring resources for investigators and postdoctoral fellows.

Response 2475

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salary scale should be adjusted to reflect the cost-of-living. The pay scale in states with very high costs of living isn’t realistic for a postdoc and affects their overall quality of life and influences their decision to leave for industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2476

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

As a postdoc in Boston, I am facing an incredibly challenging cost of living situation. Despite working long hours and being highly educated, I am struggling to make ends meet on the NIH minimum salary. Boston. for example, is notorious for its high cost of living, and it is simply not sustainable for me to continue living on such a low wage. I am forced to live in cramped and expensive housing, cut corners on essential expenses like food and healthcare, and constantly worry about making ends meet. This situation is not

only financially taxing but also emotionally and mentally draining. Therefore, I hope the NIH to address this issue and adjust their salary scale to account for the regional cost of living. It is time for them to acknowledge the dire situation that postdocs are facing and ensure that we are fairly compensated for our hard work, no matter where we live.

Existing NIH policies, programs, or resources

The NIH grant system is complex and difficult to navigate, with multiple portals and guidelines that can be overwhelming for researchers. Finding all the necessary information required for a grant application can be challenging, as it is scattered across various websites and documents. The frequent updates to the system only add to the complexity, making it challenging for researchers to stay up-to-date. It is essential for the NIH to simplify the grant application process and provide more accessible resources to help researchers navigate the system.

Proven or promising external resources or approaches

No response

Response 2477

Perspectives on the postdoc roles and responsibilities

I love working in academia and conducting meaningful and impactful research. I enjoy developing ideas to improve cancer care and survivorship. However, the current state of postdoc guidelines makes it extremely difficult to stay in academic research institutions.

Fundamental issues and challenges

One of the Fundamental issues and challenges inhibiting recruitment, retention, and overall quality of life of postdoctoral trainees in academic research is the current minimum salary for postdocs, which is unlivable and too low. Postdocs are highly qualified professionals who have invested several years in obtaining a PhD and specialized training to contribute to cutting-edge research in various scientific fields. However, the salary levels for postdocs are typically inadequate and not commensurate with their qualifications and contributions.

The low salary levels for postdocs are particularly frustrating given that individuals with only a bachelor's degree may earn twice as much in some professions. This not only affects the financial stability of postdocs, but also their motivation, well-being, and job satisfaction. Low salaries can also limit diversity in the academic research field by discouraging individuals from underrepresented groups who may face more financial pressures from pursuing postdoctoral training.

It is imperative for academic institutions and funding agencies to recognize the contributions of postdoctoral trainees and to prioritize fair and adequate compensation for their efforts. Raising the minimum salary for postdocs would improve the quality of life of postdocs and encourage more individuals to pursue postdoctoral training. It would also facilitate the recruitment and retention of highly skilled professionals who can advance scientific progress and contribute to the global knowledge base. Therefore, it is critical for institutions and funding agencies to address this issue and ensure that postdocs receive fair and equitable compensation for their contributions.

Existing NIH policies, programs, or resources

There are several existing NIH policies, programs, and resources that could be modified, expanded, or improved to enhance the postdoctoral training ecosystem and academic research career pathways. These include:

Salary Guidelines: As previously mentioned, the current NIH minimum salary guidelines for postdocs are inadequate. NIH can revise and update these guidelines to ensure that postdocs receive fair and adequate compensation for their contributions to scientific research.

Career Development Awards: NIH offers several career development awards (K awards) that provide support for postdoctoral researchers to transition into independent academic research careers. These awards can be modified and expanded to include additional career development opportunities, mentorship, and training in areas such as grant writing, teaching, and leadership.

Diversity and Inclusion: NIH has several programs aimed at promoting diversity and inclusion in the scientific workforce, including the Diversity Program Consortium and the Building Infrastructure Leading to Diversity (BUILD) program. These programs can be expanded and improved to provide more support for underrepresented groups in science, including mentoring, networking, and training opportunities.

By modifying, expanding, and improving these existing policies, programs, and resources, NIH can enhance the postdoctoral training ecosystem and academic research career pathways, thereby promoting scientific progress and contributing to the global knowledge base.

Proven or promising external resources or approaches

No response

Response 2478

Perspectives on the postdoc roles and responsibilities

I'm an MD/PhD student who is heading into residency and considering a post-doc after residency. While the stated role of the post-doc is to build your own research trajectory so that your can run your own lab in the future.

Fundamental issues and challenges

Pay and the difficult job market for PIs. This is probably the biggest factor for graduate students thinking about post-docs that I have talked to. Why would someone do a post-doc for low pay and low probability of actually getting a PI position when they can often make double this in an industry "post-doc"? The justification for the low pay is that it is only temporary until you get a job, but often there are no jobs available or the only ones available are not in geographic locations people want to be or are not tenure track.

Existing NIH policies, programs, or resources

Pay needs to be increased. This is across the board. If academia wants to attract and keep the talent they need to less the financial pain of saying no to industry jobs. Biopharma will only keep growing, which means more jobs, and increasing salaries. Universities are justifying low salaries with the prestige of their names, but now a post-doc at Genentech probably holds as much weight as one at Stanford. Also, let's be clear, universities benefit financially from having low-cost labor (taking a cut of any grant coming through the door, a cut of all IP filed, advertising for undergraduates by saying how much research they have, and by fund-raising). If you want highly-trained labor? Pay for it.

Proven or promising external resources or approaches

No amount of mentoring is going to overcome the pure financial pressure. Good universities with good post-doc opportunities are in expensive areas. A proven model for employee retention is to pay them more. This may be painful for payers, but it is by no means complicated. If you want highly-trained labor, you have to pay for it. These same people can also do equally satisfying and interesting work in industry for more money and more job flexibility.

Response 2479

Perspectives on the postdoc roles and responsibilities

I see my postdoctoral position as the opportunity (and need) to improve my curriculum to a faculty position. It also means building a solid and consistent publication record, network and training.

Fundamental issues and challenges

The main challenge in the Boston area is the cost of living! Without my partner's support, I could not pursue a postdoc. The salary IS NOT ENOUGH to afford the BASIC regional cost of living. The rent alone is 3k. As young professionals, building a family in the current position is also very challenging.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2480

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Abolish unpaid positions (a scourge that sadly persists in this line of work).

Proven or promising external resources or approaches

No response

Response 2481

Perspectives on the postdoc roles and responsibilities

The postdoc is a training step in the academic career path to conduct additional mentored research in order to gather preliminary data to support a K/R grant for independence.

Fundamental issues and challenges

My salary has stayed flat while inflation has adjusted the cost of living such that my actual expenses outpace my income and I am losing money every month and cannot maintain the quality of life I budgeted for when I started this position 3 years ago. Further, my current salary is half of what I could make in the industry doing the same job.

Existing NIH policies, programs, or resources

Tie salary to cost of living and inflation. Improve salary rate to be more competitive with the industry.

Proven or promising external resources or approaches

No response

Response 2482

Perspectives on the postdoc roles and responsibilities

To me, a postdoctoral position at a high profile institution in the US is a critical step towards scientific independency in my home country. It is an extremely valuable experience which is intended to boost scientific accomplishment but also shape networks and context.

Fundamental issues and challenges

In a city like Boston, the postdoctoral salary is too low, given the life costs. This meant for me that a postdoctoral position comes at a high price of losing life quality and accepting decreased life standard in comparison to my position in my home country. This comes on top of the effort of securing a position and making a transatlantic move.

Existing NIH policies, programs, or resources

Increase the pay.

Proven or promising external resources or approaches

No response

Response 2483

Perspectives on the postdoc roles and responsibilities

A transition from trainee towards independent researcher, rather than a period of time where the postdoc's research skills could be utilized at extremely low pay to purely maximize the mentor/manager/PI's achievements. The roles **and responsibilities** of an academic postdoc should include i) further enhancing individual research capacity, e.g. knowledge and skills; ii) establishing research network and collecting research resources to foster collaboration; iii) developing independent line of research through e.g. grant writing; and iv) gaining experience of (co-)supervising master/PhD student for research work and/or teaching/tutoring.

Fundamental issues and challenges

1. Lack of scientific freedom: candidate postdoc may be offered extremely low flexibility over project implementation but required to be productive in a "follow the protocol" and "high-impact publication-driven"manner.
2. Insufficient respect for individual career/scientific goal: when enormous work hours are spent on the completion of the "required work content", few are left to ponder who we initially hoped to become and what are our original motivations, needless to mention the future plan.
3. Poor salary: mental stress, physical stress, etc.

Existing NIH policies, programs, or resources

No training about NIH policies, programs, or resources, unfortunately. What are they?

Proven or promising external resources or approaches

No response

Response 2484

Perspectives on the postdoc roles and responsibilities

The postdoc is an intermediary training period which will set me up for success in obtaining a tenure track faculty position at an R1 institution. In this role, I am focused on developing my independence as a scholar, identifying my "researcher identity" and my program of research, understanding how to integrate the various projects I have conducted into a cohesive story line, and branding and marketing myself such that institutions are interested in what I have to offer. I am also learning to apply for grants —essentially, a mini PI in-training.

Fundamental issues and challenges

The funding/salary for postdoctoral researchers is abysmal. My rent currently constitutes 40% of my monthly income PRE-TAXES, in other words of my take-home pay, my rent comprises 50% OF MY INCOME. This is severe rent burden. These living conditions are untenable for anyone trying to do good science and solve the myriad of life-threatening issues in our world. It's frankly insulting to be paid so little when the NIH and most NIH-funded projects would be nonfunctioning without the contributions of staff scientists like postdocs.

Existing NIH policies, programs, or resources

Fund Asian American researchers who study Asian American communities. Fund Black researchers who study Black communities. Fund Latinx researchers who study Latinx communities. Fund Native American/Indigenous researchers who study Native/Indigenous communities. Fund Pacific Islander researchers who study Pacific Islander communities. Stop funding White researchers to study Marginalized Populations, whose oppression they benefit from and contribute to.

Proven or promising external resources or approaches

Improving salary and diversity.

Response 2485

Perspectives on the postdoc roles and responsibilities

The golden gate to enter academia, by which without, it would be impossible/unsustainable to start independent research career. Opportunity to train and apply for grants, which however, is usually not accessible to non-US citizens.

Fundamental issues and challenges

The packaged pay and included benefits are not up to par with qualifications of postdocs. Postdocs are already beginning careers at much later stage in life, delaying accumulation of retirement funds and savings for home purchase among many important life milestones. Pay is not adjusted to increased cost of living, particularly for those living in more expensive cities e.g. Boston. From international viewpoint, pay is significantly lower relative to other countries (in Australia up to 6 figures). Paid time off is not part of institutional policy at times. It is a no brainer, esp for those with dependants, to opt for industry jobs when all of the above are better provided. It honestly just feels like academic slavery—expected to churn out research output, with minimal pay at maximum costs to personal finance, mental health, future opportunities.

Existing NIH policies, programs, or resources

Pay packages, paid time off, tax relief, future opportunity pathways. Immediate and MANDATORY compliance by PI to meet any increase in pay levels.

Proven or promising external resources or approaches

No response

Response 2486

Perspectives on the postdoc roles and responsibilities

It means to do what I love, to do research in a more mature stage. It also helps improve and learn from areas I didn't work during my PhD, as well as being part of a bigger and larger scientific community. To learn and apply my skills to build knowledge and translational medicine, also, to meet great scientist and researchers.

Fundamental issues and challenges

Salary.

I can't fully focus on my work because I also need to spend time on looking ways for saving money. Also, the amount of stress and anxiety that I have because I don't know if I'd have enough by the end of the month. If I have a dental issue that means my savings from 6 months are gone. I'm not even quality to rent an apartment with one bed and living room that doesn't have rats. I buy my food from leftovers or sales which spoil very quick. For months, McDonald's was my luxury meal of the week.

I migrate to Boston without knowing anyone, but for socializing, I require money to spend on going outs! So I ended up isolating myself.

Specially for hospitals, PhD should be appreciated more, and with a similar level as MD, PhDs.

Existing NIH policies, programs, or resources

Either higher salary or including housing as part as benefits that the university must provide to all postdocs

Proven or promising external resources or approaches

No response

Response 2487

Perspectives on the postdoc roles and responsibilities

Its a transition role I need for my next step as a principal investigator

Fundamental issues and challenges

The salary is very low, not match the life expenses.

Existing NIH policies, programs, or resources

Yes, we need salary raise.

Proven or promising external resources or approaches

No response

Response 2488

Perspectives on the postdoc roles and responsibilities

Second postdoctoral position for me, meaning it should lead to at least one publication in high impact factor journal and pave the way to be promoted as instructor, then ass. Professor.

Fundamental issues and challenges

Living a Boston MA, a major issue is the cost of living. Postdoc salary is completely incompatible with having a decent life here with own one bedroom apartment and healthy food. We are sincerely struggling to live on NIH minimums, and ask you to change the salary scale to account for regional cost of living.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2489

Perspectives on the postdoc roles and responsibilities

The NPA and NIH jointly developed the definition of a postdoc. NIH should adhere to a consistent universal definition of a "postdoc" regardless of funding mechanism. "Trainee" is seen as diminutive by many, and should be avoided, while "scholar" or "fellow" is more appropriate.

NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.

Postdocs should work in an environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth.

Postdocs should have protected time and funds to attend at least one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network.

Postdocs are usually intent on entering different positions after a defined period of time unlike permanent staff. Establishing clear expectations at the offer of appointment for both postdocs and their PI's regarding their role and how it differs from staff scientists will alleviate misunderstandings. Requiring postdoc and PI participation in formal performance reviews as part of an NIH award will better define, formalize, and evaluate factors of role, mentorship, and professional development, while differentiating postdocs from staff scientists.

The NPA's 2023 Postdoctoral Barriers to Success ("Barriers") reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities. This will assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Fundamental issues and challenges

The Barriers report indicates salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle financially. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in defined areas. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual step increases. Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, and tenure.

Academia contains remnants of structural biases and institutional barriers that hinder the success of scholars from historically-marginalized groups still today. Postdocs from historically-marginalized groups and international postdocs face increased structural and implicit barriers including: lack of inclusion, reduced resources, implicit bias, and loss of community, while often managing increased familial commitments and additional financial responsibilities.

NIH should hold institutions accountable for fostering inclusive and supportive training environments, including expanding the current requirement for institutional commitment to preventing discrimination and harassment (https://grants.nih.gov/grants/guide/notice-files/NOT-OD-19-056.html) to include mental health and wellbeing support.

NIH should require a percentage of indirects on all NIH grants supporting postdocs to provide postdoctoral offices (or offices with similar oversight) with increased resources to foster stronger postdoctoral communities.

International postdocs face unique challenges; the Barriers report shows 86% were negatively impacted by cultural transitions into the U.S. NIH should work with the State Department and USCIS to accelerate and simplify the visa and immigration process for postdocs and expand funding opportunities to internationals through K99/R00 and other programs.

Existing NIH policies, programs, or resources

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. (Other implications, such as tax, do not stem from NIH.)

NIH should require that all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to offset costs. NIH could allow PIs to supplement fellowships from their NIH RPG funds.

NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. The NIH should expand its child care subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.

To increase equity, NIH should provide NIH-funded postdocs with moving allowances. Moving can be cost-prohibitive for researchers from low socioeconomic backgrounds.

NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding, similar to those provided under NIH mentored training programs. Such training should be offered to non-PI's acting as postdoc mentors.

Postdocs' difficulties to remain in academia due to limited faculty positions contributes to dissatisfaction. To retain top research talent, NIH should create or expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining continuity of lab knowledge, providing additional career options for postdocs while differentiating between postdocs and staff scientists.

Collecting metrics on postdoc satisfaction on an annual basis will position NIH to adjust policy accordingly based on the needs of postdoctoral researchers. These data will not only provide key insights on policy effectiveness, but will allow postdocs to provide honest, anonymous feedback without retaliation.

Proven or promising external resources or approaches

The NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version to be released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 report to be released Q3 2023).

Currently, institutions and NIH IC's each develop their own professional development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to the publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In an increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources.

We encourage NIH to work closely with institutions that host postdocs and NPA on an ongoing basis to consult on institutional policy adjustments and tool development that are needed to complement public policy change.

We applaud NIH's policies and programs that have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps. We encourage additional funding for these efforts.

Response 2490

Perspectives on the postdoc roles and responsibilities

Learn how to become a independent PI, like how to write a grant.

Fundamental issues and challenges

As a postdoc living in Boston, I feel there are too much pressure for postdoc, which not only comes from our work but also from our life.

1. I'm in my early 30s and I have been a postdoc for more than 3 years. I have passion in research but I can not see clearly if I can get a faculty job after my postdoc. Even some of the positions require no more than 3 yeas of postdoc experience.
2. The living cost in Boston is high, I pay 2/3 of my salary for rent even the standard of a NIH postdoc is less than 60k a year.

Existing NIH policies, programs, or resources

More funding opportunities should be provided. At least let us have more chance to write a grant.

Proven or promising external resources or approaches

The salary level should be improved.

Don't treat postdoc as a graduate student, we should be more like a researcher.

Response 2491

Perspectives on the postdoc roles and responsibilities

A postdoctoral position represents to me an important step towards a successful academic career. I like working as a researcher at a university/research institution, where I can continue to build upon the research I conducted as a PhD student, gain new skills, and collaborate with other researchers in my field. This helps me build a strong research profile and develop the skills needed to succeed in my career path. Overall, a postdoctoral position can be an important step in an academic career path, providing valuable experience and opportunities for growth and development. However, some postdoctoral positions are paid fairly, while others offer more modest salaries, especially if living in most expensive cities (such as Boston, MA)

Fundamental issues and challenges

One of the biggest challenges faced by postdoctoral researchers and junior faculty is the high cost of living in cities such as Boston, Massachusetts. The minimum salary offered by the NIH is often not enough to cover the high cost of living in these areas, making it difficult for postdocs to make ends meet. Moreover, the competitive job market in the city means that salaries in the industry are often much higher than what postdocs earn, making it harder to attract and retain talented researchers in academia.

One major issue affecting researchers who apply for NIH K awards is the requirement to provide proof of permanent residency. Due to the COVID-19 pandemic and other factors, the United States Citizenship and Immigration Services (USCIS) is facing significant backlogs in processing green card applications, resulting in delays in the assignment of permanent residency. As a result, the US government is providing applicants with an Employment Authorization Document (EAD) card, which allows them to work in any industry without restrictions, but does not confer permanent residency status.

In my case, I have received a fundable score for my K25 award, but I am unable to start my program due to the fact that I have not yet received my green card. I submitted my application in February 2020, but the processing times have been much longer than expected. This delay is severely impacting my career prospects and may force me to move to the industry if I am unable to obtain permanent residency soon.

Existing NIH policies, programs, or resources

To address the salary issue, I suggest that the NIH consider adjusting the minimum salary for postdocs and junior faculty based on the cost of living in different cities and states. It is not reasonable to expect postdocs to live on the same salary in areas with vastly different costs of living. For example, earning $50,000 in Iowa may be sufficient, but it may not be enough to support a comfortable lifestyle in Massachusetts.

By adjusting the minimum salary based on the cost of living in different locations, the NIH can ensure that postdocs are fairly compensated for their work and can attract top talent to the field of research. This could ultimately benefit the entire scientific community by helping to retain talented researchers and promote continued progress in the field.

Moreover, I suggest that the NIH consider accepting the EAD card as proof of eligibility for K awards, in addition to the green card. This would help to ensure that talented researchers are not penalized due to delays in the processing of their green card applications, and would allow them to continue their research without interruption. Additionally, the NIH could work with USCIS to expedite the processing of green card applications for researchers who have received fundable scores for K awards, to help prevent delays in their careers.

Proven or promising external resources or approaches

There are several external resources and approaches that could inform NIH’s efforts to enhance the postdoctoral training ecosystem and improve postdoctoral recruitment, training, working environment, mentoring, and job satisfaction. I believe that by partnering with external organizations, promoting diversity and inclusion, supporting alternative career pathways, and leveraging innovative technologies, NIH can enhance the postdoctoral training ecosystem and support the career advancement and job satisfaction of postdocs.

Response 2492

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2493

Perspectives on the postdoc roles and responsibilities

I believe an academic postdoc offers me the opportunity to build on the technical skills I developed during graduate school. Not only does it offer an opportunity to continue to learn and grow, but it also allows for a unique chance to explore new areas of research and branch out from my prior academic focus. Perhaps most importantly, the postdoc experience provides a safe space to make mistakes and learn from them, free from the pressures and expectations of graduate school or from running my own independent lab as a principal investigator. Overall, I see pursuing an academic postdoc as an excellent way to deepen my knowledge and skills, explore new research directions, and continue to develop as a scientist.

Fundamental issues and challenges

I believe one of the most significant challenges facing postdoctoral trainees is the lack of clear career paths and opportunities for advancement. I think postdocs can find themselves in a holding pattern, uncertain about their future and without clear guidance or mentorship to help them navigate their career path. This can lead to feelings of frustration, demotivation, and ultimately attrition from the academic research career track.

Another significant challenge is the lack of compensation and benefits that are commensurate with the level of education and expertise required for postdoctoral research. Many postdocs struggle to make ends meet, with low salaries and limited access to health care and other benefits. For example I currently bring home a net income that is less then what I did in graduate school because of inflation, increased rent (even though I live in subsidized housing from my institution), increased cost of healthcare (this was something I did not have to pay for in graduate school), and increased cost of living This altogether creates financial stress, which can negatively impact overall quality of life and ultimately hinder ability to focus on research.

Other issues include a lack of work-life balance, limited access to training and professional development opportunities, and a lack of diversity and inclusion in the academic research community.

Existing NIH policies, programs, or resources

Increase funding for postdoctoral training: increase the amount of funding available for postdoctoral researchers. This can be done through increased funding for existing programs, such as the NIH Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Research Training Grants, or through the creation of new funding programs specifically designed to support postdoctoral training. Additionally, it would be very helpful to extend some of the deadlines and strict timelines so that more postdocs have more opportunities to get funding awards.

Improve compensation and benefits: Another way to enhance the postdoctoral training ecosystem is to improve compensation and benefits for postdoctoral researchers. This could include increasing the minimum salary for postdocs, allowing compensation for relocation, providing better health care benefits, and offering more support for family care, such as parental leave.

Create clearer career pathways: Finally, NIH could work to create clearer career pathways for postdoctoral researchers. This could include providing more guidance and mentorship on career development, as well as creating more opportunities for postdocs to transition into independent research careers.

Proven or promising external resources or approaches

No response

Response 2494

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Its hard to live on a post doc salary! Increasing our salaries will allow talented people to stay in academia instead of going to industry. We cant have kids on these salaries! Or, you can provide an extra $10-20k per year to post docs who do have children so they can afford childcare. It costs me $30k per year for 1

child to be in daycare. With a second child due soon, I dont know how I will afford to continue my research!

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Help us with childcare, please! Any programs or money that can go toward this would be very helpful.

Response 2495

Perspectives on the postdoc roles and responsibilities

From a graduate student perspective, I viewed the postdoctoral position as a stepping stone on the path to becoming a tenure-track faculty member. When I realized that I did not want to be a faculty member, I then immediately decided not to pursue a postdoc because it would not make sense to keep going down a path when I'm not interested in the end point.

From an administrative perspective, I see that postdocs are realistically a workforce of skilled scientific researchers.

I think the NIH needs to decide which of these two things a postdoctoral position is:

1. a pre-requisite step to becoming a PI/tenure-track faculty, or
2. a scientific researcher position that is essential to maintain in academia.

The goals for these two descriptions are completely different.

1. If postdocs are meant to become faculty members, then it makes sense that fewer researchers are going down the postdoc path. There are simply not enough faculty jobs, and we all know it. Thus, it makes sense for anyone not looking to become a PI to not pursue this path. From the NIH standpoint, this means that the postdoc can remain a "training position" and thus, there should be clear skills that postdocs should be learning. Currently, this piece is also a problem: postdocs do not actually learn the skills that PIs need to run a lab (lab management, budgeting, etc.) and instead are just the skilled workers doing experiments.
2. If "postdoc" now means "skilled scientific researcher" instead of "pre-PI", and if we want to maintain this pool of highly skilled workers in academic research, then academia needs to offer jobs that are competitive with industry and tech (the other sectors that PhDs typically go to). This would mean higher salaries and many more benefits.

Fundamental issues and challenges

Low salaries: "Postdoc" is one of the lowest paying positions available to STEM PhD-holders. This makes it a very unattractive career path, especially for people from low-income backgrounds. As a person from a disadvantaged background myself, I was tired of having to be so vigilant about money (while spending money only on necessities). After getting the highest degree in existence, I decided that I don't have to live like that anymore. I looked for jobs that would finally allow me to be less concerned about finances. For people from more privileged backgrounds, the PhD and postdoc may be a finite period of time during which they have to "buckle down" and be watchful of their spending, but that's how the rest of us have lived all of our lives. By our late 20s (or later), we're looking for any way out of continuously feeling poor.

Limited benefits: childcare benefits are nowhere near the cost of childcare; typically no retirement contributions from the employer; healthcare in the US is very expensive even with health insurance

The bottom line is that the postdoc feels like it is only an enjoyable job if you have a partner who works in tech that can fund everything, AND a stay-home partner that can provide childcare and do all of the chores at home.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Since universities essentially train skilled workers (graduate students and postdocs) that then go into lucrative careers in the technology and pharmaceutical industry sectors, is it possible to get those industries to fund postdoctoral positions? Ideally, corporate taxes would shift money from those industries back into academia, but if we can't do it that way, could companies like Google and Meta directly fund some postdoc positions at universities?

A much smaller initiative that doesn't address the salary issue is for universities to have postdoc cohorts. Currently, the postdoc can be a pretty lonely position. It would be good for universities to create cohorts of postdocs and provide programming for them to socialize, get training in certain skills, and to get job application support for transitioning out of the postdoc.

Response 2496

Perspectives on the postdoc roles and responsibilities

My postdoc means a lot to me. I am motivated and engaged in understanding my projects. I feel responsible for organizing the projects and executing the experiments as best as possible. I appreciate the opportunity to move to the US and be in my current role. I started my postdoc because I wanted to become a PI in my field. Seeing many struggles with work/life balance, I believe I will seek an Industry job when I finish my position.

Fundamental issues and challenges

All postdocs from my field/area are financially worried. And I have seen this affect the overall life quality from others and myself. I've seen many fellows leaving in the middle of their postdocs for an Industry job due to the salary.

Existing NIH policies, programs, or resources

I believe my institution does a great job in terms of training and resources.

Proven or promising external resources or approaches

Surveys and RFI are great opportunities for postdocs to speak about their experiences.

Doing research in the US, and working on projects funded by the NIH is a great experience. I have learned so much as a postdoc, and I appreciate it. I just think that it is time to make a change to how postdocs are currently paid. Another issue I encounter myself is how to go into the job market after our postdocs. I don't feel supported if I still want to stay and do great work in the US. I would be very happy to see this change in the future for the next generation of fellows.

Thank you.

Response 2497

Perspectives on the postdoc roles and responsibilities

I see it as a way to get trained on my road to become a PI

Fundamental issues and challenges

I am a postdoc in Boston, [redacted for anonymity]. The rent and utilities here is 3000/per month for a single bedroom. my salary after tax and deduction is 3000 a month.

This is barbaric. I feel trapped in my current situation. Please reaccess the postdoc salary in cities like boston. I am 33 and I have no life, no life saving,.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2498

Perspectives on the postdoc roles and responsibilities

Produce high quality research

Mentoring PhDs students and Masters students, train the next generation of

Present and communicate about the research

Apply for funding

Fundamental issues and challenges

Good salary

Good salary

Good salary

Existing NIH policies, programs, or resources

K99/R00 eligibility criteria: being within 4 years of a PhD graduation makes sense if you take into account out-of-academia years. Many postdocs come back from a short experience in industry or start-ups. This criteria is too strict for them and seems designed solely for postdoc with "perfect" and linear career paths.

NIH grants are not designed for postdocs or junior investigators. The need for preliminary results makes it extremely difficult to build competitive applications. Despite NIH efforts in diversifying grant mechnisms (eg: R21), all grants are still reviewed as R01s.

Proven or promising external resources or approaches

Good salary

Good salary

Good salary

Response 2499

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral fellowship at Brigham and Women as a crucial training step to gain necessary skills and experience, in order to ensure future success in my chosen field of interest which is clinical research. I believe academic postdoc positions provide a safe and nurturing environment for those who aspire to work in research-oriented fields, and acknowledge my privilege in being able to work and learn among highly accomplished mentors. However, the salary we receive as of now hardly covers basic cost of living expenses such as rent, food, and childcare costs for aspiring fellows who choose to complete their training in high cost of living areas such as Boston. My hope is that we will be able to receive more funding from the NIH to augment what we currently receive as base salaries, in order to offset the hardships of having to reside in high COL areas in order to complete academic training. Please consider readjusting the salary scale for postdoctoral positions so that our training programs are able to attract the brightest minds and maintain competitiveness in an ever-evolving climate of various other careers choose from.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2500

Perspectives on the postdoc roles and responsibilities

Transition period between PhD and next career step (ideally faculty position in academia);

Opportunity to deepen knowledge gained during graduate studies while acquiring new skills, perhaps even exploring a new field to develop a unique skill set, allowing development of a research "niche" that would be attractive when applying for faculty positions;

Time to build/strengthen grant writing, project management and leadership skills;

Roles/responsibilities: leading projects from initiation to completion including data analysis and manuscript preparation, mentoring/supporting junior lab members, application for fellowships/grants

Fundamental issues and challenges

No issues from the university perspective (I have a very supportive mentor and [redacted for anonymity] university is providing great postdoctoral training opportunities)

Speaking from experience as an international postdoc: the main hesitation when applying for postdoctoral positions in the US were with regards to the political landscape in the US, lack of infrastructure and comparatively low benefits outside of academia (lack of public transit, limited maternity/paternity leave, limited vacation days)

Existing NIH policies, programs, or resources

More fellowship opportunities for international postdocs

Proven or promising external resources or approaches

I think one of the main keys to satisfaction is working with a PI who is supportive the postdoctoral scientist. In my case, I appreciate the following:

Mentor is available for feedback whenever needed (we have weekly meetings) while giving me space to explore my own research interests (I have started my "own" projects, mentor is very supportive of my grant/fellowship applications including allowing me to be the PI on internal University pilot grants (usually, only faculty members can be PIs), mentor is attentive to personal needs and career goals, mentor is invested in my success and offers paths to promotion

From the institutional perspective: The [redacted for anonymity] offers many fantastic workshops/seminars/lectures that are very helpful growing ones skill set.

Response 2501

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions in my field have been advertised as additional training time for research activities leading to independence as a researcher. However, within my field, most individuals have already worked for many years and then return to complete a doctoral degree. As a result, the majority of my former classmates have not gone on to complete a postdoc.

Fundamental issues and challenges

The main issue in my opinion is the lack of financial support. Most postdoctoral positions are located within universities where there is a lack of affordable housing. The cost of living is so expensive that most of my colleagues spend the majority of their stipend on housing. As a result, there is often little left over for transportation, food, and medical expenses. High performing individuals often have to relocate for postdoc positions. As a result, they lose their community and support while often being asked to be productive and constantly generate new findings. The high levels of stress and numerous working hours with isolation can often impact their physical and mental health.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2502

Perspectives on the postdoc roles and responsibilities

In my field, the postdoctoral position takes too long (min 5 years). After a 5-8 year PhD program, it is impossible to start a life while pursuing the academic career trajectory. Postdocs are not treated like employees in the best conditions and often miss out on important financial incentives by virtue of their temporary status.

Fundamental issues and challenges

For example, when my F32 funding ended, my mentor rehired me as a regular postdoctoral employee. My institute viewed me as "new hire" rather than a continuation of my job. At that point, I lost access to all benefits and had to wait a 42 day waiting period even for access to health insurance. My only option was to pay an exorbitant rate for COBRA at my own expense. NIH should provide bridge funding for situations such as these or disallow institutions from accepting such awards unless they can prove that their postdocs will not be treated like this. Stories like this are incredibly common; they severely detract from quality of life for postdocs and prevent people from pursuing postdoctoral training.

Existing NIH policies, programs, or resources

Provide bridge funding at the end of postdoctoral funding periods (such as F32) or force institutes to provide such funding so that postdocs don't get financial punishments for accepting awards (in addition to the example of losing health insurance at the end of my fellowship, I also lost access to normal benefits such as software provided by IT, gym access, retirement funds, etc when I became a fellow). NIH should provide unrestricted funds during and after the fellowship period to prevent such financial burdens endured by postdocs. The institutional allowance is simply not enough because it usually pays the COBRA rate for health insurance as fellows lose their employee status. After that cost, there is nothing left for software, retirement etc let alone conference travel, lab expenses, or a computer.

Give fellows more options for benefits.

Make the postdoctoral pay scale a RANGE instead of a single value to account for differences in cost of living e.g. a postdoc in a small town might be happy with the min of $56k but this is not sustainable for someone in a large city with high cost of living, yet PIs claim that they can't pay their postdocs above the NIH range from their R01s. So please make this a range.

Proven or promising external resources or approaches

No response

Response 2503

Perspectives on the postdoc roles and responsibilities

The roles and responsibilities of a postdoc covers both those from graduate students and faculty. Postdocs mentor students, teach classes, perform research, write grants and fellowships, and serve their community.

Fundamental issues and challenges

No clear guidelines or expectations for postdocs. Low pay. They don't always receive appropriate mentoring to help them decide on their future career. Also, there are no milestones to look forward to, which negatively impacts their experience.

Existing NIH policies, programs, or resources

Provide national online workshops to educate postdocs on career choices, mentoring, managing labs and people, and writing grants. If some of these are already done, please publicize them nationally to all schools.

Proven or promising external resources or approaches

Subsidized housing, childcare support, and financial stability correlate with scientific productivity and creativity.

Response 2504

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

I recruited a postdoc for our T32 grant. She had been a non-traditional student who had close to 22 years vested in the University. While the T32 is prestigious its current set up is not ideal for someone like her. She had been a university employee and also owned a house, and is from a marginalized background where she supports her family. Even though she was an employee of the University as a postdoctoral fellow, she had to quit her role with the University and give up her benefits to become a T32 fellow. This was very stressful for her. It can also be hard for some to get their own affordable health insurance if they are older. I believe having this be the pay structure for T32 fellows is going to limit the diversity and inclusivity of who can participate in these prestigious training grant opportunities. There needs to be institutional change on the T32 program to enhance the ability of fellows from more diverse backgrounds and with greater responsibilities to still participate and get the training they need to develop their career.

Proven or promising external resources or approaches

No response

Response 2505

Perspectives on the postdoc roles and responsibilities

See response regarding NIH’s policies that harm retention.

Fundamental issues and challenges

See response regarding NIH’s policies that harm retention.

Existing NIH policies, programs, or resources

NIH’s policies are out-of-step with modern career trajectories and harm the retention of postdoctoral researchers. I have one personal example. In 2021, I was awarded a 5-year K01 award. My field bridges AI and biology. In 2022, I began to see that there were opportunities in industry to learn about doing research in ways that are not possible to learn in academia. Having spent my whole career in academia, I decided it would be a disservice to my own career to not also learn from another environment.

My K award stood in the way because I was not permitted to take a brief unpaid leave. The PO directed me to GMP, which failed for months to respond to my emails, eventually providing a one-sentence response that such a leave is not permitted under Section 12.13.1 (I did not request an extension, and was fine relinquishing a year of funding). I was forced to terminate my award, giving up 3.5 years of funding.

From just one month in industry, I can unequivocally say that the experience would substantially benefit my own academic research program (indeed, I received three tenure-track offers to start my own lab).

After discovering how NIH permits zero flexibility, and not having funding in place for an academic return, I now believe it is unlikely that I will return from industry to academia.

Computer science has benefitted in the United States from back-and-forth between academia and industry, perhaps in part because NSF is less rigid than NIH in that respect. Academic biomedical research, on the other hand, confronts NIH’s backward-looking policies. Why would a postdoc want to remain in an environment where they are locked in—where even a brief leave, to learn science that would enhance their own academic research, necessitates terminating years of earned funding?

Proven or promising external resources or approaches

See response regarding NIH's policies that harm retention.

Response 2506

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary is not sufficient for cost of living in certain areas of the US (e.g. Boston) making it very difficult to get enough rest and nutrition to have a healthy productive lifestyle.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2507

Perspectives on the postdoc roles and responsibilities

I strongly believe that the opportunity to have a tailored mentorship program is essential for me to further develop my research and academic skills toward an independent career.

Fundamental issues and challenges

Lack of pension (retirement benefits) is a major problem that might affect recruitment and retention in the research postdoc life. Another challenge has been the tax report for me. Although I have contacted multiple professional tax preparers, I have encountered many difficulties in properly preparing my taxes due to professional tax preparers nonbeing able to figure out how to report the fellowship income.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2508

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

- Expected outcomes of a postdoc have grown to an unreasonable degree, due to the extreme competition for faculty jobs
- This has led to an increase in the average length of the postdoc tenure, where people spend more than 6-7 years in an attempt to produce work that is competitive enough for the faculty position search
- The postdoc salaries are insultingly low —which would be still okay if postdoc positions were still the short-term positions that they used to be. But with the trend of longer postdocs, spending so many critical years of one's life with such low income is incredibly difficult.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2509

Perspectives on the postdoc roles and responsibilities

A postdoc provides an intermediate career stage between graduate school and faculty positions and an opportunity for postdocs to broaden their expertise and connect with other researchers before settling down in a longer-term position. Most postdocs I know are the major contributors to the scientific, intellectual, and cultural development in their labs. They conceive of projects for themselves and their mentees, design the experimental framework, execute experiments, and write their own papers. Postdocs ghost write peer reviews of scientific manuscripts under their faculty advisers' names and often contribute a significant share of ideas and writing to R01s and other grant applications. These tasks collectively represent a huge fraction of the substance of academic research.

Such a wide range of responsibility provides a major opportunity for scientific and professional growth. The postdoc is thus often framed as a "training opportunity" . From my viewpoint, much of the training involved is provided by other postdocs rather than faculty and it is not unlike any other job in which one learns what they need to learn to be successful in the position, on the job. The idea that postdocs should be regarded as "trainees" and paid accordingly is growing increasingly offensive and absurd.

There may have been a time in which people graduated from PhD programs younger and moved into faculty positions more quickly than they do now. It may then have been appropriate to view the postdoc as a short follow-up training opportunity to grad school. This is no longer the situation. In most cases I have observed, academic-bound postdocs are functioning like junior faculty from their first year or two into a 5-6 year position rather than as glorified graduate students as their position as 'trainees' suggests. This needs to be acknowledged, and they need to be compensated accordingly.

Fundamental issues and challenges

From the POV of a postdoc in biological sciences, the major issue inhibiting retention of postdocs in the academic sector is grossly inadequate compensation. The postdoc salary scale does not account for the typical age of postdocs, duration of postdoc post-degree, hours/week required to successfully execute complex research projects (driven by high requirements for impactful publications), inflation and an increasing cost of life in the US. The issue is especially pronounced in expensive cities: while the NIH acknowledges that the cost of life is much higher is some places than others (as reflected in city-specific per diem compensation rates for travel), it does not account for these dramatic differences in salary—and as a result, postdocs working in cities that are also major scientific hubs are drastically below the salary required for a reasonable quality of life.

The NIH's hope that a postdoc position will be a brief (2-4 year) training period for young scientists is out of date and unrealistic for most people to become attractive candidates for academic faculty positions. Postdocs range from 4-6 years, during which time many postdocs are well into their 30s. For many postdocs, this corresponds with a closing window of opportunity to have children. But the postdoc salary is grossly insufficient support a new family.

Postdocs are known to work around the clock—after hours and weekends—and are often absurdly required by their universities to fill out monthly time sheets suggesting that they work 40 hours a week to avoid overtime payment requirements. I don't see a need or mechanism to regulate hours worked, but postdocs should receive a salary that better reflects the large time commitment being made to get the job done.

Existing NIH policies, programs, or resources

A few specific suggestions:

1. Regulations surrounding the K99 pathway to independence needs to be revamped to reflect the current realities of the postdoc timeline and so that postdocs within a general field (i.e. biology) have roughly equal access to this opportunity. The major issue is the eligibility timing—the deadline is too early into the postdoc. I do not agree that time spent finishing PhD work in prior labs after the date their PhD was awarded should count against the K99 timeline—there are many logistical issues that might cause a person recent graduate to spend extra months in their lab as "research specialists" until they are able to begin a postdoc in earnest. Another issue is the vast differences in the number of K99s awarded by different institutes. For example, NIAID is known to grant precious few K99 awards whereas NIA seems to have a reasonable number.
2. The K99 extension for childbirth is helpful but insufficient. While I applaud the extension to men and partners of individuals who give birth, they should not have the same duration as those giving birth. 9 months of pregnancy represents a massive obstacle to retention of child-bearing -—especially female -—postdocs in the life sciences. Many pregnant people are extremely sick for 2-3 months during early pregnancy and at substantially reduced ability in lab for the last 3 months. That represents a 6 month + time during which our soon-to-be-father peers are uninhibited in their careers. It would be appropriate for NIH timelines to account for pregnancy *in addition* to early child rearing.
3. I appreciate the F32 NRSA funding mechanism, but believe that the application package requirements should be re-examined and streamlined. Several of the required documents (other than the research strategy) are needlessly lengthy and repetitive with one another.

Proven or promising external resources or approaches

1. Additional financial resources for reproductive health (i.e. IVF) and childcare would be a massive help to postdocs and I believe this would attract a more talented a diverse pool of postdocs. At [redacted for anonymity] for example, a public university, postdocs are not given any discount to the [redacted for anonymity] daycare. For reference, as a 5th year postdoc, my monthly take-home salary is $4,500 before taxes; the daycare is $3,190 (which is typical for daycares in the area). So for postdocs at earlier stages the salary is roughly equal to the cost of daycare for their child. This is not sustainable.
2. UCSF offers an annual funding opportunity for postdocs to do research on something outside of their postdoc mentor's area of expertise. It essentially provides a small pool of money for a postdoc to obtain some preliminary data during their postdoc for their future research independent of their postdoc mentor. It would be extremely helpful if the NIH provided a small amount of money in a similar manner, with flexible eligibility requirements and less time-intensive application materials required than for a full fellowship. This would be an asset to postdocs seeking to gain independence from their postdoc mentors.

Response 2510

Perspectives on the postdoc roles and responsibilities

In my view, an academic postdoctoral fellow has two lines of responsibilities:

1. To fulfill the responsibilities to conduct the designated research projects, which usually are assigned by the mentor;
    a) This line of work can include conducting the research projects diligently and rigorously, updating and keeping regular and frequent updates with the research team and the mentor, and disseminating the results as soon as possible.
2. To prepare oneself professionally and academically for the next stage of one's career, which include the preparation in at least two dimensions
    a) Academic preparation includes plans on research directions and research projects, accumulating teaching and related activities experience (such as preparing a course syllabus, designing a short course, including assessments), volunteering in professional organizations, or as a peer-reviewer for journals and conferences on one's field.
    b) Professional preparation includes determining future career directions (academic, industry, non-profit, government, etc.), strategically pursuing the directions, networking accordingly, preparing for job interviews and CVs, and practicing negotiating skills. Additionally, grant writing, academic writing, communication, and management are all necessary skills to sharpen for an academic career.

Fundamental issues and challenges

1. The value of postdoctoral training was under-appreciated.
    a) The postdoctoral training experience can broaden the horizon of one's research and career experiences. Most Ph.D. students have worked closely with faculty members from a single department. The postdoctoral training could be with another mentor and in a different institution. The close work relationship through postdoctoral training is critical to provide a broader view of one's future research direction and research conduction.
    b) The postdoctoral training experience can prepare one better for a more sustainable future career. During postdoctoral training, one has a longer time, more experience, and more robust networks before determining one's future research directions and more time to refine future research projects, which is significantly different from a fresh Ph.D. This can be possible only if the postdoctoral training is well structured and the postdoctoral fellows are well informed.
2. The immediate status and salary that fresh PhDs could obtain were weighed more favorably than long-term potentials provided via postdoctoral training.
    a) I think starting a faculty position (perceived as a relatively permanent role) is very appealing to fresh PhDs versus doing a postdoctoral (needs to move to a more permanent role). This is understandable since most people focus more on the immediate benefits one can obtain.
    b) However, long-term benefits that postdoctoral training can bring to one's career in productivity, length and sustainability of the careers, and the actual impacts of one's work over the trajectory of an entire career are also critical, but often hard to measure, to track, and therefore are neglected often.
3. Another challenge happened far before Ph.D. Not all bright students value or prioritize science and research high when they are young. Perhaps more pipelines and early efforts to attract students or embed interests in science and research early in their minds.

Existing NIH policies, programs, or resources

I think the existing programs and resources are well structured. Perhaps more targeted marketing strategies will improve the ecosystem further. For example, to send the information, links, resources, available opportunities, workshops, or webinars about the opportunities and deadlines to Ph.D. program directors or program coordinators, who may distribute the information among the Ph.D. students and alumni, and they can be potential postdoctoral fellows; otherwise, lack of information awareness can be a significant bottleneck.

Proven or promising external resources or approaches

I think in addition to having publicly accessible websites and web pages, mailing lists, perhaps include Ph.D. program directors and program coordinators, who may circulate the opportunities, and information with their Ph.D. students and alumni. This is a more targeted way to disseminate information.

During the postdoctoral training stage, to have more structure and instructions (for example, goal setting at the beginning, quarterly updates in writing, targeted training plans—grant writing, teaching, peer-reviewing, and interview skills), even structure templates (similar to curriculum map, but with brief courses or workshops, e.g., one for an academic career, one for industry, one for a management role, etc.) will be very helpful for mentors and for postdoctoral training directors to manage their program more explicitly; such structure and instruction also have the potential to make the postdoctoral fellows use their time, resources, and effort more wisely and intentionally.

Response 2511

Perspectives on the postdoc roles and responsibilities

I view postdoctoral positions as a key step towards an independent career. Given the right mentorship, it gives researchers the right environment to learn something new and to combine it with their previous expertise as they develop their own independent research plans.

Of course, having obtained a PhD, a postdoc can deliver research results much faster than graduate students. I find this to be true even if the postdoc is changing fields.

Fundamental issues and challenges

Much has been done in terms of providing resources for mentoring and careeer advancement. However, ultimately a large number of graduate students decide not to pursue postdocs (or to cut them short) because of the low pay compared to PhD holders that move to industry.

Existing NIH policies, programs, or resources

Once again, higher salaries concomitant with cost of living is the key.

Proven or promising external resources or approaches

No response

Response 2512

Perspectives on the postdoc roles and responsibilities

Training for specific skill set that ultimately will transfer to leading labs/projects in industry, federal government, or in academics (which can include an academic path to becoming an independent investigator). A post-doc is a training environment and should have a clear goal, rather than being viewed as continuation of grad school or "cheap labor" or transition to another career. It should be paid like an employee, with salary and benefits commensurate to a highly skilled and trained person, at least at a senior technician role in academics.

Fundamental issues and challenges

1. Salary and benefits are not commensurate with the skilled required to be a post-doc. These are highly trained individuals, but they are often treated like graduate students without employee benefits and asked to delay their financial stability/security for further training and no benefits (retirement, better insurance, etc). Academia uses T32 grants as an excuse to treat them like trainees rather than employees and benefits are reduced when a post-doc is on a training grant. Pay is disparate if you are intramural vs extramural post-doc, the pay scale is a base, but grant funding is based on that pay scale and academic institutions use that scale to set salaries. Pay it also disparate with industry positions and most post-docs in academia are not paid a living wage, and they cannot support a family.
2. There are not clear goals and poor/limited career options in academics and no academic environment is helping post-docs find jobs outside of academics.
3. Very few institutions will support post-docs (PhD) to apply for career development awards/K awards. There is only one path to a K award for PHD post-docs.

Existing NIH policies, programs, or resources

Pay scale and grant funding to make the salaries possible. Require benefits commensurate with employees. Allow post-docs on training grants to be able to contribute to retirement funds/get matching funds. Expand career development grants, so that post-docs actually have funding when they are looking for faculty positions (few institution will hire a post-doc who does not have this funding), require mentors/post-docs to have a clear goals in mind for career development and state that industry/government/academia are all acceptable career options if that is the goal. If not, then work with institutions to actually create faculty options in academia—there are few job openings and few funding options and therefore, few people get hired. When post-docs are paid poorly, treated as extended trainees, receive no benefits/lack financial security, and see no job prospects in academia—> they will leave to go to other opportunities and/or leave science. Well trained people are the most valuable resource in science, and we loose many scientists because they are not supported and progressively hate the field as they continue in their career.

Proven or promising external resources or approaches

NIH could consider how industry has been successful recruiting and training post-docs that have left academia.

Response 2513

Perspectives on the postdoc roles and responsibilities

I believe that PhD training should prepare trainees for a wide range of careers—industry, academia, etc.—where as postdoctoral position should be a training period for those focused in academic career. In that regard, I think the number of postdocs should be decreased as there are only limited number of academic positions. I think academic labs should hire more technicians and staff scientists rather than relying on postdoctoral trainees for conducting research. It appears that this is naturally happening as PhD graduates see postdoc as less attractive option with the low pay and difficult academic job market.

Fundamental issues and challenges

Low salary compared to alternative options in industry and poor outlook in academic job market provides less incentive for postdoctoral trainees to stay in their position. I believe there should be fewer postdoc positions who are compensated at better rate.

Existing NIH policies, programs, or resources

Not allowing non US citizens to apply for training grant discourages both PIs to applicants for foreign born candidates to pursue a postdoctoral training in the US.

Proven or promising external resources or approaches

No response

Response 2514

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I was an NIH-funded investigator for over 30 years. I have observed how both the education and recruitment of post-docs has changed over time, mostly for the worse.

My family connection to the postdoc decision process gives me some insight. My son got his PhD about 5 years ago. About a year before he graduated, he told me that he and most of his fellow students were looking ahead to go for additional training as postdocs.

My son visited several possible postdoc offers. Those visits convinced him he would not seek a postdoc position, with the implicit career goal of eventual teaching an research. As he was newly-married, he said, the financial uncertainty of being expected to bring in grant funds in the current research-support environment was too great. He decided to work in industry.

After 5 years in his current position, he loves his job. As with anyone who devotes themselves to a life of the mind, it is not a job for him but a way of life. He benefits from good supervisors and colleagues, has the best technical support (unlike myself who has had to fight for computer and administrative support), and he gets financial bonuses for good work. He has over 18 patents, an excellent work environment and he does not have to write grants, thus not having to devote at least 50% of his time to raising money. He gets to do the research work he loves, work for which he is rewarded. He has the freedom to work on new things (thus the large number of patents he has secured for his company) and he gets support when he wants to try something new. He does not have to bootleg his resources to in order to expand into new areas.

Existing NIH policies, programs, or resources

As a seasoned investigator, I recall when getting a grant funded by NIH or NSF was not the chancy, onerous chore it has become. Having to write 5-10 grants to have a reasonable chance of getting one funded means that, first, getting grant funding is openly a matter of chance. Secondly, it means that much of the time, one is not actually doing useful research. It used to be if one had a reasonable idea, one could get a grant to pursue that idea; if not successful on the first submission then usually on a subsequent one. That is no longer the case. The lack of priority support for basic research has caused the granting system to be broken, if not outright corrupted. My observation is that, nowadays, reviewers approach their grant evaluation tasks with an agenda. Without good oversight of the "product" (the review), the frequency of outright errors in the review has grown. I do not mean disagreements about the science; I mean actual errors of content for which there is essentially no recourse.

In the past, when I use to participate in Study Sections, I found the reviewers to be honest and the interest in the science to be high, and the discussions enlightening. After my last two experiences, I would not participate again, so frustrating was the experience. The students in my departments have seen us senior faculty struggling with grant preparation and the ever-increasing rigidity and bureaucratic burden it imposes. (I particularly recall when the "innovation" section requirement was introduced. It seemed idiotic then and still does.) And the non-scientific requirements that must be satisfied before the ideas in the proposal can be evaluated—especially if institutional support for grant preparation is lacksadasical—can be daunting.

Proven or promising external resources or approaches

I am currently teaching a class attended by biomedical PhD students (last semester there were 13 students in the class). All of those students planned to seek jobs in biotech industries.

While what I write here draws on some of my experience, it unfortunately also directly reflects what students have told me when I ask if they are going to do a postdoc. They are not blind to what those of who have been doing NIH-supported research have been going through. This is especially true where, as in my institution, the faculty that are the most productive are those with non-government sources of funds.

When NIH funds were not exceeding difficult to get, students understood that, although there were reduced salary prospects (compared to industry) in an academic career, the compensation was that there was freedom to pursue one's scientific interests and to teach. The way the granting process has developed, and with the replacement of "publish or perish" with "bring in funds or perish" as the requirement for employment in a research university, it seems the logical step is to avoid a postdoc and an eventual academic career.

Response 2515

Perspectives on the postdoc roles and responsibilities

Postdocs are trainees but not post-PhD trainees, rather they are faculty-in-training (pre-fac). They should be given all the tools necessary to prepare for a successful academic search and position. In addition to learning the science and technical approaches in the lab that they are doing their research, there should be some professional training including the following topics: manuscript and grant writing, mentoring including culturally aware mentoring, lecturing and writing exam questions, communicating science, team work, statistics/rigor and reproducibility, exposure to how pharma operates and to non-bench roles outside of academia.

Fundamental issues and challenges

Finances—how little postdocs are paid

Benefits are not good for postdocs including parental leave, affordable housing and childcare options

Uncertainty for international postdocs to get sponsorship for visa

Length of postdocs is increasing so they are stuck in limbo

Limited prospects for landing an academic job plus frustration of academic jobs with regard to publishing and grants

Increased opportunity and acceptance of pharma and biotech as a viable option post PhD with better pay and work life balance

Academic bullying and pressure from PIs to produce data and overwork

Mental health resources are often for students. Postdocs do not have easy access to health care professionals.

Existing NIH policies, programs, or resources

Create International Scholar Supplement that are analogous to Diversity Supplements for R01s.

Open up some fellowship opportunities beside K99/R00 for international postdocs.

Proven or promising external resources or approaches

Taking in postdocs as cohorts through recruitment events and having them all go through professional development activities together to create community

Requiring mentoring plans/committees of faculty as mentors like thesis committee/IDPs

Make the positions more secure through longer-term contracts so they will be more productive rather than "at will"

Make the first 2-3 years of a postdoc position lower salary and then a big bump up for 3-5 years.

Allow for vesting and matching benefits after the first 2-3 years.

Create more staff scientist positions

Relocation fees and signing bonuses

Clear parental leave and vacation policies with the ability to accrue vacation for travel to home countries.

Unlink visa from PI/lab so that there is no fear of deportation

Punish academic bullying through the AToRT document and model

Create a grievance process with arbitration

RPPR for funded grants should include anonymous PI evaluation by postdocs and grad student mentees and R grant funding will be contingent on good mentoring reports

Response 2516

Perspectives on the postdoc roles and responsibilities

I am a first year postdoc at one of the hospitals in Boston. I am learning in a very good research environment and would like to continue for a couple more years.

Fundamental issues and challenges

However, the cost of living is very high in Boston. I have to live in a shared apartment which makes living not so comfortable. Being a married individual, I have to stay away from my spouse only because of cost of living here in Boston. This weakens my stability and has been challenging my decision to continue my work here.

Existing NIH policies, programs, or resources

Increase salary based on cost of living of the area.

Proven or promising external resources or approaches

No response

Response 2517

Perspectives on the postdoc roles and responsibilities

I think the goal for a post-doctoral position should be for a recent PhD graduate to receive additional training, transition to more independent research, and move toward their career goals. I'm not sure if they are considered scientists, fellows, trainees, students, etc.

Fundamental issues and challenges

Pay for academic postdocs is embarrassingly low. It's unreasonable that a person with a PhD would be unable to afford a 1 bedroom apartment in major cities (where, often, top-tier research institutions are located). Many PhD students already put their personal lives (family, savings) on hold, and still find their goals unattainable on a post-doctoral salary. Post-doctoral positions often require long hours without compensation, which is difficult for those with families. Other positions (e.g. industry) offer pay that is almost double the NIH salary, with reasonable hours, and so there is little motivation for an academic post-doc unless the scientist strongly wants to continue in academia.

Many students do not see academia as a reasonable career goal—the job market is limited. Academic research is almost by nature a bit of a pyramid scheme—PIs must recruit several graduate students and post docs, but there are not academic positions available for these trainees once they graduate. And again, a career in academia often means low compensation (compared to other positions for PhD holders) and a lack of stability (position is subject to funding/publishing/tenure decisions). Those who do not come from a place of financial privilege are not going to see this as an ideal option.

Finally, work as a post-doc is highly dependent on the individual lab environment. Some post-docs are treated as experiment factories, with long working hours (that are not fairly compensated) and very little mentorship from their PI. Although they have PhDs (and in other academic fields, this would be sufficient to become a faculty), they are treated as trainees. The role, expectation, and training can vary wildly between labs. After experiencing life as a graduate student in a less-than-ideal lab, many bright and motivated scientists want to move as far away from academic research as possible.

Existing NIH policies, programs, or resources

Better pay, or at least a salary that is scaled to cost of living in some areas. Most current PhD graduates have been experiencing a bad economy and have little to no retirement savings. Our peers with bachelors degrees are making more money at this stage in their life. It is financially not worth it to get a PhD in science without adequate pay as a graduate. I know science should be about more than just the money, but the salaries paid to people in their 30s with PhDs should be higher than it currently is.

More accountability for PIs to provide good mentorship in their labs. Many graduate students and post docs choose to leave academia due to toxic lab environments—poor mentorship, demands to work long hours, etc.

Make sure that there is an end to the pipeline! If the goal of post-doctoral training is to prepare trainees to become professors/PIs, then positions must be available for them.

Proven or promising external resources or approaches

As stated before, improve the pay/benefits, and hold PIs accountable to provide better mentorship, and create a system where there are positions for the postdocs that complete their training.

Is our current academic research framework sustainable?

Response 2518

Perspectives on the postdoc roles and responsibilities

Postdocs are more than trainees. Postdocs are early career investigators with Ph.D.-level expertise in defined areas of research. Postdocs are fundamental to the success of university labs and need to be valued as such. As early career investigators, the goal of the postdoc is two-fold:

1. Postdocs are hired to fulfill the final stages of their research training while also expanding on their own expertise and providing that expertise to the lab to strengthen that lab's research program; and
2. Postdocs are hired with the understanding that they are to receive training in grant writing, research program development, networking, teaching/mentoring, and lab management with the ultimate goal of developing an independent research plan and a more established research portfolio. Within a given day, postdocs are responsible for initiating and carrying out large-scale experiments, training lab members, developing experimental plans and protocols, data curation and analysis, data presentation, manuscript preparation, grant writing, project/lab management, and supply ordering.

Postdocs are also mature adults and no longer students. With the average age of postdocs being low-mid 30's it needs to be recognized that postdocs have families and that women are in their childbearing years.

Fundamental issues and challenges

[Redacted for anonymity] does not enforce the NIH salary minimum, instead, some postdocs earn $9,000 below the postdoc level 0 minimum, and on average senior-level postdocs still make ~$1,500 below the postdoc level 0 minimum.

Many postdocs never see an annual raise. This is a substantial issue because the cost of living is so extreme that postdocs struggle to afford housing, transportation, food, medical expenses, children/childcare, and student loans. [redacted for anonymity] puts postdocs on student health insurance which does not account for families. A postdoc pays $450/dependent added to their insurance plan that increases substantially every year, without meaningful raises in postdoc pay. This forces many postdocs to delay family planning, which is a biological problem for women nearing the end of their reproductive prime.

It is difficult for majority of postdocs to develop independent research projects that could lead to a subsequent faculty position due to lack of research funding. Often times PIs do not have extra R award funding to support independent postdoc hypotheses and F awards only support postdoc salary and not research costs. As a result, postdocs are unable to develop preliminary data in pursuit of their own independent research plans. There is also a lack of training and career development support by PIs. Many PIs do not support non-research efforts and/or postdocs do not have time outside of research to fulfill "extracurricular" training commitments. This is especially challenging for non-academic track postdocs.

Postdocs feel extremely isolated because we are not part of an official program with worker protection and community. Poor working conditions/environments heighten this sense of despair, leading to burnout and disinterest in continuing an academic career. Lack of protected vacation time, sick leave, and religious observance days sets the expectation that postdocs will work and be accessible 24hrs 7 days a week causing serious burnout.

Existing NIH policies, programs, or resources

NIH should create an award for postdocs that financially supports research ideas and training pursuits while also providing a stipend so that postdocs can pursue independent research ideas and develop cross-disciplinary preliminary research. The addition of research funds would allow postdocs to rotate through collaborator's/co-mentor's labs to learn multi-disciplinary approaches and increase training diversity. This new grant should also require the University to provide workshops on research program development, access to campus facilities and cores, PI panels for faculty-postdoc interaction, and career transition. NIH should also create an award for late-stage postdocs (year 3+) that need a final year's worth of funding in order to propel a smooth transition into an independent academic career. Additionally, another major restriction of the F awards is that internationals are ineligible to apply. The NIH currently offers almost no support regarding internationals except the K99/R00 awards. This creates two issues:

1. Low chance of retaining US-trained talent, which will mean that other countries benefit from highly skilled and well-trained young scientists, and
2. This makes the US less attractive for international postdocs. With the revamp in funding mechanisms the NIH also needs to encourage Universities to offer extended postdoc contracts. Instead of a yearly contract renewal system, a bi—or triennial renewal system with a required 6-month notice before contract termination would help internationals with the visa process and would protect postdocs from sudden loss of job or deportation. This would also provide postdocs with stable, protected time to accomplish research and training goals. Lastly, ERA Commons is not user-friendly and needs to be

revamped. The website is very confusing and hard to access and use. Users should receive training on how to use the site if it cannot be improved.

Proven or promising external resources or approaches

Postdoc salary disclosures and reasoning for paying below the NIH-recommended salary minimum need to be required of PIs. NIH also needs to ensure that postdocs receive the minimum recommended salary plus raises for each year of training as part of our annual contract renewal. To do this, NIH could supplement R awards to account for yearly postdoc salary increases. Or, the NIH could require that to receive indirect funds from the NIH, the University has to make sure that a portion of those funds are used to supplement postdoc salaries where the PI cannot afford to meet the NIH minimum pay. This increased oversight should also extend into postdoc training and career development. NIH needs to require progress reports not only on research progress but also on postdoc training and career development. Considering awards for international postdocs would also allow for the retention of international postdocs and encourage international postdocs to pursue US-based academic careers. Lastly, the NIH could consider a reporting system for formalized Individual Development Plans (IDP). Upon completion and annual review of a formalized IDP between the mentor and postdoc, the postdoc would then submit the signed document via an NIH portal. This system would serve as a yearly postdoc progress report where postdocs could honestly disclose their research and career progress, provide reasoning for lack of productivity, and confidentially disclose their mentor's performance.

Response 2519

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is a bridge between graduate school and the next stage of my career. It is meant to gain insights and training to progress in my career. But that is not what it has become. It is more of mule position!

Fundamental issues and challenges

Fundamentally the postdoc positions are indirectly promoting poverty. The wages do not allow for postdocs to have a family, transportation and afford housing near their place of employment. Especially since most universities are in or near large cities. While most postdocs go into their position wanting to make a difference in their field, it becomes abundantly clear that postdoc life is not sustainable long term.

In addition, PIs do not seem to be as supportive in career progression within academia. Cheap postdoc labor seems to be favored, thus postdocs are being beaten down juggling PIs grants to keep them afloat, while no time is allowed for personal growth. It is unknown where the problem lies. Whether it's grant funding not being large enough to hire the required personnel or PIs not wanting to spend money on labor, the weight falls on postdocs to solve.

These two issues in combination is a recipe for disaster. The result is toxic work environment, mental health and financial strain.

Existing NIH policies, programs, or resources

Build in career development time as part of all NIH grant requirements. If the PIs are not willing to provide the time, then it's up to the higher ups to mandate it.

The culture will not change if it is not mandated. Offer career trainings, career explorations remote and in person (away from the lab) in a way that has to be recorded so there is no out for the PIs.

Proven or promising external resources or approaches

At the moment even a laptop/PC, software subscriptions often times comes out of the pocket of a postdoc. There should be a way for NIH to garner some influence and or mandate purchase of a laptop/PC for a postdoc. With the age of bioinformatics and flowcytometry, it is impossible for us to progress sharing computers and or paying out of pocket for software subscriptions.

Response 2520

Perspectives on the postdoc roles and responsibilities

It creates the training pathway to becoming a principal investigator in academics.

Fundamental issues and challenges

1. The income is too low compared with a relevant position in the industry. We often stay in the lab on weekends, but scientists in the industry never go to the lab on weekends. Academia is less and less attractive than the industry.
2. Our salary is not going up with the inflation, which makes it even harder for us to survive with our family.
3. As I know, a postdoc in NCI makes around 90k dollars yearly, but a [redacted for anonymity] postdoc makes below 60k dollars a year. That's not fair!

Existing NIH policies, programs, or resources

Please speed up the process of reviewing the applications and increase the amount of funding to support PIs.

Proven or promising external resources or approaches

Booster the basic income to the NCI level can increase job satisfaction a lot.

Response 2521

Perspectives on the postdoc roles and responsibilities

While the postdoc period is in many ways defined by the training aspect in anticipation of an academic position, we are primarily highly skilled workers in extremely specialized fields. That postdocs are "in training" does not negate the need for much higher pay and stability than most postdocs are receiving—many highly skilled jobs in other fields and sectors provide extensive on-the-job training to prepare workers for the next stage in their careers while not restricting pay and position to a lesser "trainee, bordering on student" position within the workplace.

Fundamental issues and challenges

Higher pay is needed. Most postdocs have nearly a decade of experience in their fields and need higher compensation to comfortably conduct research without significant personal sacrifice, especially as academic jobs often come with extra costs for things like moving, conferences, etc. This is absolutely urgent for retention.

No policy aside from increased minimums/pay will have a universal, across the board, significant impact on retention and quality of life for postdocs.

Existing NIH policies, programs, or resources

Increase NIH minimums for postdocs pay. Consider cost of living and experience of postdocs in their respective fields, along with considerations of commensurate pay in other sectors for the same level of experience.

Proven or promising external resources or approaches

No response

Response 2522

Perspectives on the postdoc roles and responsibilities

They are expected to conduct their research with higher quality than PhD students do.

Fundamental issues and challenges

Family matters

Existing NIH policies, programs, or resources

I hope I would have a system to support postdocs who have partners in common-law marriage by sharing information about the way to manage their immigration status and live in the US together.

Proven or promising external resources or approaches

Lectures or public speeches open to ordinary people.

Response 2523

Perspectives on the postdoc roles and responsibilities

The postdoctoral role to me is an opportunity to apply the skills and topics learned in graduate school to a new project as well as learn new skills and interpretation of data to further develop as a scientist, regardless of staying in academics or going to industry or another position.

Fundamental issues and challenges

Challenges of recruitment are moving expenses and being able to afford to break a lease if a research opportunity arises. The uncertainty of a one year contract, whether it will be renewed or if the lab is a good fit, after moving many states is high risk. COVID made my postdoc interview virtual, I wish I could have met more colleagues (even virtually!) and observed the lab prior to my current position. I work just as hard at my current postdoc position as I did in my previous role that required a PhD, yet I am paid $30 k less a year. My quality of life is far greater than as a grad student since I can afford better housing, however I am on the cusp of entering the job market. I don't know if my current PI, who hasn't obtained tenure, can aid me as I go onto the job market as well as an established PI could. I am working for a new PI who is struggling to balance teaching, mentoring, and research. I am often talked over by my PI when we meet one on one to discuss my work, they often don't understand or forget my suggestions since my research specialty is outside of their area of expertise. I understand they're stressed out, however it's no excuse to be a jerk. I have thought about quitting to join another lab due to the current toxic environment, however I love the project I work on. I keep sticking up for myself. Most of my friends and family have advised me to quit, a few have suggested to stick it out since it's a temporary position and the project is good. I chose the latter, and it's been up and down.

Existing NIH policies, programs, or resources

The NIH pay increases every year to account for inflation help. My additional F32 funding all goes towards health insurance, so expansion for a dedicated allotment of funds for a conference that my PI isn't responsible for, would be nice. No surprise that an increase in pay would aid in attracting more postdocs when compared to starting industry salaries. The fact that the university no longer takes out taxes when I bring in a grant is very confusing to me. Paying quarterly taxes is extra work on my end, and it feels like I'm being penalized for bringing in extra money. I don't know if the taxes issue is a University discrepancy or NIH.

Proven or promising external resources or approaches

I rarely take all the yearly vacation days allotted by the university. A timecard where I can keep track of vacation days and get a buy-out at the end of my time as a postdoc would help a lot with moving expenses to another position or having to use COBRA for health insurance costs, as some institutions don't offer immediate health insurance coverage. The lack of any retirement plan that the university pays into is discouraging, especially since some universities offer this, and others don't. I doubt there will be any kind of exit interview when I leave my current role, but some type of accounting, like this survey, would be helpful to see how views change over time. A statement from the NIH on the F32 that may help for new PIs is that postdocs are to be seen as colleagues and not subordinates.

Response 2524

Perspectives on the postdoc roles and responsibilities

- The academic postdoc is a scientific and professional training. This includes doing science and advancing in our careers, while learning, and being mentored, but as well, during this crucial time we are training to be independent, and become a mentor ourselves.
- We need to write grants and fellowships, we need to teach techniques to others, and we need to network to prepare for the next stage.
- We, postdocs, are a heterogenous population, with different goals and priorities based on what we would like to do afterwards (e.g. academia or industry, in the US or abroad, etc)
- Our responsibilities are not to be lab managers of our labs, nor secretaries, nor technicians, nor just science production machines.

Fundamental issues and challenges

- The low salary and the higher cost of living in every city in the US,
- The lack of benefits including healthcare (in some cases), retirement, childcare funding, and vacation days amongst others.
- The structure itself of academia. There is no consistency between labs and institutions regarding salaries, policies, and benefits. Postdocs feel that there is a lack of clarity and transparency.
- The lack of stability or security to the independent step. It is a real worry, to all of us postdocs, that only a 17% of us will transition to faculty positions. Additionally, PI positions are often not attractive enough. The fact that to transition to a PI, we will leave the bench for office work, the pressure to always depend on grants, the time commitment the job demands are some examples to explain this lack of attractiveness.
- Another fundamental issue is that there is no alternative pathway for postdocs that would like to stay in academia but not in a PI position. It is scarce and rare to find a fix position as a scientist in academia.
- Foreign postdocs are dependent on visas, current policies and politics. In addition of being a very stressful and uncontrollable situation per se, visa issues can impact the scientific career of the postdoc by causing significant delays or even interrupting their research by denying reentry to the US.

Existing NIH policies, programs, or resources

- Increase the minimum postdoctoral salary
- Adjust postdoctoral salaries based on the location’s cost of living
- Consider removing the requirement to be a US citizen for more NIH fellowships and resources
- Significantly shorten the current long turnaround time in the feedback of fellowships. This would allow the possibility to reapply when first rejected, and overall, less delays in our research.
- Extend the current limited timing between receiving the PhD title and many deadlines to apply for different fellowships. Not only due to Covid, maternity or paternity leave, but also other life restrictions that are currently poorly considered.
- Offer funding and support for professional scientists that do not need training anymore, but want to do bench science after the postdoc, and would like to stay in academia.

Proven or promising external resources or approaches

- Offer more career advances grants.
- Offer smaller fellowships (e.g. for shorter duration) that give less funding, but higher success rate.

Response 2525

Perspectives on the postdoc roles and responsibilities

Being an international postdoc means opportunity and diversity but also a lot of challenges in order to get a status and funding for our ideas.

Fundamental issues and challenges

My particular case I have been trying to initiate my own research by the lack of resources for foreign investigators is disappointing, if you are not green card holder or citizen, you are not allowed to find resources. I have sent no less than 50 applications and I never qualify given I am visa holder.

Existing NIH policies, programs, or resources

From my personal experience, you should open a pathway for visa holders, it does not make sense to me that I need to give my ideas to an American researcher just because they can get funding and yes this is happening.

Proven or promising external resources or approaches

No response

Response 2526

Perspectives on the postdoc roles and responsibilities

I see postdoctoral positions as valuable training toward becoming an independent researcher and leading my own lab.

Fundamental issues and challenges

Postdoc positions can be demanding, leading to a poor work-life balance. PIs should recognize that postdocs are still in a training role and should be provide guidance on both experimental work and paper writing to help us develop a more comprehensive skill set.

Existing NIH policies, programs, or resources

I agree that there should be training programs available for PIs, which go beyond just mentoring postdocs and also include guidance on how to support their career development without any personal gain. This type of training would be valuable in promoting a healthy and productive lab environment and in ensuring that postdocs receive the support and guidance they need to achieve their career goals.

Proven or promising external resources or approaches

No response

Response 2527

Perspectives on the postdoc roles and responsibilities

I do what I love

Fundamental issues and challenges

Bethesda is an expensive place to live. If you are not american such as me, it is way too difficult to find a place to rent that is around groceries for an affordable price.

Existing NIH policies, programs, or resources

I think state taxes could be also deducted to our paycheck to avoid migraines. In caso of aliens like me.

Proven or promising external resources or approaches

In my case, I just can thank my PI so much because he is so professional and care about people in a sense of asking if we are happy doing our job, offering help and being so respectful to everybody.

I know that is not true for all laboratories. I would say some PIs are just a lot and can cause mental health problems or take it to higher levels.

I repeat: thats NOT my situation but, I know I am lucky.

I wish I could change it I mean the unnecessary pressure people face daily because our potential to be good scientists just decrease under too much pressure. We do not need people giving it up because of PIs bad mood.

Thank you.

Response 2528

Perspectives on the postdoc roles and responsibilities

Transitional position to next step, very important

Fundamental issues and challenges

I am working at Boston area and the salary we are having now which meets the standard of NIH is not sufficient for those living in Boson to have a decent life as the rent only can take almost half of the salary

Existing NIH policies, programs, or resources

Have more opportunities for international trainees

Proven or promising external resources or approaches

No response

Response 2529

Perspectives on the postdoc roles and responsibilities

I began this postdoctoral position after my psychiatry residency. With this step I aim to become more specialized in metabolism to bring the topic further into psychiatry research. Without a US license, I am limited to my roles as a postdoc, however I greatly enjoy the training in research.

Fundamental issues and challenges

Life in the US has become more expensive, and for us that come with family the postdoc salary is limited. Arriving to the US as a foreign scientist is complicated as we have no credit history and apartment places make special requirements that limit application from outside the country.

Existing NIH policies, programs, or resources

Providing options to study with Universities. Helping scientist spouses and their families.

Proven or promising external resources or approaches

No response

Response 2530

Perspectives on the postdoc roles and responsibilities

The main objectives of a postdoctoral position are to develop a competitive individual research program while acquiring the experience and credentials that make you competitive on the tenure track market through mentored work. Aside from acquiring new skills in developing and carrying out experiments and technical development this SHOULD include receiving training in grant writing and submission, honing of presentation skills both through regular lab meetings and at conferences, writing reviews, mentoring undergraduate students, and interview skills. The general parameters of the training/skill development should be tuned to the goals of the postdoc, i.e. shorter secure projects if the postdoc wants to transition out of academics and more ambitious projects for those that will go on the academic market.

Fundamental issues and challenges

Systemic issues are those dealing with quality of life and salaries, especially those that affect women with young children. The current expectations of PIs and the aid provided by the universities will often become self selecting for single people (easier to move around, no issue with TT recruitment if there are no

spousal hires) and those without children (able to work long hours and weekends). Postdocs also have limited access to teaching opportunities, which is a fundamental part of most R1 institutes.

If we conceptualize retention as the ability of postdocs to progress through the academic market with the goal of securing TT positions at R1 level institutes a major obstacle is showing a track record of funding. In my experience many postdocs remain unaware or unsupported in their pursuit of funding, leading to loss of experience in grant writing and artificially decreasing the competitiveness of otherwise excellent candidates, particularly those of underrepresented backgrounds and first generation scholars, who may not benefit from the generational knowledge of the US academic system.

Additional systemic issues are the current prevalence of the K99/R00 grants as one of the top selection tools for universities. While initially framed as a way to help exceptional scientists, the situation now is that the same K99 recipients are interviewed at multiple universities, taking up spots from otherwise competitive postdocs that did not secure a K99. This creates a selection bias, effectively removing non-K99 awardees from the pool of those interviewed. Additional issues exist at the level of nepotism within academia, where children of PhD holders are more likely to secure jobs at top institutes (Ref Morgan et al, 2022). The combined effect of these issues is loss of women, first gen, and minority researchers from academia.

Existing NIH policies, programs, or resources

Practices to narrow the knowledge gap for postdocs could include: mandatory training of PIs on mentoring and career advisement if they receive NIH grants. Stipulation of an outside career monitoring through committee formation or reporting to an internal office of the NIH for postdocs. Expanding eligibility years for K99 type grants or introduction of additional funding not restricted by time from PhD for those who's development might take a non-conventional or unlucky turn early on. More aggressive dissemination of opportunities, perhaps through University offices, it has been my experience that most postdocs are not aware that they are eligible for K01 grants.

Proven or promising external resources or approaches

No response

Response 2531

Perspectives on the postdoc roles and responsibilities

Being a post-doc means you must do everything without much say. You have the least say about your interests and need to perform better.

Fundamental issues and challenges

The quality of life is very poor for postdocs US. The major reason for it is inadequate salary/stipend. Due to this, we cannot afford good and secure housing. Because of a lack of funds, many of us live in unsafe housing or areas, risking our and our families lives.

Unequal opportunities to participate in career development programs and scientific conferences.

Existing NIH policies, programs, or resources

Our institute provides a minimum salary according to the NIH guidelines, whereas Boston City is so expensive that one cannot live a decent life with this salary. Maybe increasing the salary according to the city will help the postdocs research in an inhibition-free environment.

Proven or promising external resources or approaches

Postdocs should get more career development opportunities with a say over their interests and needs.

A decent salary so they can afford a good life in expensive cities like Boston.

Response 2532

Perspectives on the postdoc roles and responsibilities

A postdoc to me is an opportunity to receive more training in skills and independence needed to run your own lab. You have a responsibility to seek out opportunities to do so and focus on your growth as a researcher and scientist.

Fundamental issues and challenges

The number one issue inhibiting postdoc recruitment and retention is non-competitive pay and benefits. Alternative paths pay at least double if not quadruple more than the NIH minimum set for post-docs and offer better health insurance, retirement, and family leave. The postdoc salary after taxes does not even cover the cost of daycare in most cities. Without a partner with another income (non-postdoc) it is impossible to save any money or even consider starting a family. In addition, there are absolutely no benefits to take advantage of when you do have a family and it is in fact frowned upon by most mentors to take any family leave from the lab and it is expected that you will still maintain more than 50 hours a week in the lab when most daycares cannot accomodate late pickups. It is in fact recommended that as a woman in science, if you leave the lab early to pick up your child from daycare that you will return to the lab later for a few hours to finish up your work for the day. There is no protected family time or hours unlike most other industries.

Existing NIH policies, programs, or resources

The pay and benefits is the number one problem the NIH faces with postdoc recruitment, retention, and quality of life. The pay needs to be adjusted, particularly in major cities such as Boston and NYC where the NIH minimum does not even cover the cost of renting a one bedroom apartment, let alone utilities, food, and basic expenses. A standard life science post-doc of 4-5 years after a 5 year PhD means that if you are to do a post-doc, you cannot begin to even start contributing to your savings and retirement until your mid 30s, at least 10 years after your peers have been putting money away towards this. Competitive compensation is necessary to enhance the postdoc training ecosystem and academic career path.

Proven or promising external resources or approaches

You need to look at what start-ups and industry are offering people with PhD as starting compensation and how the compensation is adjusted with 1 or 2 years experience. Post docs are doing the same if not more work than their peers in these positions and are treated significantly worse for no reason. While a post-doc position is considered a training position and they are treated as such, their peers are respected as qualified scientists in their industry.

Response 2533

Perspectives on the postdoc roles and responsibilities

Postdocs are heavily involved in lab work with both PI and independent projects and are trained in more administrative tasks of running a lab and in grant-writing (if going to continue in academia). They are focused on continuing their career elsewhere after a short amount of time, ~3-7 years, with a PI. In my opinion, many current postdocs are actually research scientists, working for the PI without personal goals of moving into lab administrative roles. There is also often not enough guidance for postdocs and their role in a lab; it is highly variable by the lab.

Fundamental issues and challenges

Pay and cost of living. That alone is the largest and most important issue. Postdocs simply do not get paid enough for all the work that they do. Many work overtime and on weekends without pay. Additional work could be done on assisting postdocs with transitioning out of grad school, grant writing, and/or career advancement.

Existing NIH policies, programs, or resources

Cost of living adjustments should be included in the NIH funding program. Pay scale should reflect the cost of living in any area. Many postdocs in rural areas are very happy with their pay, while those in urban areas struggle to make ends meet.

Proven or promising external resources or approaches

Having a peer advisor system in place. Giving postdocs a more experienced postdoc contact that they can go to for information and advice.

Response 2534

Perspectives on the postdoc roles and responsibilities

I appreciate my current scientific role as a post-doc. I feel that my mentor has given me a great opportunity to mentor students, be independent in my experimental design and execution, and grant writing. I view this time as a trial period for what my life will be like a professor, while still having a fall-back of my mentor's funding and guidance.

Fundamental issues and challenges

Primarily, the pay scale is what I find drives many of my colleagues away from academia and into industry. Especially in a city like Boston where cost of living is high, the post-doc salary is not nearly enough for the level of expertise and education we have. This low pay also excludes people from financially under-privileged backgrounds (which is dominated by URM scientists) from succeeding in academia as easily as our privileged counterparts.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2535

Perspectives on the postdoc roles and responsibilities

Postdocs should have the ability to write papers and grants, to idealize projects and to train undergrad and grad students. In another words, they should be ready to become independent scientists.

Fundamental issues and challenges

Because postdocs usually have 30+ years old, the salary does not match with their cost of life (paying rent, afford school for kids, etc) specially in big cities.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2536

Perspectives on the postdoc roles and responsibilities

A postdoc should focus on training, not just labor for a PI in the short-term to wrap up an existing project or analyze some data to finish up someone else's work. Postdocs should not be expected to do the same work as a faculty member. They are in training, and training is more than doing. If they are supposed to be doing the work of faculty, they need to be hired and compensated as such. That said, even as "trainees" it should be recognized that postdocs are already professionals. They are not students. They need full benefits and pay like other professionals in other fields who have commensurate experience. Other industries have on the job training as well and the person is still paid for their existing professional skills. In other words, you can't slap a "training" tag on someone and pay them less when they already have a PH.D.

Postdocs should also help people build new skills and experience to help them move on, not just be more of what they did for their Ph.D. Otherwise, what was the Ph.D. for?

In sum, postdocs are not students or cheap temporary labor to fill in for permanent staff that PIs can't afford or don't want to mess with. They are professionals who are trying to upskill or pivot their research or teaching direction. Anything else is exploitation of highly trained professionals who in any other field would have job security and much higher pay.

Fundamental issues and challenges

Ph.D.'s are taking longer and longer to finish because definition of a complete Ph.D. continues to grow. Postdocs are at an age where they need to be able to start families. They expect and deserve job security. The number of expected years of postdoc experience or publication production required to take the next step continues to grow. People can't just keep moving around from temp job to temp job when they want to start a family.

The pay is insufficient, especially when people at similar life stages with similar experience make far more money. Passion for research and a willingness to make a little less money to pursue that can only be exploited so far.

Disinvestment in higher education institutions makes for fewer and fewer opportunities to advance beyond the postdoc in academia. At the same time, the positions that are available are more and more dependent on unreliable soft money. Tenure is melting away and providing less security. Good science, on relevant subjects, well-communicated, is no longer sufficient to get funding, and hasn't been for 30 years (arguably). A PI's work and their employees' livelihoods are left to a dice roll as much as they are left to the quality of grant submissions. Quality is necessary but not sufficient. If postdocs are overworked, underpaid positions, and faculty jobs look little better, why would anyone choose that path? Love of science and the appeal of academic freedom can only take you so far.

Existing NIH policies, programs, or resources

Policies on when postdoc positions are allowed on grants and how the PI expects to use the position need to be adjusted and tightened to make sure that postdocs are actually getting a mentored experience that will help them move on, not just filling in for positions that should be permanent staff or cheap labor.

Required pay needs to be increased to reflect local cost of living, full employee benefits (not student benefits), and reflect the level of experience and training PIs are getting when they hire a postdoc. No other field gets to pay people so poorly for so long for so much experience and education. It needs to end in the academy, even if that means funding fewer projects/positions. Academia can no longer do more with less. We've taken that as far as it can go.

Proven or promising external resources or approaches

I don't have anything to share here.

Response 2537

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is to prepare candidate to independent researcher. this is very crucial step of academic career.

Fundamental issues and challenges

over all training is good in good institution. however these good institution's are in expensive cities. therefore the money paid by NIH is not good enough to live good quality life. for example, cities like boston, new york the minimum salary should be around 84K.

Existing NIH policies, programs, or resources

Definitely, NIH has to modify and improve postdoctoral training.

Proven or promising external resources or approaches

No response

Response 2538

Perspectives on the postdoc roles and responsibilities

This is a training position and thus, should be developing new methods or avenues of investigation. Many postdocs get put on routine projects, where they are basically used as glorified technicians, running tens to hundreds of samples with no clear goal--see [redacted for anonymity]. I dont think that is a good postdoc. This kind of work is good for those that want to lead groups--gives them some managerial training that is painfully absent in most postdoc positions.

Fundamental issues and challenges

Postdocs are grossly underpaid for their stage of life. This is largely due to the fact that NIH grants are the same dollar amount as the 1990's. Not even pretending to keep up with economy.

PDs are not trained to manage people or funds. This is a challenge if their next step is a leadership position.

Existing NIH policies, programs, or resources

NIH grants need to be worth more money, especially for salaries. If an R351 is $250k a year, a postdoc in California is $90-100k a year (including benefits), then my salary (51% for an R35, plus benefits: $75K + 30% ~~$100k). That means I have $50k left for experiments. An ice bucket with a lid is $100.

A mechanism to fund foreign trainees IN AMERICAN LABS would also be helpful. Some kind of fellowships. I agree in supporting US-born PDs but a large part of the workforce are foreign trainees.

Proven or promising external resources or approaches

They need more money. They are trying to have kids and save for retirement. They are in their 30s. We have to pay them something competitive with industry salaries. They get freedom and other benefits but if they cant afford to live ($2500 for a 1 bedroom in Southern California) they wont postdoc.

Response 2539

Perspectives on the postdoc roles and responsibilities

For me, a postdoctoral position was a trainee position, where I could learn how to be a PI, learn a valuable skill such as coding to my list of abilities, and be associated to high impact work of my PI. But it's clearly not the case. I'm basically someone that does the projects that are below my PI according to her opinion, which often end up being dead ends. I only worked on my PhD data since I'm here, I'm not allowed to collect myself datas with patients so I need to hope that my PI will give me valuable things to work on, but I don't know of that's gonna happen.

Fundamental issues and challenges

First, the lack of definition of what you are, what your role is, what your environment will be. Then the salary: you are constantly struggling, you need help from your parents to survive, it's so humiliating to have to repeat to yourself "you are a postdoc, you are doing ok in life" just to convince yourself. The, the PIs treatment. Working 13h / day everyday is normal ? No. If PI provided a supporting environment, we could work 8h/day and be way more productive than an almost burned-out person workin 13h/ day. Finally, the publication pressure should be lowered: if you're in a smaller lab, you'll publish less, and it's ok, it doesn't mean that you are not doing your job right. 20 years ago, publication was easy, it's not the case anymore, so why are the expectations always go higher in terms of papers, even when you're just out of your PhD ?

Existing NIH policies, programs, or resources

To increase salary, NIH should monitor the amount of money the institution takes from PI grants, especially for labs that makes an insane amount of profits. If a lab is making lots of money, shouldn't [redacted for anonymity] (my university) take less money from this person grant ? In general, why are these rates so high ? If the institution takes less from the grant, a certain amount should be retained for

increased postdoc salaries. In addition, we HAVE to adapt the salaries to the location: I'm in New York and earning the same as someone in Texas: is this normal ? I'm barely surviving, some months I don't know how I'm gonna be able to do the groceries, I cannot afford any kind of breaks, holidays, or hobbies ! This is not normal in 2023. In addition, a lot of the postdocs are internationals, and therefore not eligible for NIH grants. We should be able to apply for grants, otherwise we are even more stuck and dependent of our PIs. In the same line of ideas : where are the grants for human sciences / psychology ? We NEED more recognition from NIH, more grants dedicated to human sciences (and no, not all human sciences are gender studies or ecological things . Come on, I'm working on PTSD / stress reaction from a psychological perspective and you have NOTHING I can apply to).

Proven or promising external resources or approaches

Monitoring the PIs !!! They need to answer to someone, we should have a platform to report abuses, outside our institution (because nothing happens, the story is killed or we threaten your job). And those reports NEED to have an impact on the PI! Working hours should also be monitored: why aren't we supposed to officially report our hours ? Why a week of rush on a project is not followed by a lower hours week? NIH should force institutions to officially record working hours to prevent abuses. It's not because years ago a postdoc = no life and only work that it has to stay the same, it is NOT a sign that you're good at your job if you work 13h / day. It shouldn't be a criteria anymore ! Suffering during your postdoc should not be a mandatory stage in your careers! And what about gender adaptations ? Why are we, as women, evaluated according to the same criteria than mens ? It means that I cannot start a family before at least one successful postdoc, to ensure my career. Otherwise, my record track will never be as good as others. I am doing a postdoc oversea in the fear that my relationship will not survive it and that I might never have a family. But it's that or have no career in academia, and as a researcher in psychology I cannot go in industry. I'm stuck in research after my PhD, and I feel like I don't have any other option now, so I HAVE to perform, according to sexist and horribly old criteria. You have to do something about this whole situation, it has to change and not a bit.

Response 2540

Perspectives on the postdoc roles and responsibilities

Cheap slaves that are exploited by PIs, who by the way have ZERO skills comparing to postdoc these days. A position that will damage your career in a permanent way.

Fundamental issues and challenges

This is a very stupid question. How dumb are you, NIH people? The most obvious issue is MONEY, SALARY, and [redacted] LONG WORKING HOURS!!!

Existing NIH policies, programs, or resources

Pay them more, morons!

Proven or promising external resources or approaches

None. You guys are useless anyway.

Response 2541

Perspectives on the postdoc roles and responsibilities

I view the postdoc as an extension of training from graduate school, either to learn new skills or crystalize understanding of the current field. The difference in perspective and responsibility compared to graduate students is an important means to gather more requisite knowledge about a career in academic science. Also, postdocs, unfettered by the requirements of studentship are often the most productive and invested researchers and leaders in the lab.

Fundamental issues and challenges

Increased demand for postdocs in biotech and biopharma has reduced the number available for recruitment to academic labs. If this continues, the academic output is likely to stagnate somewhat.

Postdocs have considerably better quality of life compared to graduate students, but this assumes a number of things. For example, it is exceedingly hard to start a family (and pay for childcare) as a graduate student or postdoc, especially in major US cities. Moreover, there is a large heterogeneity in terms of treatment for postdocs, where some are exposed to consistent and present mentorship, some are left alone for 5 years and expected to "just figure it out".

Existing NIH policies, programs, or resources

I believe there should be a simple to interpret and search, common framework for guidance from the NIH for postdoctoral fellows. As the preeminent investor in young scientists, having resources to help not just those funded but those seeking funding by way to training and tutorials that can be built and held asynchronously (to lower the burden on staff/teachers/mentors) would be powerful.

Simply creating something where when someone starts a new postdoc and asks "what do I need to no about a postdoc?" there's a single point reference to give them an idea of what to expect and trusted advice from those both in academy and industry would be invaluable. As a counterpoint, for example, to get a list of fellowships to apply to as a postdoc one needs to scour dozens of webpages to find eligibility and timelines. A community oriented/built, NIH administered, set of pages (think StackOverflow) could dramatically improve this.

Proven or promising external resources or approaches

The simplest thing is to pay postdocs more. Yes it's hard, yes it'll be challenging, but making ends meet or trying to build a family before the age of 40 results in an undue burden on postdocs who are often asked to work 60-90 hours a week.

Moreover, institutions (and states) such as mine will require higher minimum salaries for postdocs that will be greater than $90,000 by 2028. If there is not more money invested and reserved for postdoc salaries, we will continue to lose some of the best and brightest to more lucrative careers.

Finally, investment in ESIs will be essential, and a move away from the modular budget for early investigators. There is almost no way to afford modern and deserved postdoc salaries on budgets written to accommodate science 20 years ago.

Response 2542

Perspectives on the postdoc roles and responsibilities

The postdoc is an important training period where the trainee has the freedom to pursue their own project(s) that fall reasonably under the umbrella of the host lab in a largely independent way without the stressors of admin/fundraising/teaching/service/infrastructure building.

It is essential that tenure track faculty have a solid foundation in designing and executing research prior to becoming independent, as there are many hats to be worn once one is in a PI job.

Fundamental issues and challenges

$$$$, especially in Washington State due to the new legislation.

Existing NIH policies, programs, or resources

R01/R35 budgets need dramatic increases. The current modular levels are a joke.

Proven or promising external resources or approaches

Its really just $.

Response 2543

Perspectives on the postdoc roles and responsibilities

I view it as a means to an end. I view the post-doc as a temporary position that allows me to work in my field while I prepare to pursue other, more lucrative opportunities. I think the specific roles and responsibilities of a post-doc vary wildly from lab to lab, but in general I think post-docs are expected to be the drivers of research within their labs. They are tasked with training new students and other post-docs, generating data, and writing papers. For the most part it seems that principal investigators are

responsible for grant-writing and editing of papers, but the post-docs are responsible for ensuring the principal investigator has something to write about.

Fundamental issues and challenges

The low pay-scale for post-docs definitely has an impact on recruitment, retention, and overall quality of life. The highest salary for post-docs per the current NIH guidelines is under $70k per year, and even that salary requires 7 years of experience on top of the PhD. Given the high cost of medical care, housing, and transportation nowadays, this salary leaves a lot to be desired when compared to how hard post-docs have worked. Post-docs have gone through a PhD program wherein they were paid very little, and they have usually made significant sacrifices to make it through their program. After their years of hard work with little pay, I feel like post-docs expect to have the possibility of living a comfortable life. However, the high-paying jobs are limited to pharma industry jobs and tenured faculty positions at universities. Since tenured faculty positions are so competitive and post-doc positions pay very little, I feel like this forces many PhD graduates to look for industry jobs and nothing else.

Existing NIH policies, programs, or resources

The payscales for post-doctoral scholars could probably be increased. I would recommend increasing the payscales across the board, but ensure that the higher end of the payscale is significantly higher than it is now. The average pay for fresh PhD graduate joining the pharma industry is ~$90k per year. Under the current system, fresh PhDs can either find a comfortable industry position with good pay, or choose a post-doc and work harder for half the pay. I think the current payscales are driving skilled PhD graduates out of academia because the pay simply isn't good enough for how hard they work and have worked to get their PhD.

Proven or promising external resources or approaches

Unsure. I think increasing pay would make post-doc positions more desirable, and therefore would attract more of the most skilled and driven PhD graduates and thus improving the post-doc ecosystem.

Response 2544

Perspectives on the postdoc roles and responsibilities

[Redacted for anonymity], established the Long Range Planning Committee to build a shared collective vision of the future of postdocs. The Report, [redacted for anonymity] addresses the broader occupational context of postdocs in the US, the historical context of postdoc advocacy at [redacted for anonymity], the current mindset of postdocs ascertained through focus groups, and contemporary advocacy efforts of current postdocs. The Report concludes with an extensive list of recommendations broken down by specific issues postdocs face and action items for specific stakeholders, including the NIH. The bottom-up, community-oriented vision for the future is that postdocs should be enabled to perform the best research possible and be supported to achieve success in their subsequent careers inside or outside of academia. The Report was deliberatively focused on foregrounding the voices and efforts of postdocs themselves, asking "What do postdocs think about the postdoc role?". The Report received substantial input, including a dozen focus groups with 50 postdocs at [redacted for anonymity] and input from over 70 postdocs on the draft in the form of hundreds of comments. The full elected [redacted for anonymity] unanimously adopted the Report at our meeting on March 30, 2023 and directed the Committee to submit the Report to this NIH RFI. We request your deep and thoughtful engagement with the content we have created and for the NIH to adopt policies and procedures that can help postdocs reach the vision laid out in the Report by 2030. Postdocs play a major role in the academic and research enterprises by designing, executing, and performing experiments; assisting in writing grants; and teaching and supervising undergraduate and graduate students.

Fundamental issues and challenges

Difficulties facing postdocs are extensively covered in the Long Range Planning Report from [redacted for anonymity]. Difficulty meeting basic needs and extreme financial pressures are significant pressures and challenges facing postdocs. Postdocs in academia are underpaid, and postdocs at [redacted for anonymity] (and other high-cost-of-living areas) are additionally underpaid. Postdocs with dependents face extreme financial pressures, and most postdocs do not end up as tenure-track researchers. Postdocs exist in an occupational limbo, neither students nor staff. Postdocs are underappreciated and perform labor that tends to go unacknowledged or uncredited. Postdocs face specific issues related to Justice, Diversity, Equity,

Inclusion, and Belonging, but difficulties meeting basic needs overshadow those challenges. Postdocs face job instability in the short term due to being hired on a short term basis and also in the longer term due to the time limit on working as a postdoc or applying for funding opportunities. International postdocs, who represent a majority within both the [redacted for anonymity] and US postdoctoral populations, face additional job and life instability due to visa issues. In focus group discussions, major themes that emerged frequently were that postdoc salaries are insufficient for the high cost of living we face; that postdoc parents face very high costs and low access to childcare; that the instability inherent to the postdoc position prevents long term life planning; that effective formal structure is lacking for postdocs, the difficulty of navigating the US funding system (especially for international postdocs); the ambiguous status of postdoc leading to feelings of exclusion; the lack of effort on Justice, Diversity, Equity, Inclusion, and Belonging issues; postdocs not always being aware of existing resources; and that existing academic structures are poorly designed and unclear. Please see the Report for a deeper discussion of all these topics.

Existing NIH policies, programs, or resources

The NIH should work to achieve the policies that it has failed to reach over the past two decades. In 2001, the NIH set a target annual stipend of $45,000 for entry level postdocs and planned to increase then-current stipends by 10-12% over the following years to reach that target before subsequently maintaining the real value of those increased wages by annual cost-of-living adjustments. This decision came shortly after the 2000 report from the National Research Council, Addressing the Nation's Changing Needs for Biomedical and Behavioral Scientists, called for increased stipends for researchers. (For instance: "Recommendation 5-4. Stipends and other forms of compensation for those in training should be based on education and experience and should be regularly adjusted to reflect changes in the cost of living." in Chapter 5: Crosscutting Issues in Research Training). Starting from the NIH goal of $45,000 in September 2001 and adjusting for national average inflation, the target minimum annual postdoc salary in September 2022 would be equivalent to $74,403. However, the actual minimum annual postdoc salary is only $54,840, a gap of nearly $20,000. The NIH also does not have a policy to adapt funding levels to local cost of living, exacerbating issues for postdocs who live in high cost of living areas. The NIH should work to achieve its long-stated goals of increasing salaries for postdoctoral researchers. Additionally, the NIH should remove the time limit associated with the postdoctoral role. A majority of academic postdocs do not transition to tenure-track roles, but many remain employed as non-faculty doctorate holding researchers. NIH should recognize the empirical reality of the academic research workforce and create stable, long-term positions and funding opportunities for academic researchers with terminal degrees that are not employed on the tenure track. Please see the report at the link above for more.

Proven or promising external resources or approaches

The [redacted for anonymity] Long Range Planning Report, [redacted for anonymity], concludes the executive summary with a list of principles. Firstly, postdocs should be appreciated and not exploited, including receiving salary and benefits commensurate with their existing high level of training and expected contributions to the research enterprise. Secondly, postdocs basic needs should be met, including salary and benefits that take into account cost of living for the local area, not being required to spend more than 30% of income on housing, and access to childcare facilities that are affordable and cost no more than 30% of postdoc income. Thirdly, postdocs should have job security, which includes a removal of the five year time limit for postdocs and the distinction between postdocs and research staff; postdocs being employed as permanent staff with provisions to terminate employment if explicitly stated conditions are not met rather than yearly contracts; and work visas that reflect the permanent staff status which allow international researchers to work as postdocs as they do now. Fourth, postdocs should receive job structure and career support outside their immediate research groups in the form of:

1. structured guidance at multiple points during a postdoc, ideally within a cohort setting;
2. career tracking of past postdocs and communication of those results publicly; and
3. training for groups leaders to improve their mentorship skills.
4. Finally, postdocs should be actively included in university business by having (voting) seats on university committees and working groups, as well as recognition from funding bodies in fellowship and grant applications for university service and DEI work.

Response 2545

Perspectives on the postdoc roles and responsibilities

- Publish quality papers. Have been told by many mentors, "Publish or perish".
- Training to be an independent scientist and have the opportunity to train to be ready to be a PI
- Opportunities to write a grant for the postdoc to take with them to their next stage
- Opportunities to present at conference once a year to expand the network of the trainee. Not all PIs have the funds to allow all of their postdocs to go to conferences to expand their network. Furthermore, there are also PIs who do have funds, but choose to not have their trainees go to conferences due to desire to spend costs from grants on other expenses.
- Focus on training and meeting the trainee's research goal, not just the research goal of the PI. To ensure this, regular check-ups with the trainee and the trainer could be sent in to NIH for review if the postdoctoral trainee is meeting all goals. If there are signs that the postdoctoral trainee is not being provided with enough support to support the trainee, then new projects would need to be proposed by the trainee and progress need to be made for the trainee to be able to have the experience of leading an independent project.
- Mentor graduate/undergraduate students

Fundamental issues and challenges

- Unjust financial compensation. Private universities have their own postdoctoral minimum salary, therefore they are allowed to pay postdocs below the NIH stipend level. While the private institution minimum is higher than NIH's Year 0 level, they are not required to pay a 6th year postdoc the Year 6 level. Every institution, whether they are private or public should be required to meet the minimum NIH salary cap based on their corresponding year.
- Increase money given to labs in order for postdocs to be paid fairly. Many PIs are stating that they have to terminate postdoc opportunities due to increased postdoc salaries and lack of increase in grant funding from the NIH.
- Childcare/Maternity/Paternity Leave. Lack of childcare support discourages women and scientists who would like to start families from doing a postdoc and as a result is not creating an inclusive environment.
- Cannot save for retirement. Institutions should match Retirement 403b contributions. Full benefits from social security is projected to run out in 2037. Therefore, postdocs must be able to have 403b/401k to plan for their retirement. Also, postdocs on fellowships are not allowed to save for retirement! Only permitting salary-paying postdocs to have a 403b makes it unfair to postdocs who bring in a fellowship and who are helping the PI save money.
- Many postdocs do not take all paid-time-off/vacation days they are given due to external pressures. If quality of life is taken seriously for retention of postdocs in the biomedical research enterprise, make it so that for every paid-time-off the Postdoc does not take, they are compensated financially for the paid-time-off they do not take. Trainees should not be pressured to work every weekend and holiday. This should especially be the case because Postdocs do not get paid Overtime. Yet, majority of postdocs I've met work 60+ hour weeks!

Existing NIH policies, programs, or resources

- It should be modified such that if a PI who hires several postdocs has to set aside money to pay for the postdocs including estimates for covering raises each year to fit the NIH salary cap. It should be made that when a PI hires a postdoc, that if they are signed on for 2 or 5 years, they should have money set-aside that is used to pay for the postdoc. Then, any leftover amount, if they overestimated the costs, could be kept to be used for paying future trainees or could be used to supplement spending for trainees to go to conferences or can return to the PI. If there is true interest in fostering trainees and the next generation of scientists in the U.S. biomedical research enterprise, proper budgeting needs to be enforced for fair compensation and retention of postdoctoral trainees.
- If a PI saves money to spend for trainees, there could be a savings initiative put into place similarly to how there are savings benefits when people save money to go to college. The same could be applied to PIs and their grants, and therefore this would provide incentive for PIs to ensure that they have enough money to compensate the work the postdocs are putting in.
- NIH funding programs do not incorporate intersectionality very well.

Proven or promising external resources or approaches

No response

Response 2546

Perspectives on the postdoc roles and responsibilities

The primary goal of an academic postdoc is to supplement the graduate training with necessarily skills and knowledge for the next step, either for a PI position or a non-academic position. For a PI position, the postdoc period is for carving out a niche and crafting a research program for an independent lab; for non-academic jobs there is more focus on learning skills and methods. Responsibilities include mentoring technicians and students as well as carrying out an independent project.

Fundamental issues and challenges

Postdoc in biomedical research, especially for people intending on staying in academia is quite long. This is a prolonged period of relatively low income (compared to full earning potential of PhD-holders) and little certainty often overlapping with a period in life where family planning and settling down in a place happens. In other words, income and certainty of one's career prospects/ future are especially important during this period, but postdoc positions rarely offer even one of these: 5-6 years is a long time to be making ~60k at best especially with high childcare and housing costs, and academic jobs are extremely competitive and depend heavily on the mentors' reputations (for recruitment and for publication record). These issues disproportionately impact women as many women have to weigh whether and how to balance their careers and having a family in their early-mid 30s, which usually overlaps with their postdoc training. The low postdoc income especially deters recruitment of scientists from marginalized and underserved communities who may need to provide financial support to their families/communities.

The academic culture is also more challenging for women and minority scientists. The power dynamic in academia is such that there is very little protection for victims of bullying, harassment, and misconduct by PIs, especially by those that are established and well-known in the scientific community. There should be more definitive consequences to these kinds of actions.

The lack of consistent policies regarding salary and benefits also impacts the postdoc quality of life. Institutions have different policies on how an NIH fellowship would impact a postdoc's benefits and in many institutions a fellowship means losing retirement and subsidized healthcare benefits. This is counterintuitive as fellowships are critical for an academic career.

Existing NIH policies, programs, or resources

Higher salary and a greater year-to-year increase to account for inflation rates.

Allow for longer maternity and paternity leave in funding timelines.

Increase childcare reimbursement limits in NRSA awards: in many cities, $2500 barely covers one month of daycare.

Increase childcare funding for conference travel.

There should be less bias when reviewing extensions or funding based on life events (pregnancy, unexpected caretaking, etc.) and further justifications should not be necessary.

PIs who have been reported in the past of harassment or misconduct of any sort should not receive NIH funding again.

Proven or promising external resources or approaches

No response

Response 2547

Perspectives on the postdoc roles and responsibilities

A lot of work with minimal reward. I lead experiments. I supervise undergrads and grad students because the PI is absent, but will gain no credit for doing so. If I want to stay in academia this what I am required to do.

Fundamental issues and challenges

Overworked and underpaid. As a postdoc I am paid one third of the salary I could get from industry. In fact there are staff employees in my lab that get paid more than me despite them having a lesser degree and similar work experience. You want people to stay as postdocs, then pay us a fair wage for the responsibilities we have.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2548

Perspectives on the postdoc roles and responsibilities

Let's stop calling postdocs "trainees" and start focusing on their status as early career researchers. The term "trainee" is demeaning and too often used to justify paying low non-competitive salaries. Postdoctoral fellows should be focused on building their independent research program and obtaining their own grants rather than serving a prof's interests and research program. It should be a stepping stone and transition to faculty, not a lengthy 4-6 year commitment under the guise of "being in training".

Fundamental issues and challenges

Pay is horrendous. Quality of life is terrible. Postdocs are treated as glorified grad students and lumped into the same "trainee" category as them. There is little to no respect for them. It feels like doing a second PhD.

Existing NIH policies, programs, or resources

Increase salary support! And change where postdoc funding can come from. Our institution has a postdoc union that has negotiated a higher than NIH salary, but because of the NIH rules the difference between the union salaries and NIH pay scale have to be paid by non-federal funds. This makes it even more challenging for labs to recruit and retain postdocs. Allow postdoc grants to make up the difference or cover the difference on the mentor's R01. Add small amount of research funds to F32. F32 to K99 pathway could be reworked—by the time we get an F32 and complete it, no longer eligible for K99.

Proven or promising external resources or approaches

Competitive salaries.

Response 2549

Perspectives on the postdoc roles and responsibilities

To me, postdoc is a transient intermediate bridging PhD and independent career. In the context of biomedical research, independent career can be academic or for-profit organizations (a prime example being pharma or biotech companies). Postdoc is essentially meant to supplement skills and expertise that a PhD student feels are necessary, or important, or desirable on their resume for them to be competitive in the job market. As an extension, postdoctoral research should supplement PhD training and not repeat it in a polished, more sophisticated fashion. I feel as a postdoc interested in a tenure-track position, I want to learn how to set up and run a lab, how to identify funding opportunities and write compelling grant proposals, grow a sizeable network of peers as well as contribute to service through peer review, etc. Just getting better at certain techniques or solely focusing on learning novel techniques defeats the purpose of postdoc. In a research lab, a postdoc can be a great resource to train others, more approachable for daily experimental trouble shooting for both undergrads and grad students and a general oversight of the lab.

Fundamental issues and challenges

Postdocs are often treated as cheap labors to complete experiments that are needed for a paper or grant proposal a PI has envisioned, with little to no regard for their career development. To begin with, postdocs in biomedical sciences continue for ~5 or more years which is equivalent to the time spent earning a PhD

degree. The compensation is poor, not adjusted for inflation, there are no long-term career prospects. For postdocs on a visa, the struggle is a lot harder. It usually takes anywhere between 3-6 months for the university to process visa related paperwork during which they cannot realistically find any new job. Contracts are often abruptly terminated because the PI ran out of funds and the visa cannot be renewed. It is often very difficult to get a vacation for 4-5 weeks to visit one's home country at least once in a year. The contracts are often for one year only, which means we only get a visa for one year and every time we go back to our home country, we need to fill out lots of paperwork for stamping and it is expensive. With the COVID related disruption, slots for visa interviews are very limited.

Existing NIH policies, programs, or resources

a) Postdoc should be capped at 4 years, maybe extended to 5 under extraordinary circumstances. Just glorifying postdocs by titular changes is of little use. Lab associate/ postdoc associate should be abolished altogether and replaced by non-tenure track research positions with competitive benefits commensurate with skills and experience. Instead of capping salary for these positions, NIH should increase the number of these positions to increase research productivity.

b) ~50% postdocs are not US citizens nor permanent residents. They are not eligible to apply for any other NIH grant except K99 which is super competitive and open to US citizens. This translates to 50% of the postdoc work force left without any viable career development options if they want to continue their research in the US.

c) Health insurance offered to postdocs differs vastly across different states in the US and is not at par with other university staff. This really affects people with family given the prohibitive cost of healthcare in the US. Many of us just cannot make ends meet with the current pay and benefits and are forced to move into biotech (forced, not lured).

Proven or promising external resources or approaches

No response

Response 2550

Perspectives on the postdoc roles and responsibilities

Transitional role for a faculty

Fundamental issues and challenges

Very low salaries. At this age and stage or our careers, a chunk of brilliant minds are underpaid leading them to explore other non academic opportunities (unwillingly) because everyone in their 30s need money to feed mouths at home, plan for their future, have a house! Basic things!

Existing NIH policies, programs, or resources

No one in my opinion would be substantially increasing the salaries to meet the industry standards for a related role.

Proven or promising external resources or approaches

Increasing salary

Response 2551

Perspectives on the postdoc roles and responsibilities

As an academic postdoc, my perspective on the roles **and responsibilities** of this position is that it is a critical stage in my academic career. The postdoctoral position offers an opportunity to develop research skills, gain expertise in a particular field, and enhance one's academic profile. It is also a time to collaborate with other researchers, build a professional network, and potentially open doors to future career opportunities.

However, there are genuine concerns about the expectations placed on postdocs, the lack of job security and opportunities for career advancement. On top of that for international postdocs, lack of a clear path to Green Card is another hurdle. With J-1 visa, international postdocs are practically held hostage to the

institution/P.I. they are working for and their ability to stay in the US depends on entirely the said institution/P.I.

Postdocs are expected to conduct research independently or as part of a team, publish their work in high-quality journals, and contribute to the academic community through conferences and seminars. At time, they are also expected to mentor and supervise students and participate in grant proposal writing. Though many time, they never get the chance to write actual grant and never get any recognition for their contribution.

Fundamental issues and challenges

One of the most significant challenges facing postdocs is the limited funding available to support their research. Postdocs are often funded through grants, and funding for research can be unpredictable, making it challenging to plan research projects or support themselves. This lack of financial security can be a significant barrier to recruitment and retention of postdocs, as many are forced to seek other employment opportunities to make ends meet.

Another issue that affects postdocs, particularly international postdocs, is the visa and immigration process. International postdocs face unique challenges, including language barriers, cultural differences, and the need to navigate complex visa and immigration processes. Obtaining/continuing a visa can be a time-consuming and stressful process that often requires significant financial resources. This is a significant barrier to recruitment and retention of international postdocs, as many might prefer to pursue opportunities in places with better visa processes.

Additionally, postdocs often experience limited job security, short-term contracts, and limited opportunities for career advancement. This lack of stability can make it difficult for postdocs to plan for their futures, leading to anxiety and uncertainty. This also make difficult to retain talented postdocs, as they may seek more stable career opportunities elsewhere.

Furthermore, postdocs often experience low pay and limited benefits, making it challenging to cover basic living expenses. Postdocs are generally paid way less than faculty and receive limited benefits, such as health insurance or retirement benefits. Many postdocs (especially international) feel isolated and unsupported in their research environments.

Postdocs also experience challenges related to work-life balance, including long work hours and high levels of stress. These challenges can lead to burnout, physical and mental health issues, and reduced productivity. Work-life balance can be particularly challenging for international postdocs who may be adjusting to a new culture or language and may not have a support system in place.

Existing NIH policies, programs, or resources

The National Institutes of Health (NIH) plays a vital role in supporting postdoctoral training, including international postdocs, and advancing academic research. While the NIH has policies, programs, and resources that support postdoctoral training and academic research, there is still room for improvement.

The NIH could improve the Ruth L. Kirschstein National Research Service Award (NRSA) by, for example, expanding the scope of the NRSA program to include more interdisciplinary and collaborative training opportunities. Additionally, the NIH could modify the NRSA program to provide more support for postdocs in underrepresented groups, including women and minorities.

Another existing resource that could be improved to support international postdocs is the Office of Intramural Training and Education (OITE). The OITE provides various resources and services for postdocs, including career development workshops, counseling services, and a speaker series. However, the OITE could do more to support international postdocs who face unique challenges, such as navigating the visa and immigration process and adjusting to a new cultural and linguistic environment. The OITE could develop tailored resources and services for international postdocs to ensure they receive the support they need to succeed in their academic research careers.

The NIH could work with academic institutions to create more welcoming environments for international postdocs, including providing resources for language and cultural training. Additionally, the NIH could establish policies that streamline the visa and immigration process for international postdocs, reducing the bureaucratic hurdles that often prevent international postdocs from pursuing academic research careers in the United States.

The NIH could establish policies that ensure that international postdocs are not disadvantaged when it comes to career development and advancement opportunities. The NIH could encourage academic institutions to provide international postdocs with mentorship and guidance, as well as opportunities to participate in collaborative and interdisciplinary research projects.

Proven or promising external resources or approaches

One promising approach is the creation of postdoctoral associations, which provide postdocs with a platform to advocate for their rights and interests, connect with fellow postdocs, and access professional development opportunities. Postdoctoral associations have been successful in enhancing the postdoctoral experience at many academic institutions and can serve as a model for NIH to support postdocs in their career development and advocacy efforts. Additionally, these associations can provide valuable resources and support for international postdocs, who often face unique challenges in their academic research careers.

Another promising approach is the use of mentorship programs to support postdocs in their career development and advancement. Mentorship programs have been shown to improve postdoc job satisfaction, research productivity, and career success. The NIH could work with academic institutions to establish mentorship programs that provide postdocs, including international postdocs, with guidance and support from experienced mentors.

Furthermore, the use of diversity, equity, and inclusion (DEI) training programs has shown promise in creating a more supportive and inclusive environment for postdocs. DEI training programs can help academic institutions and their faculty to recognize and address systemic barriers and biases that may be inhibiting postdoc recruitment, retention, and advancement. Such training programs can benefit international postdocs by creating more welcoming and supportive environments for them to pursue their academic research careers.

The use of career development workshops and training programs can also inform the NIH's efforts to enhance the postdoctoral training ecosystem. These programs provide postdocs with opportunities to develop the skills necessary for their academic research careers, including grant writing, project management, and leadership.

Finally, the use of technology can also inform the NIH's efforts to enhance the postdoctoral training ecosystem. For example, virtual mentoring platforms can provide international postdocs with access to mentors and support networks across different geographic locations.

Response 2552

Perspectives on the postdoc roles and responsibilities

Postdoc position is a trainee period where you apply your previous experience as a graduate student and have opportunity to develop your own research paradigm.

Fundamental issues and challenges

For international postdocs in US, the only career development award they can apply is K99/R00 and which also has 4 year eligibility rule. The 4 year eligibility window is very tight to get first acclimatized with US system, get a first author publication and develop a research proposal that shouldn't overlap with mentor's. Considering this fact, it is very challenging for an immigrant postdoc to foresee long-term stability in academic research.

Existing NIH policies, programs, or resources

NIH is no longer offering COVID extension. For example, the COVID pandemic year (03/2020—04/2021) falls in several postdocs timelines and the information on COVID-related eligibility extensions is not updated apart from the old notice NOT-OD-22-062.

Proven or promising external resources or approaches

The postdoc salary cap for the postdoc should be improved for better job satisfaction.

Response 2553

Perspectives on the postdoc roles and responsibilities

- From the perspective of the postdoc, the position is a transition from structured training to independent research. It provides a period to fill knowledge and skill gaps and allows the individual to develop a research portfolio that provides the basis for a future academic research career. The position also provides opportunities to expand professional networks and initiate new collaborations.
- From the perspective of the mentor, an academic postdoc has the potential to bring new knowledge, skills, and ideas to the research team, stimulate the research, yet be sufficiently independent to generate peer-reviewed publications. The academic postdoc also provides an intermediate level of mentoring to undergraduate and graduate students, particularly for day-to-day operations.
- From the perspective of the institution, a research-intensive organization thrives on a healthy and robust postdoc community. It reflects the strength of the research portfolio to attract the intellectual resources provided by this position, which in turn fosters more vibrant and expansive research. An active postdoc community also provides a pool of potential future colleagues for the institution.

Fundamental issues and challenges

- The major challenge with both recruitment and retention of postdocs is fundamentally financial. Recently, entire graduate student bodies have gone on strike for higher wages. Even the most senior, highly paid postdocs typically earn significantly less than other PhD graduates who go straight to work in other career options outside of academia. Moreover, recent graduates with a lesser degree than postdocs are capable of earning more than most postdocs in careers outside of academia. Foreign nationals may come to the US as postdocs because this is their only route forward, but many American students generally have more attractive options. A 2017 review of longitudinal survey data found that ex-postdocs continued to earn less on average than non-postdocs ten or more years post-PhD. [Kahn, S., Ginther, D. The impact of postdoctoral training on early careers in biomedicine. Nat Biotechnol 35, 90-94 (2017). https://doi.org/10.1038/nbt.3766]
- The same 2017 article points out that there appears to be a lack of new tenure track permanent academic positions while the number of graduating PhDs has grown over time, as the likelihood that a postdoc led to a tenured/TT position was only 21-27.4% for the ex-postdocs they sampled. The article also notes that "official bodies have raised concerns about the working conditions, long hours, lack of benefits, and forced geographic mobility faced by postdocs, as well as the effects of postdoc jobs on families," which could also be considered potential challenges.

Existing NIH policies, programs, or resources

- NIH postdoc salaries should be increased at all levels, particularly for starting postdocs. There also needs to be a regional cost-of-living adjustment. Some cities are disproportionately more expensive and more competitive than other cities or rural areas. A starting NIH postdoc annual salary is currently $56,484, but likely needs to be at least $10k more to remain competitive. As more students graduate with crippling student loan debt from both undergraduate and graduate studies, salaries need to facilitate payment of student loans while being able to meet a minimum standard of living. Student loan repayment is one of the primary concerns of current postdocs and needs to be addressed before they are able to secure mortgages, etc.
- NIH should continue to implement and support policies and programs that diversify the postdoctoral population by increasing the number of postdocs currently underrepresented in biomedical sciences research, in order to stimulate new and innovative research that advances public health.

Proven or promising external resources or approaches

- More could be done to coordinate and train existing postdocs on funding opportunities to transition out of postdoc positions and to maximize their time as a postdoc. An excellent example of an NIH initiative that is making a difference is the Institutional Research and Academic Career Development Awards (IRACDA) (K12) program. This program provides funding for salary, outstanding mentoring, and prepares graduates of the program for a variety of career opportunities. The IRACDA program and other similar programs should be expanded in scope and reach.

- NIH should expand the inclusion criteria and/or reach for the student loan repayment program. This is an amazing resource to reduce student loan repayment burden, but it varies across institutions and is not widely promoted. Reducing student loan repayment burden shifts the needs for salary increases for eligible postdocs. Participation in these programs also requires a commitment of the recipient to a minimum of 5 years in non-profit clinical research. This allows a period of time to allow the postdocs to secure a position in academic research, consistent with NIH's priorities.
- Institutions like St. Jude Children's Research Hospital or Princeton University have recently increased postdoc salaries beyond the NIH standards. Some universities have implemented postdoc "term limits." Academic departments may also consider tenure-track hires for top new graduates. (Kahn et al.)

Response 2554

Perspectives on the postdoc roles and responsibilities

Recruitment of junior faculty / physician scientist must be as faculty and not as research fellows , especially for those with prior clinical or research experience so that they are ready to be scientists and take on challenges.

Fundamental issues and challenges

1. Intramural program needs to focus of health issues of public health relevance.
2. Efforts must be on to recruit talented physician—scientists.
3. Salary of physician scientist especially young investigators must be realistic and in tune with the pay around the country.
4. There should be ease of transition from intramural to extramural environment and vice—versa for the benefit of science.

Existing NIH policies, programs, or resources

1. Intramural program needs to focus of health issues of public health relevance.
2. Efforts must be on to recruit talented physician—scientists.
3. Salary of physician scientist especially young investigators must be realistic and in tune with the pay around the country.
4. There should be ease of transition from intramural to extramural environment and vice—versa for the benefit of science.
5. Efforts must be on for a K award like mechanism for clinicians / fellows in training to transition if needed from intramural to extramural environment.

Proven or promising external resources or approaches

K awards / CTSA awards / k99/R00 awards etc

Response 2555

Perspectives on the postdoc roles and responsibilities

The post-doctoral trainee period of a young scientist's career is critical. It is where one starts to learn how to focus their research and efforts without the dictates or support from a PhD. committee. It should be where they learn new skills and application of these skills to studies. It is also the time when they learn the details of how research is funded and how this funding is a contractual arrangement with the funding agency—not simply to do whatever idea you have but one that has undergone review. It is that awakening to the framework of how one has to work within academia. It should be a time when they learn how to manage a lab and/or group and to make a decision on their future career.

Fundamental issues and challenges

Pay, opportunities for job offers, at NIH limited support for visas, time to recruit foreign candidates, not enough good candidates, uncertainty of funding for full period.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Within NIH—require all intramural divisions to follow the NIH guidelines for pay and term limits rather than to have different divisions set their own limits. When a division arbitrarily states that post-docs will only be for 3 years that confuses candidates as they look at the NIH website and it states different time limits. A 3 year post-doc for someone at the wet bench is not sufficient for training—thus, one would choose to go to a different place for more stability and opportunity. There are divisions within IR that set their own time limits, ignoring NIH guidelines,—this is usually not DIR but rather the other divisions within IR.

Response 2556

Perspectives on the postdoc roles and responsibilities

A stepping stone toward a more permanent position. Time to develop independent research niche.

Fundamental issues and challenges

The uncertainty of timeframe is very challenging. A post-doc is not a set program like a PhD or a fellowship, but can go on for many years. This could allow flexibility in developing projects or in waiting for the best next step to become available, but more often than not, it makes it seem like these goals are not imminently achievable. Because you don't HAVE to move on to the next step at a certain time, mentors are less motivated to help with this.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2557

Perspectives on the postdoc roles and responsibilities

Post doctoral fellows have a wide range of responsibilities and career development opportunities available to them across the biomedical sciences. It would be good to have some standard guidance from the NIH attached to funding for post-doctoral training (i.e. for the mentor/supervisor to provide for career development advice, a set number of developmental opportunities to better prepare post docs for the next step, freedom to network/meet other non-supervisory mentors and participate in social and academic engagement with other disciplines periodically)

Fundamental issues and challenges

Sorry to be so blunt, but in some institutions, post-docs are abused/have work dumped on them for very little compensation with very long hours. At other institutions they are more like "absentee" slots for PIs to use up funding to justify their grant/apply for the next cycle while the post-doc interviews for junior faculty positions—I think both are abuses of the system (but who would track and report as such as fraud/waste/abuse?)

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Mentoring and clearer pathways for advancement as junior faculty might help with improving post doctoral recruitment/training. There need to more scrutiny for "large academic institutions" [which are almost automatically considered 'conducive training environments'] for utilization of resources (including trainees) for scholastic productivity vs. hours worked based on outcomes beyond placement of fellows. Blue sky

science is very important and ought to be protected, however, there needs to be some ongoing/iterative process of discussion with other disciplines to see about implementation—so that tax dollars aren't funding projects that sound glamorous but do not, ultimately, benefit the average American.

Also consider greater urban/rural collaboration for more equitable distribution of resources rather than constitution at a few large institutions. Maybe encourage a certain amount of funds to go towards biomedical outreach to less population dense centers (not just to build impressive buildings but also provide a pipeline for collaboration and education?)

Response 2558

Perspectives on the postdoc roles and responsibilities

It is a senior training position.

Fundamental issues and challenges

There need to be a fewer number of graduate students trained and postdoctoral positions need to be reserved only for those graduate students who have shown exceptional talent and accomplishment. They should come with a competitive salary and benefits.

Existing NIH policies, programs, or resources

Eliminate training grants. We are training too many graduate students. Replace them with Masters programs of 2-3 years that will create a workforce that is trained and competent to work in pharma or biotech. Allow penalty free discontinuation of a Ph.D. Program towards only a Masters and vice versa allow masters program students to opt to pursue a Ph.D. If they can obtain an independent fellowship.

Limit the number of trainees that a lab is allowed to have. It is unfathomable that the NIH thinks that a lab with 20-30 trainees can provide good training. In that kind of environment the PI does not even talk to the trainee on a weekly basis. The trainee is just a cog in a large machine. Even the most competent and talented PI will struggle to offer good mentorship and scientific guidance to more than 10 trainees, regardless of the organization and infrastructure of a lab. The main reason trainees go to such labs is not because of the science training but because of the political connections that such large labs offer. Time for the NIH to value mentorship and quality of science over the political power of such labs. Research also shows that smaller labs also produce more original science, so it is a win win both for the science and training.

Proven or promising external resources or approaches

Gradually phase out grants to institutions that do not provide salary support of at least 50% to its faculty and eliminate grants to research faculty who do not have secure appointments at their institutions. The number of tenured faculty positions with some institutional support has steadily decreased in the last 30 years thanks to the reliance on the indirect support from the NIH. This will force universities/research institutions to increase the number of tenured and tenure track positions at institutions which will create a larger number of positions for well qualified postdocs and will also improve the quality of teaching and mentoring at US institutions.

Response 2559

Perspectives on the postdoc roles and responsibilities

The postdoctoral position in theory is to be the opportunity for the postdoc to receive more training / build additional skills in preparation to transition to a role as an independent scientist leading their own lab. In reality, to me the postdoctoral position is a way to take advantage of young scientists by underpaying them to essentially lead a research lab and generate the majority of scientific contributions for the lab (e.g., papers, experiments). The postdoctoral position has moved from being a transitory phase to a black hole that seems to swallow trainees up and not spit them out for another 5-7 years. The delays in migrating to permanent positions observed for postdocs, in my experience, seem to be motivated in part by PIs not allowing postdocs to apply for grants until the end of their second year or later, not providing pathways to publications, and actively working to retain the postdoc for longer periods of time, for both financial and scientific reasons. I view the postdoctoral position as a frustrating obligation that stymies

growth but cannot be avoided for folks who want a career in academia. I think the postdoctoral phase is the single greatest contributor to the mass exodus out of academia.

Fundamental issues and challenges

In my position as a postdoctoral trainee at NIH, I do not receive any retirement contributions / matching, I am not eligible for government pension programs (so my time here is gaining me nothing for my financial / health security in the future), and I am not considered an employee--meaning that I only get paid once per month. My taxes are not taken out in my paycheck, which causes severe stress and anxiety--if taxes are misestimated, this can create a crippling financial disaster. The postdoc prolongs the training process, and because trainees are encouraged to move institutions for graduate school, postdoc, and their first faculty position, it makes it impossible for postdocs to settle down and make roots. We cannot afford to buy houses, as our salaries are too low and the financial risk of buying a home and then having to sell in uncertain markets in 2-5 years is too great. We may face difficult decisions in starting families. Because I have chosen this path, I feel that I have chosen to forgo the personal life and happiness that I crave. I am behind my peers who have only gotten a Bachelor's degree but went into other fields--with less training and lower degrees, they are making double the money I make, they have had the opportunity to grow in their jobs and communities by staying in one place, they have houses, equity, and retirement funds, and they have been able to start families. Postdocs do not have these opportunities because of the inherit structure of the postdoc. It is a major reason why postdocs are leaving their positions, and why graduate students are choosing to go into industry instead. We are sick of being enslaved to the lab and indentured servants to academia.

Existing NIH policies, programs, or resources

1. Increase the NIH stipend level.
2. Increase the budget caps for postdocs on NIH grant applications
3. Call for a change in the tax code so that taxes can be taken out of the fellowships that pay postdocs (F grants, K grants, NIH intramural funding)
4. Change the hiring practices at NIH so that postdocs are considered regular employees and can benefit from things like retirement contribution matching and pension plans

Proven or promising external resources or approaches

No response

Response 2560

Perspectives on the postdoc roles and responsibilities

The NPA and NIH jointly developed the definition of a postdoc. NIH should adhere to a consistent universal definition of a "postdoc" regardless of funding mechanism. "Trainee" is seen as diminutive by many, and should be avoided, while "scholar" or "fellow" is more appropriate.

Fundamental issues and challenges

The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas with defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step. Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit.

Existing NIH policies, programs, or resources

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. (Other implications, such as tax, do not stem

from NIH.) Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible.

Proven or promising external resources or approaches

Compensation improves retention broadly across other industries.

Response 2561

Perspectives on the postdoc roles and responsibilities

Fundamentally, postdoctoral training is meant for the individual to gain additional skills to facilitate their transition to an independent scientist. While traditionally this may be defined as a tenure-tracked researcher in an academic institution, today, what this means may differ across individuals. Because of the expertise the postdoctoral fellow may bring into the lab/institution, the individual may may have additional responsibilities that is separate from their training program.

Fundamental issues and challenges

Financial compensation is a key issue as a postdoctoral fellow. Given their skills and expertise, in addition to their responsibilities, the current financial compensation does not match their expected roles in the laboratory. Additionally, differences in the postdoctoral training experiences across laboratories is not reflected by the pay schedule. For example, there is no financial incentive for myself, a postdoctoral fellow, to supervise additional postbaccalaureate trainees, in addition to my research projects. And yet, there is an unsaid expectation for me to supervise them. This experience differ from my peers in other labs, where no such responsibility is expected. Yet, we are compensated at similar amounts. Even within my own lab, my colleague who began working at around the same time as me is compensated at higher levels just because their source of funding is external of the NIH. This, in addition to the uncertainty of our career stability, creates grounds for a challenging experience.

We are overworked and underpaid. Overlooked and undervalued.

Existing NIH policies, programs, or resources

Increase funding for postdoctoral fellows. Have standardized, measurable standards of achievements. Improved benefits and flexibility comparable to external opportunities.

Proven or promising external resources or approaches

No response

Response 2562

Perspectives on the postdoc roles and responsibilities

An opportunity to work with a new mentor or continue working with an existing mentor. An opportunity to further explore and refine my area of interest. An opportunity to learn new methods and contribute to the body of knowledge. Get constructive feedback on areas of improvement. Teach courses in my field of expertise. Be supported while seeking funding for research.

Fundamental issues and challenges

Supply/Demand imbalance due to lack of relevant mentors and/or location restrictions. You need to pay us a fair and competitive salary and offer tuition reimbursement.

Existing NIH policies, programs, or resources

Examine your ageism policy. It should not just be about old people. Young people can be discriminated against, too.

Proven or promising external resources or approaches

No response

Response 2563

Perspectives on the postdoc roles and responsibilities

Final training to become an independent Scientist. Postdocs apart from their projects need to be trained on how to manage labs, write budget and mentor students.

Fundamental issues and challenges

Postdocs salaries and carreer progression are undervalue at NIH and all academic centers. NIH payment table serves as the reference for the average of postdocs' salaries in the intra and extramural. that maybe helps to explain why the postdocs' salaries are so undervalue and depreciated, which impact directly in the number of recruits, Quality of Life, Quality of postdocs (the best ones are being recruited to Industry) and in a long-term lead to depreciation of Science.

Existing NIH policies, programs, or resources

expand the number of career paths' grants. There is only one grant option for postdocs' immigrants to apply to help on the transition to Independence (K99).

Proven or promising external resources or approaches

No response

Response 2564

Perspectives on the postdoc roles and responsibilities

Postdocs should work in an environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth.

Postdocs are usually intent on entering different positions after a defined period of time unlike permanent staff. Establishing clear expectations at the offer of appointment for both postdocs and their PI's regarding their role and how it differs from staff scientists will alleviate misunderstandings.

Requiring postdoc and PI participation in formal performance reviews as part of an NIH award will better define, formalize, and evaluate factors of role, mentorship, and professional development, while differentiating postdocs from staff scientists.

The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities. This will assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Fundamental issues and challenges

International postdocs face unique challenges; the NPA's 2023 Postdoctoral Barriers to Success report shows 86% were negatively impacted by cultural

transitions into the U.S. NIH should work with the State Department and USCIS to accelerate and simplify the visa and immigration process for these world-class early-career researchers. NIH should also expand funding opportunities to visa holders through K99/R00 and new programs.

Short contracts create immigration headaches. NIH should encourage contracts with lengths commensurate with the intended postdoc periods, longer termination notices, and ties to institutions not PIs. NIH should also support adoption of policies such as vacation accrual rollover to support international travel, subsidized visa costs, and insurance with dependent coverage, while prohibiting use of part-time postdoc positions to avoid provision of benefits.

Existing NIH policies, programs, or resources

Postdocs' difficulties to remain in academia due to limited faculty positions contributes to dissatisfaction. To retain top research talent, NIH should create or expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining continuity of lab knowledge, providing

additional career options for postdocs, while providing clear differentiation between these positions and postdocs.

PIs should be evaluated based on how they meet mentoring expectations and sustained postdoc development.

More programs should be open to the international postdocs, or new programs should be opened specifically for them.

Proven or promising external resources or approaches

We encourage NIH to work closely with institutions that host postdocs and NPA on an ongoing basis to consult on institutional policy adjustments and tool development that are needed to complement public policy change.

The NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library.

Response 2565

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are NOT trainees. They have earned the right to be treated as adult professionals who have earned a highly advanced degree. In my view, the infantilization of postdocs into perma-trainees disempowers them to take charge of their own projects, their lives and their careers at the age where most of their peers in the normal world are treated as full adults in their workplaces. This, in my view, is also hurting transition to independence. Postdoctoral training used to be almost entirely about doing a crazy hard curiosity driven project that would make a real breakthrough, learning to write a grant, mentoring a few students and then moving on to a real job. Just a decade ago, I did a 3.5 year postdoc, before applying for faculty positions, and that was the norm across the biomedical field.

Now postdoc scholars are overwhelmed with entirely diffuse well-meaning but useless trainings and developments that 90% of grad students already do in their graduate careers. Scientific progress by these brilliant talented fellows, first and foremost, is the reason taxpayers fund research. With a few careful exceptions, the majority of other initiatives have been dreamed up by over-paid and under-evaluated administrators, many of whom have never lifted a pipet in their lives. Many of these folks, while truly passionate about postdoctoral scholars wellbeing, don’t appear to recognize it takes hard work, real discipline, intensity and the true burning curiosity to fuel the phenotype that is a scientist.

Fundamental issues and challenges

Due to an over-commitment to universities, that result in a glut of PhD scholars who do a postdoctoral position just to figure out what they want to do next (rarely continuing in academia), there are few jobs available as PIs. This is coupled with the ludicrously lopsided grant system which favors scientists in their 70s and 80s, and even 90s. The lack of an enforced retirement age (unlike the EU) results in a pyramid scheme which benefits university administrators and PIs, but not the true face of creativity—fellows who earn these advanced degrees and actually do the science.

We are seriously lagging behind other countries, where by the age of 32, most students will have moved on to jobs, and only a small fraction will take the academic route, which they are truly passionate about. Thus, our postdocs hang on for years and years—10 year postdocs were unheard of until recent times, because there is nowhere for them to evolve. This is the biggest challenge facing the United States, where an 75+ year old PI can have 2,000,000+ funding, while a new PI gets only a tiny fraction of that amount, if they are lucky. Most are not, and just quit from exhaustion and depression. We see this routinely in our mentoring. It is devastating.

Existing NIH policies, programs, or resources

1. Strict cut off policy for senior PIs who have already had one or two RO1s plus external funding.
2. No double funding beyond age 75 except in truly rare cases where the person is actually at the bench doing amazing work (highly unlikely)
3. Fund young and mid-tenure PIs and postdoc scholars with an independent program (K99, expand that!).
4. Cut off overhead to the highly paid and totally corrupt university system (110% overhead at Salk?! How is that even justified?!).
5. Institute strict oversight of how funds are spent—how many conferences does the PI go to? How many does their student go to?

Proven or promising external resources or approaches

Look to Cancer Research UK and welcomm trust. They do a good job.

Response 2566

Perspectives on the postdoc roles and responsibilities

My postdoc is a research training position to prepare me for independence. I personally am aiming to become an independent investigator in academia (tenure-track) but I also want to be prepared to transition to industry. However, I want to clarify that I consider myself an early-career professional. I think it is important to acknowledge that as a postdoc I am in the early stages of my career because the word "training" suggests I am untrained, which is wrong.

Fundamental issues and challenges

Funding and a lack of exit strategies.

Existing NIH policies, programs, or resources

Funding is not adequate for mid-career professionals. I know all the arguments for why funding is difficult but it comes down to being a poor choice for me to choose to earn so little at this stage of my life. I have a partner who is subsidizing my career right now. I could not afford to be a postdoc otherwise.

Exit strategies: the resources I am familiar with are mostly panels of industry professionals explaining how they transitioned. It would be more helpful if the NIH somehow encouraged companies (and more than just biotech, many of us are trained to program for instance but cannot sell this on a resume) to come RECRUIT us.

Proven or promising external resources or approaches

Speaking as an [redacted for anonymity] one of the easiest ways I see for a quick quality of life improvement (besides more $) is to get us on actually salaried pay and off of these horrible grant stipends. It makes taxes a true nightmare and we cannot even legally save for retirement on them. Which is a horrible position to be in as an early-career professional.

Response 2567

Perspectives on the postdoc roles and responsibilities

The postdoc experience is a great opportunity for new investigators to learn and be mentored by other scientist

Fundamental issues and challenges

For those graduates like myself that has to work full-time it is hard to have to quit a job in order to get the post-doc experience, some of us can't afford the low pay postdoc trainees receive so that is why retention and recruitment can be a challenge

Existing NIH policies, programs, or resources

There should be a policy that full-time NIH employees like myself that is also in graduate school should be able to do postdoctoral training without having to quit their full-time job and just become a trainee, some type of collaboration program between your current position and postdoc training on the side, example if you work 40hrs a week maybe some of these hours can be given for research time 10-20hrs etc, whatever your supervisor agree on.

Proven or promising external resources or approaches

More collaborations for post-docs and working NIH employees that want to pursue graduate opportunities but want to remain a NIH FTE

Response 2568

Perspectives on the postdoc roles and responsibilities

Training for my professional development, and a chance to get some good publications under my name.

Fundamental issues and challenges

The system has resources for career development but often the fellow has no suitable time and opportunities to pursue those. This is mainly because of the 40 lab hours/per week. PIs often prefer to have their fellows busy with lab work and not engaged in individual career development. The training at the lab is really great. Simultaneously, it limits the options for the development of individual career pathways.

Existing NIH policies, programs, or resources

Already mentioned!

Proven or promising external resources or approaches

The quality of mentoring and expectations to and from a fellow may be modified/improved.

Response 2569

Perspectives on the postdoc roles and responsibilities

What the postdoctoral position should be is an opportunity for gaining experience at a higher level with more responsibilities than a graduate student, in preparation for a job in academia, industry, or government. Postdoctoral fellows should be expected to carry out their own research and design their own experiments, while having plentiful opportunities to gain management experience by mentoring undergraduates, post-baccs, and graduate students. Postdocs should also have the opportunity to gain experience with grant writing or other skills that may serve them in industry.

Fundamental issues and challenges

The biggest issue facing postdoctoral fellows, or potential fellows, is the lack of job opportunities following their postdoctoral fellowship. This puts a tremendous amount of stress on postdoctoral fellows to publish high impact research in high impact factor journals, until they ultimately find out that the position they are looking for is not available and none of it mattered. It can be a soul-crushing experience. Additionally, while senior scientists are continually encouraged from above and from grant issuing institutes to prioritize the training of their fellows, there is no real accountability on senior scientists. I have personally seen many senior investigators, funded directly by NIH grants, pay lip service to the importance of postdoctoral training while privately discouraging and preventing their fellows from traveling to conferences, using “lab time” to write grant applications, or attend training sessions that may interfere with their bench work.

Existing NIH policies, programs, or resources

The existing structure of the R-01 and Z-01 funding is a huge impediment to training of both graduate students and post-doctoral fellows. By allowing the research done on these grants to be carried out by trainees and fellows, it puts a massive incentive on senior scientists to push bench work over all other types of “training”. In order to really improve the graduate student and postdoctoral experience, graduate

students and postdoctoral fellows need to be entirely funded by training grants that strictly prioritize their training. I'm sure the pushback to this suggestion would be that this would leave a void in researchers able to perform work R-01 and Z-01 projects, but this work should be carried out by full time staff scientists and biologists, thus creating more openings in a job market currently saturated with PhD's looking for work.

In addition to my above comments, I would take issue with the phrasing of the background statement "Data published by the National Science Foundation suggest that the number of postdoctoral researchers may be declining, presenting an uncertain future for the overall U.S. biomedical research enterprise". This should not be cause for concern, as (to my knowledge) there are no shortage of applications for positions requiring a PhD and postdoctoral training. Indeed, K99 awards are currently funded at a ~20% rate, and every industry position that I am aware of requiring a PhD receives hundreds of applications per opening. A shrinking number of postdoctoral researchers may be a healthy indication that more PhDs are realizing the futility of the job market post fellowship, and are acting accordingly. Additionally, I am unaware of any research indicating that a post-fellowship PhD is more prepared for a non-academic job than a pre-fellowship PhD.

Proven or promising external resources or approaches

The postdoctoral training programs that I have seen (both at the NIH and in academia) have generally been moving in a positive direction by offering additional training on grant writing, networking, and coordinating exposure to alternative career paths. However, the benefits of these programs will always be limited by the financial incentives of a senior scientists demanding bench results from their trainees/fellows. Until their funding and training is separated from the lifeblood funding of the senior scientists assigned to mentor them, real change simply won't be possible.

Response 2570

Perspectives on the postdoc roles and responsibilities

I went through postdoctoral training as part of my training to be an early career investigator. I also pursued medical training as well. I strongly appreciate the importance of needing to build independence and the ability to develop / interrogate research ideas both on micro and macro scales, and do think the postdoc allows for this opportunity.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

There is ABSOLUTELY not enough accountability of senior investigators, particularly abusive senior mentors. Accountability comes in the form of investigations where trainees' complaints do not jeopardize their jobs (NOT true of current NIH complaint systems—your name is required for AOR and anonymity cannot be guaranteed through the process—https://public.era.nih.gov/shape/public/notificationForm.era), in the form of rescinded grants, and in the form of setting the standard that academic abuse is *never* justified.

The current requirements from Congress of reporting bullying to the NIH for potential action involving grants as of 2022 depend on academic institutions already *removing* or *disciplining* faculty, where there have been numerous accounts of accountability taken only when complaints have been made to state bodies or to the NIH directly. (Example here: https://cancerletter.com/the-cancer-letter/20210528_1/)

The academic institution is not a neutral player in this problem, but has incentive to minimize the harm done to the postdoctoral fellow in exchange for maintaining funds.

Proven or promising external resources or approaches

Persistent anonymity of trainees filing complaints with the NIH through the process -> with a threshold of complaints, for example to launch an investigation into an NIH grantee (R01 or higher)

https://grants.nih.gov/grants/policy/harassment/notify.htm

Response 2571

Perspectives on the postdoc roles and responsibilities

Postdoctoral Positions seem like ways to get cheap labor out of highly qualified individuals under the guise of providing "additional training".

I worked in a few non-postdoctoral scientific positions in industry, before accepting a postdoctoral position at NIH and have to say that the amount of new skills learned are not meaningfully different. (In my opinion this is due to the fact that all scientific positions require problem solving, which is something that just happens during the course of work.)

Fundamental issues and challenges

I would argue Postdoctoral positions are fundamentally unappealing. They are not very well compensated with respect to what most people could earn in industry. On top of that we constantly have to listen to and participate in meaningless mandatory trainings to keep the illusion alive that there is some sort of meaningful benefit in working as a postdoc as opposed to working in an industry research job. Another factor is the time-limited nature of the position, which a lot of postdocs just don't want to deal with any more when they reach a certain age.

A more short-term issue. The focus on getting fellows back into the office is just a total dealbreaker for me. I work mostly on a computer but are still supposed to commute in to work three days a week to sit in a sad cubicle. Which I realize was the norm before the pandemic, but at this point it just seems like the goal is wasting my time. I guess the larger issue here is that the desires of fellows/postdocs are not taken into account very much when policies are made.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Pay better. Maybe provide retirement benefits instead of offering "financial literacy courses". its a financially dumb decision to take a postdoc position. So don't lecture me about it. Be more flexible in accommodating different work arrangements.

If you don't want to pay more don't pretend that it is because you are providing some sort of additional teaching benefit.

Response 2572

Perspectives on the postdoc roles and responsibilities

As a postdoc, we hope to acquire new skills and experiences to advance our careers. With the expertise to the experience researcher, we can contribute to research community and this mentorship will help us advance our career.

Fundamental issues and challenges

The first and foremost is the unattractive salary which is low paid and also not equal. The benefits for a postdocs should be more comfortable. For example, childcare in New York is so expensive that one has to spend $30000 annually which is almost more than half of what is earning. It should be adjusted according ti the the salary a person is getting. The one who earned more, can pay more. It should be subsidized based on salary. To survive with a family and kid is so difficult, that a researcher struggles for every bit of day to day life and then is expected to give 48 hours a day work in lab. There is no personal life of a postdoc and most of the people are depressed at a certain levels. No time limitation for work, but constant struggle with expenditure and savings, leads to unhealthy mindset of the postdoc. We are thought be creative and give innovative ideas. But the constant struggle impedes the process. If one is paid accordingly, every person will do more work when they have money to spare on other necessities. Housing is said to be subsidized but for example in New York, it is so expensive that 40% of salary goes in housing and remaining into the taxes. The commute itself takes 2000$ annually. The list goes on and on.

Existing NIH policies, programs, or resources

Removing discrepancies in postdoc salary is the prime concern. A comfortable starting salary with regular increments would grease the wheels of the life a postdoc researchers.

Cheaper childcare facilities so that one can survive with kids. If both the parents are postdocs, childcare facility becomes a necessity. It is well known fact that it is impossible for a family to survive on one postdoc salary. So, both the parent has to work. Thus a reasonable childcare prices would make their life much simpler.

Good medical benefits. We postdocs, go through sever mental states and thus faces several medical concerns. thus we need good medical benefits.

More workshops on imparting knowledge on Visa information and educating postdocs with their options.

Review of the mentor along with the postdoc for regular upgrade in the work. Making committees to reveiw the progress of both the mentor and the mentee should be made mandatory.

Proven or promising external resources or approaches

Training programs to include recent advancement research can be implemented. If one want to explore industry careers or leave the bench and venture into science policy or consulting, there should be some ways to explore those as well.

A time limited work pattern for postdocs so that one can have a personal life. Every lab should have a manager or technician to do basics jobs so that postdoc can focus on the experiment and research

Response 2573

Perspectives on the postdoc roles and responsibilities

A postdoctoral position provides a time to actively perform independent research, while receiving training from mentors as well as continuing to develop new skills. It provides a time to learn more management skills to run a lab or work in collaborative teams that may not have been skills you learn during graduate school. The postdoc should not be a "technician-like" position, solely investigating the mentor's research questions. A postdoc is not a means of cheap labor for a lab; guidance and support for pursuing independent research questions is necessary.

A postdoc position is a time to further develop skills for communication, applied research, and navigating the larger research community past the experiences of graduate school which is focused more on individual experiments and techniques.

Fundamental issues and challenges

Low pay in many academic postdoctoral positions that is not equal to the experience level. Understanding that it is still a training position, so salary does not need to be equal to higher positions, but current salaries are barely an increase from graduate stipends, despite having greater experience and cost of living increasing (loan payments beginning). It makes postdocs feel undervalued and taken advantage of as cheap labor. Many of my colleagues were able to get full-time jobs immediately after graduate school, making a postdoc less-desirable if it is not necessary.

It is hard to find available positions. A central job listing would make it easier to find open positions. Currently, it requires looking at each individual university, government institute or lab page to find openings. Many applicable positions may be missed simply because it is not easily found. Compounding this are often short open period for application further limiting the chance that someone may see and apply for a position.

Highlighting the skills and career development to be gained by the postdoc during the position, rather than just what the lab can gain from the postdoc. This shows the mutual benefit and will help in recruitment and retention of postdocs. If there is no benefit to the postdoc, then they will not stay on as a low-paid postdoc when they could be paid higher doing a job that also provides more growth in experience in the workforce. It is often not made clear the goals of the postdoctoral training experience.

The academic research environment can be very toxic, abusive and unhealthy. This leads to poor retention and low recruitment. Efforts need to be made to change this unacceptable environment and show that inclusiveness, support and collaboration are necessary for effective scientific research.

Existing NIH policies, programs, or resources

Making it either possible, or better known, that salary/stipend adjustments are feasible. Currently, academic postdocs are paid substantially less than government postdoc positions.

Creating a centralized repository for open postdoc positions, and marketing that so it is known where to find open positions.

Proven or promising external resources or approaches

Include required mentor training and resources for the mentors of the postdocs, particularly if funded by NIH grants. Lack of mentorship skills by PIs makes the working environment inhospitable, leading to poor satisfaction and poor retention.

Response 2574

Perspectives on the postdoc roles and responsibilities

Postdocs are a critical part of the research environment. They are trainees and they are still learning, but they are independent, contributing members of any research group and serve as mentors to younger trainees. Postdocs are necessary for the continuation of academic research—if we don't train and keep strong researchers, then we won't be able to keep going. Especially if we don't appreciate their value and contribution and show that appreciation in meaningful ways.

Fundamental issues and challenges

Money and benefits are a huge issue for postdocs. The amount we pay postdocs isn't enough but that is in large part because very few people make "enough" to live comfortably and save. That being said, the absence of benefits, especially retirement benefits, is a deterrent to doing a postdoc—postdoc experience is proving to have less of a benefit than going to work in industry, etc. where you can begin to save for retirement earlier in the career. There is also still a sense of the toxicity in academia and the power imbalance between PIs and the others in lab and that is pushing people away. The "publish or perish" mentality as well as the sense that the work of one brilliant person matters more than the health and well being of others in the lab is still pervasive. More senior individuals working longer also makes it seem less likely that a young researcher WILL gain independence in academia in any reasonable length of time which drives them to look for opportunities elsewhere.

At the NIH especially, there are also challenges with the Visiting Fellows Program—these fellows are brought here to train, but do not feel that they are supported to the same level as their IRTA peers. We don't do as much to support them in transitioning to next steps and the language communicated to them when they are recruited may be misleading in that regard.

Existing NIH policies, programs, or resources

More opportunities or better communication regarding transition and next steps for Visiting Fellows; higher pay and perhaps some resources related to financial literacy to help them plan while they aren't getting a 401K or other retirement plan but still have options; better training for PIs and other lab staff re: mentoring to help promote a more equitable and balanced research training environment—remind PIs that they are ALSO trainees (not employees) and preparing for next steps is a critical element of the postdoc experience.

NIH grant policies and oversight is also critical in ensuring positive environments across the industry. NIH can't just exist in a bubble and as a policy establishing institution and role model there is an obligation to ensure that standards are being met and expectations enforced. Anyone receiving NIH funding should adhere to a certain ethical standard, and that's not just scientific ethics. I know of at least one highly funded institution that is rife with corruption and toxic work environments, but because they do good science, people look the other way. This teaches bad habits (that they can get away with anything if they do good science) and good people get pushed out altogether.

Proven or promising external resources or approaches

Mentor training. The better the experience overall for trainees that ARE here, the easier it will be to recruit. If fellows are satisfied and successful when leaving, word spreads; they will encourage others to

consider opportunities at the NIH and so-on. The more positive the experience, the more continued collaborations and mentoring relationships, the wider our network gets. Wider networks attract and bring in more fellows in general.

More collaborative environments vs. competitive encourage free exchange of ideas and less toxicity.

Response 2575

Perspectives on the postdoc roles and responsibilities

In my opinion, the academic postdoctoral position was designed to provide further training to recent STEM graduates before they pursue a tenure-track position in a university or organization that has a heavy research component. I also view it as a transition phase between graduate school and a position in industry or government during which one may acquire new skills necessary to succeed in their next position. I find the postdoctoral position an important component in the development of an individual's skills and acumen as a scientist. As Peter J. Feibelman's book "A Ph.D. is not enough" argues that the technical mastery required for getting a PhD is not sufficient for career success, or even necessarily for finding a job in the sciences, a postdoc position coming out of a Ph.D. provides the perfect opportunity to hone one's skills and better prepare for a career in the sciences. Overall, to me, a postdoc is generally a short-term research position that provides further training in a particular field, and for individuals planning research careers in academia, government, or industry, the postdoc years can be an opportunity to develop independence, hone technical skills, and focus research interests. For many, however, the value of a postdoc is not so clear. The rewards of postdoctoral work are usually not financial, and a postdoc might not provide an experiential gain for some career pathways.

Fundamental issues and challenges

Today's postdocs face an array of challenges, some newly visible and some stemming back decades. Ways to address them are becoming more complex. They can include lack of financial resources, variable positions within their institutions, toxic work environments, lack of mentorship, family stresses, a clear pathway to a permanent position, and other pandemic-related problems. Moreover, in most places I have seen, including my own situation, postdocs are underpaid, overworked, and variable grant funding meant they had very little job security. It's not a secret that postdocs are undervalued. Yet, few academics talk about how awful the situation actually is.

In her book How Economics Shapes Science, the economist Paula Stephan breaks down the loss of potential earnings of Ph.D.s in the biological sciences versus those who earn a master's degree in business administration. She estimates a loss of $1,219,257 in lifetime earnings for those who spent seven years completing their Ph.D. in biological sciences compared to the holders of M.B.A.s. For those who complete their Ph.D. in seven years but also complete a three-year postdoc, the loss in lifetime earnings is even greater: $1,272,680. She notes that the difference in earnings between the M.B.A.s and the Ph.D.s makes "it quite clear that reasons other than money enter into the decision to pursue a career in science and engineering. If it were only money, virtually no one would choose such a career."

So is the suffering for the greater good or for the honor of academic advancement worth it? With more industry positions arising, it is no surprise that Ph.D. graduates are moving away from postdoctoral positions.

Existing NIH policies, programs, or resources

Credit where it's due, the NIH have taken steps to raise the profile of postdoctoral researchers and to explore ways to make postdoctoral training more effective. The NIH Office of Postdoctoral Services, which is part of the NIH OITE, serves as a clearinghouse for information and policies affecting intramural postdoctoral researchers at the NIH and its affiliated institutes and centers. However, here are some directions that the NIH can take to enhace or modify postdoctoral experience.

1. Establish a Postdoctoral Association (PDA)
2. Setup and maintain a postdoctoral listserv and social media outlets
3. Establish a Postdoctoral Advisory Committee
4. Ensure postdoctoral scholar representation on relevant institutional committees
5. Identify and establish policies to deal with issues concerning postdocs
6. Utilize a centralized appointment process
7. Establish time frame for postdoctoral transition to independence
8. Provide career counseling and development services
9. Establish a minimum baseline salary/stipend, plus a salary/stipend scale
10. Provide a comprehensive, fair, and equitable benefits package to postdocs, comparable to that which is received by standard employees whether national or international at the same institution.
11. Extend family-friendly benefits to all postdocs
12. Allow matched contributions to a retirement program

Proven or promising external resources or approaches

The NIH has a lot of resources that do help enhance the postdoctoral training experience. I think that having more financial support for postdocs and atleast pushing to bring the postdoc experience to attain parity with industry positions would make once again attract postdocs to academia. Then, if NIH can make policies and provide resources to support the postdocs such that they have an enjoyable experience, that would help retain postdocs in academia.

Response 2576

Perspectives on the postdoc roles and responsibilities

A step in the direction of building research career and approach academic positions.

Fundamental issues and challenges

Some institutions consider Postdocs trainees while other find them employees. This is a fundamental flaw in how these positions are defined. Most institutions keep Postdoc performing well for more than 5-10 years while changing the name of position. Appointment terms are not at all defined well and most Postdocs have no say in terms of job, responsibilities, progress. This is duty of NIH and any institution that hires Postdoc and should never be left on Investigator/ Professor.

Labs should hire more Staff Scientists/Biologists/Technicians and no more than 50% personnel can be Postdocs. This will allow better mentoring.

Existing NIH policies, programs, or resources

Institutions should be held accountable for welfare of Postdocs. One way to build quality in research is hire all Postdocs through NIH centric fellowships which is based on evaluation done by independent committe and hiring manager can be only a stakeholder. This will ensure the quality candidates will be chosen by the institution and diversity can be maintained.

Proven or promising external resources or approaches

No response

Response 2577

Perspectives on the postdoc roles and responsibilities

The postdoctoral research is a period to progressively gain scientific independence from your mentor. It is about defining the research questions you want to address in your future lab. It is also a period to acquire new technical skills and new perspectives. It should be a time to expand your network.

Fundamental issues and challenges

Low pay. Overworking. Lack of grants accessible to postdocs that have more than 4/5 years of postdoctoral research. Lack of grants open to non-citizens and green card holders. Use of postdoctoral fellows to advance the lab research, but not necessarily good mentorship and realistic career advice.

Existing NIH policies, programs, or resources

Available grants, especially for non-citizens or green card holders.

Increase stipends.

Serious effort to follow up of what happens to postdocs, for better visibility of what they become.

Proven or promising external resources or approaches

No response

Response 2578

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are a period of protected training where junior scientist receive the training required to be successful in their field, including writing/submitting manuscripts, grant writing, management/mentorship, and technical expertise. Postdocs should receive directed guidance from a direct mentor that has expertise in the areas required for their success or support in seeking outside training/mentorship for roles outside their direct mentors supervision.

Fundamental issues and challenges

Major issues regarding long term financial stability of junior scientist, such as social security and retirement. Quality of life—when I was a postdoc (2014-2019) most of my peers were expected to work 50-70 hours per week which isn't compatible with family commitments such as child or elderly care.

Existing NIH policies, programs, or resources

Maximum number of hours, minimum number of conferences, postdoctoral committees to support a comprehensive training plan, training plans/financial commitment for training in essential scientific areas such as grant writing, manuscripts, and lab management

Proven or promising external resources or approaches

Look to european systems for better work life balances. Junior scientists in many other countries do not need to choose between career and having a family.

Response 2579

Perspectives on the postdoc roles and responsibilities

Lower entry training position (Low wage, Long hours). It is the academic equivalent of hazing where a post doc student must "pay their dues" before being considered for an academic position (assistant professor). Better alternatives include gaining industry experience and then transitioning to a Sr Scientist/Principal Investigator.

Fundamental issues and challenges

Fundamental issue is the low wage and poor work life balance.

Existing NIH policies, programs, or resources

Strategic reform is needed to move away from traditional views of the career pathway to independent research: postdoc -> academic PI. There are other career pathways that are viable.

Proven or promising external resources or approaches

Industry pays significantly more and offers the same level if not better training for future academic/industry positions.

Response 2580

Perspectives on the postdoc roles and responsibilities

- A transition period to apply scientific knowledges bases acquire during phD (10-20%) and an intense/extraordinary training period (80-90%)
- Learning how to use scientific knowledge, building a mythology, developing and leading a project, mentoring trainee (postbox, summer student,phD)
- Responsibility to maintain good workplace atmosphere and working ethics (postdoc are the one the most physically present in the lab so their attitude among the lab and with the other member can determine the general atmosphere)
- Responsibility to communicate with the PI and consider that this communication is essential and will help his/her scientific growth and the atmosphere and trust in the lab (highly competent but still at the beginning of their career postdoc should be able to receive feedback in a positive way, acknowledging their mistake, and share their concerns/questions/scientific and personal opinions and feeling to make sure to get the best of their postdoc experience)
- Postdoc are the workforce of the lab and lead/coordinate projects in the lab, but should also considering to learn from their mentor about mentoring, developing their own idea, being creative and the way to make work a lab and a team between the half-term to end of their contract
- Because of their workforce role, they are the one in direct contact of the data that will hopefully help the field and patient at longer term, so trust, honestly and ethic are very important quality/role/responsibilities of a postdoc

Fundamental issues and challenges

- Stress of publication (a new system of evaluation should be installed, people should be evaluated not only based on publication but also based on their skill of mentoring others, developing a project, their aptitude to help the members of the team and interaction with other people in the lab/with other labs. I am seeing/heard too much postdoc becoming frustrated and willing to do anything to get a publication (= stealing data from others, transforming data, being rude and competitive with their lab coworker.ect). For me this is killing the science. I will always choose my values before the publication, even if I might not reach or slower reach the level than other reach in few year by acting badly. We are scientist, I choose this work by love of the science and to improve life or solution for patients, it does not make any sense to “break” healthy people by competition or publishing unreliable data. The system need to change, the publication number does not mean anything and induce bad science/personal practice.
- As a postdoc we are very busy to do science and less time is available to develop our skill for the after postdoc = finding a job and knowing what are our options and the timeline for that.
- I am lucky to be in a lab with an extraordinary PI, who is human and care about the development of her trainees. She gives me the space to do mistake, to think and supports my creativity. She takes the time to communicate, listen, teach me the science but also the mechanism of thinking science, the scientific system system. But I know this is extremely rare, and most of my friends postdoc have a more frustrated experience, most of others are treated like a “machine of data”.

Existing NIH policies, programs, or resources

- We are very busy to do science but less available to develop our after-postdoc (finding a job/knowing what are our options/timelines). Having more information/more exposure to know our options will be very helpful. A group of discussion with people who were NIH postdoc few years ago and now has another position would be great too. Organizing once a month a forum with people presenting their pathway and option after the postdoc. OITE has some really good ressources but I think they will benefit of this. Maybe some "carreer development trainings" should be "mandatory", like the annual trainings about ethics, use of biological material.ect. To give a space/time for that.
- As said below, some postdoc are treated as "machine to generate data". I am wondering if some evaluation at least at the beginning of the postdoc or a closer follow up could help to prevent this. Having anonymous audit from the trainee or something like this. NIH, has place to speak but it ask to the trainee to take time off of the lab to go. Also, some trainee do not know either if the issue is worth to talk about, some just accept their condition thinking there is no solution. An organized time to talk for each trainee included in their training, at least at the beginning could help. The eIDP that we filled is helpful but only for the lucky one, like me who have a great PI that communicate with them. Having a meeting on one and one with the person who review the eIDP for instance will be really helpful. It can prevent any harassment too.
- In the same idea, module to learn how to develop idea/creativity and how to develop his own lab could be also a good adding to the OITE program

Proven or promising external resources or approaches

I am speaking from experience of my engineering school. The first year and last year we had modules that I found extremely helpful. Some people from outside came to help us for interaction with people and teach us communication skills and recruitment skills:

- Theater classes (from actors or theater teacher) with situation of communication with people in a team or in conflict
- Professional coach were teaching us communication/resilience skill, by putting us in small group and acting in different situation: resolving a conflict, asking for needs, mediation.ect
- Professional coach were teaching us communication/skill for interview. and knowing our weakness and strength. And how to choose the best options fitting our personality.personality test.ect
- Psychologists teach us to know ourself and help for communication (instance: non-violent communication). Teach us how to try to understand the people we are interacting with an being patient and change perspective, to decrease tension and help others.
- I think it will be a real good adding to the OITE program, to propose some after-work or day program with this kind of external person.
- Having former students (here former students) presenting their pathway and being in contact with them (could be during lunch time or after-work)

Response 2581

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are stepping stones from graduate research under the mentorship of an advisor to independent research.

Fundamental issues and challenges

One of the biggest inhibitors for recruitment, retention, and quality of life of postdoctoral trainees is the starting salary of postdocs. It is one of the main reasons listed for people not pursuing postdocs, because starting salaries are so much higher going straight to industry positions. Otherwise, those that are interested in academic research typically will work for very little material incentive to the detriment of their quality of life in the present and future (put off starting a family or neglect their own mental health).

Existing NIH policies, programs, or resources

Since the bar for success as a post-doctoral researcher transitioning to independence is high (i.e. necessity to publish large multi-disciplinary research in high impact journals, display competency in multi-omics approaches), the restricted time frame of 5 years of post-doctoral research experience time allowed to secure career transition funding is not practical and exclude a group of productive post-doctoral trainees from pursuing academic research careers.

Proven or promising external resources or approaches

No response

Response 2582

Perspectives on the postdoc roles and responsibilities

An academic postdoc is aimed towards performing independent research.

Fundamental issues and challenges

Independent research can take place at a number positions-academia, industry, government, and non-profits. Supporting what research looks like in these institutions would make a smoother transition. Mentoring around a specific case (ie industry through a I-Corps or AIM model) should be encouraged across the spectrum.

Existing NIH policies, programs, or resources

Expand the AIMs program and include entrepreneurship at FAES for government scientists.

Proven or promising external resources or approaches

No response

Response 2583

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Unlike the other ICDs in the NIH Intramural Research Program, the NIH Clinical Center does not offer K99 grants. This makes it very hard (if not impossible) for Clinical Center postdocs to get U.S. university faculty positions. When candidates interview, they want to know what former postdocs do after completing their fellowships in the Clinical Center. By not having a track record of success at getting academic positions, this makes CC postdoc fellowships less desirable than postdocs in the other ICDs. Thank you.

Proven or promising external resources or approaches

No response

Response 2584

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

PSLF for CRTA postdocs working at NIH, little to no assistance with student loan repayments

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2585

Perspectives on the postdoc roles and responsibilities

I see my role as a scientific trainee who learns these key skills:

- How to independently think about solving important questions in the field
- How to conduct research with appropriate experiments to answer these questions
- How to establish fruitful collaborations
- How to share my scientific findings with the community
- How to envision a long-term scientific program

I enjoy the privilege to learn something new every day, be it new findings or new methods. I am grateful for the freedom I have in choosing the questions I want to work on. However, I find it challenging to balance the expectation of productivity with the requirement for deliberation and creativity in developing a good experimental strategy.

Fundamental issues and challenges

There is little appreciation for the work I am doing, neither financially nor through other means. There is constant pressure to produce new data and lots of scrutiny. This scrutiny does not only come from within the scientific field but also from dealing with visa or other bureaucratic issues. The (visa) renewal process is in large parts untransparent and requires the involved parties not to make any mistakes. In my case, during three of my renewal, issues occurred that caused a temporary loss of my health insurance or being paid late.

It is also very challenging to reconcile job and family. In my case, I have a child with special needs who requires substantial medical attention. These additional private matters are left out of any consideration the NIH has regarding my productivity.

Existing NIH policies, programs, or resources

The Visiting Fellow program would strongly benefit from changes to the annual fellowship and visa renewal requirements. Giving the fellow five years from the start will be beneficial for dependability. This will not only allow the fellow to plan riskier or more long-term-oriented projects, but it will also reduce the time spent on dealing with visa issues. Permission to spend the whole five years at the NIH can still depend on factors such as preceptor satisfaction and long-term career plan preparations. Furthermore, the NIH should consider private hardship as factors that can negatively affect a fellow’s short-term performance.

Proven or promising external resources or approaches

No response

Response 2586

Perspectives on the postdoc roles and responsibilities

Two types of postdoc roles:

1. Get targeted training in new or peripheral area
2. Continue with existing work to increase experience/expertise needed to land faculty position (or some kind of equivalent)

Fundamental issues and challenges

- Compensation is pathetic (sometimes unlivable) compared to alternative career paths
- Postdocs feel like a "holding pattern" or indentured servitude necessitated by lack of adequate funding to do work in grants and lack of sufficient faculty positions
- Many/most good postdoc candidates have no interest working with junior faculty, as plenty of availability with well-established labs
- Universities offer extremely little in terms of job perks (commuting benefits, good insurance, family benefits, retirement plans) to postdocs
- Industry postdoc positions are much more lucrative than academic postdocs, particularly in computational fields (e.g., biomedical AI)
- The fundamental purpose of a postdoc role needs to be clarified, and used to redefine policies (e.g., those mentioned below) that influence recruitment and retention

Existing NIH policies, programs, or resources

- Minimum stipend levels should be increased
- Funding levels for research grants need to be adjusted upward to allow for better pay/benefits for postdocs (we can't hire competitively due to lack of room in grant budgets)
- Ways to encourage joint postdoc positions between academia and industry, could unload financial burden from NIH grants
- Fund platforms, etc. to help disseminate available postdoc positions to the best-qualified trainees who can fill those rolls.
- Training guidelines or other programs for faculty that help them to provide a more fulfilling experience to postdocs
- Increased allowance for grant funding (T/F/K grants, etc.) to postdocs who are not US citizens (but maybe would like to reside in US long-term)

Proven or promising external resources or approaches

No response

Response 2587

Perspectives on the postdoc roles and responsibilities

Postdoctoral programs are in my opinion are job training programs that generate the future scientific workforce. The role of a postdoc is to learn the "tricks of the trade"by contributing to a major project. The responsibility is to complete the project and deliver the outcome via publications and /or other means. Postdoctoral training must not be regarded as an end in itself. Life work balance is also equally important during postdoctoral period.

Fundamental issues and challenges

The most important issue is the disparities that exist between the the pool of postdoctoral talent and the traditional job opportunities. Academic research may not be the appropriate choice for every Ph. D. This realization must set in at an early stage, and necessary changes introduced to steer towards different career trajectories. Another factor inhibiting recruitment is the lure of publications in so called "high impact' journals, which are often attributed to the Ivy.

Existing NIH policies, programs, or resources

Maximum postdoctoral training must be 3-5 years.

Trainees must be encouraged to follow alternate career paths.

Trainees must be convinced that the postdoctoral training is NOT necessarily meant to transition to a permanent position at the NIH.

Proven or promising external resources or approaches

University/ Academic Institutes models are often better suited for postdoctoral experience. The NIH based research is more apt for overarching goals that require more experienced scientists.

Response 2588

Perspectives on the postdoc roles and responsibilities

Independent research, expertise on new techniques, mentoring of students, grant writing—some of these areas will need continued training and development during the postdoc, but that is generally driven by the postdoc's own motivation—not departmental or mentor efforts as is more common in graduate training.

Fundamental issues and challenges

Low pay, one year contracts to prevent classifying postdocs as employees, high cost of health care for family, minimal support for postdoc career development, no savings for retirement

Existing NIH policies, programs, or resources

Stop penalizing postdocs on 'training' metrics who are in labs where no other postdocs have gone on to faculty positions. Require higher base salary requirements. Provide grant supplements to PIs so they can give raises to their postdocs every year that keep up with inflation. Provide supplements to postdocs in NIH funded labs to offset cost of health care/child care. Set expectations for multi-year contracts for postdocs—don't allow 1 year contracts for NIH funded grants.

Proven or promising external resources or approaches

No response

Response 2589

Perspectives on the postdoc roles and responsibilities

A postdoctoral position means the transition to becoming a PI. In that regard, after we finish our training we should be able to independently lead research, write grants, and guide people.

Fundamental issues and challenges

Very low salary, which is not competitive with postdoctoral researchers in the industry.

Also, there is considerable variability between the postdoc salary among different institutions.

Ten days of yearly vacation for someone that works more than 9 hours/day and is from abroad is not good, considering that we need to travel to our countries to renew our visas, and sometimes the embassy takes more than ten days to process the paperwork.

No coverage for children

Very low benefits compared with other workers of the same institution

Very low opportunities to grow

Most of the time, we are requested to do more than our postdoctoral job requires, and we ended becoming a Postdoc/lab manager/technician.

The salaries for post-doc proposed by NIH should be the standard for all the universities that receive NIH funding, not just a recommendation. Because even when the laboratories are funded with more than one NIH grant, the postdocs are still being paid below the minimum because the postdoc salary is just a recommendation by NIH and not a must.

NIH should require that all the Universities/PIs receiving funding from NIH must meet the NIH standards.

Existing NIH policies, programs, or resources

Given there is a considerable population of postdocs from abroad, NIH should expand the grants offered to postdoctoral researchers with no permanent residency

Proven or promising external resources or approaches

To improve the working environments and mentoring, PIs and institutions receiving funding from NIH should receive an annual in-person course to work in these aspects

Also, the postdoctoral association from every university with NIH funding should be required to prepare bi-annual reports to NIH to inform the status of their postdoctoral researchers regarding the training, the working environment, and job satisfaction.

Response 2590

Perspectives on the postdoc roles and responsibilities

NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.

Fundamental issues and challenges

The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to at least $62,898, with higher amounts in areas with defined cost-of-living levels and annual increases.

Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit.

Academia contains remnants of structural biases and institutional barriers that hinder the success of scholars from historically-marginalized groups still today.

Postdocs from historically-marginalized groups and international postdocs face increased structural and implicit barriers including: lack of inclusion, reduced resources, implicit bias, and loss of community, while often managing increased familial commitments and additional financial responsibilities. Examining and acting on these power imbalances is key to creating a more inclusive and safe environment. Cohorts are a proven way to improve recruitment and retention of postdocs and other staff from diverse backgrounds.

Existing NIH policies, programs, or resources

NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. The NIH should expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.

To increase equity, NIH should provide NIH-funded postdocs with moving allowances. Moving costs can be especially cost-prohibitive for researchers from low socioeconomic backgrounds, those with increased familial commitments and internationals.

NIH should require all postdocs receive employee-level benefits (including affordable healthcare for dependents) as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.

Proven or promising external resources or approaches

The NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library Cohorts (e.g. for postdocs of color) are effective for recruitment and retention.

Response 2591

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellowships are an opportunity to gain new or additional research training in pursuit of an academic or industry career after receiving an advanced degree (PhD, MD or equivalent). In my field, postdoctoral fellowships are required to obtain a tenure-track job at a major research institution with 2-years unofficially viewed as a 'minimum' required time for a 'successful postdoc'. For me, my postdoctoral fellowship has provided me the opportunity to gain new clinical research skills while also developing basic and preclinical research skills for the first time while also receiving career and professional development. In my view, postdoctoral fellowships should provide structured opportunities to gain experience establishing independence, running a lab and experience mentoring with adequate resources, support and protected time to write grants, manuscripts which are required for promotion in addition to research tasks. Postdoctoral fellows are NOT research assistants, technicians or a graduate student and should not be treated as such with respect to responsibilities, treatment, or compensation. Training should be specific, obtainable and efficient relative to the individual's career goals without excessive unnecessary training because postdoctoral fellowships should only be viewed as a 'stepping stone' to independence and an individual's career goal rather than synonymous with a second PhD (in terms of duration, expectations).

Fundamental issues and challenges

- COMPENSATION and inflexible rules around compensation! Low pay not consummate with an advanced degree/ experience, does not take into consideration regional cost-of-living, annual cost-of-living increases, family expenses (cost of daycare, etc), whether institutions provide retirement or not. I currently receive less than 1% raise each year despite inflation being >8% in my region. Prior to NIH minimums being increased, my raise last year was about $200 for the entire year which essentially goes to taxes. The NIH won't allow postdocs to be supplemented from federal sources, which is the majority of our funding. ~50% of research assistants without advanced degrees and less research experience than myself make more money than I do, receive more time-off and are eligible for university retirement matching which is incredibly frustrating after getting a PhD. I live in [redacted for anonymity] a region that was expensive before the pandemic but has risen dramatically. I am lucky because my family is well-off and they were willing to let me finance my mortgage through them and pro-rate my mortgage in 2019 when I bought my house to have my mortgage + utilities be 45% of my take-home pay. I am a single-income household with no dependents. Despite my mortgage staying the same since 2019, my mortgage + utilities is now ~60% of my take-home pay because of inflation that has risen exponentially compared with NIH compensation. I have had to dip into savings (which I thankfully have) to make ends meet when I've had unexpected medical bills or high energy bills.
- Increasing length/duration of postdoctoral fellowships but limited (3-years) of support
- No forgiveness/leeway for delays in training and progress due to the pandemic. Because of regional differences in COVID shut-down/delays, the NIH would rather ignore the pandemic happened than provide bridge funding/extensions of fellowships.

Existing NIH policies, programs, or resources

- Increase NRSA salaries
- Develop an additional NRSA (F) or K mechanism to provide bridge funding after the pandemic for people who have had delays due to the pandemic. For example, I was just starting my fellowship at the start of the pandemic. My NRSA clock started because I receive a T32 however, I wasn't allowed to do research for 13 months because my university suspended research due to the pandemic. I do interventional clinical trials in humans that range between 3-6 months in duration that are complemented by preclinical studies. While there was forgiveness initially for current F32 and K-awardees, there is no grace, support or acknowledgement of these delays now. My F32 runs out in June 2023, even though a portion of my NRSA time was spent with research being suspended. I have had a successful postdoc but even with a lot of hard work, it's impossible to make up for 13 months of research suspension in a 3-year postdoc. I have a K01 under review but I had to get creative because my studies were ongoing but I had to submit something because my funding ends soon.
- Decrease time-to-award. The time from submission to review, review to council, council to funding is almost a year now. This is a problem for 1-2 year awards.
- Increase $$ for daycare assistance
- Require institutions contribute to retirement

Proven or promising external resources or approaches

No response

Response 2592

Perspectives on the postdoc roles and responsibilities

A postdoc works a dual role in a give and take relationship. Postdocs receive training and an environment to conducive to their development as independent researchers from their mentors. In return, postdocs have a duty to their mentor to support ongoing research of their mentor in addition to pursuing their own professional goals.

Fundamental issues and challenges

I believe that the lazy response is to say that postdocs are worked too hard and do not receive adequate compensation for their work. I'm conflicted. As someone who would benefit financially from that changing, it is tempting to give that answer; however, I think that improving postdoc compensation would be like putting a bandage on necrotic tissue. The academic research enterprise is saturated. Entering into a postdoc comes with a promise of training to support an eventual faculty position. It is a career stage with a lot of responsibility and low compensation, but the promise of a long and rewarding career as an academic scientist (in the form of a PI) makes it worth it. Many PIs only keep labs afloat by keeping several trainees (grads and postdocs). If a PI trains more than one academia-aspiring postdoc in their career, they have contributed to saturation of the employee market for independent faculty. For most PIs, their career number is much higher than 2 trained postdocs hoping for a faculty position. One solution is to expand independent faculty positions, but this will only create further competition for already highly competitive funding. With this option off the table, you now have postdocs being asked to work low paying, high demand jobs with no real promise of a faculty position once they finish. No one should be surprised when they go ahead and take the high paying industry job right out of grad school rather than working 5 tough years just to end up there anyways. The only solution I see is to invest in higher paying, career staff scientist opportunities at universities. It will make non-faculty academic research careers more attractive, make PIs less dependent on postdocs, and make academic research more productive in the long term.

Existing NIH policies, programs, or resources

Create funding programs to support staff scientists in established, PI-led labs. This will support an academic alternative to faculty positions for postdoctoral trainees that is a balance of stable employment and a respectable wage. Whatever ends up being done, postdocs need to know that there is a stable career path waiting for them when they finish training.

Proven or promising external resources or approaches

No response

Response 2593

Perspectives on the postdoc roles and responsibilities

In my lab postdoc researchers are given a unique training opportunity to work with top scientists in the field to learn how to execute rigorous experiments, interpret results with integrity, ask unique questions and be part of team science. During their time in the lab they have one on one conversations with lab colleagues and participate as lead authors or collaborators on manuscripts, a subset of which are high impact. In my lab they travel to meetings to present their work. They learn about job opportunities in the field and it is my job to help them achieve their long term career goals. They are paid well compare to people coming out of college with a bachelors degree in science who struggle to find a job. They have the chance to meet with scientists throughout NIH in a variety of ways, develop out of institute collaborations, and meet with other trainees.

Fundamental issues and challenges

The most problematic issue NIH is the work ethic associated with the culture. PhD postdocs here don't feel a sense of urgency to be the best, learn the most, present the most compelling ideas, etc. They often don't want to travel to meetings, are reluctant to participate in lab meetings, and they talk more about

vacations than science. They often want to "work from home" and don't value the community atmosphere of team science and sharing ideas. Reasons for not attending journal clubs include things like "getting my tires rotated," or "getting my lawn finally mowed." Many postdocs are just as happy to have someone else "be first" to address some fascinating aspect of their project if it means they don't have to work a weekend or stay beyond 5:01 pm. The culture does not push them. Finally, they are hierarchical and credit obsessed. They don't want to help another person in the lab unless, as multiple postdocs have told me, "I get full credit." Indeed, I've had them tell me they have been told by NIH leadership that they should not have to participate in anything where they won't be a first author. They are told they should do the work for their fist author papers and nothing else matters. Finally, having a family as a postdoc represents extra challenges. But I find that group of postdocs is the hardest working and most focused. They have the greatest sense of urgency and best time management skills. We should value those trainees more and offer them the support they need.

Existing NIH policies, programs, or resources

To help get postdocs interested in academic research career pathways you could stop telling them over and over (and over) that it does not matter what they do and academic research careers are not that important, they are always hard, and not for most people. You could send them information on academic career opportunities. You send information everything else but that. You never have successful academicians from outside NIH come and talk to them about how great it is to be in charge of your scientific destiny. You have the clinical people meet with Lasker Award winners, but not the average run of the mill Ph.D. You also undermine the Principal Investigators by constantly asking Postdocs to provide information on things they don't like about their PI. Talk to me as well. I can tell you why they are unhappy about lab meeting--it is because it is at 10 am and they don't want to be here that early. But you don't hear that part.

You also create an atmosphere where it is increasingly hard to offer constructive criticism of their work. I was told not to be critical of post doc experiments at lab meeting, lest it make them feel bad. Science is a critical field. It is what we do to achieve excellence and rigor. I have to tell them when an experiment proves nothing.

Finally, I'd say if you want to improve one thing for postdocs--have classes where you teach basic writing skills. At least half of US born postdocs can't express themselves scientifically. I spend a huge amount of my time rewriting their papers before submission.

Proven or promising external resources or approaches

Go talk to Universities where being a postdoc depends on funding (most universities) and you will find trainees with a far greater sense of urgency and curiosity. See what makes those trainees tick, and succeed. You will find their rewards are attached to their achievements. We give postdocs 5 years of funding and make it nearly impossible to get them out early if they are not producing. They get raises every year no matter what they achieve. We send them on travel (if they want it), regardless of whether they have a paper published. Why would one work hard? Seriously, why would you?

Response 2594

Perspectives on the postdoc roles and responsibilities

One's experience as a postdoc should be, ideally, something combined with training from graduate school that, together, no one else has done. This should also be a time where writing (grants, manuscripts) and presentation style is developed.

Fundamental issues and challenges

Limited number of tenure track positions available. Why spend five or more years chasing something that, at the best of times, is highly unlikely for success. Postdoc fellows must navigate complicated taxes law unaided (by design from Universities) and may be paid less. Many institutions, if not all, lack a backstop for postdocs that work for someone who is racist, unfair, or unfit to be managing people.

Existing NIH policies, programs, or resources

Higher pay and funding across the board. Shift money back from indirect costs, if need be. Some Universities, such as Yale, are corporations (their words); treat them as such.

Proven or promising external resources or approaches

No response

Response 2595

Perspectives on the postdoc roles and responsibilities

The postdoc position is a temporary position with largely undefined goals that widely varies across labs and institutions. Ideally, I would view the postdoc as an opportunity to gain additional technical and non-technical skills that benefit my professional progression in academia, industry, and government. I believe it is an important time to gain experience in developing an independent research plan, establish grant writing practices, and gain mentoring skills. Altruistically, I envision the postdoc position akin to an apprenticeship where the focus is on 'shadowing' mentors to best develop yourself as an individual researcher. Unfortunately, I currently feel the position is more so seen as a second graduate degree with a stronger emphasis on scientific production.

Fundamental issues and challenges

Career outcomes and tangible benefits of pursuing a postdoc are often misunderstood. There is a lack of actionable information and transparent data to make informed career choices before and during their postdoc periods, including increased awareness of career options (e.g., academia, industry, government). The NPA's 2023 Postdoctoral Barriers to Success report shows postdocs are paying a significant opportunity cost for limited faculty positions and 86.6% are impacted by job security concerns. Moreover, there is unsatisfactory access to exploring additional career opportunities that vary between institutions due to inequitable resource allocation.

Compensation is a continual source of consternation and anxiety for myself and these sentiments are almost universally shared across other postdocs I have spoken with. While I commend the NIH for setting minimum salaries, this amount is often set as the default postdoc salary even in regions with higher cost of living or can be entirely disregarded by universities and departments. At the [redacted for anonymity], there has been a move from administrators to change the status of postdocs so that we are paid hourly in order to avoid state-mandated raises in minimum salaries starting in 2024. I believe these administrative maneuvers undermine the value of postdocs that reduce retention and quality of life for postdocs.

Existing NIH policies, programs, or resources

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such

postdoc as an employee. (Other implications, such as tax, do not stem from NIH.) Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible. NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.

Many PIs lack formal training in mentoring and personnel management. Likewise, many postdocs lack understanding of how to succeed as mentees. To address this gap, NIH should institute substantial, reportable grant requirements for

mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding, similar to those provided under NIH mentored training programs. Such training should be offered to non-PI's acting as postdoc mentors.

Postdocs need to develop essential skills for their career transition, whether teaching and grant writing for an academic career or program management and public engagement for careers outside of academia. NIH should mandate that all

NIH-funded postdocs develop an IDP and that PIs support and aid in submission of documentation.

Proven or promising external resources or approaches

Currently, institutions and NIH IC's each develop their own professional development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In an increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources.

I am appreciative of the NIH's efforts to advance and improve postdoc training and the desire to collect our experiences and visions for future postdoctoral training in the biomedical sciences.

Response 2596

Perspectives on the postdoc roles and responsibilities

As postdoctoral fellows, our responsibilities extend far beyond conducting research, analyzing data, and maintaining collaborations for our PIs. We play a vital role in ensuring the success of our labs and university by taking on multiple additional responsibilities. In addition to writing research papers and postdoctoral fellowships, we work alongside our PIs to secure funding through grant writing, contributing to the significant financial and reputational success of our institution. We also serve as peer reviewers for our colleagues and collaborate with journals to ensure the quality of published research.

We serve as mentors to a wide range of individuals, including undergraduate and graduate students, as well as research technicians. We take pride in teaching essential research techniques, analysis methods, and current literature, all of which are critical to the success of future scientists. Our work as postdoctoral researchers is multifaceted and integral to the success of our academic communities.

In addition to the indispensable roles highlighted above, we often find ourselves responsible for managing the lab and fulfilling various administrative duties. These tasks include organizing, stocking, ordering, and maintaining equipment—all of which are crucial for the success of our research. However, these additional responsibilities cannot be accommodated within a typical 9-5 work schedule. As a result, we frequently have to extend our already-packed schedules to ensure that our research is not compromised. In fact, 100% of our colleagues report working on weekends. Furthermore, a staggering 80% of us work up to 60 hours per week, and more than 10% work up to 80 hours per week. It is important to note that these hours far exceed the average workweek, which can lead to burnout and jeopardize the quality of our research.

Fundamental issues and challenges

While we view our work as a calling, this should not come at the cost of our standard of living or our well-being. There is no common policy for postdoc contracts, which allows some PIs to pay their postdocs below NIH salaries. It is distressing that firing a postdoc does not require a justification as in the case of a laboratory technician.

Our career should enable us to achieve personal goals (owning a car, buying a home, and starting a family). However, more than 75% of our colleagues cannot save money, almost 90% cannot afford to start a family, and 50% report that their financial situation impedes their access to medical consultations/interventions. Less than 8% of us own a home, and almost half of the postdoctoral fellows surveyed rely on a significant other or family to maintain their current standard of living. In short, we are undervalued, underpaid, and feeling the strain. While 75% of [redacted for anonymity] postdoctoral fellows initially sought a career in academia before starting their postdoctoral fellowship, this number has dropped to less than 40% due to the current financial situation.

Despite the significant contributions that postdoctoral fellows make, [redacted for anonymity] payscale is inadequate, starting at only $56,484, which is supposedly in line with the FY 2023 NIH minimum. However, [redacted for anonymity] not only pays below this base salary for some postdoctoral fellows, but it also fails to provide experience-based yearly raises and/or fails to implement the NIH-mandated yearly increase for more than 90% of its postdoctoral fellows.

Regardless, this number does not account for the high cost of living in [redacted for anonymity], which is approximately 20% higher than the national average. Furthermore, the median household income for [redacted for anonymity] is $65,781 and $67,521 for the US as a whole, which is on average ~20% higher than that of [redacted for anonymity] starting salary.

Existing NIH policies, programs, or resources

At [redacted for anonymity], roughly 60% of our postdocs are international postdocs who in addition to dealing with the issues mentioned above have to deal with costs associated with retaining their immigration status averaging $3,131. In addition, international postdocs often struggle to be as efficient as native speakers in publication writing and grant writing. Very often, postdocs do not have support from their PIs to start their own independent research, which will allow them to be competitive for transitional funding such as K99/R00 or career development awards in such a short period after graduation. Furthermore, since the data generated by the postdocs are often included in their PI's grants, the postdocs are not seen as independent candidates who will establish a novel research program from their PIs. Significantly, many of the transitional funding opportunities are not available to international postdocs due to their immigration status.

In addition, postdocs are often discouraged from applying for R01 grants because postdocs do not have physical lab space where they can carry out their independent research. Commonly, the postdocs are encouraged to apply for the R21 mechanism which is not well suitable for young investigators, or the R35 mechanism which is restricted to several institutes but not all NIH institutes have R35 MIRA funds.

To summarize, the current funding mechanisms (K99R00) are highly competitive and postdocs with mediocre support of their PI will never be awarded a K99R00 grant, postdocs struggle to start independent research when their tasks are associated with their employment. There is a need for adjustment in the eligibility of certain mechanisms for international postdocs that are not currently eligible for NIH postdoctoral fellowships.

Proven or promising external resources or approaches

Until recently, there was no postdoc association at [redacted for anonymity]. Thanks to the size of the university, only about 30 postdocs are employed at our institution. Most of the postdocs do not know that resources are available to them. The new postdoctoral association we have established is aiming to change that including helping other postdocs to navigate the available funding opportunities. While starting the association at [redacted for anonymity], we highly appreciate efforts from National Postdoc Association.

Response 2597

Perspectives on the postdoc roles and responsibilities

It is a training position meant to make us ready for the next stage of career. In simple terms that it the main purpose.

Fundamental issues and challenges

Quality of life is fairly low overall. Over worked, stressed because of this. Less money than peers of similar education that didn't do a postdoc. Or that did a postdoc in a more affordable location. Bethesda area is very expensive to live. We do not make enough money to successfully save up for things like a house, or retirement. We are not counted as real employees for some reason—compare this to MD fellows who are for some reason (and make more money). Starting salary for PhD in Pharma entry level is over 100K + benefits + bonuses. It is criminal NIH pays starting fellows so little money. We have no voice or say. Very little vacation days (and combined with sick). No performance bonuses is very disappointing. The general attitude of PI culture is toxic.

Existing NIH policies, programs, or resources

Give us unions. We want to be treated as real employees rather than temporary underpaid people. The entire academia structure of labs publishing at the NIH depends on postdocs. So then if we are the key to NIH success pay us like we are key. Give us performance bonuses then. Give us better working conditions. The FDA has more strict work environment rules such as hours worked. Give us the same. The FDA pays higher, give us the same. Post docs in different institutes shouldn't be given higher salary than those in less funded ones.

Train us for industry better. Allow us to more easily travel and visit companies. Travel to conference that is industry based is frowned upon. I was denied going to industry conference because it would be too expensive coming out of our budget and it is "inappropriate" to send me somewhere just to learn about potential jobs and the field. Then how am I to ever learn about industry if I cannot travel to participate in the industry conferences and workplaces? PIs not understanding of industry. The NIH being proactive in helping us get a career outside academia is a sham. I would never come here again if I had the choice. I would never do a postdoc if I could go back. Because it is all fake. There is no real support here.

Proven or promising external resources or approaches

How about not having us work in crumbling buildings with no heat all winter and no AC all summer? Stop being such a terrible place to work. Holes in the ceiling. Holes in the flooring. Last updated before I was born. It is absolutely terrible working conditions compared to university setting. Some buildings are nice. But some post docs work in absolutely terrible working conditions.

More resources for us to be able to job shadow and learn about careers. Why does it have to come from my PIs budget for me to learn about a type of job? NIH should cover all these expenses for us to learn not the PI.

Better more fair pay. I have a PhD and I'm making the same money someone with a BS makes teaching high school biology class. Ridiculous. Pay us what MDs are making as fellows at least. Pay us equally across all institues. Give us bonuses for performance.

More vacation days and don't combine it with sick days. Better working culture as far as hours and expectations go. Train the PIs better in workplace civility and make them learn they are King of their lab. It doesn't feel like a nice culture to work in. I would absolutely leave any workplace that had this type of culture.

Give us real employment status. Real benefits. This is crazy how we are temporary workers. Paid on a 1099G which makes taxes also terrible.

Build a modern research facility the US is supposed to have as the premiere research facility.

Response 2598

Perspectives on the postdoc roles and responsibilities

As a transition period

Fundamental issues and challenges

We are not paid enough.

Existing NIH policies, programs, or resources

Increase pay. yes you have increased it this year but it is not enough to support a family and we have our phds

Proven or promising external resources or approaches

Increase pay, we have our doctorates

Response 2599

Perspectives on the postdoc roles and responsibilities

Postdocs are critical to the mission of NIH and academic institutions. Postdocs conduct much of the research at NIH and at universities. They sometimes mentor and train postbacs, summer students, undergrads, and graduate students. These are amongst the most highly trained professionals in the country, are passionate about their work, and are proud of their contributions to the advancement of science in the united states.

Fundamental issues and challenges

Despite being some of the most highly trained individuals in the country (Ph.D. or MD being a minimum qualification requirement), and their contributions to the advancement of research in the country, Postdocs

are amongst the most inadequately compensated group of professionals. The starting salary of a postdoc based on the NIH standard is $56,484 (2023-2024). This is well below the living wage of the cities in which postdocs live and work. Compounding with the post-pandemic inflation has put most postdocs in untenable financial situations. Rising costs of living in the DMV area (a standard 1bd apartment costs 2000USD on average to rent) and other university towns, as well as other expenses, make it difficult for postdocs to maintain basic standards of living. The problem gets worse for those with children, as they struggle to afford childcare, and many defer having children for financial reasons. These are individuals in their early to mid-thirties having to defer having children at a period in their life where their fertility window is fast closing. Additionally, postdocs are not paid wages at the NIH and this presents a financial opportunity cost that deprives all of them of critical savings and pension contributions. Historically, none of these factors have been so severe as this post-pandemic period. Combined, they produce high burdens, leading to talent loss to the industry.

Existing NIH policies, programs, or resources

Postdocs need to be paid living wages (not stipends) for their contributions. Also, the NIH should provide childcare support for postdocs.

Proven or promising external resources or approaches

All of the problems I have listed above are well-known. They have recently been recognized with pay raises by some universities across the country, and also in articles published in Nature (https://www.nature.com/articles/d41586-023-00332-6), (https://www.nature.com/articles/s41587-023-01656-4) and Science (https://www.science.org/content/article/postdocs-need-raises-who-will-foot-bill). Princeton and MIT have committed to raising starting postdoc salaries to $65k annually (which is a good start). The NIH can follow their lead and raise postdoc starting wages (not stipends) to $75k annually with full pension contributions.

Response 2600

Perspectives on the postdoc roles and responsibilities

A postdoc position is intended to be a specialized training period, while working towards independence.

- Postdocs are usually intent on entering different positions after a defined period of time unlike permanent staff. Establishing clear expectations at the offer of appointment for both postdocs and their PI's regarding their role and how it differs from staff scientists will alleviate misunderstandings.
- The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities. This will assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.
- NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.
- Postdocs should work in an environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth.
- Postdocs should have protected time and funds to attend at least one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network.

Fundamental issues and challenges

- The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas with defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step. Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit.
- Per the NPA's 2023 Postdoctoral Barriers to Success report, more than 90% of postdocs are negatively affected by the lack of clarity in transitioning to next positions. More than ever, postdocs are paying a significant opportunity cost for limited faculty positions and 86.6% are impacted by job security concerns. Additionally, 'disenchantment with academia' is trickling down from overburdened faculty, making these positions less desirable to early career researchers. Career outcomes and tangible benefits of pursuing a postdoc are often misunderstood. NIH should provide early career scientists with actionable information and transparent data to make informed career choices before and during their postdoc periods, including increased awareness of career options (e.g., academia, industry, government.
- Postdocs also often cite high instances of isolation and poor mental health. NIH should hold institutions accountable for fostering inclusive and supportive training environments (to decrease discrimination and harassment and enhance mental health and wellbeing support.

Existing NIH policies, programs, or resources

- Increase staff scientist opportunities.Postdocs' difficulties to remain in academia due to limited faculty positions contributes to dissatisfaction. To retain top research talent, NIH should create or expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining continuity of lab knowledge, providing additional career options for postdocs, while providing clear differentiation between these positions and postdocs.
- Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. (Other implications, such as tax, do not stem from NIH.) Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible.
- Many PIs lack formal training in mentoring and personnel management. Likewise, many postdocs lack understanding of how to succeed as mentees. To address this gap, NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding, similar to those provided under NIH mentored training programs. Such training should be offered to non-PI's acting as postdoc mentors.
- NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. The NIH should expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.

Proven or promising external resources or approaches

- Resources provided by the National Postdoctoral Association (NPA) and Graduate Career Consortium (GCC), and AAMC/GREAT Group
- Center for Improvement of Mentored Experience (CIMER) Mentor Training
- NASEM report from 2017: The Next Generation of Biomedical and Behavioral Science Researchers
- Career/professional development resources provided by NIH OITE
- Currently, institutions and NIH IC's each develop their own professional development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In an increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources.
- NIH should work closely with institutions that host postdocs and NPA on an ongoing basis to consult on institutional policy adjustments and tool development that are needed to complement public policy change. The NPA could utilize its convening power in this role.

Response 2601

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as an opportunity to receive further training and develop my independence as a scientist, in preparation for the next stage of my career. I feel that the average time of a postdoc position should be shorter than it currently is, but at the same time the current demands of the field require it to be a long position. Postdoc should be a time to build whatever skills and professional network is needed for your next job. Ideally you would have opportunities to expand your technical skills, learn management skills, and have opportunities to attend and present work at professional conferences or meetings.

Fundamental issues and challenges

We are not paid enough. There is no way around this; the NIH needs to increase the limit for modular budgets in R01 funding, and correspondingly postdoc salary must increase. Academia will never be able to compete with industry-grade salaries, but when I look at friends who have left academia for work in industry or nonprofits, I often wonder if I am just stupid for staying in a position where I am so underpaid and overworked. To add to this, the faculty job market feels very bleak, with few opportunities to secure a position and even more pressure and demands on your time waiting for you even if you are successful. It does not feel sustainable. These are also the primary factors driving women and URMs as a group to leave academia.

Existing NIH policies, programs, or resources

It would be valuable for the NIH to provide more opportunities for funding for staff scientist positions at departments or within labs. This is a career option for many scientists that want to continue working at the bench, in an academic setting, but do not want the pressure of running their own lab. However, currently few institutions have funding for these positions outside of the NIH itself. As science continues to become more interdisciplinary and moves towards a team-based approach rather than an individual PI model, this type of position can serve as a valuable resource for a department or team of PIs.

Proven or promising external resources or approaches

I have been impressed by the Society for Neuroscience's Neuroscience Scholar Program—this provides some funding for travel and professional development, but it's most important feature may be the structured mentorship aspect that places URM students in contact with faculty members at other institutions. It can be difficult for trainees to identify mentors outside of their own PI, but having other perspectives on professional development, research practices, etc, as well as building out one's professional network, is really valuable. https://www.sfn.org/initiatives/diversity-initiatives/neuroscience-scholars-program

I don’t know if this falls under the NIH’s purview, but it would also be very valuable to have some legal protections for international postdocs that are relying on a visa to remain in the U.S. Many international postdocs may choose to stay in labs where the PI is demanding, hostile, or even sexually inappropriate, for fear of losing their visa and uprooting their entire life. More protection to stay and search for another postdoc position would decrease the penalty for leaving a difficult work environment.

Response 2602

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

A key issue for success in biomedical postdoctoral fellowships is a lack of computer science and biostatistical skills. Far too fellows are equipped to analyze complex data and navigate multi-level data structures. Fellows working with omics data or data from administrative systems (e.g. U.S. health care databases, UK Biobank) need these skills to succeed in today’s working environment. This largely reflects a lack of support for developing these skills on the job through coursework, collaborations with quantitative scientists, and access to well-curated banks of previously-developed code.

The biomedical research environment often feels surprisingly low-tech, with only a weak conceptual grasp about the underlying quantitative nature of research. This has resulted in “technical debt” in the field. See news stories about Southwest if you need to know why this is important!

Technological and computational skills in biomedical sciences need to be improved generally, but it is especially important for our junior scientists.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2603

Perspectives on the postdoc roles and responsibilities

Academic postdoctoral fellowships are positions where individuals who have completed their doctorate can round out their experience, wrap up projects from graduate school, work on and complete new projects (particularly using new methods, populations, etc.), and complete requirements for licensure or other accreditations.

Fundamental issues and challenges

Quite frankly, postdoctoral positions do not compensate individuals adequately who have 22+ years of school and completed a doctoral degree. These positions require individuals to work nearly 24/7, and pay less per hour (even when only considering it a 40-hour-per-week commitment) than bus drivers in some cities, which they absolutely deserve (https://chicagotransit.taleo.net/careersection/ex/jobdetail.ftl?job=22000029&tz=GMT-05%3A00&tzname=America%2FChicago, $29/hr starting hourly rate). The postdoc pay is not a living wage by today’s standards, and it must be at least 1.5 times the rate it currently is to recruit and retain talented doctors in academia. PhDs typically have more years of training than medical students, who have residency pays that are ~1.5+ times what we make. There is no reason for postdoctoral scholars should continue going into debt and not be able to grow savings.

Further, the average time for postdoctoral positions is increasing substantially to be competitive for the very few tenure-track academic appointments that open up.

Existing NIH policies, programs, or resources

Programs and resources that allow under-represented individuals to join academic societies for free or cheap in order to be aware of the same resources and opportunities that those who are more privileged have.

Proven or promising external resources or approaches

N/A. Focus on increasing salaries to a wage that is comparable to the extensive training and hours postdoctoral fellows have achieved.

Response 2604

Perspectives on the postdoc roles and responsibilities

A highly trained scholar that needs to learn a couple of things more before becoming a faculty member

Therefore between the roles and responsibilities comes mentor students (undergrad and grad), direct an independent project, learn to write grants, perform budgets, etc. While at the same time getting technical skills required to pursue her/his own research

Fundamental issues and challenges

The lack of long term security of the job. There is not way to be sure that one will be able to land a faculty position after a postdoc. After a postdoctoral training the need to move across the country (with family, without support group)to find a job in academia.

The low pay (specifically for postdocs with family)

Existing NIH policies, programs, or resources

Better monetary compensation, some type of financial support for daycare expenses

More train and retain positions (right now there is a little tabu about staying in the same institution in which one was postdoc)

Better benefits

Proven or promising external resources or approaches

No response

Response 2605

Perspectives on the postdoc roles and responsibilities

Independent and thoughtful Researcher, who should give valuable inputs and ideas too instead of following the project goal and orders from PI ONLY.

Fundamental issues and challenges

1) Complexity of processing DS2019 or table works for immigrant Scientists
2) Complex salary structures like different ununified salary structure by different institutions and project funding sources
3) Hike is too low
4) Main issue is very low salary compared to industry so people choose to join in industry rather than in postdoc research.

Existing NIH policies, programs, or resources

1) Increase the salary at least 20% to meet the gravity of post doctoral research with industry and to prevent brain drain to industry.
2) Should offer a minimum Relocation charges on joining new labs or changing them.
3) Salary should be unified and the range should not be absurd like from $47000/year—$55000/year to stop human resource exploitation in some cases.

Proven or promising external resources or approaches

No response

Response 2606

Perspectives on the postdoc roles and responsibilities

Opportunity to more independently explore biological questions while taking on a greater leadership role.

Fundamental issues and challenges

Lack of pay makes it extremely difficult to work in expensive cities.

Existing NIH policies, programs, or resources

Increase salaries for training grants and fellowships.

Proven or promising external resources or approaches

Improving pay would improve job satisfaction.

Response 2607

Perspectives on the postdoc roles and responsibilities

- I perceive a postdoctoral position as a trainee, rather than an employee. I see it as a mentored position where an early-stage researcher is gaining additional skills that will help them land a faculty position. I also don't think anyone does a postdoc unless their goal is to eventually become faculty (or they are at least considering it).
- The postdoc appears as the scientific equivalent of a medical residency, i.e., relatively low pay training position for individuals with doctorate degrees.
- It is not always clear whether a postdoc position is perceived as career advancement or more as treading water until a more permanent position is made available

Fundamental issues and challenges

- Low salary
  a) Pay does not align with level of training, experience, and expectation of work
  b) Postdocs are a stage in their lives with many financial responsibilities, with a strong desire to "settle down" , purchase home, and start a family
  c) After 4+ years of school it would be preferable to jump into a position that starts off with a bit better pay
  d) Underpaid positions all the way up to higher faculty levels versus a much more lucrative career path outside of academia
  e) People who come from economically disadvantaged backgrounds may find it hard to commit to a postdoc position when you would likely be compensated less than your peers without advanced degrees
- Relationships with mentors:
  a) Fear that a post doc is at the mercy of their advisor and that the experience can be very hit or miss depending on that relationship
- Reduced desire to pursue a tenure-track faculty position
  a) Perception that advancement in academia is increasingly competitive with far less tenure-track faculty positions available than candidates
  b) Less interest in driving own research/aims; more interest in coming up with research aims as a team.
  c) More interest in applied research versus academic research
- Postdoc is not necessary to be competitive in desired career space
  a) Increased awareness of job options outside academia
  b) Increased visibility of biotech and pharma positions available for recent graduates

Existing NIH policies, programs, or resources

- Increase pay/salary support for all NIH supported postdoctoral fellow
- Enhance benefits for NIH supported postdocs (i.e. child-care, flexible work schedules)
- Increase support for professional develop of NIH supported postdocs to help them as they apply/interview for faculty positions and for postdocs who want to pursue a career outside academic.

Proven or promising external resources or approaches

No response

Response 2608

Perspectives on the postdoc roles and responsibilities

Historically, a postdoctoral position has been framed as a training position. However, in my experience, a postdoc position has become much more of a staff/employee position in its roles and responsibilities. Most postdocs do not enjoy full creative and intellectual freedom, and these positions are often used as the main labor source, along with graduate students, in executing the research goals of a PI. The lack of staff scientist positions in academia has shifted those responsibilities and roles onto postdocs and students. However, compensation and benefits have not evolved along with this and still reflect that of a trainee (low salary, no access to institutional retirement benefits, limited or unclear access vacation/sick/parental leave, etc.).

Fundamental issues and challenges

Low compensation and benefits, and the high prevalence of bullying and harassment by PIs, are the main factors limiting quality of life for postdocs in the current academic climate. Most institutions match their compensation scales to the NIH pay scales for postdocs, even if they are not directly funded by fellowships and thus, few PIs are able to increase these compensation levels even if extra funds are available. Postdocs are also beholden to PIs for letters or recommendation, visas, research funds, etc. which increases opportunities for experiencing bullying and harassment in the workplace as there are few institutional checkpoints or accessibility points for administrators to be involved in postdocs' experience/career training/trajectory.

Existing NIH policies, programs, or resources

NIH pay scales must be increased and must allow for more flexibility in increasing salaries on an institutional level. NIH training fellowships should be allowed to be combined with other types of government and non-governmental fellowships and grants to facilitate this. NIH should also provide more training and mentoring guidance for PIs to learn about team management, communication, navigating difficult conversations and situations, and professional norms. These should be mandated courses to receive federal funding. Further, allegations of bullying and harassment need to be taken seriously by the NIH and there need to be real consequences on funding for PIs that display these types of behaviors. Without real consequences, PIs will continue to exploit postdocs for their professional benefit.

Proven or promising external resources or approaches

Increasing efforts for postdoctoral recruitment without improving workplace quality of life, compensation and benefits would be unethical and an inefficient use of resources. We cannot in good faith bring more postdocs into an environment that does not support them, and in some cases, exploits them. NIH must decide whether it intends for postdocs to be a short-term training position (and if so, invest in better mentoring training for its PIs and more transition grants to facilitate postdocs moving on to permanent careers more quickly) or for it to a be a staff/employee position that is more long-term and that matches the current pivotal role postdocs serve in the scientific enterprise (and if so, invest in increased compensation and benefits and long-term job security). Postdocs can serve both roles at once.

Response 2609

Perspectives on the postdoc roles and responsibilities

Postdoc training is an essential step for me to transition my role from a student to a researcher in the future, no matter in academia or industry. From this training, I can learn how to mentor and how to apply for high-level grants, and how to lead my projects.

Fundamental issues and challenges

The salary is tooooo low for postdocs, especially when the postdocs are living in Boston or New York. We cannot live a dignified life, but share everything with one or several roommates and mice. When someone ask us to hang out to a restaurant, it's not easy to say "yes", because we have to check if we have enough money to go through this month. Please Please raise the salary for postdocs.

Existing NIH policies, programs, or resources

Raise the salary, please!! Many institutes still obey your salary rules even in Boston, a high-living city.

Proven or promising external resources or approaches

Please enhance the inspection of postdoc living quality including the salary and mental health. It's not easy living on only $3000 (after tax and insurance, etc.) per month in Boston.

Response 2610

Perspectives on the postdoc roles and responsibilities

An academic postdoc position is taken by individuals that have obtained a Ph.D. but want to gain more technical, intellectual, and administrative experience in the field of their interest. In current times, most postdocs positions are undertaken with an assumption that they will be a transitionary position. With the training and experience during their postdoc, individuals will be able to transition to more stable, better paying, more meaningful roles. The post doc training is therefore a preparatory phase where individuals get trained not just on techniques and science but should also be prepared for the current job environment.

Fundamental issues and challenges

Rather than being a transitionary and training position, postdoc positions have come to mean cheap labor for the institutions and PIs. Postdocs are some of the brightest, highly educated, and most hard-working individuals of the society. Low pay, unregulated hours, minimal training, and no career progression paths make this a very unattractive career move for such people. Most PIs are only focused on their own grants and sustainability without providing postdocs with the tools, training, experience, and career progression paths. Since many American students are already aware of these shortcomings, they do not join the postdoctoral programs in as many numbers. To overcome this limitation, overseas Ph.Ds. are often hired. While these overseas candidates are attracted by the science, they still must face the same fundamental problems described previously. The fact that they are bound by visa limitations makes the situation very exploitative for these people. While the lure of science and better pay was initially quite attractive for this group of people, but in course of time they have become aware of the shortcomings. It is therefore going to be increasingly difficult to attract overseas talent.

Existing NIH policies, programs, or resources

Extramural program should be modified with penalties and rewards for post doc support. Examples are:

1. Restrict post doc to 4 years. Individuals wanting to continue must be promoted.
2. Grant applications must evaluate PIs for their mentorship record. If a postdoc joins another postdoc after 3 to 4 years and does not progress to other career paths points should be deducted. Every postdoc that progresses to better positions in industry or academics should get extra points. This puts the onus of development on the PI.
3. Similar to the above point, institutions should also be evaluated.
4. Explicit requirements for postdocs to work for 8 hours a day. Employers must track and provide these details in progress reports. Consistent overwork should trigger penalties on grant applications.
5. If one individual cannot finish the tasks, then more people should be hired.
6. Institutions must adopt policies that ensure career development for postdocs. Institutions with poor record should not get NIH money.
7. Fundamental issue is commercialization of academic research. Tenureless faculty have little time or concern for the careers and development of postdocs as they are caught in a fight for survival. Reforms that give more stability to faculty positions are needed. Safe and stable faculty support the development of their postdocs.
8. Grants must have well defined allocation for salary and raises. Expense reports must be scrutinized. Grants for institutions and PIs that fail to provide benefits to postdocs should be frozen.
9. Funding pipeline to fund more stable positions.
10. Separate grants could support higher level positions.
11. Eligibility for bridge grants should be expanded to include foreign nationals. The timeline of eligibility to apply should be increased.
12. Overseas candidates must be hired on immigrant visas instead of non-immigrant visas like J1. This will enable faster stability and fair treatment.

Proven or promising external resources or approaches

No response

Response 2611

Perspectives on the postdoc roles and responsibilities

An academic postdoc is an early career researcher who plays important roles in both the research and teaching missions of a university: designing and performing experiments as well educating of graduate students. When I was a graduate student, I would turn to the postdocs in my lab with questions before anyone else, and they were invaluable in helping me analyze data and design experiments. Postdocs already possess advanced training and subject matter expertise. They can also provide feedback on training and career progression for earlier stage researchers like graduate students and undergraduates. A postdoctoral position is also a time to learn new techniques and enter new fields. Switching from the physical sciences to the life sciences, I viewed the postdoc as an opportunity to pursue research of my own design in a field other than where I received my training. I have had wonderful opportunities but also faced challenges. Though a postdoc should be a position where one can change fields and researchers are nominally encouraged to move away from their graduate work, I faced great difficulty obtaining funding: reviewers consistently said they did not believe I could perform the research because it was too far from my training. There seems to be a twofold responsibility: stated and unstated. The stated responsibility of a postdoc is to develop skills as a trainee to transition to an independent career. The unstated responsibility is to enter the laboratory ready to be productive from day one. There is a misalignment between the way we talk about a postdoc position and the empirical reality. Postdocs mostly seem to be used as a source of cheap and highly skilled labor.

Fundamental issues and challenges

Postdocs perform highly skilled labor for long hours with little compensation or career stability. By definition, a postdoc recently finished a PhD, and graduate training is widely known to be low paying. Some people have difficulty meeting basic needs in graduate school and are promised that the short term suffering will be paid off with long term gains. When a postdoc offers continued low wages, instability due to short term contracts, and no ability to plan for the future (e.g. matched contributions to retirement accounts), that career path is relatively unattractive. This is especially true since postdocs are at a time in life where they may be seeking stability such as planning for retirement, paying off student loans, beginning a family, or caring for aging parents. Furthermore, the experience of postdocs can widely vary depending on the specific institution and lab one joins and potential for toxic work environments is high. A majority of postdocs for every year (except one) since 1991 have been international—the draw for postdoctoral employment is simply not as strong for US citizens and permanent residents. This has been the case for nearly my entire life. Even if someone does pursue a postdoc, there is high difficulty with retention. Funding rates have not kept pace with inflation, so compensation is severely lacking. Funding has gotten more competitive, pushing out potential postdocs who would be willing to continue on the academic career path even with the above listed challenges. Postdocs receive little institutional support. As an example, someone who began a postdoc a few months before the pandemic like I did received no extension on timeline for a K99 grant, even though lab work was disrupted for well over a year. Postdocs simply are not respected, so people choose to work where they are respected.

Existing NIH policies, programs, or resources

Pay more. Expand funding opportunities to be available to international researchers. Create long term staff scientist positions for researchers who want to stay at the bench performing experiments. Student loan forgiveness up to a certain dollar amount for every year of work as a postdoc. Matched contributions to retirement accounts for postdocs as a mandatory benefit for employers to provide as a condition for receiving funding. Dependent health care costs covered for postdoctoral researchers. Access to affordable childcare, both near one's place of work and at conferences. Pay more. Pay more. Pay more. Mentorship training for PIs (and postdocs too!).

Academic career paths are lengthening. It is increasingly common for researchers to complete a postbac fellowship or work as an academic research technician for a year or more before applying to graduate school. This provides an opportunity for pairing early career researchers with postdocs to give them an opportunity to hone their mentorship skills and work to develop the expertise needed to be lab leaders one day. But this must be coupled with a recognition of the reality of the lengthening career pathways. If a common academic career pathway becomes working as a research technician for two years followed by graduate school for 5(+) years, followed by a postdoc of 5(+) years (e.g. 1st year apply for an receive an F32 then apply for and receive a K99/R00), researchers will by design be in their mid-30s at the earliest when they transition to an independent career. In any other industry, workers would be recognized and respected as working professionals by that time. We need to alter the perception that a postdoc is simply 'transitional', which incentivizes institutions to not care for the researchers in the long term. Incentives need to be aligned to support the humans doing the work.

Proven or promising external resources or approaches

Mentorship training for PIs can help improve the experience for postdocs.

Opportunities for postdocs to mentor early career researchers in a formal way that enables their receiving recognition for that work. As a graduate student, I received a great deal of mentorship from postdocs in informal settings but not in any way that they would receive credit for. As a postdoc, I have been fortunate enough to work with a postbac fellow for two years through a formal mentorship program. I have been able to help mentor her with career progression and guide her in experimental design and execution. Scaling opportunities for postdocs to provide mentorship would be a great opportunity (see ChEM-H/IMA Postbac Fellowship in Target Discovery at Stanford).

Required tracking and public reporting of postdoc career progression and outcomes for universities receiving NIH funding.

Increase pay for postdocs, and normalize salary to cost of living in local area where postdocs work.

Streamlining visa process for international researchers.

Affordable dependent health care options and affordable and accessible childcare options for postdocs.

Reach out yearly to trainees in the labs of funded PIs to get feedback on mentorship experience and utilization of that information in further funding decisions.

Removing the idea of a postdoc as a 'transitional' role and recognition of the value provided by non-tenure track PhD holding academic researchers.

Recognition of work beyond the laboratory in funding decisions for postdocs (e.g. DEI work, science communication, outreach, university service, teaching).

Provide funding opportunities for postdocs to build community at their institutions and within their disciplines.

Provide relocation funds for postdocs to enable them to transition to their new roles without going into debt (e.g. as a line item on a PI grant for when they hire a postdoc).

Provide funding opportunities for non-tenure track PhD holding academic researchers as a stable career option.

Response 2612

Perspectives on the postdoc roles and responsibilities

During the postdoc I am observing and learning from my mentor about scientific research planning and project management, as well as understanding clinical studies, funding opportunities and developing important skills in appropriate scientific validation and grant writing. The postdoctoral training has enabled me to network and collaborate with researches from our group but also from other institutions that work in my field. It is a critical step into becoming an independent researcher and learn how to develop my own research projects.

Fundamental issues and challenges

The postdoctoral training is been extremely challenging for me and my family, specially considering the financial burden. I have two small children, one of them still in daycare, and the cost of childcare alone corresponds to more than 60% of my net salary. We also pay US$3700/mo rent to live in a fairly small two bedroom apartment, so we are barely making it every month. My husband is very supportive of my choice of pursuing an academic career, but it certainly imposes extra pressure on him to provide for us since my salary is not even close to the cost of living in Massachussets. We could certainly have a more comfortable and financially stable life, but this would require that I change paths to industry and give up an academic career in medical robotics.

Existing NIH policies, programs, or resources

I'm not considered to be an Early Stage Investigator, since I have finished my PhD in 2022. However, during this 11 year-period after my degree, I followed a lecturer-oriented academic path in Brazil (my home country) before deciding to switch back to research. Just when I started, I had to deal with 2 maternity leaves followed by the restrictions of the covid pandemic while taking care of two toddlers, which puts me in a position of a somewhat unexperienced researcher (hence, my current postdoc position). I understand that I haven't followed the standard career path, but I also know that I'm not alone. I also understand that my unconventional career path gives me different perspective and a different skill set that can add to the research enterprise, but it also makes it more challenging to become an independent researcher when I have to compete against already established researchers. It would be great if NIH programs could include more opportunities to those with unconventional career paths.

Proven or promising external resources or approaches

No response

Response 2613

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions should be the last step to a career position. Professional development is crucial. I had 2 one-year long postdocs. The first, at a USDA funded facility I obtained through ORISE/ORAU. I provided me the opportunity to plan and run an entire animal study on my own under the management of my PI, which gave me a lot of confidence and was a valuable experience.

The 2nd position was the exact opposite and turned out to be nothing more than a lab tech position in a poorly managed lab. My only accomplishment was genotyping (in a lab that had been unable to successfully genotype several of their animal colonies for almost a year). No professional development of any kind. The PI's bad management prevented him from retaining qualified staff. 3 people quit within my first 60 days. Conditions were poor and there was no access to HR because I worked at [redacted for anonymity] considered separate from the University. No handbook for employees, no access to HR. Department staff stood in for HR even with confidential medical forms and other normally protected employee information, providing no confidentiality. It was like working in a developing country. There was also coercion to falsify data (I was asked on multiple occasions to create a "fake" western blots). I did not comply, but that made the work environment openly hostile. So not only was there no training, I felt that continuing to work for this PI would endanger my reputation for scientific integrity and I elected to quit after one year. Until postdocs have a direct voice, abuses of this kind will continue. NIH needs to check up on funding recipients because the universities won't do it.

Fundamental issues and challenges

For my 2nd postdoctoral experience, I'd say lack of best practices in HR resources at the university, lack of scientific integrity of some scientists (without any way to report the behavior or submit feedback) and total lack of management skills of the PI were key factors in limiting retention and quality of life. There is no quality of life when you work in a hostile work environment and the boss is literally "above the law". My PI actually told me if I wanted to speak to other professors outside his lab, I had to ask him first and have him screen my questions to these professors. I am an adult US citizen and do not need to submit to such requests, yet I have him on tape telling me I was not allowed to speak to other professors. He often appeared unhinged and made threats as well, picking out names from my CV to threaten me. Freedom from coercion and abuse should be fundamental to any job. I don't think any of the science that is produced from such work environments can be counted on, as most of the staff who generate the data are abused and scared and just want to survive. Luckily, the mismanagement was such that I never even got to start a real study. The few "fake" western blots I made were very poorly executed and have watermarks, so if I ever see them published I can call the journal to report the fraud.

Existing NIH policies, programs, or resources

ORISE is a step in the right direction. If it weren't for COVID and my PI needing to retire unexpectedly, my first ORISE postdoc would have been all I needed. For less ideal positions: NIH funding for PI's that includes salary for postdoctoral staff should be contingent on a plan for professional development for those positions. If there will be no first author publications, there has to be something else to make this "training position" worth it. First author publications were an impossibility for my last position. A plan B for professional development for all postdoctoral staff could include training in core facilities used by the PI, training in other labs, writing and teaching opportunities, and networking. A minimum of hours/week could be devoted to such opportunities. Postdocs could then submit feedback on the topic of professional development as a way to review the PI's compliance. If the PI could not provide professional development opportunities, then the NIH could provide external resources for the postdoc, like ORISE provided to me during my postdoc at USDA (automatic membership in the NPA and other remote resources). This would help retention staff even in difficult situations (albeit not in the case of abuse). Apart from the abuse, I may have stayed at my last postdoc even as a lab tech if there had been on-site or remote programs available to me. My situation was unique in that I chose not to work for such a loser, but there are many labs that might benefit from retaining their staff by providing a Plan B during tough times. If it's really supposed to be a training position, ENSURE THERE IS SOME TRAINING AND ALLOW THE POSTDOC TO GIVE FEEDBACK TO MAKE SURE THE TRAINING IS BEING OFFERED.

Proven or promising external resources or approaches

ALLOW POSTDOCS WHO WORK IN POSITIONS FUNDED WITH NIH MONEY TO GIVE DIRECT FEEDBACK. I wonder why this is not already a policy. The only people who really know what is going on in NIH funded labs are the staff members and they don't have any voice. There is no boss. The universities are not resources—with no actual HR department? And it is not in the best interest of the academic institutions to oversee labor relations in these labs, as the universities themselves benefit from the funding (so their incentive is not to discipline abusive PI's) NIH HAS TO START LISTENING TO THE STAFF. I had no one except [redacted for anonymity] Title 9 office. However, they could not help me with any HR problems and even admitted to me that HR was not doing their job in my case. If this PI is getting paid by NIH, NIH should be checking up on him as the university is not doing it. Also, the policy that only university-

disciplined researchers are reported to NIH for civil rights violations is not going to work. The university protects bad actors because of the money they bring in. Protected classes pay the taxes that fund the NIH and it is appalling that individuals in those very groups are being discriminated against openly. Check out the resources for staff of [redacted for anonymity] and you will see. They are investing zero $ in supporting postdocs and the NIH doesn't even know.

Response 2614

Perspectives on the postdoc roles and responsibilities

Postdocs are supposed to be prepared for leading research projects given from the PI at the bench. Specific Aims, budget, and instructions about the framework of data acquisition strategy come from the PI, and postdocs will generate primary data with other lab support members. Postdocs are responsible for providing timely reports and feedbacks to the PI, including troubles and negative data.

Fundamental issues and challenges

Postdocs are not currently paid well, and their financial future has no assurance. Their diligent efforts may not be appreciated by reviewers of their papers or grants —quite often unfairly. Whether they can secure good faculty job or industrial positions depends on not only their good training but heavily on simple luck. Whenever this issue is raised, we hear arguments AGAINST helping postdocs based on a historical view that science and scientific positions are always competitive. However, aspiring scientists do not have any obligation to gamble their living on this uncertain game. As young people exchange information far more efficiently today than just a decade ago, they are making choice in favor of avoiding such risky games even at the time of selecting graduate school education.

Existing NIH policies, programs, or resources

We are currently hearing a lot about increase in postdocs' basal salary. However, NIH funding never increases to sufficiently cover such raise. As a straightforward consequence, we must fire postdocs when the laboratory faces financial difficulties. Even when two full-modular budget R01 are active, the amount of these funds do not fully support even one postdoc's salary + benefit + reasonable research expenses. The only responsible way to manage the lab is to support only a small number of affordable postdocs whereas other, well-talented PhD's will be out of job security.

Proven or promising external resources or approaches

Postdoc applicants want to know whether their job will be secured in the next ~5 years. Unless NIH makes a very significant change in supporting postdocs' salary and benefit, their number in the US ecosystem will decrease. Because we have spent a lot of effort to increase and maintain the PhD level of the US graduate education, recruiting postdocs from foreign countries may not work well. Besides, if current PhD students in the US see a move that Government encourages employment of foreign-educated PhDs as postdocs, the US-educated PhD candidates will lose their motivation and go away from the system.

Creating a set-aside budget request for postdocs might be a solution. Namely, in a 10-module R01 application, up to 2 modules ($50k) are permitted as ADDITIONAL budget request set-aside if the application includes recruitment/employment for postdocs, and these additional modules MUST NOT be used for any other purposes than payment for postdoc salary/benefit. Similar budgetary rules should be created for non-modular grant applications. It is important to establish rigorous rules to separate these postdoc-supporting budget elements from supervisors or institutions, who might create any local rules to take money out of these set-aside funds.

Response 2615

Perspectives on the postdoc roles and responsibilities

postdocs are very stressed and unsupported and have no future at all that is visible. At hospitals like mine, [redacted for anonymity], where its a 100% soft money position, we need the hospital to non-discriminatively provide support for F & A costs that our IDCs bring. Unfortunately at [redacted for anonymity] it is not done and women faculty in particular are ruthlessly retaliated against if they complain. If we are people of color also, we are freely called aggressive for complaining. We are told our careers will not go further and indeed those retaliations relentlessly follow. They do not forgive dissenting opinions even if brought up nicely, in a group, or in desperation when things are falling apart for our

postdocs. Our postdocs see that and they have no hope. There is no respect from the administration for postdocs who have PhDs but their salaries are lower than admin at hospitals who dont. They are also kept lower by such strategies; our repeated attempts to raise salaries from grants WE get are killed by HR and in return we are haunted by retaliation with the way you asked for it was aggressive, misconduct etc. There is no policing. We had a discussion during covid where they wanted to stop salary raises for trainees, as they had for hospital administration and also us PIs, but all of us PIs stood firm against it, they fought back against us rather threateningly but had to back down because NIH had released a note to not affect postdoc salaries and because we PIs were united and ready to revolt.

Fundamental issues and challenges

There is no incentive to being a postdoc. There is no respect from administration. There is no future; too few academic jobs all of which want a K99 that is not possible for the institute to get IDCs. Industry and other options are very serious about quality of life, academia does not care about postdocs.

Existing NIH policies, programs, or resources

If NIH would survey both trainees and minority and female faculty annually, which hospitals would know of, then that would help as a deterrent to correct these actions. It will also prevent horrific harm to minority female faculty who raise complaints on behalf of their postdocs.

Proven or promising external resources or approaches

A path forward is necessary. A curriculum is needed. Some things that they can check off such as grant writing, alternative jobs, a time plan, and surveys so that they are heard annually.

We also pushed back against them trying to monitor postdocs at home for the amount of work put in, which is not needed at all. HRs do not seem to understand that they cannot override NIH policies. They also retaliate against minority female faculty like myself as we are marked after complaining in desperation when salary raises were not done for years or other trainee services delayed. If NIH would survey both trainees and minority and female faculty annually, which hospitals would know of, then that would help as a deterrent to correct these actions. It will also prevent horrific harm to minority female faculty who raise complaints on behalf of their postdocs.

Response 2616

Perspectives on the postdoc roles and responsibilities

Being able to apply knowledge earned in grad school. Transition to an independent scientist.

Fundamental issues and challenges

No financial stability. Almost all postdocs are 30+/—3 years old and breadwinners for the family. Not making ends meet despite having a doctorate with no guarantee of future is highly demoralizing. Also there’s subtle male dominance when it comes to decision making.

Existing NIH policies, programs, or resources

Offer salaries competing to industry (probably not possible in reality). Encourage collaborative projects. Adjust salaries based on city instead of making it the same nationwide.

Proven or promising external resources or approaches

Advertise non academic positions available for postdocs. Yearly Evaluation of PIs as a mentor would help in avoiding hostile environment. Evaluation of trainees to track progress.

Response 2617

Perspectives on the postdoc roles and responsibilities

Academic postdocs seed the next round of discoveries and set the trajectory for the future of biomedical research in the US and beyond. It is vital that we thoughtfully engage the next generation of researchers and shape them to think critically and to see the promise of a fulfilling academic research career.

Fundamental issues and challenges

The 'on-ramp' for a biomedical research career can be steep and tortuous. We need to create more opportunities for early career investigators and to make sure their mentors are adequately incentivized and supported to help them navigate the next stages of their careers.

Existing NIH policies, programs, or resources

Increasingly, we have seen a large group of biomedical trainees, particularly MD-post-docs, who want to engage in global health work. They are deeply committed to ideals of social justice and equity, and they are well-positioned engage diverse partnerships around the globe to tackle pressing global problems. There is substantial benefit to be gained domestically through these interactions, which, because they are in different contexts, often lead to innovative solutions that can shake up our status quo approaches to problem solving.

Proven or promising external resources or approaches

Providing child care, increasing salary cap, incentivizing mentors, and opening up training slots to non-US citizens for T32s —perhaps through 'twinning' with US citizen T32 trainees.

Response 2618

Perspectives on the postdoc roles and responsibilities

The postdoctoral positon feels like a way to continue paying highly educated scientists a fraction of their worth for as long as possible. Roles **and responsibilities** can vary greatly from institution to institution (and lab to lab within institutions). There appears to be little regulation/oversight. My institution treats post-docs as an offshoot of the graduate school—and have trouble maintaining even a single employee in a role meant to provide professional development and support. I think it can be useful to scientists who are looking to change their field of research; however, it has absolutely gone far beyond that original goal. I don't understand why a PhD isn't qualification enough to secure a position after graduation. Postdoctoral positions should not be an expectation after graduation.

Fundamental issues and challenges

My institution currently offers no paid parental leave to postdoctoral scholars. Paid parental leave is offered to full time employees and graduate students. As most postdoctoral fellows are in their prime child-bearing years (mid-twenties to mid-thirties), this feels like a huge oversight and a major disincentive for scholars who want to start families, particularly female scholars. Pay is also substantially lower than what many of us might expect to earn with a bachelor's degree + 5 years' experience. PhD-level scientists are eligible to begin working in industry without postdoctoral training,so why is it required (often for a period as much as 7 years) to attain a position in academia? Are we not getting appropriate training during our PhD? If so, why not implement some of that training rather than requiring a post-doc at a substantially lower rate of pay. There is little work-life balance and the overall "vibe" seems to be that we must work as hard as possible for as long as possible to get a position in academia—where we continue working ourselves well beyond a typical 40-hour work week. As a pregnant woman, I don't see a way for me to continue working in academia with a young family, certainly not anywhere on a tenure track. I don't know a single faculty member who has a top priority other than their job, and that makes me feel like I don't belong in academia.

Existing NIH policies, programs, or resources

I am not familiar enough with these resources to comment.

Proven or promising external resources or approaches

Improve pay. Guarantee parental leave (and other forms of leave). Promote work-life balance. Limit postdoc positions to 2 years, with a maximum of 2 post-docs per person (no more than 4 years of training post-PhD). Reduce the expectation that a post-doc is required after earning a PhD. Improve training during graduate work so that post-docs are not a de-facto requirement. Improve training of faculty mentors. Start mentorship programs where post-docs can interact with people who are not at their institution/are not in academia. Share resources with post-docs seeking to leave academia—we tend to get mentored towards the positions our advisors have and that is not always the best fit for each person.

Response 2619

Perspectives on the postdoc roles and responsibilities

The postdoctoral position allows the researcher to expand or gain new knowledge in an unknown field. Therefore, traditionally the postdoc position has been viewed as a training position. This is partly true today. The postdoctoral period takes on average 4-6 years of which only the first 2 years can be considered training, since two years are enough to get "trained" on the main concepts and technologies in a new laboratory. The rest of the time the researcher tries to be as productive as possible to compete in an already highly competitive academic environment or fulfill all requirements to become eligible for a green card and make his exit to the industry.

Fundamental issues and challenges

As mentioned above, the postdoctoral position is for most of its time not a training position. However, the benefits and the salary and the perspectives have the character of a training position. Most postdoctoral researchers are in their late 30s. Low payment and "being stuck" in a position make starting a family impossible. Especially women suffer under this a lot, since they are facing the dilemma between career or starting a family.

Existing NIH policies, programs, or resources

Salary of postdocs should be adjusted to the regional cost of living (e.g. Boston, NY and SF are more expensive then S. Carolina). After 2 max 3 years the postdoc training should end and the researcher should move to a more sustainable position.

Proven or promising external resources or approaches

Please urge the labs to recruit a smaller amount of postdocs but pay them better and treat them better. Also, the J1 visa for postdocs is a catastrophe and should be replaced by H1B which allows the researcher to visit their home country more often and foster collaborations world wide.

Response 2620

Perspectives on the postdoc roles and responsibilities

This is an opportunity to build collaborative skill sets in a mentored academic environment with access to resources for scientific investigation.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Great as is.

Proven or promising external resources or approaches

Provide a platform for funded postdocs to communicate directly with each other across extramural institutions. It will promote a sense of community—which is valuable to Millenials and Generation Z.

Response 2621

Perspectives on the postdoc roles and responsibilities

A postdoc position is intended to provide further training to a researcher with a PhD degree and prepare him/her for an independent academic career path. So a postdoc researcher is usually working under a PI to conduct research. During this process, he/she is expected to develop his/her own ideas and projects, which eventually lead to independence.

Fundamental issues and challenges

Postdocs usually work long hours, have little personal life, and get a very low stipend. More importantly, the chance of getting an independent academic position is very low, and most eventually go to industry or

other non-academic fields. But the postdoc experience is often worthless in non-academic fields. I wish I had known this earlier and never gone down this path.

Existing NIH policies, programs, or resources

The design of the postdoc position is problematic. It would be better if postdocs were treated as scientists as those in the industry but not trainees. As trainees, we should have clearer pathways leading to independent academic positions. In this way, all the hardship we are enduring would be defensible. However, the reality is not the case at all.

Proven or promising external resources or approaches

There might not be an easy way to solve this issue, considering the limited academic job openings. The situation may be improved if postdocs are treated as scientists, get good salaries, a better working environment, and more professional development support.

Response 2622

Perspectives on the postdoc roles and responsibilities

Higher training, professional position

Fundamental issues and challenges

Low pay, long work hours, poor work/life balance, lack of full independence, little respect.

Existing NIH policies, programs, or resources

Shorten the number of years for postdoc training to 3 after which a more professional/permanent position is offered.

Proven or promising external resources or approaches

No response

Response 2623

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary.

Existing NIH policies, programs, or resources

Salary.

Proven or promising external resources or approaches

Salaries of biomedical PhDs in any job position other than postdoctoral fellow.

Response 2624

Perspectives on the postdoc roles and responsibilities

I view it as a transitionary role following PhD and before gaining a full-time career position in academia or industry. As an international scholar who received a PhD in the US, it is also a more stable visa environment compared to the uncertainties of industry roles.

Fundamental issues and challenges

While postdoc fellowships by design were meant to be a transitionary role, it is no longer the real case. It is not uncommon to see 3 to 6 year postdocs, working to get enough publications and citations to be competitive in the academic market. As such, it is unfair to continue treating this role as a ‘stipendee’ role as if it is temporary, when postdocs are in practice a full time position.

Academic postdoc fellowships offer extremely low stipend salaries compared to salaries Bachelor's degree holders with 2-4 years research experience can obtain in an industry setting. The NIH-minimum suggested stipend is unfortunately the de facto stipend offered by most universities. This stipend is only livable wage in places with low cost of living. Postdoc trainees live on the edge of poverty in many prestigious universities, which inhibits recruitment of people with diverse socioeconomic background, affects retention of talented postdocs who are unable to sustain a comfortable living on low salaries, and overall reduces quality of life of these highly-trained scientists by making them require monetary support from other sources (personal funds, spouse, etc.) to maintain their position as an academic researcher. Especially with industry salaries on average being 2X or even 3X what is offered to NIH stipend-receiving postdocs, many academic career aspirants are forced to move to industry to have a better quality of life.

Existing NIH policies, programs, or resources

The NIH stipend scale needs to be revamped to a sliding percentage system that factors in cost of living of various locations and also the federal employee pay grade for people with equivalent education and experience in those locations. It needs to change the suggested minimum for postdocs in high cost of living places. This is a key policy to ensure low-income background researchers and diverse communities aren't excluded.

Proven or promising external resources or approaches

Competitive salaries, benefits, and 401k match with full-time industry scientists.

Response 2625

Perspectives on the postdoc roles and responsibilities

As Postdoc we are not only learning from the existing cutting-edge science, but also contributing to the development of new avenues of these.

Fundamental issues and challenges

Most fundamental challenges after pandemic became the financial issues where the less salary for a postdoc is concerning as the prices for daily life survival had gone upwards. And this is really challenging for the academic life in the cities like Boston.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2626

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

A number of opportunities for funding, position, career path are not open to non-U.S. citizen, even conducting research using certain facilities are not allowed to be opened to us. These challenges make non-U.S. citizens postdoc lost these opportunities to advance their research and spend relative more time and efforts to achieve similar career goals.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2627

Perspectives on the postdoc roles and responsibilities

Postdocs are a major workforce of the research enterprise because they are trained scientists who drive research projects forward, mentor and train junior scientists, and at our Institute, they are the first authors of most peer-reviewed publications. After successfully received a doctoral degree (Ph.D., M.D., or equivalent), a postdoctoral position is a temporary and time-limited period of mentored training to gain the experience to transition into an independent career of the postdoc's choice.

Fundamental issues and challenges

Salaries & Benefits: There are fewer Ph.Ds. applying for (recruitment) and staying in (retention) academic postdoctoral positions because they are going into employment positions with better salaries and benefits in other sectors, primarily industry.

- Academic institutions cannot compete with industry companies that offer higher salaries and better benefits.
- Postdoc salaries at academic institutions do not routinely consider inflation or the cost of living, especially in big cities (New York City, Boston, San Francisco, San Diego, and similar).
- Academic postdoc positions are lasting longer with low pay and poor benefits.
- Some postdocs do not have access to childcare services or support to care for family members which can negatively impact their research productivity, work-life balance, and mental health.

NIH Funding Mechanisms: Postdocs have limited opportunities to apply for funding based on the current eligibility criteria.

- Faculty have difficulty financially supporting postdocs because NIH postdoc salaries have increased over time, but R01 grant funding has remained relatively flat.
- There are limited opportunities for international postdocs to apply for funding, because many fellowship (F32 & T32) opportunities require citizenship.
- Eligibility for early career awards such as the K99/R00 are limited because postdocs must apply within 4 years, but time to a publication has increased making these candidates less competitive.

International Postdocs: International postdocs are in a vulnerable position because their visa status is directly linked to their faculty mentor. This can lead to unhealthy expectations where the international postdoc is in fear of being sent back to their home country if they do not meet all expectations of their faculty mentor.

Career Progression: Other than a faculty position, there is a lack of career development tracks within academia for Ph.Ds. who want to pursue independent research.

Existing NIH policies, programs, or resources

Salary & Benefits: Increase funding amounts to all mechanisms in support of academic institutions becoming more competitive with other employment sectors in postdoctoral salaries and benefits.

- Increase postdoc salaries in consideration of inflation and cost of living.
- Provide additional funds for fellowships and institutional training grants in support of childcare and family services so that academic institutions can be more competitive with industry companies.

NIH Funding Mechanisms:

1. Create new funding mechanisms and
2. expand eligibility criteria for existing funding mechanisms to allow for a larger percentage of postdocs to pursue independent funding of their research projects.

- Expand time limits (e.g. 4 years of postdoc research experience) on early career awards.
- Create separate funding mechanisms beyond K99/R00 for postdocs to transition into more independent positions between postdoc and faculty, such as a Staff Scientist or Research Assistant Professor.
- Emphasize importance of career development for postdocs within all funding mechanisms (e.g., institutional training grants and research grants).
- Provide more travel awards to ensure postdocs can attend conferences.
- Remove citizenship requirement for fellowships (e.g., F32) and institutional training grants (e.g., T32) funding mechanisms so that international postdocs are eligible to apply.

Career Progression: Emphasize the importance of career development for postdocs through existing and new NIH programs.

- Track faculty/institutional use of Individual Development Plans (IDPs) to emphasize importance of reaching research milestones and of career development/advancement for postdocs.
- Create new funding mechanisms for institutions to develop career tracks for PhDs beyond postdoc towards research independence, i.e. between postdoc and faculty, such as a Staff Scientist or Research Assistant Professor.

Proven or promising external resources or approaches

Two strategies at our Institute that have proven success are:

1. Establishing a Postdoc Training Advisory Group for postdocs to directly provide their ideas, feedback, and input into shaping the postdoctoral training experience and advocating for their needs. Outcomes have included:
   a) Establishing a postdoc pay scale based on years of postdoc training experience,
   b) creating an-Institute wide Trainee Seminar Series, and
   c) rewarding faculty who demonstrate high-quality mentoring of their postdocs through a Mentor of the Year Award.
2. Recruiting talented postdocs through a Rising Stars Symposium mechanism which has:
   a) brought together the research and training communities at the Institute,
   b) supported diversity, equity, and inclusion efforts and raised awareness of the postdoctoral training experience at our Institute, and
   c) led to talented postdocs joining our Institute.

Response 2628

Perspectives on the postdoc roles and responsibilities

Postdocs are highly qualified professionals and usually an undervalued driving force behind the high quality research being produced and delivered in the US. However, they are often undervalued and face unique challenges due to their academic career stage and limited opportunities for continued academic positions. Postdocs are at a transition stage of becoming independent researchers, but still require mentorship and guidance. The quality of mentorship can vary greatly, with some postdocs being treated as "cheap labor." In addition, the temporary nature of the postdoc position, which is often dependent on external funding, adds to their stress as they constantly worry about their own financial stability. Postdocs are also burdened with financial and family-related stressors. The average age of obtaining an R01, a grant for independent research, continues to increase, making postdocs financially vulnerable.

International postdocs, who represent a significant portion of the postdoctoral workforce (47%), face unique challenges such as visa issues, cultural challenges, etc. A "bad mentor" can have disastrous consequences for an international postdoc, as their visa status may be jeopardized, affecting their career trajectory. To address these challenges, postdocs should have access to a support network that includes academic, HR, financial, and legal experts who can provide support specific to their needs. However, many institutions do not have this support. It is important to survey postdocs funded by organizations such as the NIH to assess the support they receive.

Postdocs have diverse roles and responsibilities, including conducting their own research, mentoring junior lab members, and assisting their mentor's projects. These challenges also present opportunities for professional growth. As postdocs have varied career goals, there is no one-size-fits-all solution to address their challenges. Therefore, it is crucial for funding agencies like the NIH to seek feedback from postdocs themselves on their challenges and how best to address them.

Fundamental issues and challenges

1. Salaries do not keep up with the rising cost of living, leading to financial difficulties for postdocs (arXiv (https://arxiv.org/pdf/2205.12892.pdf). Salaries should reflect the cost of living in the area where the research is being conducted.
2. Postdocs are the driving force behind research in academic labs and often work long hours, with little work-life balance. Institutions should implement policies to protect postdocs from exploitation due to overwork. Postdocs are often heavily dependent on their PIs for their future career prospects, including reference letters and opportunities for research, which can create a power imbalance.
3. Postdocs play a critical role in securing grant funding for universities, yet some institutions do not consider them as employees, resulting in limited access to benefits. The NIH should conduct surveys to understand the financial challenges faced by postdocs in terms of benefits and employee status in various universities.
4. Bullying in academia is also a pervasive issue (https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3850784), and institutions and funding agencies should provide support for addressing toxic workplaces. Adequate mechanisms should be in place to support postdoc victims of abuse and harassment in continuing their research while investigations are ongoing, including providing them with a safe environment.
5. Postdoc are often not equipped with the necessary skills to transition into independent career (administrative work, etc) and institutions should provide training opportunities in these areas to prepare postdocs for leadership roles.
6. There is a lack of non-tenure track academic positions (research scientists). The NIH should collaborate with entities like NASEM to research the feasibility and benefits of such career tracks to accommodate diverse career aspirations in academia.
7. International postdocs face unnecessary daily life challenges when only signed into short 1-year contracts. International postdocs that are currently funded should have a secured contract and visa status for the duration of their funding.

Existing NIH policies, programs, or resources

1. Expand the timeline for fund opportunities like the K99, which is a unique funding mechanism for which international postdocs are eligible.
2. Gradually transition postdocs into more independent roles, such as "senior scientists," before obtaining an academic appointment. This would allow postdocs to gain more experience and autonomy in their research, preparing them for future career steps.
3. Academic incentives and tenure rewards for PIs who provide good training, positive learning environments, and foster non-toxic workplaces and education are also important. This would promote healthy work environments and support the professional growth of postdocs.
4. Institutional support for health insurance, paid leave, and retirement plans is crucial for the well-being and financial security of postdocs. Expanding the R50 mechanism to support non-tenure track positions would also provide more stability and opportunities for career advancement.
5. Offering more funding opportunities that are accessible to international postdocs would promote diversity and inclusion in the postdoc community. Institutions should also allow certain expenses, such as childcare during conferences or funded fellowships, as allowable costs in postdoctoral fellowships to support postdocs with caregiving responsibilities.
6. Longer maternity leave with additional support from the laboratory to continue research during leave would also benefit postdocs who are starting families. It is important to consider postdocs as employees of the institution, providing them and their families with health and other benefits.
7. Creating more permanent staff scientist positions with competitive salaries would provide additional career options for postdocs and ECR.
8. Addressing tax issues related to child and dependent care credits for postdocs who do not have earned income would provide financial relief for those utilizing caregiving services while working. Universities should commit to developing and expanding offices for postdocs and early career investigators, providing specific support for professional development, mentoring, and mental health to address issues like burnout and depression.

Proven or promising external resources or approaches

These efforts should be a continuous process and in constant contribution with the institutions where these postdoctoral researchers are employed. To better inform the parts involved, the NIH could provide and collect templates for job satisfaction surveys, performance evaluations, newsletters informing about the recruitment process, etc.

The NIH should be in contact with successful postdoctoral offices who have found a way to support their postdoctoral community with career training programs, employee benefits and advocacy resources that address visa and employment issues, like misconduct and harassment. One example can be found at the University of Pennsylvania: https://research.upenn.edu/postdocs-and-students/welcome-postdocs/

Extra hands support, such as that provided by Harvard's Claflin Distinguished Scholar Award or the Doris Duke Fund to Retain Clinical Scientist, for postdoctoral scientists who are also caregivers can be pivotal in retaining scientists from underrepresented groups by maintaining research momentum during times of significant caregiver responsibilities.

Response 2629

Perspectives on the postdoc roles and responsibilities

I am transitioning fields from physical inorganic chemistry to biomaterials, and this postdoc position allows me to gain critical training and experience. I particularly value the support of the NRSA postdoctoral fellowship I currently have. I view my role as a mentor to the junior scientists in my lab, and a mentee to my current PI, where my focus is to learn, help people around me learn, and grow as a potential future leader in academia. However, I do find it challenging that the academic market is so difficult to find positions in, and that industry is more accessible and better paying. A huge percentage of my cohort and many labmates younger than me have left postdoc positions for industry, or didn't bother to find a postdoc. Partly because of that, I think a lot about how I could more easily obtain financial security with an industry position, i.e. supporting a family, having a retirement fund, and not worrying about applying

for grants all the time--and contrast that to the fact that I have less than $10,000 in retirement savings, would struggle to raise a child on my postdoc salary or deal with a major illness, and have no guarantee of securing an academic position. I believe that there isn't value in doing a postdoc unless you want to change fields in your job after, or if you want to be a professor. In those specific ways, I think postdocs can be a great opportunity and stepping stone to a more fulfilling career. For me, I think both apply, and I do really value the opportunity and freedom my postdoc has given me to grow intellectually and creatively, and I wouldn't change the fact that I went after one.

Fundamental issues and challenges

Because the postdoc position is a short-term one, when people are considering becoming and staying as a postdoc, they're primarily thinking about the next stage. Do they want do pursue academia or industry? I think in this time, more people are rethinking postdoc positions because of the difficulty of obtaining academic positions in desirable locations and the challenges associated with academia. And thus, if they are not as interested or able to get an academic position, they would either choose not to obtain a postdoc or choose to leave their postdoc early. I think it's a common viewpoint that the value of a postdoc intrinsically is rather low unless there's something specific about the research, the location of the postdoc, or the chance for employment afterward. Especially because many industry positions pay at least twice the typical postdoc salary, you're really taking a financial hit doing one, and it's hard to save for key life events like a having a wedding, buying a home, or having a child that would typically occur at the same time. Being a postdoc also means being uniquely vulnerable to your PI, as you need their recommendation and support to pursue a career in academia. I generally have a good relationship with mine, but there have been several instances that I have felt uncomfortable, and found it difficult to speak up to defend myself knowing that he welds such control over my career. More broadly, the pyramid-scheme-like nature of academia makes it dispiriting to think about future prospects. All of these factors are challenging and make it hard to continue as a postdoc.

Existing NIH policies, programs, or resources

When I became an NRSA NIH postdoctoral fellow, I forfeited my status as an employee of my university. As a result, I lost all the retirement benefits I had previously as a postdoc. In actuality, the value of those benefits came out to exactly the same amount as the increase in my NIH salary, meaning that the only difference was the title of my position. Additionally, it means that if I ever have an accident in the workplace, I will have difficulties navigating the process because I am not an official employee; I don't have documented vacation time as I did previously; and I have no specific people supporting me in the HR department who are familiar with all of the features of my fellowship. These factors all contribute to a poorer experience than I was anticipating, given the prestige of the fellowship. It would be really beneficial if the NIH could help support fellows in these gaps and in particular, pressure universities to maintain postdocs as employees. Cost of living adjustments to salaries would make a huge difference to fellows, as well as more support for non-traditional pathways.

Proven or promising external resources or approaches

No response

Response 2630

Perspectives on the postdoc roles and responsibilities

It means I have the ability to conduct research more independently with opportunities to apply for more grants. I used to view it as the best post PhD graduation option because I study a very niche area of biomedical research which isn't heavily represented in [redacted for anonymity], but at the end of my PhD and especially with the UC strike, the amount of abuse increased across campus and I'm not sure if it's worth it to endure PI abuse for a "chance" at getting a ladder rank position at a university, for HALF the pay of anyone else in industry

Fundamental issues and challenges

Getting paid half the salary of any equivalent PhD level position

There's no regulations preventing academic abuse, unlike in industry

There's no guarantee that taking a $50k salary in the most expensive state will lead to a research position

The level of grant awarding is so low how can any post docs really expect to be able to fund their research and supposed future lab?

We rely on the NIH as the major funder and guideline of biomedical research to actually protect people who want to improve humanity through research, please help us end the cycle of academic abuse that forces foreign nationals to be afraid of losing visa status, women to have lab meetings WHILE IN LABOR (which happened at [redacted for anonymity]) so that they can keep the students doing research to not lose grant status, and to force publish data (potentially mistaken data) because the labs weren't "productive enough" by publishing enough papers within a short amount of time

Existing NIH policies, programs, or resources

A lot of PIs are funded off federal grants, so PIs should have to treat students with the level of respect that is afforded federal employees or at least decent human respect, so if PIs are reported and found to be non adherent, they should be fined or dinged on current or future grant applications

Increased funding for either post docs or transition roles—only the F32 and K series grants are well known for those positions but why is it only those?

Published statistics on the number of postdocs who successfully transition to ladder rank academic positions, or any other academic level positions

Proven or promising external resources or approaches

No response

Response 2631

Perspectives on the postdoc roles and responsibilities

During doctoral studies, most students work on supervisor-provided research topics. While working on such topics they start developing their own research ideas and topics. After graduation, if the supervisor is not interested by such ideas or topics, the graduate may live with their ideas. Working on those ideas is one way of becoming an independent scientist. To do so, one need to find a postdoctoral position where their ideas are valued and they are given a chance of exploring their own path towards independence. Also, during doctoral program, most skills learned are match related to the topic on which one is working. To be an accomplished independent scientist, there is a set of soft and hard skills that one need to acquire. Postdoctoral position is a time to acquire such needed and desired skills. So, postdoctoral position for me means a time of transition between graduate student and independent scientist. It should not be considered as a trainee position as it is now, rather as an employment in early career stage. It should not be unstable, but give a way to a tenure position as scientist.

Fundamental issues and challenges

Postdoctoral candidates are not considered as employees, therefore they have limited benefits compared to employees. They are the lungs of the academic world, yet they are given limited paid leave time and less support for their families, which they often sacrifice for the sake of building an elusive career in academia. Most postdoctoral trainees are recruited to do the work of their PIs who, if the trainee fail to produce the results they expected, decide to let him/her go. The overall quality of life of postdoctoral trainees in academic research is below the average.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2632

Perspectives on the postdoc roles and responsibilities

Post-doctorate is the initial stage of scientific research work, and it is an important stage. A perfect scientific research platform is essential.

Fundamental issues and challenges

Compared with the expensive rental price in Boston, the postdoctoral salary may not be able to support their lives well.

Existing NIH policies, programs, or resources

Is it possible to provide postdoctoral fellows with relatively cheap rental housing resources?

Proven or promising external resources or approaches

Reduce unnecessary meetings that take up a significant amount of research time.

Response 2633

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Several current problems with postdoctoral positions come from lack of reward from the work as perceived by current trainees.

In my view this arises from several converging factors:

1. Postdoctoral training times have lengthened as PI biomedical research positions have been harder to obtain, and assistant professorships harder to obtain funding for.
2. In many fields, industry jobs have grown up, often with greater compensation than postdoc positions.
3. The generation of postdocs today faces serious societal stressors: soaring costs of housing, job insecurity, a warming planet, a nation sinking towards fascism, gun violence, and stripping of fundamental rights. All of this makes junior researchers want to obtain stable employment, not take on increasingly risky research positions. They are also less willing to sacrifice personal and family time for work.
4. Generational change that makes it harder to raise children as a postdoc. This is getting easier but still a problem.

Together, in my experience, these factors discourage students from taking postdoc positions. I have had a half-dozen conversations of this type with postdocs and junior faculty over the past few weeks alone.

Existing NIH policies, programs, or resources

- NIH should act to make grant funding for young PIs easier.
- Require applicant /institutions/ to commit to funding salaries of grant applicants and investigators. It is too easy for soft money positions to be created, which has dramatically increased the number of grant applicants. The stress on junior PIs is scaring postdocs away.
- ARPA-H has pulled money from NIH R01s to risky translational work that makes it harder for young PIs to obtain funding. This discourages postdoctoral training.
- Better child care and family support especially in two-career households—a standard situation for young PIs and one that is hard to manage as a postdoc.
- Better writing and presentation training. Top institutions have substantial resources for this, but many institutions do not. This sharpens the funnel of postdoctoral positions and career advancement.

Proven or promising external resources or approaches

Key approaches:

- Fund R01s at a greater level so junior PIs can again (as 20 years ago) fund small but stable laboratories with one or two R01s, and mentor postdocs without submitting 10 grants per year.
- Reduce the number of soft-money positions, asking institutions to fund their own faculty (for the same reason as above).
- Raise postdoc support systems: childcare, other household support, etc —see many tech companies which do (or used to) provide food and other services, to make postdoc positions more desirable and also let postdocs concentrate on science.
- Support RAs or postbacs for postdocs. This is common in pharma/industry postdocs and helps postdocs develop mentoring skills, trains young RAs/postbacs, and can also accelerate their own work.
- Support science infrastructure for postdocs. In the tech industry, production teams take experimental code written by researchers and make it robust. Animal support is better. Automated systems run assays. The absence of these resources in science makes science postdocs less attractive.

Response 2634

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2635

Perspectives on the postdoc roles and responsibilities

I view the academic postdoc as a time for learning how to apply the skills and scientific method gained during graduate school to new problems while building a independent research program. In other words, I see the postdoc as a transition from an independent researcher (able to conduct and collaborate on the experiments for a project without day-to-day guidance) to a PI who manages multiple research projects and lab members, while blanacing the administrative and research activities of the lab. It’s also a time to continue to build writing skills in terms of articles and grants, and expand on the tool kit of techniques or protocols of expertise.

Fundamental issues and challenges

The salary is the biggest challenge. Choosing a postdoc requires weighing the lab environment, the research area, the resources of the institution, the recognition of the lab, along with salaries, and the living environment. Some of the labs that are most likely to set a postdoc on the path of success are in cities with high cost-of-living. Until recently, I was paid based on the NIH minimum and while I was able to make it work, looking ahead I was unsure if I would be able to afford to continue living where I do with rent increases. Even with my recent increase in pay, I am still paying a substantial portion of my paycheck towards rent. I made a conscious effort when I started my postdoc to try to reduce expenses where I can to make it work, but I have friends who didn’t want to or couldn’t make those choices.

The other big challenge is that the support for postdocs and social experiences are not really as prominent at my institution as they were in graduate school. It can be hard to make time for meetings at the institutional level which seem heavily weighted towards postdocs with families or at a different campus. In part this is due to COVID, since I started during the pandemic, but since restrictions have lifted I’ve still

had a hard time to fit some of the in-person activities into my schedule and around experiments as I've also recognized I have to produce data to publish and set myself up for an academic career.

Existing NIH policies, programs, or resources

The timelines for some of the postdoctoral grants are difficult to meet if experiments take a long time, or the science requires multiple additional follow-ups to fully explain a phenomenon. I feel like postdocs are continuing to be asked to produce more and more high quality data in shorter time frames that are not always realistic with the experiments. It might also be nice to have more how-to resources for people to help understand all of the language and minutiae of the grant applications so they seem less intimidating to start. I think the NIH minimum salaries should be updated to reflect the years of experience in research that postdocs have gained through graduate school, or at least include guidelines for institutions in high cost-of-living areas.

Proven or promising external resources or approaches

No response

Response 2636

Perspectives on the postdoc roles and responsibilities

Academic postdocs are highly skilled, trained scientists seeking to build upon their graduate training to advance in their careers. While postdocs are responsible for day-to-day conduct of research, the position should be primarily viewed as a temporary and transitional career stage focused on mentored training and development. The expected timeframe of postdoctoral training is typically from 2 to 5 years but is highly dependent on the field and type of research, and career and training goals of the postdoctoral fellow, among other factors.

While it is often assumed that postdoctoral training is intended to prepare scientists for tenure-track faculty positions, only 1 in 4 postdocs will be in a tenure-track academic position after 5-6 years post-graduation (Denton et al., 2022). Postdoctoral training can provide an array of professional skills, such as grant writing, navigating academic publishing, experimental design, subject matter expertise, communication, and expansion of existing research skills, which find application in a range of professions in the academic, private, and government sectors. If given adequate mentorship and opportunities to develop their skills and independence, a postdoc should be well positioned to transition to a variety of careers.

Postdoctoral training is considerably less structured than Ph.D. education. The training a postdoc receives is almost exclusively through their mentor, and consequently the quality of training varies significantly. It is critical that postdoc programs offer ample opportunities for professional skill development. The assumption that postdocs are preparing to enter tenure-track faculty positions may discourage training opportunities that would benefit other career tracks. Moreover, even skills that are essential for faculty positions, such as mentoring, managing a budget, and teaching classes, may be overlooked. NIH should take steps to improve the breadth and consistency of skill training opportunities that postdocs receive.

Fundamental issues and challenges

Relative to comparable high-skill jobs in other sectors, the salary for academic postdocs is low. For many students finishing a Ph.D., this can make a postdoc impractical. A postdoc salary may not even cover basic living costs in more expensive cities, and leaves little to no room for retirement savings or student debt payments. Those from disadvantaged backgrounds are especially likely to struggle on a postdoc's salary, further exacerbating existing inequities at some of the most well-regarded academic institutions.

Many postdocs are in the early stages of starting families, which can further strain their limited financial resources. Furthermore, benefits available to postdocs vary significantly by state and institution, including parental leave and access to childcare, which are a critical concern for many postdocs. When added to other financial pressures such as student debt and moving costs, many who earn a Ph.D. may decide to seek a more stable career path.

A postdoctoral fellowship comes with an inherent degree of instability. The incentive for postdocs to accept the lower salary that comes with staying in academia is assumed to be an assurance of a stable and rewarding job afterward. However, the lack of structured training, minimal opportunities for career exploration, and the short duration of training grants and fellowships leave many with insufficient support.

Furthermore, postdocs are often employed on a one-year contract, so if their salary is not covered through a training grant, they may find their mentor is unable to support their position through the necessary duration. Postdoc attrition could be significantly reduced if there were a stronger assurance that after 2-3 years they will have acquired a breadth of transferrable skills that will prepare them for the career path of their choice.

Existing NIH policies, programs, or resources

NIH programs and policies should be refocused to improve professional skill training for postdocs, support a broad range of career trajectories, and improve access to essential resources to support the needs of a diverse and inclusive postdoc workforce.

Postdocs often have few opportunities to diversify their skillset. Outside of direct mentorship from an advisor, training is generally limited to the programs available at the postdoc's institution, if there are any. NIH should prioritize expanding career development and training opportunities available to postdocs. Skill development can be supported through creation of instructional materials, mentoring rubrics, workshops, or other similar mechanisms, and can be developed in partnership with third parties such as scientific societies.

NIH should develop clear standards and guidelines for postdoctoral training that reflect the range of careers for doctoral degree holders in the biomedical sciences. Postdocs often feel that they are expected to train for a tenure-track faculty position at a research-focused academic institution, even though there are far fewer such positions available than postdocs. Some may feel uncomfortable being open with their advisor about their career plans if their goals lie outside of academia or feel pressured to hide their career plans when writing a training plan for fellowship applications. An academic postdoc is a valid career step for a variety of jobs outside the tenure track, and NIH policies and programs should reflect that.

Several current NIH programs effectively address the requirements of postdoctoral training but could be expanded or adapted to broadly improve the postdoc experience. K99, K01, and K08 awards offer support for researchers and clinicians, respectively, a guided pathway with clear timelines and outcomes to achieve a career transition. Additionally, NIH loan repayment awards address a specific need of postdocs, improving quality of life and making training more accessible for those who are less financially secure.

Proven or promising external resources or approaches

The resources that academic postdocs rely on typically come from the institutions where they work—mostly universities and academic medical centers. These institutions are also responsible for providing benefits and salaries for postdocs. NIH should partner with universities to identify strategies to improve consistent benefits such as family care for postdocs, as well as to manage costs of living for more expensive geographic areas.

University postdoctoral associations often provide career training opportunities, facilitate networking, and sponsor mentorship programs. While these resources are valuable for postdocs, the associations are often run by postdocs and therefore subject to high leadership turnover. Some associations are able to provide high quality programs, but there is large variation among institutions.

Postdoctoral associations can benefit greatly when supported through institutional leadership and organizational structures. For example, the [redacted for anonymity] Postdoc Association ([redacted for anonymity]) is supported by the medical center's Postdoctoral Division (PDD), which was created to facilitate career training for postdocs within a more cohesive environment. The postdoc-run MGPA seeks to provide opportunities for career development, networking, and training through workshops and other events. The PDD assists in the organization of these activities, and provides further support through mentorship opportunities, career advising, and resources for personal health and family care. Because of the robust range of support provided, postdocs are given the resources they need to transition into the career of their choice.

The National Postdoctoral Association (NPA) also offers resources to support postdocs, in addition to their advocacy activities. NPA offers resources to support the development of institutional postdoctoral associations. NIH should seek to partner with NPA and institutional postdoctoral associations to broaden the impact of existing training and mentorship resources.

Response 2637

Perspectives on the postdoc roles and responsibilities

The postdoctoral experience is an opportunity to be mentored by a world-renowned scientist, prepare for one's future career in STEM, learn about the process of discovery, publication, and critical thinking, obtain leadership training and experience, and develop one's personal and career goals.

Fundamental issues and challenges

Postdoctoral stipends are typically low, benefits are minimal, and hours are long. The average age of a postdoctoral fellow is early to mid 30's, past the age when many people have already secured their first job, bought their first home, and had their first child. Many people in scientific careers delay these milestones for financial reasons, setting them behind their peers and putting them in the category of high risk for pregnancies. Because most postdocs do not have retirement benefits, many delay the initiation of their retirement savings until after their mid-30's, resulting in the loss of hundreds of thousands and even millions of dollars compared to those who initiated their retirement savings in their early 20's. Furthermore, some individuals who secure a tenure-track position after a successful postdoc will further delay having children and/or contributing to their retirement savings as they catch up on deferred student loan payments, saving to buy a home, and/or paying off debts that accumulated while they were in graduate school or in their postdoc.

In addition to the issues described above, the traditional path to becoming an academic scientist is not reasonable for individuals from lower socio-economic backgrounds who do not have family members who can contribute to the cost of their education and/or to their living expenses while they pursue full-time education and postdoctoral research. This disadvantage is especially true for young women with limited access to healthcare who become single mothers, the numbers of which will grow with abortion bans in many states. For these reasons, careers in academic research select for a population of people who come from high socio-economic backgrounds (often including parents who have higher education), have good access to healthcare, and have financial support from family. This population is the minority in the U.S. and are mostly white.

Existing NIH policies, programs, or resources

The NIH should set the example of an alternate path to obtaining a Ph.D. education and to becoming a Principal Investigator that eliminates full-time education and excludes post-doctoral training. This alternate path will open careers in academic research to individuals from lower socioeconomic backgrounds, first-generation college graduates, young single mothers, young men who pay child support, and individuals without financial support from family. It will also prevent individuals from having to defer student loan payments and from having to delay initiating retirement savings, having children, buying their first home, etc., and from accumulating more debt while pursing education and training. I accomplished all the above by pursuing my Ph.D. education part-time while working as a laboratory technician in the NIH. I was able to head my own lab in the NIH after completion of my Ph.D. which put me on track towards becoming a tenured Principal Investigator. This alternate path allowed me to have children, purchase my first home, pay my students loans, and initiate my retirement savings in my 20's, setting me far ahead of my peers on the traditional track. This alternate path should be encouraged in the NIH and used as an example for academia to do the same.

Proven or promising external resources or approaches

The NIH should offer funding (through a new grant mechanism) for very talented technicians with B.S. or M.S. degrees who have already published several research papers, presented at international conferences, and are seen as experts in the field to pay for their part-time Ph.D. education (classes and research). These individuals can take the alternate path to becoming a Principal Investigator described above.

Response 2638

Perspectives on the postdoc roles and responsibilities

Postdoctoral researchers have more independence than graduate students, leading more projects and progressing more quickly, with the prospect of eventually running their own labs.

Fundamental issues and challenges

Postdoctoral trainees are paid horribly; I will not consider working as a postdoc because of the salary, I feel like the only reasonable option is industry. To pay someone with a PhD ~60-70k is absolutely insane (also considering the hours >40 hrs a week/working on weekends), I would expect starting salary to be 90-100k minimum, which you can find in industry. To become a postdoc, you will be a student until you are 30 to obtain the PhD, already living on very low income. The job I take after this will have to allow me to afford basic life necessities and the ability to support a family, especially after surviving on barely livable PhD student wages for 5-7 years.

Existing NIH policies, programs, or resources

Pay livable wages

Proven or promising external resources or approaches

No response

Response 2639

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is a transitional role predominantly towards an academic tenure track position that is underpaid relative to staff scientist position in order to drive turnover.

Fundamental issues and challenges

Low pay relative to industry positions draws talent away. Administrative dual role of trainee and staff can further cut worker benefits. Some institutions have poor data collection efforts on incoming and outgoing postdocs that can be useful to detect or predict challenges facing their postdoc population.

Existing NIH policies, programs, or resources

Fellowship funding mechanism emphasizes that sponsor have extensive previous experience with training postdocs, which can disproportionately favor well-established sponsors, who are often composed of a less diverse population and who are uninformed on current career prospects facing postdocs. Program lack lower value grants that have a higher probability of award.

Proven or promising external resources or approaches

No response

Response 2640

Perspectives on the postdoc roles and responsibilities

My job as a postdoc should be to learn, grow, and pursue a line of scientific inquiry. A major goal should be to establish independence. I currently feel like an inconvenience/burden to my mentor. NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills. Postdocs should work in an environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth. It is hard to not think that I am exactly replicating my mentor, since I am offered almost no room for doing things outside their interests. It is common for me to propose an idea and be told no because someone else (early faculty) has been promised that slice of data. This has led me to pursue things that are not my interests, but are available, so I don't have to compete for access to data. Postdocs should have protected time and funds to attend at least one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network. Establishing clear expectations at the offer of appointment for both postdocs and their PI's regarding their role and how it differs from staff scientists will alleviate misunderstandings. Requiring postdoc and PI participation in formal performance reviews will better define, formalize, and evaluate factors of role, mentorship, and professional development, while differentiating postdocs from staff scientists. NIH should establish a minimum percentage of postdoc time to be devoted to service,

mentoring and professional development activities. The NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Fundamental issues and challenges

The biggest factor affecting my overall quality of life and my thoughts of leaving science is compensation. The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. And if you want to think about diversity, equity and inclusion. How are women supposed to have children, pay for child care, and be successful early career investigators on such a low salary? Postdocs from historically-marginalized groups face increased structural and implicit barriers including: lack of inclusion, reduced resources, implicit bias, and loss of community, while often managing increased familial commitments and additional financial responsibilities. Examining and acting on these power imbalances is key to creating a more inclusive and safe environment, particularly for women and mothers. My postdoc environment is unhealthy due to the focus on others' growth (PI, staff scientists, other early career faculty). The majority of my conversations with my PI center on how to handle data or make decisions about analyses, while conversations surrounding my development, career trajectory, and future are put off. I have not felt that I have room to grow and mistakes are handled in such a way as to make me feel long-term embarrassment, which makes me contemplate hiding future mistakes. I don't feel that I am treated as a person who has a PhD but rather as an accolade for my PI (they get to report that they mentor a postdoc). My opportunities are limited by the interests of staff scientists and early faculty and I am left to do what is "left-over" rather than was promised and what I want to do.

Existing NIH policies, programs, or resources

Postdocs need more money and better benefits. It can't be said strongly enough. The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high-cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas with defined cost-of-living levels. The NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit. NIH should require a percentage of indirects on all grants supporting postdocs provide postdoctoral offices with increased resources. Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, and provide funding to institutions to assist with these costs. NIH should expand its family-friendly policies, including paid parental leave and childcare subsidies. The NIH should expand its childcare subsidy program to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income. NIH should provide NIH-funded postdocs with moving allowances. NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding.

Proven or promising external resources or approaches

he NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library. Consolidate professional development resources. Currently, institutions and NIH IC's each develop their own professional development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In an increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by

increasing not only the availability and access of federally-funded research but also its community resources. Engage with key stakeholders. We encourage NIH to work closely with institutions that host postdocs and NPA on an ongoing basis to consult on institutional policy adjustments and tool development that are needed to complement public policy change. We sincerely thank NIH for the platform to share our vision for postdoctoral training in the biomedical sciences. We applaud NIH's policies and programs that have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps.

Response 2641

Perspectives on the postdoc roles and responsibilities

training the next generation of scientists; training in a timely manner to allow prime candidates to enter the scientific field as independent researchers earlier

Fundamental issues and challenges

quality mentoring

Existing NIH policies, programs, or resources

modify extension policies—limit the amount of time for postdoctoral training to 5 years.

stronger policy on who can serve as a mentor/supervisor and mentoring requirements (standard IDP for all NIH postdocs)

Proven or promising external resources or approaches

improve mentoring

Response 2642

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a transitioning job for a scientist who seeks to pursue a career in either academia or a higher-level industry sector. Individuals interested in a governmental sector would normally pursue their careers post-PhD. Hence, postdoctoral positions should be highly structured and project-orientated—to equally allow both advancements of science (in a lab), and the progress of an individual scientific career. Instead, postdocs are commonly considered cheap labor force, and their presence is subjected to the needs of a lab solely, without a clear plan for their own advancement.

Fundamental issues and challenges

Unreasonably low salaries for the individuals with the highest competences and academic credentials.

Existing NIH policies, programs, or resources

As an international postdoc who was trained outside of the US, I encounter multiple admin obstacles—such as non-US citizens being ineligible for the majority of grant applications.

Proven or promising external resources or approaches

1. Providing training for supervisors who recruit postdocs in their labs, in terms of dynamics and requirements of a postdoc position—i.e. defining and improving mentorship schemes
2. International postdocs who wish to stay in the US academia are encountering additional obstacles due to visa issues. The scheme of career-tracked positions enabling a smooth transition from being a postdoc to becoming a faculty should be empowered. Those positions are systematically lacking.

Response 2643

Perspectives on the postdoc roles and responsibilities

This is being submitted by [redacted for anonymity] comprising US postdocs, International postdocs, faculty advocates and the Director of the Office of Postdoctoral Education. At our institution, postdocs are

hired by individual faculty members and supported from their PI's current funding source(s). They are hired as Staff under category called "Research Fellow" if they are receiving salary paidby the individual PI. They are hired as "Fellow" or "Research Scholar" if they are supported by a stipend from a T32 or other training grant. Both categories are provided the same benefits as all other Staff, which includes health care insurance from the group plan, access to all other services offered to Staff hires. They are not invited to participate in junior faculty activities with the exception that they are eligible to compete for the "R and K grant writing" training program. In this sense, Postdocs are hired via the Human Resources office and are treated as staff members.

At the same time, the Graduate School supports the "Office of Postdoctoral Education", which is the source of professional development activities for Postdocs, provides faculty advocates for postdoc groups (20-30 people each), and guides and funds the Postdoc Association social activities. In this sense, the postdocs are provided training and career development support geared toward career advancement.

Fundamental issues and challenges

1. At our institution, the percentage of international postdocs is >= 50%. These postdocs fear that should their PI's abiilty to fund their position falter, or if they have a problem with their PI, that they will be forced to leave the country within a very short period of time. Our institution does not have any "bridge" funding for postdocs, and there is no organizational provision for re-assigning a postdoc into another lab (international or US) if the PI who hired them "does not work out".
2. Quality of Life: Our institution has fallen behind on many family-friendly policies for postdocs who are in the 30-something age group and may still be repaying their college loan debts. The "Family Leave Policy" allows both mother and father to receive leave, during which accumulated "BTO" (vacation and sick leave) cover their salary or else they can request FMLA (with no pay). The institution has a private day care on site, but the waiting list is very long and the cost is very great. These policies may reasonably apply to full time faculty workers who have been at the institution for enough time to accumulate carry-over BTO and sign up for the daycare center. However, this policy is not good for a postdoc who needs to find daycare immediately upon being hired into the position, or has no accumulated BTO to plan for a pregnancy. The postdoc job is a limited-time position, and so more flexible support needs to be provided.

Existing NIH policies, programs, or resources

1. Expand training grant numbers and capacity from all NIH institutes, and develop international training grants: The Training Grant umbrella provides a secure salary support because it is not limited to the PI's ability to pay. The Training Grant faculty is comprised of a close network of research advisors and faculty mentors rather than one single PI thereby allowing the trainee to move to a different lab under compelling circumstances. Finally, the Training Grant offers a program developed to enhance the training and education within the chosen disciplines and missions of the NIH institutes, and can direct the trainees into the next level grants (e.g. Ks and Rs).
2. Use the IRACDA model of the NIGMS to develop training grants that encourage professional development as part of the Postdoc's training. For IRACDA, it is 75% research and 25% teaching at a partner MSI-teaching mission institution. This model could be extended for those interested in industry to include 75% research and 25% internship with an industry partner (to be paid by the industry partner). A third would be 75% research and 25% policy/advocacy/public outreach/education internship.

Proven or promising external resources or approaches

The DHHS, NIH and Dept. Education could provide competitive "Facilities Improvement Fund grants" for educational institutions to renovate space for private on-site Day Care facilities to use rent-free so that the per capita cost of child-care is reduced to less than 10% of the postdoc wages/stipend. The plan for the facilities award would require a guaranteed set-aside for a number of postdocs based upon the total number of postdocs at the institution. The competition could consider:

The ability of the institution to reduce costs but maintain quality;

The institution's educational mission to train early-childhood education professionals;

collaboration with private or public organizations with a social impact (an example is the Association for Retarded Citizens) with missions to improve the care of and perhaps mainstream special needs children via a shared facility;

the enhancement of services such as incorporation of a "walk-in" day care plan for those who need childcare for limited planned or unplanned times, or a sick-child ad hoc day care for children recovering from an illness that is no longer contagious but not quite ready to return to general population (e.g. late stage chicken pox) or trauma with limited mobility (broken legs,arms).

Response 2644

Perspectives on the postdoc roles and responsibilities

Institutes do not respect postdocs and do not provide benefits or support when us faculty plead for them. Yet, when there is a covid shutdown, they are also asked to redeploy as in our hospital at [redacted for anonymity] and serve the covid cause. While faculty have to fight severely with threats from administration to ensure their salary raises are not removed since we bring it via nih grants and they dont have benefits, which during covid was beyond the pale. This attitude of adminstration will change only if such surveys are run annually. And are included with PI feedback in our annual reports. We cannot submit them without admin approval so its a section that should be allowed to justify IDC.

Fundamental issues and challenges

No future. Not enough grants to start and institutes want postdocs coming in as faculty to have grants. No work-life balance. No benefits. No respect, they are treated badly based on the fact that their salary despite their high education level, is lower than administration. HR proactively disables raises from PIs who have industry or other monies. They often use NIH or poorer faculty as an excuse to stop raises although the NIH salary levels are not meant to be an upper limit, just a lower limit. We faculty cannot speak without immediate and decimating retribution from the administration, especially hospital leaders and HR who earn administrative salaries from IDCs. These activities will stop only if there is oversight annually via such surveys.

Existing NIH policies, programs, or resources

Annual surveys.

Mandatory reports from lab postdocs of grantholders and from the PI regarding justification of IDC and fringe taken from grants as well as random surcharges made on our direct costs, severely depleting funds. All of us in soft money positions have to prepare not so much for nih cuts but rather institute raising rates, charges, etc at random, to offset their budget mismanagement. We PIs cannot complain, there has to be oversight from funding agencies.

Proven or promising external resources or approaches

Postdoc should be equivalent to staff position in benefits, mandate that at institutes.

Surveys.

More grants for postdocs, more time also given the short frame for k99.

If more grants are hard, more industry collaboration enabled to allow for such funds to enable postdocs.

Response 2645

Perspectives on the postdoc roles and responsibilities

For me, postdoctoral training is one step getting closer in establishing one's own lab. I view postdoc as a training that enables me in acquiring skills and tools including funding procurement, and resource management to understand and help me to pursue and at times answer research questions.

Fundamental issues and challenges

As an international, the constant need to worry about visa is an important factor. This is because postdoctoral researchers come under J1 visa which is a trainee visa that can be renewed every year. As postdoctoral researchers, I would argue the training aspect has a different meaning. For instance, to draw

parallels with industry, I would say postdocs are team leads who are trying to become managers which essentially means that there is more contribution coming from them. If there is one thing that would make the life of international postdocs easier is having a separate type of visa for them or making them go under H1B category.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2646

Perspectives on the postdoc roles and responsibilities

In the three institutions I have been at; as an undergraduate student, as a technician, and as a graduate student, postdocs are essentially mini-PIs operating under the real PI.

Fundamental issues and challenges

Money, money, money, money, and money. My dream is to be a PI in an academic setting—I love the environment and would love to mentor students. But I cannot ask my partner to carry me as financial dead-weight for another 1, 2, 3 years after 5 years of graduate school. Postdocs cannot support themselves at many institutions. That's what it comes down to—money.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2647

Perspectives on the postdoc roles and responsibilities

As it is currently organized and supported, I believe a postdoc position should almost exclusively be for people who want to pursue a career as a faculty member with a significant research component to their faculty work. A postdoc (hopefully) receives a few years to explore a research direction that can propel them into an independent research career and potentially some mentorship experiences, but in my view postdocs receive almost no training in anything else that would meaningfully support them in pursuing other career directions (there is even a lack of training in key aspects of a research career like management and communication).

Fundamental issues and challenges

The three main issues I see are low pay and benefits, the length of time the average postdoc spends in a postdoctoral position, and for international postdocs the anxiety associated with an overly complicated immigration system. Low pay and benefits (especially relative to the highly specialized training that postdocs have) causes an incredible emotional strain on postdocs, especially those that have to support family members (most postdocs are in their 30s and 40s, so many are supporting family members). The long duration of "postdoctoral training" reinforces a sense that the postdoc must go on in this career direction because they have already "sunk" so much time and energy into it, even when they no longer feel truly attracted an academic path or that path has been closed to them. Finally, a high proportion of postdocs at my institution are international, and they all feel an incredible pressure created by the immigration system, which seems unnecessarily complex and involves separating them from their families for long stretches of time. I know that all three of these dimensions have prevented some of my colleagues from pursuing postdoc positions.

Existing NIH policies, programs, or resources

Increasing the minimum salary and benefits for postdoctoral researchers would be hugely beneficial to the entire academic career pathway. Hand-in-hand with that is increasing the sizes of grants. If there's any

way for NIH to work with USCIS to streamline the visa system for postdocs, that would also be incredibly helpful. For a more long-term solution, having a stronger funding stream for long-term bench scientist roles that aren't postdocs would hugely impact the overall "academic ecosystem"—so many people pursue a postdoc because they love doing bench science but don't actually want to become professors, and they end up eventually being pushed out and dissatisfied, and their knowledge gets lost from the overall academic system. Another longer-term solution would be to have the effectiveness of PIs' mentorship be evaluated as part of grant review—what I mean is not just a narrative of their own mentorship style, but in some way actually evaluating how effective their mentorship is (concretely, how many of their postdocs have published (first author, middle author, last author) papers? How many postdocs have left the lab before publishing? How often do postdocs get to participate in training opportunities like attending conferences and courses?)

Proven or promising external resources or approaches

I strongly support programs that pair postdocs with mentors outside of just their PI. In my view, the "exclusivity" of the PI-postdoc relationship is ripe for potential abuse (in contrast to the PI-graduate student relationship, where there is usually a thesis committee and department leadership that can theoretically intervene if problematic behaviors emerge).

Response 2648

Perspectives on the postdoc roles and responsibilities

Gain training in new and/or complimentary area of science from my doctoral training; conduct research at a more independent level than doctoral work; participate in career development courses/workshops; prepare for a career as a faculty member or in industry; and gain autonomy in order to develop an independent program of research.

Fundamental issues and challenges

The major and central issue is pay. First, it is really challenging to make ends meet with $50,000 a year (before taxes). The only people who can afford this "pay cut" are those with money and resources, further nurturing the socioeconomic divide that is present in higher education and science. Secondly, it makes absolutely no sense that the traditional NIH funded T32 training program has a set pay regardless of zip code. Cost of living differs dramatically in Gainesville, Florida, compared to New York or San Francisco. Most universities require you to be in person with good reason. But living in New York or San Francisco on $50,000 a year is poverty.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2649

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

There are three main issues that contribute to poor quality of life as a postdoc:

1. Uncertain career path—the major issue that contributes to poor quality of life for postdocs that wish to remain in academic research is the uncertainty of their career path. Currently, the only academic path that provides stability and good pay is to become faculty at an academic institution. There are very few opportunities for alternative options such as staff scientists. Creating a stable and well-paying career path for staff scientists would allow those who do not attain, or do not wish to attain, desirable faculty jobs a way to stay in academic research long-term. Furthermore, such a career path would greatly benefit academic science by providing a long term source of technical and intellectual expertise with time directly spent conducting research for labs that employ staff scientists.
2. Extreme competition—due to the relatively small number of faculty positions available there is ever increasing pressure to be as productive as possible in a short time. This environment engenders overwork and anxiety. This point is related to point 1. Establishment of viable, stable, and well-paying career paths in academia other than faculty/PI would help immensely.
3. Low salary—this point is fairly self-explanatory. The large majority of academics use the NIH postdoc salary scale as their own scale. The salaries in these scales are embarrassingly low for postdoctoral researchers.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2650

Perspectives on the postdoc roles and responsibilities

Postdocs should learn new knowledge, techniques, and other skills in this position, and adapt these skills to develop a career in academia, industry, government, or other fields. I think NIH should avoid using "trainee" to call a postdoc and use "fellow" or "scholar" instead. Postdoc positions should facilitate research independence. The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish more programs and opportunities for postdocs to develop a career.

Fundamental issues and challenges

Per the NPA's 2023 Postdoctoral Barriers to Success report, more than 90% of postdocs are negatively affected by the lack of clarity in transitioning to the next positions. More than ever, postdocs are paying a significant opportunity cost for limited faculty positions, and 86.6% are impacted by job security concerns. NIH should provide early career scientists with actionable information and transparent data to make informed career choices before and during their postdoc periods, including increased awareness of career options (e.g., academia, industry, government).

It is even more difficult for international postdocs. International postdocs have extremely limited opportunities to apply for NIH funding. K99/R00 is the only program that we have access to and the time window is only for the first 4 years. With such limited opportunities, the majority of international postdocs will not succeed in developing independent careers, which inhibits further recruitment and retention. Meanwhile, a large number of them struggle in their current position and have a poor quality of life. NIH should also expand funding opportunities to visa holders through K99/R00 and new programs.

Existing NIH policies, programs, or resources

NIH should require all postdocs to receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies.

Postdocs' difficulties to remain in academia due to limited faculty positions contributes to dissatisfaction. To retain top research talent, NIH should create or expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining the continuity of lab knowledge, and providing additional career options for postdocs while providing clear differentiation between these positions and postdocs.

Proven or promising external resources or approaches

We sincerely thank NIH for the platform to share our vision for postdoctoral training in the biomedical sciences. We applaud NIH's policies and programs that have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps.

The NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library.

Response 2651

Perspectives on the postdoc roles and responsibilities

Postdocs are trainees, often MDs or PhDs, sometimes MD/PhDs. Their role in our institution is to learn how to be independent researchers or academic clinicians under the supervision and support of experienced and successful independent researchers. This role can support existing research, but the overarching goal should be for trainees to progress toward their own research goals.

Postdocs are early career scientists, often also in the early stages of adult life, with newer primary relationships, often new or very young families, and all of the attendant "real world" responsibilities.

Despite our best efforts, most successful postdocs tend to be those who come from elite or established families who can afford to support them well into adulthood and do so.

Fundamental issues and challenges

Recruitment is harmed by insufficient pay. Young adults or those who find success or good pay in private industry are often discouraged from pursuing an academic career because the pay is well below most comparable industry positions, the expectations are increasingly regarded as abusive (long hours, unreasonable demands), and universities and other academic institutions in areas with a high cost of living often pay well under the amount needed to survive and thrive as a young academic.

Existing NIH policies, programs, or resources

NIH could move to the GS system of compensation, based on geographic location, for NRSA stipends and when considering funding in other programs which support postdocs financially. NIH SHOULD require detailed verification that all institutions are paying their postdocs at the level required, as there are reports of postdocs being paid well under NRSA stipend amounts across the country. NRSA stipend amounts either

1. need to take into consideration actual COL or
2. need to require that PIs/mentors cover a certain percentage of pay to ensure the stipend amount truly "supports" postdocs.

Total pay needs to be more competitive with related industries to encourage more postdocs to choose academic research pathways.

Proven or promising external resources or approaches

Training Grants should be more closely tied to the grantee institution's academic year cycles to encourage competition and more equitable recruitment. Basic expectations for IDPs should be required and verified. All programs should have external monitors/advisory boards who are not beholden to a mentor or institution to allow postdocs a safe route for reporting any abuse or problems, without fear of undermining their careers. Reporting cannot stay within a powerful mentor's institution. Mentors must be certified and meet national standards of training and must be evaluated externally as well.

Response 2652

Perspectives on the postdoc roles and responsibilities

The academic postdoc is part of the backbone of a research lab —ultimately projects are developed in-depth, new avenues are explored all as part of his/her training toward independence. It is also the first opportunity to develop mentorship skills, by supervision of graduate students and undergrad independent study projects.

Fundamental issues and challenges

Even though I have a Chemistry Nobel Prize which should be an incentive, I get no US applicants, and just a few from China and India as response to a job posting. This has been true for a number of years now. I think there is a general perception that training for an academic career is a waste of time. Students appear to be very much focused on short-term goals, getting rich quickly in some way. They probably have found out by word of mouth and social media that it might take a couple of decades to get public funding. Because of the general uncertainty about the distant future, focus on short term goals makes a certain sense.

The career choices of postdocs who trained with me fit into this pictures as well. Of six people who finished in recent years, only a single one stayed in academia, five (brilliant people) went for jobs in industry or they became EM facility managers.

Existing NIH policies, programs, or resources

The salary differential between NIH postdoc salary and industry is too great. The bleak grant situation is a disincentive for everybody to even consider going the academic route.

Proven or promising external resources or approaches

I don’t know

Response 2653

Perspectives on the postdoc roles and responsibilities

As a postdoc, I am expected to conduct original research in my field of study, often under the guidance of my advisor. This involves designing experiments, collecting data, analyzing results, and writing up findings for publication.

Publishing my research in academic journals is a crucial aspect of my role as a postdoc. It helps to establish my research reputation and is essential for advancing my career.

I am also responsible for mentoring and training graduate students or undergraduate researchers who assist with my research projects. This involves providing guidance on experimental techniques, data analysis, and professional development.

Presenting my research at conferences, seminars, and other professional events is an important part of my job as a postdoc. It allows me to share my findings with the wider academic community and can lead to new collaborations and opportunities.

Securing funding for my research is another critical responsibility. As a postdoc, I may need to develop strong grant proposals and build relationships with funding agencies.

Overall, I see the postdoctoral position as a crucial period of professional development for myself. I am expected to take on significant responsibilities and make important contributions to the research community, while also building my own skills and expertise.

Fundamental issues and challenges

Lack of job security: Postdoctoral positions are often short-term and lack job security, which can make it difficult for trainees to plan their careers and personal lives.

Low pay: Postdoctoral salaries are often low, especially when compared to the level of education and experience required for these positions. Limited career opportunities: Many postdoctoral trainees aspire to academic or industry research positions, but the competition for these jobs is fierce. This can create a bottleneck, with many talented trainees unable to advance to the next level. Lack of mentoring:

Postdoctoral trainees often lack adequate mentoring and support from their advisors. Workload and work-life balance: Postdoctoral trainees may face heavy workloads and long hours, which can lead to burnout and negatively impact their quality of life.

Existing NIH policies, programs, or resources

J-1 Visa Limitations: Many postdoctoral trainees are international scholars who hold J-1 visas, which are temporary visas that are subject to strict regulations and limitations. These limitations can include restrictions on the length of the visa, the ability to transfer to a new institution, and the ability to bring dependents to the United States. These limitations can create additional stress and uncertainty for postdoctoral trainees and may contribute to their decision to leave academia or the United States altogether.

Advisor Misconduct: Unfortunately, there have been cases of postdoc advisors taking advantage of their power dynamic to mistreat, bully, or even harass their postdoc trainees. This can take many forms, such as setting unreasonable expectations, withholding resources or authorship credit, or even engaging in discriminatory or abusive behavior. This type of misconduct can have a significant negative impact on the postdoc's mental health and professional development, and may contribute to high rates of attrition among postdoctoral trainees.

To address these issues, the NIH and institutions could consider implementing stronger policies and procedures to protect the rights and well-being of postdoctoral trainees. For example:

J-1 Visa Limitations: The NIH and institutions could work to streamline and simplify the visa application process for postdoctoral trainees and advocate for more flexible regulations and visa options that better reflect the needs of international scholars.

Advisor Misconduct: The NIH and institutions could establish clear guidelines for expected advisor behavior and provide training for postdoc advisors on appropriate mentorship practices. Institutions could also establish clear channels for reporting misconduct and provide support for postdocs who experience mistreatment. Additionally, institutions could provide mechanisms for postdocs to share their experiences and offer feedback on advisor behavior in order to hold advisors accountable and improve the overall postdoctoral training experience.

Proven or promising external resources or approaches

To improve the quality of life and sustainability of postdoctoral positions in academic research, the NIH and institutions could take several measures. They could increase the minimum salary for postdoctoral trainees to reflect the cost of living and the value of their work, expand benefits such as access to affordable healthcare and retirement plans, and promote work-life balance through policies like flexible scheduling and mental health support services.

To better support postdoctoral trainees who are parents or caregivers, the NIH could provide additional resources, such as on-site childcare or subsidies for child care. In addition, the NIH and institutions could expand existing career development programs and resources, such as mentorship programs and networking opportunities, to help postdoctoral trainees develop the necessary skills and experience for advancement.

International scholars who hold J-1 visas face limitations and regulations that may cause additional stress and uncertainty, leading to high rates of attrition. The NIH and institutions could streamline the visa application process, advocate for more flexible visa options, and simplify regulations to better meet the needs of international scholars.

Unfortunately, some postdoc advisors may engage in misconduct, such as bullying, harassment, and discriminatory behavior. To address this issue, institutions could establish clear guidelines for advisor behavior, provide training on appropriate mentorship practices, and establish channels for reporting misconduct. They could also provide mechanisms for postdocs to share their experiences and offer feedback on advisor behavior to hold advisors accountable and improve the postdoctoral training experience.

Response 2654

Perspectives on the postdoc roles and responsibilities

The postdoc is responsible for learning skills that will benefit the next step in their career. Mentorship, leadership, finance training, management, and science communication in the form of grant and manuscript writing and the ethical performance of science are critical components of that training.

Fundamental issues and challenges

Salary is particularly challenging and inhibits retention and reduces quality of life for postdoctoral trainees, particularly in locations where the cost of living is high and the NIH salary is below what is needed for housing and food.

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

All postdoctoral fellows (and all graduate and early career scientists) should receive practical, skills-based training in science communication. These skills are beneficial both within and outside the academy and will only improve outcomes and career success for these scientists.

Response 2655

Perspectives on the postdoc roles and responsibilities

Postdocs are involved in independent research, working on new projects and applying for grants and developing skills.

Fundamental issues and challenges

Salary and benefits are too low for postdocs' scholarly degrees.

Existing NIH policies, programs, or resources

Better salary and benefits. The opportunity to obtain better salary increases with experience.

Proven or promising external resources or approaches

No response

Response 2656

Perspectives on the postdoc roles and responsibilities

Postdoc is a temporary position following the completion of a PhD to acquire further skills in preparation for the most demanding professional research careers in academia and industry.

Fundamental issues and challenges

1. Financial feasibility of living as a postdoc in states such as California with extreme living costs is a significant issue. In particular postdocs with small children are typically left with an extra 2000+ dollars monthly expense from childcare alone (in San Francisco 5-days a week childcare monthly tuitions currently range between 2000-3000 dollars). For a single-parent postdoc the cost of childcare can easily amount to half or more of their monthly take-home pay which, combined with typical rents in these areas leaves hardly any money for other living expenses. This creates a vicious cycle where postdocs in such situations have to opt for less than full-time childcare, significantly hampering their ability to conduct research, thereby not only lowering the return-on-investment of NIH's funding, but also causing significant stress and diminishing the career prospects of those postdocs due to reduced research output. These issues seem to be almost exclusively a US-specific problem, within the so-called western countries at least. I think the US, while at the moment still a leader in science in many fields, endangers its position as a world-leader if these issues are left unaddressed.
2. Postdocs are in many instances used akin to cheap labor for conducting the bulk of research activity in universities, while the later career prospects in research or other highly specialized positions where the postdoctoral training would be needed are often slim due to significant surplus of postdocs trained. Many end up working in fields where their training has little use, raising the question of whether engaging in postdoctoral training made sense for those individuals in the first place, given the cumulate loss of life-time income during the training period at the current salary levels, combined with the (often) high-stress working environment resulting in sacrifices in other life areas.

Existing NIH policies, programs, or resources

For cost-of-living challenges mentioned in the previous box, the obvious solution would either be cost-of-living adjusted salaries, or directed subsidies to specific items such childcare.

For the issue of training surplus of postdocs relative to the needs of academia and industry, NIH should encourage and support funding permanent staff scientist positions that would come with both higher salary and no time limits like the usual 5 years that exists for postdocs.

Proven or promising external resources or approaches

No response

Response 2657

Perspectives on the postdoc roles and responsibilities

The role of a postdoc seemed like a necessary evil to qualify for faculty positions at an academic institution. However, it claimed to facilitate protected time to publish dissertation and grad school work but these have certainly had to occur after working hours. One main benefit for my postdoc was to gain some additional expertise in a field of interest beyond what I had done for my dissertation. I have learned skills and built a network in a field of interest. I felt like my path was clearer before my postdoc and, like many of my peers, I feel swayed towards a path that may be less struggle, less competition, and better compensation.

Fundamental issues and challenges

For me, the pay structure of a postdoc is criminal. As a 33-year-old, I had have little opportunity to save for retirement, build equity, or pay off student loans. Housing is essential but qualifying for home loans is virtually impossible based on how my "income" is allocated. My institution also doesn't take out taxes which makes tax season complicated and difficult for a family. The health insurance is nice. While I am proud of my PhD, I am ashamed of playing into a system that does not value my years of education. I am more worried that there is not a place for queer researchers as it has been near impossible to find queer senior scientists in my division at NCI.

Existing NIH policies, programs, or resources

What is the deal with the narrow qualifications for Loan Repayment programs? Can there be more ways for intramurally funded postdocs can gain more grant writing experience/qualifications by collaborating externally?

Proven or promising external resources or approaches

No response

Response 2658

Perspectives on the postdoc roles and responsibilities

A postdoc seems to be given more responsibilities to work on multiple projects, mentor students, and to work more independently. Postdocs are expected to be able to learn new techniques quickly and without much hands-on training. Postdocs are expected to be more efficient (trouble shooting faster, reading literature faster, and come up with new hypothesis faster).

Fundamental issues and challenges

The most pressing issue in recruitment and retention of post-docs is that post-doc salaries are not much higher than PhD salaries (particularly because post-docs are older and are more likely to start or have families). Furthermore, only about 1/4 of post-docs become PIs within 5 years, which means that the hard work and low paying salary sacrifice is not very likely to be worth it if the end goal is to be an independent researcher/PI. And, a post-doc who goes to industry/pharma/biotech enters at a similar position as someone who just graduated from a PhD program, which means that the time spent doing a post-doc does not advance a person's career much unless they become a PI. Lastly, the intrinsic nature of testing the unknown means that there is a lot of failed hypotheses and troubleshooting, which can be demoralizing. Although one could publish negative results, positive results are the ones that get into higher impact journals which is the currency to promotions in academia.

Existing NIH policies, programs, or resources

NIH minimum salary/stipend should take into account the cost a living in a particular region. Cost of living in different states are different, and even within the same states, different cities have different cost of living. For example, the cost of living in New York City is much higher Rochester, NY even though they are in the same state. More programs/workshops that could indicate how a post-doc training program can be beneficial to jobs outside of being a PI would be good.

Proven or promising external resources or approaches

No response

Response 2659

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are focused time for trained researchers to develop a substantial, independent scientific project. Academic postdocs have principal responsibility over a well-defined project and carry out substantial research with few expectations for teaching, service, or formal coursework. Postdoctoral positions can provide a range of training opportunities—to learn a different field of biology, to learn new techniques, and to work with a mentor with different approaches to a thesis advisor. However, undistracted time and attention on carrying out research is essential, and postdocs should have the maturity to learn in the course of working, without structured training.

Fundamental issues and challenges

Low pay is clearly the fundamental challenge for postdoctoral trainees. Salaries are quite low relative to those in biotechnology and to other fields with highly skilled and trained workforces. The NIH directly controls fellowship pay scales and strongly influences postdoc pay from research project grants and drives decisions by other fellowship sponsors.

Existing NIH policies, programs, or resources

Postdoctoral fellowships should last longer as well as pay more. The timing of review and resubmission for F32 fellowships does not align well with the timing of postdoctoral positions.

The administrative burden of these fellowships should be lower. Elaborate training and mentorship plans do not improve postdoctoral positions, and drive an escalation of burdensome requirements that detract

from research. Greater emphasis on research plans in fellowship review will ensure that postdocs are carrying out well-defined and independent projects.

Furthermore, the strict timing requirements for K99 fellowships distorts postdoctoral training and discourages ambitious, impactful projects. In practice, successful K99 applications require an accepted manuscript in a particular point in post-doctoral training, along with an artificial training plan that in effect interferes with post-docs taking advantage of existing research successes and strengths.

Proven or promising external resources or approaches

When postdoctoral scholars unionize, they typically ask for more money, along with employment benefits that typically accompany highly skilled professional jobs. A substantial fraction of salaries and benefits for postdoctoral scholars come directly or indirectly from the NIH, and other funding sources often track NIH policies as well, so the NIH has a great deal of influence here. Changes should be based on a pragmatic assessment of how post-docs are actually paid—usually through a shifting mix of research grant funding and fellowships at different times.

Postdoc training plans should focus on fostering scientific interactions with other PIs, and engagement with the scientific community through local and informal seminars.

Response 2660

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

First, salaries are too low, particularly in high cost-of-living cities. The State of Washington recently passed a law guaranteeing a living wage to all employees in the state. It is embarrassing how far below this minimum most postdocs fall. We need to ensure that all postdocs make a fair wage for their work. It may be necessary to reduce the total number of funded postdoc positions in order to make this happen.

Second, although postdoc positions are nominally training positions, in practice few postdocs receive training in anything other than research. In particular, postdocs are typically aiming for academic positions, where teaching is likely to be a component of their position, yet they receive no teacher training and rarely are given a chance to practice their teaching skills. Also, regardless of their career trajectory, they will need the skills required to run a lab, most notably with respect to effectively managing a team of people. I think the NIH should fund formal postdoctoral training programs that focus on effective pedagogy, as well as leadership and management skills.

Third, postdoc recruiting is a huge source of inequity. Unlike admissions to undergraduate or graduate schools, where recruiting is done publicly and all applicants are evaluated in a batch using established criteria, postdocs are almost always recruited by word of mouth. This reinforces the "old boy network" and makes it harder for people from disadvantaged backgrounds to find good postdoc positions. Solving this is hard but, I believe, super important. One could imagige, for example, a centralized NIH database of people looking for postdoctoral positions, with a standardized CV format. NIH-funded postdocs could be hired via such a system, with PIs reporting how many applicants they reviewed and what criteria they employed.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2661

Perspectives on the postdoc roles and responsibilities

I view my current role as an academic postdoc as a highly-specialized spearhead of the research in my PI's lab. My PI (early career) has so many responsibilities that she rarely has direct contact with the data, so my role has been everything from data generation (including logistics), processing, systems

prototyping, to analysis. And my responsibilities over the past three years the lab has existed have been manifold, but primarily focused on the details of lab and research setup while my PI focuses on overarching design of the research and all of the administrative duties and logistics of setting up the lab. So this has felt far less like a "trainee" position and more like a focused researcher position. I've simultaneously been able to apply many of the skills learned during my PhD as well as learn many new skills, although much of this has been independent learning/trial by fire. However, I have observed other friends of mine in postdoc positions who have had responsibilities more akin to being junior academic faculty, managing both research and the administrative/logistical aspects of running a lab. My role is also, to a certain extent, to help train graduate students and other trainees in the lab (even more junior postdocs). The responsibilities of a postdoc are most certainly not uniform across individuals or labs, and also depend on the individual's career interests/intentions. I intend (if possible) to pursue a non-ladder research faculty position (e.g. staff/research scientist) within academia, so my perceived role and responsibilities have also been shaped by the intent to learn skills necessary for such a position.

Fundamental issues and challenges

Amongst the myriad issues with the current state of postdoc recruitment, retention, and quality of life, perhaps the keystone is this concept of postdocs as "trainees". The default assumption is that a postdoc is training to become an academic PI, but especially in recent years such a path has become disincentivized —very few positions are available, competition is high, pay is limited, and postdocs and postdoc funding opportunities are frequently limited in lifespan, forcing recent doctoral graduates and current postdocs to pursue avenues outside of the traditional ladder academic track. Pay differences between industry and academia have had a dramatic effect on recruitment and retention. Furthermore, there is a negative feedback loop maintaining low postdoc pay which leads to low retention and quality of life: Universities will always try to minimize postdoc (and graduate student) pay, matching the NIH or NSF minimums even if they could afford more and placing all sorts of obstacles to raises, while the NIH and NSF use arguments of pay disparity/equity to maintain current minimums despite the obvious and increasing economic strains of the past several decades (e.g. absurd levels of inflation). This problem is further exacerbated at smaller institutions, so I (a postdoc at an Ivy League university) can only imagine how much more extreme these problems are for graduate students and postdocs there, let alone how systemic racism and sexism can augment these problems and even synergize with institutional differences (e.g. smaller institutions with less average federal funding having demographics skewed toward underrepresented populations leading to exacerbation of existing inequalities in pay, quality of life, recruitment, and retention).

Existing NIH policies, programs, or resources

NIH postdoc salary minimums could of course be increased with a concomitant commitment to increased salary lines in grant budgets. The push for change has to start somewhere, and universities are eager to grasp at the excuse that the NIH won't change funding levels, so don't let them use it as an excuse! I also think the R35 is a great concept, although more could be done to increase diversity and inclusion in R35 cohorts, given how R1 institutions are grossly overrepresented in awardees. It is very likely that an R35 will be used to fund a postdoc in a newly-started lab, so R35s may be a tangible avenue to stimulate a healthier postdoctoral training ecosystem. These sorts of systemic inequalities may present themselves in both evaluation criteria for these grants (e.g. what a reviewer would consider a sufficient "environment" for the researcher to succeed, or how the quality of their prior research record is evaluated) as well as simple issues of access (e.g. faculty at smaller institutions may not even be aware of such early career awards, nor have the administrative support structures available to help with applications, leading to systemic inequality). It's difficult to say what changes to the K99 system might help in a similar way. However, broader access to resources about postdoc funding (both direct funding like K99 and indirect like R35) and even active promotion of such resources to smaller institutions should help quite a bit. I knew next to nothing about postdoc funding coming into my postdoc as a first-gen academic, yet it is such an important factor for recruitment, retention, and quality of life. Frankly, any resources even just about *being* a postdoc and the academic career path would have been helpful as first-gen.

Proven or promising external resources or approaches

The Yale Postdoctoral Association has a peer mentorship program for postdocs that seems to help new postdocs acclimatize quite well (though I have not had a chance to participate).

Response 2662

Perspectives on the postdoc roles and responsibilities

I decided to pursue a postdoc to enhance my clinical skills, academic/scientific writing, and learn new lab and research skills/techniques. My perspective was that I would be mentored by a senior scientist and that they would help improve my clinical skills, provide constructive feedback, and make time for my mentorship and career development. My goal was to obtain a larger NIH grant near the end of my 2nd year as a postdoc.

Fundamental issues and challenges

The salary would be impossible to live on if I wasn't married and had a partner with a better paying job. It often feels as though I am filling a spot in a lab that doesn't need to be filled by a PhD and that I am not being trained/ mentored/ or taught by someone with enough time to do this effectively nor am I being paid an adequate fair rate for the level of education, experience, and skills I have. Quality of life could be better, the main factors that decrease quality of life for me as a post doc are the financial restrictions, lack of mentoring from my team/ leadership of the lab, and having no other individual in the lab with a similar background as me to help guide career development. There are postdoc associations, but they more for socializing and do provide support about mentors or how to make your position/training better.

Existing NIH policies, programs, or resources

The payback clause within a T32 grant should be modified. As a young professional in a 12 month contract in a position that I am not feeling supported/ mentored/ trained adequately in is difficult. It should not only be the postdocs responsibility to fulfill their obligations but the institute and the mentoring team as well. If the full team is not being providing adequate training, mentoring, help accessing educational opportunities, or providing advice on career development, then it should be up to the postdoc if they want to continue in this lab or not. They should not be locked into a contract that holds them in a stagnant position that is not helping to advance their career.

Proven or promising external resources or approaches

There should be continuous follow up with labs on how they are training their postdocs, how much time is dedicated to mentoring the postdoc, and this should be very transparent when a post doc is hired into a new lab. The mentoring team should have a release from other obligations to make time for training and mentoring the postdocs. In my experience every mentoring team / individual mentors are too busy with their own obligations for their role to be bothered to adequately train and mentor a postdoc. 60% of the time my mentoring team doesn't even answer my emails or they respond at least a week after. I am their direct report and they make me feel as though my position and individual training is not important and that I am here to help progress projects along.

Response 2663

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The NIH has some grant funding mechanisms that are meant to encourage early stage investigators, i.e., K99/00 pathway to independence. Another example is RFA-HG-22-001, the eligibility of which is limited to "Early Stage Investigators," which is defined as someone "who has completed their terminal research degree or end of post-graduate clinical training, whichever is later, within the past 10 years and who has not previously competed successfully as a PD/PI for a substantial NIH independent research award". These policies have served as barriers to my own career, which has followed a non-traditional path. I completed my PhD in Genetics in 1999, and then had a few jobs on the business side of science, before working as a stay at home mother and a community volunteer for a number of years. When my children got older, I went back to school to reenter my career, earning a MS in Bioethics in 2016. I completed a two-year postdoctoral fellowship in medical ethics in 2019. However, as I was finishing up my postdoctoral fellowship, I realized that I was not eligible to apply for the K99/00 and did not meet the definition of an "Early Stage Investigator." I finished my terminal degree in 1999 and although I completed my post-doctoral training in 2019, it was not clinical in nature. Nevertheless, I was and still am an early stage

investigator in reality. These policies--which likely disproportionately negatively impact women--have proved to be a significant barrier for me, and quite frankly, may jeopardize my ability to stay in academics. I feel it is important to provide a specific case in which these policies are having unintended affects. My situation is unique. However, my guess is that many others are also negatively impacted by the exclusion criteria for the Early Stage investigator grant funding mechanisms.

Existing NIH policies, programs, or resources

Need to change definition of early stage investigator to include all those who have not had prior NIH grant funding as a principal investigator.

Proven or promising external resources or approaches

No response

Response 2664

Perspectives on the postdoc roles and responsibilities

I think the postdoc role should be specifically focused on advanced research training with the career goal of leading a research group. This differs slightly from the PhD, which is focused on training how to pose and research scientific questions. Postdocs should be more independent, pushing their own research project, speaking with their mentors as equals (more or less), and actively working on skills related to starting a lab. This includes grant writing, managing finances, selecting and training students, and learning how to build out a research program.

Fundamental issues and challenges

Postdoc positions are seen as temporary, which means many people (trainees and supervisors included) see them as opportunities to underpay and overwork. Salaries in major cities are not competitive for the level of education or work expected. There are few (if any) benefits, and universities further dilute these benefits by making arbitrary distinctions between postdocs who have fellowships (not employees, no benefits) and those that do (employees with benefits). Many postdocs are in their 30s and beginning to think about families, and postdoc salaries and expectations do not match that. Particularly now, it’s really difficult to spend 3 years in a badly paying job with no job stability afterwards, even if you love what you do.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increasing the minimum salaries. Making a postdoctoral position a real job and requiring universities to see it as such.

Response 2665

Perspectives on the postdoc roles and responsibilities

The postdoc is a transitory position in which, in addition to performing research, you take on new responsibilities that were not acquired during the Ph.D. and will be helpful for the next stage of your career. These responsibilities include but are not limited to supervision, teaching, and fundraising.

Fundamental issues and challenges

Viewing this question from the engineering lens, a major challenge to recruitment and retention of postdoctoral trainees in academic research is the appeal of a career in industry. In engineering, industry careers are more stable, more abundant, and offer significantly more money than what is available to a postdoc in academia. Academic positions for postdocs are often limited, both in the number of available positions and in the funds to sustain the position. The need to fundraise in order to maintain job security can hamper stability and overall quality of life for future and current postdocs, a group with little to no experience in the fundraising process who now need to fundraise in order to support themselves and their family. Retention is also a difficult question as the postdoc is not a long-term career option, so moving on

is inherent to the job; retention in the sense of staying in academic research is subject to the above issues and challenges.

Existing NIH policies, programs, or resources

I am less familiar with what is available from the NIH, so more access to information on what is available starting at an earlier stage of the process would be helpful. More funds is always helpful, but is obviously difficult to implement. Finally, more options to facilitate international partnerships.

Proven or promising external resources or approaches

The postdoc experience is often greatly shaped by the mentor and facilities associated with the institution/position. I have found that some supervisors are very invested in their postdocs' career, and others treat their postdocs as Ph.D.s that require less supervision. If the NIH can target mentoring opportunities toward the supervisors (or offer postdocs solutions to enhance their position), then that will already make a big impact.

Response 2666

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a stepping stone to a career as an independent Principal Investigator (in academia or elsewhere). Postdocs take on leadership and project management responsibilities under the lose supervision of a PI. Success in the role is measured by getting that PI position.

Fundamental issues and challenges

1. Salary and benefits are not commensurate with industry; not even close. This makes it difficult to stay and be productive as scientists with a PhD. We make big quality-of-life sacrifices to be postdocs.
2. Precocity of appointment. Everything depends on the whims of a PI even though many postdocs are employees of their university. This arrangement makes postdocs dependent on a PI even when they are striving towards independence.
3. Lack of faculty positions means we are in the postdoc queue longer and many leave. Maybe we should have more, stable, higher paid staff research scientist positions and fewer postdocs.

Existing NIH policies, programs, or resources

We need more research about the experience of postdocs and effective mentoring.

Proven or promising external resources or approaches

No response

Response 2667

Perspectives on the postdoc roles and responsibilities

Most postdocs at the [redacted for anonymity] see postdoctoral training as a necessary step towards a tenure-track faculty position, and therefore typically choose a faculty member for their research. The position allows more time to publish and apply for grants. A significant perceived benefit is the ability to pursue interest-driven research, compared to profit-driven research in industry or other sectors. Some postdocs stated that mentorship of undergraduate and graduate students was a part of their role, but few received formal training on how to mentor/supervise students.

There can be a disconnect between how postdocs view themselves and how faculty view postdocs, which leads to high variability in postdocs' roles and responsibilities. The spectrum ranges from faculty who treat postdocs as research technicians to faculty who treat postdocs as early career collaborators. In the former group, postdocs only conduct research and are offered little to no career and professional development guidance while in the latter group, postdocs can pursue their own research interests and are encouraged to take professional development opportunities. To alleviate these discrepancies, NIH should adhere to a consistent universal definition of a "postdoc" as being in a training role regardless of funding mechanism. PIs should be required to submit and report on mentoring plans as a part of the NIH pre—and post-award process.

NIH-funded postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have protected time for and access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant writing, new experimental techniques, career exploration, and other transferable skills. Postdocs should have time and funds to attend professional development opportunities of their choosing on an annual basis (e.g., conference, internship, or shadowing program) to explore new concepts, share knowledge and perspectives, and network.

Fundamental issues and challenges

Per a survey of [redacted for anonymity] postdocs, top sources of stress include finding employment opportunities, finances, workload, obtaining funding, work/life balance, mental health, and family responsibilities. Higher salaries, paid parental leave, and subsidized childcare would help postdocs support themselves and their families. Postdocs need to earn a living wage that is adjusted annually for inflation, location, experience, and merit. NIH should require NRSA stipend levels be paid to ALL NIH-supported postdocs, and increase grant funding limits to allow for it. NIH might also expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.

At [redacted for anonymity], 75% of postdocs feel that they could use more information about career options to make a good decision regarding which one(s) to pursue. Postdocs pay significant professional and personal opportunity costs to pursue limited faculty positions. Career outcomes and tangible benefits of pursuing a postdoc are often misunderstood. NIH should provide postdocs with actionable information and transparent data to make informed career choices before and during their postdoc, including increased awareness and training opportunities for careers in a variety of sectors.

NIH should establish a minimum percentage of protected time to be devoted to service, mentoring, and professional development activities. This would assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Postdocs from historically marginalized groups and international postdocs face increased structural and implicit barriers. The NIH should continue expanding its DEIA initiatives and instate rigorous, impactful annual mandatory DEIA training for all those impacting postdocs (mentors/peers/faculty/PDOs), similar to research ethics. NIH should ensure training materials are current and evidence-based, while developing accountability and outcome measurements.

Existing NIH policies, programs, or resources

There is a significant career and personal financial trade-off associated with accepting an NIH NRSA fellowship. While the fellowship is beneficial career-wise, [redacted for anonymity] postdocs lose eligibility for state employee benefits as a result. NIH should issue guidance that receiving an NIH fellowship does not prevent the host institution from categorizing and paying such fellows as employees. NIH should require that all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to NASA's new postdoc fellowship requirement.

To increase equity, NIH should provide NIH-funded postdocs with moving allowances. Moving costs can be especially cost-prohibitive for researchers from low socioeconomic backgrounds, those with increased familial commitments, and international scholars. NIH policies could also be expanded to support postdocs with disabilities. For example, additional funding to hire technicians would allow postdocs with certain disabilities to conduct necessary experiments while providing an opportunity to train and mentor early career scientists.

International postdocs face unique challenges; the NPA reports that 86% were negatively impacted by cultural transitions into the U.S. NIH should work with the State Department and USCIS to accelerate and simplify the visa and immigration process for these world-class early-career researchers. NIH should also expand funding opportunities to visa holders through K99/R00 and new programs.

Many PIs lack formal training in mentoring and personnel management. Likewise, many postdocs lack understanding of how to succeed as mentees. To address this gap, NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded faculty, mentoring/managing up training for postdocs, and mentoring committees at all institutions receiving NIH funding, similar to those

provided under NIH mentored training programs. Such training should be offered to all supervisors of postdocs.

Proven or promising external resources or approaches

Postdoc training could be enhanced by the Entering Mentoring and Mentoring Up curriculum from the Center for the Improvement of Mentored Experiences in Research (CIMER). These courses would train postdocs to mentor down and up more effectively, and give them the necessary tools for increasing self-advocacy and building a mentoring network for career success.

At [redacted for anonymity], the Center for Teaching and Learning provides pedagogical teaching training through the Tech-to-Teaching Program and Fundamentals in Teaching and Learning for Postdocs course. Postdocs who take these courses are better prepared for teaching-focused positions.

[redacted for anonymity] is also a part of the NSF-funded "Alliances for Graduate Education and the Professoriate (AGEP) Research Universities Alliance Model" , which aims to increase rates of doctoral candidates transitioning into postdoc positions and postdocs transitioning into early-career faculty employment. Grad students and postdocs in AGEP have dedicated mentors, are supported by a community of peers, and participate in professional development activities that prepare them for faculty positions at R1 institutions.

Within the [redacted for anonymity] Office of Postdoctoral Services, we offer "Faculty Career Advancement Groups" that teach postdocs about the faculty application process and facilitate peer review of their application materials. We also piloted the Leadership and Management in Action Program this spring with great success. Our experience is that postdocs are gravitating toward cohort-based programs that allow them to discuss career and professional development challenges and opportunities with their peers. As such, we will be piloting a Professional Development Hub series next fall, which focuses on peer-facilitated career explorations groups. NIH should provide funding to PDO leaders to further explore what cohort-based programming would look like for postdocs.

Response 2668

Perspectives on the postdoc roles and responsibilities

Research intensive position to develop new skills, perspectives, and expertise.

Fundamental issues and challenges

Very few postdocs are able to successfully obtain faculty positions. To publish well and have a chance at a job, one must remain a postdoc for a financially unsustainable amount of time. Postdoc salaries are insufficient to afford to live in major health research hubs (Boston, Bay Area, etc.). Childcare is not remotely affordable on a postdoc salary in many places (e.g. > $60,000 per year for two children in Boston metro area). Entry level jobs for PhD scientists in Pharma and Biotech pay up to twice as much as postdoc positions.

Existing NIH policies, programs, or resources

Raise the minimum postdoc salaries to account for the cost of living (see https://www.nature.com/articles/s41587-023-01656-4). Create more academic research scientist positions "between" postdoc and assistant professor. Create more assistant professor positions (smaller labs). Make more fellowships available (including for non-US citizens).

Proven or promising external resources or approaches

Living wage calculations for postdocs: https://www.nature.com/articles/s41587-023-01656-4

Response 2669

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

My postdoc is in Boston, and I entered from a MD/PhD program. Boston is quite expensive particularly with a wife and child. My health insurance premiums are 9,000 per year alone. Many of my MD colleagues were also going to Boston after graduation for postgraduate, US-gov't funded training in the form of residency. I didn't understand how they seemed to be much less concerned with making the city financially work. I was quite surprised to find that [redacted for anonymity] residency training programs start with salaries of 79,000 + 10,000 stipend for childcare/rent. Their yearly increase is 4k, compared to 1k for postdoctoral scientists. This is almost a 40% higher salary than I make as a postdoc at the same institution, often working the same number of days per week and similar hours. I do not believe that residency and postdoctoral scientific training compensation used to be so radically different.

Because the hospital must maintain staffing, their compensation was chosen as the one necessary to quickly get to work 6-7 days a week in an expensive city, and pay for >40 hours of childcare. *[redacted for anonymity] knows this and consequently has set the resident salaries accordingly.* This involves them "topping up" the medicare-funded resident slot compensation, which is too low. It is so strange then, that the same institution has *different* compensation for other postgraduate training run out of the medical school. This discrepancy is common across institutions, but I hear it discussed little, and often postdoctoral compensation is (erroneously) compared to industry compensation levels, which of course should be higher than academic institutions.

Every institution funded by the NIH knows the salary necessary to support rigorous postdoctoral training and often sets this in their residency training programs. The same should be done for other postgraduate trainees like scientists.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2670

Perspectives on the postdoc roles and responsibilities

A short period to become more independent however it becomes a long period due to limited positions and tight competitions over limited grant resources.

I do not even want to be a professor, I wanted a research scientist role in academia.

Fundamental issues and challenges

Low salary

Vague future

Limited grants and funds opportunities

Having most responsibilities of a PI but getting paid less than half

Existing NIH policies, programs, or resources

Raise the salary standard or adjust based on location (using a logical formula considering cost of living, inflation, etc.). 55K is not enough for a postdoc in expensive cities

Proven or promising external resources or approaches

No response

Response 2671

Perspectives on the postdoc roles and responsibilities

A Postdoc position means the stage of your career where you are stuck doing more research before getting any faculty position which gives you chance to publish more papers and gain more skills.

Fundamental issues and challenges

The main problem is the visa issued is the duration of DS-2019, so if DS-2019 is issued for a year, the visa validation will be a year only. This makes postdocs difficult to travel abroad and to their own home country. So, DS2019 should be issued for the entire 5 years. Another thing is the salary of postdocs is very low in many universities just little bit above the marginal poor family which makes postdoc with family difficult to cover their living expenses as most of the postdocs will have family.

Existing NIH policies, programs, or resources

Visa extension for Postdocs and salary increment, more grants for non-resident

Proven or promising external resources or approaches

training about writing grants, better working environments as some PI threaten to fire them if they don't work hard. There should be a system where postdoc can complain about such PI. Efforts to maintain work-life balance.

Response 2672

Perspectives on the postdoc roles and responsibilities

[redacted for anonymity]

What is the Roles and responsibilities of a Academic Postdoc

A postdoctoral appointment offers a bridge between mentored scientific research experiences and the scientific profession. Unlike other apprenticeship models in the professional world the traditional postdoctoral appointment provides the fundamental skills for operating as an independent, fully functional principle investigator. There are typically are no cohort models like in medicine, no pairings like in teaching, no need to be familiar with the business of science e.g. funding sources, direct/indirect costs models, travel budgets, publishing and presenting. It's possibly the most unique onboarding pathway to faculty research appointment yet has very little standardized or objective components for successful completion.

Fundamental issues and challenges

A few fundamental issues:

- University processes for managing and monitoring postdoctoral appointments vary from institution to institution and within a single institution from department to department.
- There is very little intentional oversight over these assignment which opens to door for potential abuse by a highly empowered Advisor.
- Minority Serving Institutions are typically not aware of opportunities prior to broad public circulation due to their absence and access to powerful networks within the research enterprise.
    - Postdoctoral candidates are rarely identified organically. Majority of candidates are made aware and subsequently emerge as a result of PI to PI networking. This creates a huge disadvantage to schools with smaller research footprints like HBCUs and MSIs.
- Postdoctoral training typically ignore work culture issues like belonging and inclusion.
    - Many appointments by-pass the rigor of a traditional HR training and support. The process has gotten better over time but candidates still find themselves segregated from the general workforce.
- Significant pay differential despite similar work locations.
    - Among the federally funded postdoc programs the funding is determined by the project budgets rather than an objective qualitative process.
- Ad hoc teaching assignments.
    - In many cases postdocs are often used as back-fill to support instruction in absence of their advisor.
    - These assignments are loosely monitored and rarely documented.
- Project "creep"
    - Many times postdoctoral candidates are reassigned to new projects not described in the original job listing.

Existing NIH policies, programs, or resources

I would suggest the use of the National Postdoctoral Association (NPA) recommendations here.

In addition, things to consider could be:

Creating a HBCU/MSI Postdoctoral program where the research is conducted on a HBCU/MSI campus. This will address some of the barriers discussed in the response above. It can also be source of increasing biomedical research and recruiting new faculty to the campus.

Establishing a new code of ethics for institutions hosting NIH candidates. The code should reflect a commitment to guarding against activities and assignments that are not highly correlated to professional development objectives.

NIH should form a community of practice with other agencies to constantly evaluate best practices for managing postdoctoral experiences.

NIH should consult with industry leaders like ORAU to gain insight on challenges and best practices.

NIH should always seek to have industry standard competitive compensation (salary and benefits (health care, etc).

NIH should provide support (workshops/mentoring) outside the host site for candidates, particular women and minorities, that struggle with adapting to the environment.

NIH should try to implement site visits for formative evaluation of postdocs and their Advisor/facility.

Proven or promising external resources or approaches

Probably the best resource available is the National Postdoctoral Association (NPA)

I would also suggest the National Science Foundation Mentoring Network resources

ORAU/ORISE Resources

A Beginner's Guide to Professional Training

https://orise.orau.gov/internships-fellowships/stem-professional-training-modules.html

Postdoctoral Program Management

https://orise.orau.gov/internships-fellowships/postdocs.html

Response 2673

Perspectives on the postdoc roles and responsibilities

The (first) postdoc position for me is indeed a training position which allows to change/expand fields of research, shape an individual research profile and develop a network.

It is a postdoc's individual responsibility to "make things work" as in searching opportunities and possibilities to solve a problem or develop a method. Of course the PI is supposed to support this (with network, insights, resources, etc.), but I think its a postdoc's business to carry the project.

Also, to some degree the postdoc position is the first time where you are mainly responsible for supervising students and techs, whereas when supervising as grad student yourself, you can often refer questions and decision to more senior colleagues.

Fundamental issues and challenges

While a postdoctoral position provides a lot of freedom, limited only by the pressure applied by the respective PI, it also brings the intense challenge of strategically forming a career to happen within a time frame of only the next 10-15 years.

There is a lot of professional pressure on the postdoc to do experiments, publish, report, supervise and all a salary that is far from being competitive with industry positions together with a lack of job security/perspective.

The current system almost forces you to hold back on any personal life, dumps intense stress and responsibility on the researcher. While I can accept that research (and mainly the struggle for appropriate

positions in academia) is competitive, the very limited salary leaves an intense gap in personal funds, be it for family or retirement investments.

It needs better salaries for postdocs! If as a graduate I have to choose between an academic position and an industry job that easily pay three times as much, it depends so much more on the socioeconomic background of a graduate whether or not they can afford to choose academia. This is cementing gender inequality and the lack of diversity in research.

Existing NIH policies, programs, or resources

I think currently there are many valuable resources available on how to navigate the current system and also to raise awareness on career paths outside of academia, but what it takes would be to change the system to make it more attractive, or say less obviously disadvantageous, to subject oneself into it.

Proven or promising external resources or approaches

It needs much better salaries! And more time. In biomedical research things just take so much longer than in other fields. Working up e.g. a mouse model can take 1-2 years before you even can start doing your actual experiments to answer your questions. One year time frames are ridiculous.

Further it needs true incentives for faculty to cultivate a healthy and not toxic atmosphere. Those group leaders who try to change things for the better do definitely exist, but it's their personal struggle to develop/maintain healthy work environments. I feel there is little actual support of these people (mentoring awards are a start, but hardly anything more). Somehow it needs to be put as a requirement to all (especially current senior) faculty, to undergo training for empathy and compassionate leadership (or leadership in general might be a good start).

The current system, that is very hierarchical, is built to foster unhealthy power dynamics and abuse. If there is misconduct that is reported it's usually damaging only the inferiors career—there must be protection for the victim and actual consequences for the PI/faculty/institute.

But again: It needs much(!) better salaries for postdocs!

Response 2674

Perspectives on the postdoc roles and responsibilities

I personally view it as a great training period where you will be introduced to new areas of research and also get help to become an independent researcher.

Fundamental issues and challenges

1. SALARY, SALARY, and SALARY only
2. It is difficult when you have a family including kid(s)

Existing NIH policies, programs, or resources

1. Better salary and extra benefits (e.g. housing, parking, daycare/school benefits, etc.) if someone lives with a family with kids.
2. Mandatory grant writing. Every post-doc should work towards at least one grant during their training
3. Some more help and mentorship about job search (academic or industry)

Proven or promising external resources or approaches

No response

Response 2675

Perspectives on the postdoc roles and responsibilities

I see the postdoc as a highly specialized worker who performs research in a lab and mentoring trainees while setting up a personal line of research. It should be moment when a scientist learns something new and combines this new methods with previous knowledge to create a new and unique line of research who will allow the postdoc to pursue an independent position.

Fundamental issues and challenges

The institute where I am working (in Boston), until last year, used the NIH postdoc minimum salary table as RECOMMENDED salaries, with almost zero possibility of negotiation. This created a lot of problems since the cost of life in Boston is dramatically higher than in the NIH area. I suggest that together with the minimum salaries, NIH also publishes MEDIAN salaries for EACH INSTITUTE at EACH YEAR to maximise transparency and give the more realistic idea that at NIH, the MINIMUM salaries are used as a MINIMUM starting point and not as a religious reference.

Existing NIH policies, programs, or resources

Non americans pay american taxes, therefore it is very obsolete that F32 fellowships are accessible only to people with citizenship.

Also, NIH grants and fellowship salaries should be adjustable with the cost of living of each USA region.

Proven or promising external resources or approaches

publish median salaries divided by years of experience to create a better competition in the job market and to improve the job offers.

Response 2676

Perspectives on the postdoc roles and responsibilities

Taking an academic postdoctoral position should be an opportunity to grow as a researcher and establish your career. Yet unfortunately for many, it means sacrificing your personal life and enduring financial hardships.

Fundamental issues and challenges

Fundamental quality of life issues are mostly related to compensation. Low compensation at the height of the current cost of living manifests into unaffordable childcare, expensive health insurance (specially for dependents), and general safety concerns for only being able to afford housing in certain/cheaper areas. The age of a typical postdoc position is at a prime time for wanting to establish a family, and the disincentives for taking up postdoc position, and particularly fellowships with increased tax and health care burden, are becoming larger. This disparity is even larger for female postdocs that often have to choose between having children or focusing on their careers. Retention also becomes increasingly difficult when postdocs are lured into private industry positions for the higher compensation and better working hours.

Existing NIH policies, programs, or resources

As a current Ruth L. Kirschtein T32 NIH fellow, I see that the Stipend Supplementation and Compensation policy (11.2.10) should be updated to:

1. Clarify that while the definition that "individual fellowships are not considered to be in an employee-employer relationship with NIH or the sponsoring institution" there is nothing preventing the institution from establishing an employee-employer relationship with the fellows to supplement their income and provide employee benefits they would otherwise be ineligible for (e.g. retirement accounts).
2. Allow the supplementation of salary be from other federal and/or NIH grants by the PI. Many PIs only have federal funding, and even if they wanted to supplement the salaries of their fellows to a decent living wage, they are unable to due to the policy.

This could alleviate the constant burden of asking NIH to increase the minimum salary requirements by giving more leeway to the institutions/PIs to decide supplementing fellows without any additional obligations, particularly as we see institutions implement a much higher minimum than that set by NIH which leaves fellows excluded from the institutional policy.

Proven or promising external resources or approaches

NPA Institutional Policy Surveys provides a great resource. The research by Tim Sainburg (arXiv:2205.12892v1) on postdoctoral salary compared to cost of living is also a great resource that can guide efforts to enhance pay scale. I sincerely thank NIH for the platform to share our experiences as postdoctoral trainees, and I applaud NIH's efforts to progress postdoc training.

Response 2677

Perspectives on the postdoc roles and responsibilities

I took an academic postdoctoral position because I eventually wanted a tenure-track faculty position at a research institution, running my own laboratory. I know it's not useful if you want to go into industry, but an academic postdoc is basically required in biomedical research to obtain a TT faculty position.

Fundamental issues and challenges

Postdocs are expected to fund their own moves, are often paid ~half of what an industry job right out of PhD pays, and are not offered retirement benefits, making it a significant financial hurdle to undertake a postdoc. Since there are so few tenure track faculty positions relative to the number of people who obtained PhDs, no one is interested in doing a postdoc unless they want a TT faculty position, so it is hard for PIs to recruit and retain postdocs. This is creating an issue for those PIs who rely on postdocs to produce data to fund their grants, but really those people should be using staff technicians or staff scientists. The postdoc should be working on their own project they can take with them to start their own lab. It is a failure in university policies and NIH grant funding in general that the staff techs/scientists are not able to be paid enough to get good quality productive techs/scientists.

Existing NIH policies, programs, or resources

Postdocs should really be only undertaken by people who want tenure track faculty positions, and the number of postdocs overall should be reduced. PIs should instead pay staff technicians/scientists much better wages than they currently receive, and get most of their data that way, as postdocs should be focused on generating their own data to start their new lab, while learning from the lab in the meantime.

Proven or promising external resources or approaches

No response

Response 2678

Perspectives on the postdoc roles and responsibilities

A role where an individual continues their development and training from the work they did to attain their doctorate, through the contribution to completion of a research project which contains components relevant to their training to date but includes methods and/or techniques that have a mutual benefit to the training/development of the postdoc personally and completion of the project they are working on. An ideal postdoc position would allow sufficient time to allocate to career development alongside the research project the candidate is working on; including grant writing, mentorship, peer review, conference presentation—but also developments more relevant to a career outside academia.

Fundamental issues and challenges

Appeal of academic career: from discussions with peers at graduate level and outside academia, the main appeals of an academic career are largely based on ideas of freedom of thought and flexibility; in reality academic careers are perceived to be constrained by difficulty in receiving funding, small chance of success (few achieve tenured positions), lower reimbursement than similar skilled jobs outside academia, lack of time to dedicate to research (demands of administration, teaching, etc.)—result is that people who choose academic career more likely to be doing it out of intrinsic motivation at the expense of other aspects of life (this reduces the recruitment pool, many not willing to do this and many cannot afford to).

Pace of academic work: postdocs are inherently ambitious and hard workers due to the nature of their training to this point in their career, but the pace of decisions and progress in academia is far slower than similar roles in industry. Speaking from experience, it feels like I am fighting administrators for my right to do research, which is exhausting and is the main factor making me doubt a career in academia beyond postdoc at the moment. It is unfair if postdocs commit to relocating to work on a project that does not start for a year after they have started.

Financial constraints: linked to appeal of academic career, but independent in the way that for many people a postdoc salary and benefits (or lack of) simply do not support the cost of living—whether that be family life, caring for relatives, etc.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2679

Perspectives on the postdoc roles and responsibilities

This position should be a training role with progressive development towards independence (in many forms). Our roles involve conducting research, communicating outcomes and training the next generation of scientist. In theory the responsibilities should be multi-faceted and benefit both the postdoc and the environment they work in. I fear that these positions have largely morphed into skilled and cheap labour, based on listening to the experiences of those around me for 5 years, and these roles have become even more unstable after the COV-19 pandemic.

Fundamental issues and challenges

Issues:

- Visas: these processes are impossibly opaque and stressful for foreign postdocs, and this population makes up the majority of the workforce
- Childcare: of particular importance for female postdocs, who bear the brunt of the lack of benefits and structure
- Pay: has not changed with inflation and does not compensate for skillset; low pay occurs at a time when many significant life changes are also happening (i.e. kids, marriage, house etc.)
- Startup costs: difficult to scrounge for many who were also paid minimally during their PhDs; definitely a barrier to some for changing location; debt incurred lasts years
- Cost/location of living adjustments: NIH salaries should not be identical for postdocs living in relatively low vs. high cost of living cities

Existing NIH policies, programs, or resources

- Faculty are trained in understanding NIH grants and systems almost solely, in my experience, and this doesn't relate to foreign postdocs. Perhaps it is a lofty goal to hope for more resources for foreign-trained PhDs, but in the meantime, education faculty on how to support postdocs not trained in the US would be important.

i.e. it is often suggested to try and get on an F32 or apply for K awards. not possible if not American

- More bridge to independence type awards

Proven or promising external resources or approaches

No response

Response 2680

Perspectives on the postdoc roles and responsibilities

A postdoc is a period when I receive further training into independence to start my own career. During this time, I expect to learn new knowledge/techniques and receive career advice.

Fundamental issues and challenges

In my institution, postdocs are not well respected by the university ; because it's a prestigious institution, there are always sufficient applicants and postdocs are replaceable. So issues that postdocs can be easily dismissed by the administrators.

Existing NIH policies, programs, or resources

The salary baseline should be adjusted based on geography and inflation. The past two years, the inflation has been close to ~10% , so the salary should have been raised by ~10%, but it's not.

Proven or promising external resources or approaches

Postdocs should be given opportunities to review the PIs , instead of just PI reviewing the postdocs.

Response 2681

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

salary for postdoc in the lab is too low, especially in the big city and some Academic field, like affiliated hospital, [redacted for anonymity]. This is the only concern currently.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2682

Perspectives on the postdoc roles and responsibilities

Just like slave boss treat everyone as slave. Especially Indian boss.

Im wondering why NIH gives grant to bosses who never published in good journals. NIH gives money to well connected people.You dont need good science even if you do [redacted] if your boss has connection he gets grants and continues slave treatment for-ever

2 things need to change

1. giving grants to boss who published in science or nature ONLY.
2. Boss should done phd in good institute (here lots of boss are from westie university from India)
3. Never give grabnts to boss who had retraction (I have seen Chendil damodaran 8 retraction still he get grants)

Fundamental issues and challenges

1. Giving grants to boss who published in science or nature ONLY.
2. Boss should done phd in good institute (here lots of boss are from westie university from India)

Existing NIH policies, programs, or resources

[redacted].

Please ask postdoc view when boss applying for grants.atleast they will trat postdoc not like [redacted].

Proven or promising external resources or approaches

Postdoc view when boss applying for grants.atleast they will treat postdoc not like [redacted].

Response 2683

Perspectives on the postdoc roles and responsibilities

it is actually a good way to interact and be in the research world. It is also a good training phase to be responsible for tasks useful in the real world and feels like you are making a difference.

Fundamental issues and challenges

I have a good quality of life and see no inhibition in my recruitment. The only slight problem in my case might be for the admin employees out of the international affairs department not being familiar with the visa process and hassles.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

ways to be in touch with them like there being a contact person or something like that

Response 2684

Perspectives on the postdoc roles and responsibilities

I have had two postdoc positions (in the science/biomedical field) at two very different academic institutions. At the first I felt like a "sr." graduate student, nothing could be done without getting my mentors approval. It felt stagnant, and that I was not learning skills that would make me an independent researcher. It was also my main job to finish up research projects that previous students never finished, either because they quit the lab or because they moved on without finishing. At my second (current) postdoc appointment, I have a bit more autonomy. I have learned a lot of valuable lab skills. In this position I feel more independent but there are people who I can go to if I need help. This position is very fast paced and a lot of projects are rolling in and out quickly.

Fundamental issues and challenges

Fair pay. My number one complaint about being a postdoc is the low pay. I have been in school for over a decade and have multiple degrees and I am making the same(my first two years was making less) as someone with a bachelors in hospitality management who is a manager at an Olive Garden. That is so demoralizing. All of my mentors in academia continually tell me to just hold on it gets better, when you get a faculty position or this grant or that grant funded. But the harsh truth is that there are not as many faculty positions available, the grant opportunities are limited. I had to have a very frank discussion with my mentor and tell them that my salary was not keeping up with the economic demand, and it took eight months to change it. I have gone into more debt by being a postdoc, and it is a hole that I don't know if I will be able to climb out of in the next decade.

In addition to the low pay. there are also not many positions after your postdoc is completed. I know it varies but field and discipline but so many faculty researchers are staying and not retiring which means my peers and myself are just waiting in this postdoc purgatory until there are positions available or jumping ship into industry to save ourselves from accruing even more debt. I know multiple faculty members who are well into their 70s (or older) and not retiring, I know of another who stayed in their position until they passed away. I would not encourage anyone to get a PhD or enter a postdoc until there is some kind of job security or better pay because otherwise you will never get out of debt.

Existing NIH policies, programs, or resources

I think the NIH has great programs and resources. The job fairs that you host and the talks and career path option symposia that you have are all very valuable and helpful to new postdocs.

I like the idea of the LRP that NIH offers, but it requires a lot of time and information and for myself I can barely get my mentors attention to read through a manuscript we are trying to get submitted. I think it would take a lot to get all the necessary documents from my mentor to do the LRP. Maybe adopting a plan that is closer to the Public Service Loan Forgiveness (PSLF) plan that is run by the FSA would be better. For example, if you are a postdoc for X number of years, e.g. 3 years, and are a productive scientist based on a letter from a mentor, or a grant applied to, or a manuscript accepted for publication, then you get X number of dollars of loans forgiven. Offering help, but making it overly complicated to get the help is not helping.

It might also be helpful for any person funded on NIH funds if they have mentees to go through a mentorship course. Even something as small as one hour a year. There are many brilliant scientists who fall short at mentoring their trainees.

Proven or promising external resources or approaches

I think a lot of current problems can be alleviated by paying a fair competitive wage to postdocs. We all know academia can't beat the pay scale that is in private industry but they need to at least be competitive. No one, but especially a highly educated individual, should be paid below a living wage and that is what is continually happening with postdocs. Especially since the NIH has one standard stipend based on year and the cost of living is variable throughout the country.

I think the shift has already happened, whether you want to blame the pandemic, or millennials, or a butterfly beating its wings too hard on the other side of the world; no one wants to go into a job where they feel undervalued and unappreciated, and work for 60+ hours to maybe move a boulder an inch. Having a work-life balance is the new demand, and many of my mentors do not understand that. Their favorite tactic to resort to is "Well back in my day, when I was a postdoc" which can't even relate to modern times and the debt burden most students have entering a PhD program and then leaving that program to get paid a questionable livable wage, it's unreal.

I guess in short a list of things that will only improve your chances of getting people to come into a postdoc would be:

Fair and equal pay

Better loan forgiveness options

4 day work weeks (or 9-80s)

Response 2685

Perspectives on the postdoc roles and responsibilities

My definition of what a postdoc is has changed since becoming one. In my eyes, postdocs are the driving force behind scientific innovation, we are the individuals that have forgone convenience and practicality to pursue a scientific journey with the hope of helping humans. We are organizing collaborations, running experiments, presenting, writing grants, and reviewing journals and the reality is we are spending 60-80 hours a week doing these things even though we are paid horrifically. If you were to ask my friends outside of science they would tell you a postdoc is an individual who sacrifices their quality of life and their families for the pursuit of science.

Fundamental issues and challenges

This response can be distilled into one central issue, finances. In my case, as a US citizen, I can say with confidence other Americans are avoiding academic science or science altogether because it's the equivalent of slave labor. Very few people want to work more than double the time they are already underpaid for. I am a fellow at a prestigious institution in Boston and because of this, I am required to live in Boston (the avg rent is here $3758) and the avg cost of rent exceeds my monthly salary. THIS IS BLASPHEMY. I don't think this is too complicated to figure out why we can't recruit or retain fellows when they literally cannot afford to live on the salary provided even as a single person with no kids. Thus, I suggest that NIH salaries have a scaling factor based on the cost of living in the city your institution is located within. Amongst fellows, this is the most common discussion.Everyone all the time is considering leaving academia because we can't live or enjoy life on this salary. Frankly, if I were a PI, I would be ashamed to look the fellows in face paying them so little (in Boston) and expecting them to work double or triple the hours we are (under)paid to work.

Existing NIH policies, programs, or resources

It is difficult to focus on training when you do not make enough money to pay your bills.

Proven or promising external resources or approaches

I would like to reiterate. It is difficult to focus on training when you do not make enough money to pay your bills.

Response 2686

Perspectives on the postdoc roles and responsibilities

The position of a postdoctoral researcher is a position for advanced and trained researchers in my opinion. It is for people for have substantial knowledge in research acquired during their doctoral studies, and one where they continue acquiring additional research experience on the way to becoming an independent group leader. All postdocs will not go on to become group leaders and supervise laboratories at academic institutions but it is my goal to get there.

Fundamental issues and challenges

I think the lack of substantial financial support and uncertainty about future prospects is a major challenge for recruiting and retaining talented individuals in academic research.

Existing NIH policies, programs, or resources

NIH should seriously think about how they set salary cap for some arguably some of the most talented, passionate and hardworking people in society. The current minimum salary does not do justice to the work postdocs perform. There is also no reward for additional hours or better performance and no maternity leave or child care support.

Postdocs should are not actively encouraged or required to teach. This is not good training for faculty positions where teaching is necessary. Postdocs should be required to teach and should receive appropriate training to become excellent future mentors.

Proven or promising external resources or approaches

No response

Response 2687

Perspectives on the postdoc roles and responsibilities

In my opinion, postdoctoral position prepares one to be an independent investigator, contractor, enterpreneur, etc.

Fundamental issues and challenges

Covid-19 pandemic

Starting families

Not knowing exactly what one wants to do in the career

Existing NIH policies, programs, or resources

IRACDA can be advertised more

Different grants (such as ones for personal leave such as having a baby) can be advertised more

Proven or promising external resources or approaches

Once NIH-funded programs and resources are advertised more, postdocs are more likely to join them and get the training they feel they need.

With knowledge of different grants, this will give the postdoc incentive to perform well at work and apply for the grant. They will have a higher chance of getting the grant, which leads to the postdoc’s satisfaction and makes them more competitive in the future.

Response 2688

Perspectives on the postdoc roles and responsibilities

The NPA and NIH jointly developed the definition of a postdoc. NIH should adhere to a consistent universal definition of a “postdoc” regardless of funding mechanism. “Trainee” is seen as diminutive by many, and should be avoided, while “scholar” or “fellow” is more appropriate.

NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.

The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities. This will assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Fundamental issues and challenges

The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas with defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step. Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit.

International postdocs face unique challenges; the NPA's 2023 Postdoctoral Barriers to Success report shows 86% were negatively impacted by cultural

transitions into the U.S. NIH should work with the State Department and USCIS to accelerate and simplify the visa and immigration process for these world-class early-career researchers. NIH should also expand funding opportunities to visa holders through K99/R00 and new programs.

Short contracts create immigration headaches. NIH should encourage contracts with lengths commensurate with the intended postdoc periods, longer termination notices, and ties to institutions not PIs. NIH should also support adoption of policies such as vacation accrual rollover to support international travel, subsidized visa costs, and insurance with dependent coverage, while prohibiting use of part-time postdoc positions to avoid provision of benefits

Existing NIH policies, programs, or resources

Many PIs lack formal training in mentoring and personnel management. Likewise, many postdocs lack understanding of how to succeed as mentees. To address this gap, NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding, similar to those provided under NIH mentored training programs. Such training should be offered to non-PI's acting as postdoc mentors.

Postdocs' difficulties to remain in academia due to limited faculty positions contributes to dissatisfaction. To retain top research talent, NIH should create or

expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining continuity of lab knowledge, providing additional career options for postdocs, while providing clear differentiation between these positions and postdocs.

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible.

Per the NPA's 2023 Postdoctoral Barriers to Success report, more than 90% of postdocs are negatively affected by the lack of clarity in transitioning to next

positions. More than ever, postdocs are paying a significant opportunity cost for limited faculty positions and 86.6% are impacted by job security concerns. Additionally, 'disenchantment with academia' is trickling down from overburdened faculty, making these positions less desirable to early career researchers. Career

outcomes and tangible benefits of pursuing a postdoc are often misunderstood. NIH should provide early career scientists with actionable information and transparent data to make informed career choices before and during their postdoc periods, including increased awareness of career options/

Proven or promising external resources or approaches

Currently, institutions and NIH IC's each develop their own professional development resources, leading to inequity while inefficient in time and money.

NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In an increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of

federally-funded research but also its community resources.

We sincerely thank NIH for the platform to share our vision for postdoctoral training in the biomedical sciences. We applaud NIH's policies and programs that

have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored

training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps.

Response 2689

Perspectives on the postdoc roles and responsibilities

This is supposed to be a bridging position, providing mentorship and training to help the trainee reach their career goals and potential.

Fundamental issues and challenges

Work/Life balance. Poor mentorship from doctoral student to career academic researcher, ie skills and opportunities in grant writing, sitting in on study section meetings, meeting grants officers, and a transition to managing a research lab instead of conducting experiments. The lack of opportunities to network and develop collaborations with peers to share expertise and efforts on grants.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2690

Perspectives on the postdoc roles and responsibilities

A key upside to an academic postdoc is the freedom to pursue questions based on their intellectual merit, rather than a potential profit motive; these questions can be developed independently or with input from the postdoctoral mentor. I also think the postdoc should contribute to the community of the university and the mentoring/training of younger scientists—but they need protected time/money to do this. Ideally, the postdoc is a junior collaborator to the PI, getting support and training but also granted a fair degree of independence. A postdoc is an incredibly vulnerable position: the power of the PI over the postdoc's current and future jobs is extreme and this mechanism of control can be dangerous for the postdoc.

Fundamental issues and challenges

Key time of life—parenthood, want to buy a home and not uproot. A postdoc often is not at all competitive financially with other jobs a biomedical PhD could take; if benefits could be improved, this might slightly ameliorate the issue.

Existing NIH policies, programs, or resources

Paid parental leave and funding for a technician or similar during parental leave would be huge. Criteria for K99 award often means postdocs have to choose between using it and getting a faculty position immediately—it should be given earlier in the postdoc/have fewer publications required. Dedicated, mandated time and/or money for professional development—so it is easier for postdocs to justify time away from research to gather other skills that will benefit them and the whole scientific mentorship (e.g., management, mentorship, and similar training).

Proven or promising external resources or approaches

Take mentoring seriously when funding grants for PIs: anonymously solicit feedback from their postdocs; require training if they are abusive. Somehow reward institutions that have robust postdoctoral services—often, no one is really looking out for the postdocs; universities have a much bigger interest in keeping PIs happy than postdocs. This is true for funding bodies, too, and is a major source of abuse targeted at postdocs. What if a postdoc needs to leave a lab due to abuse—could funding bodies provide bridge funding for them to go elsewhere? This would help with retention in the academic system.

Response 2691

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

NSRA funding is extremely difficult to navigate in terms of taxes, health insurance, and banefits retirement plan. You essentially lose all privilages associated with normal employment.

In my experience having a fellowship has been a logistical nightmare and financial drain and a extremely stressful

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2692

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is a unique period in a person’s academic career, with minimal teaching or administrative responsibilities and maximum opportunity to focus on research and continued research training. A postdoc should not be treated exclusively as a well-qualified research assistant performing tasks they mastered in graduate school for the purpose of forwarding the research of the laboratory’s principal investigator. A postdoc is also a trainee whose training and education in new skills and additional knowledge should continue to advance during this period and can be used to further their independent career. The postdoctoral period should be

1. a time for an early-career researcher to gain additional independence and responsibility in a research group while still benefiting from the mentorship of a more senior researcher and/or
2. a time for a researcher to expand their methodological repertoire with the guidance of an experienced mentor and gain new skills that can help the advance their field. An academic postdoctoral position also offers the ability to gain experience mentoring graduate and undergraduate students.

Fundamental issues and challenges

A clear issue facing postdocs and the mentors who wish to recruit and retain them are the poor salaries and benefits associated with the position. Postdoctoral trainees are well-educated researchers, often expected to work long hours and assume considerable responsibilities. Postdocs are productive and valuable members of a research team and their pay and benefits should reflect this value.

Recruiters must remember that postdoctoral trainees are in the laboratory to continue their education and training and must be provided with opportunities to develop the skills necessary to contribute to the future of their own field. This will not only benefit postdocs, but improve the quality of U.S. research as a whole, ensuring we have well-trained scientists able to compete with international developments and continuing research advances.

Currently, many academic research programs are still heavily animal-based, despite the well-known problems with translation and replicability of animal research. Many researchers trained in the use of animal models lack the time, funding, or institutional support to receive training in emerging, human-relevant research technologies. The postdoctoral training period is an ideal period during a scientist's career to familiarize themselves with new and/or unfamiliar technologies.

As the range of animal-free testing methods expands, researchers whose graduate training was animal-based will need training with these tools to keep pace with these pivotal developments and redirect their research as needed and ensure that the U.S. science workforce does not fall behind other countries. Increased postdoctoral education and training initiatives will help ensure we are creating a robust biomedical workforce that is able to compete with a rapidly-changing scientific landscape and respond to increasing calls for improved translation of biomedical research findings into human health advancements. Specific training in advanced, non-animal methods for postdocs would better prepare them for a robust, innovative, and satisfactory career in academic research.

Existing NIH policies, programs, or resources

- Institutional Training Grants can be provided for postdoctoral researchers to receive training that would allow them to make the transition from animal to non-animal research methods.
- Continuing Education Grants can be offered with the explicit purpose of establishing educational programs to train postdoctoral researchers on available non-animal methodologies.
- The NIH Director's Early Independence Award could prioritize postdoctoral applicants who currently use non-animal, clinically-applicable methods; are making the transition from animal to non-animal methods; or are developing and/or validating non-animal methods.
- The NIH Bench-to-Bedside and Back Program could prioritize pairing basic science postdoctoral researchers using animal models with Intramural Research Program (IRP) clinical researchers. The goal would be to assist those researchers interested in permanently switching from animal-based research to clinical work.
- Program Project Grants or Center Grants can be offered to mentors of postdoctoral researchers who wish to gain experience establishing centers for non-animal methods at their institutions.
- Grant supplements can be offered to postdoctoral researchers who wish to switch to non-animal methods mid-funding.

Proven or promising external resources or approaches

Some supplemental training programs have been developed to begin to fill the gap in adequate training in non-animal methods. For example, in the EU, the European Commission's Joint Research Centre hosts a summer school on non-animal approaches. Many online resources by experts in the field also exist, including those offered by PETA Science Consortium International e.V. and the Physicians Committee for Responsible Medicine. The Dutch Transition Programme for Innovation created a series of "helpathons," action-orientated workshops built around a specific question that encourages researchers through a community forum to think creatively and harness the power of coincidence in the discovery of new opportunities with regard to non-animal approaches.

Response 2693

Perspectives on the postdoc roles and responsibilities

Given word limits, I pasted my thoughts in the following three spaces but they do not fully connect to the prompts. I am extremely grateful for having received an NIH F32, but as I detail below, there are many ways it massively disadvantaged me. For example, those of us who paid for our own fellowships were paid less and given worse benefits than postdoctoral fellows paid on R01s, which is bizarre given that having F32 funded postdocs is good for the university and for mentors. There is also data to suggest that we are

more successful in the long term given that we worked hard to cover our own salary/research funds and that hard work leads to longer term persistence. One thing that did not fit elsewhere is that there are also large within-NIH disparities in terms of support. Some institutes have trainings and programs to help postdocs get mentorship, write Ks, to help K recipients write R01s, etc. My institute had none of these.

Fundamental issues and challenges

I got an F32 to fund my postdoctoral training. While waiting for my NOGA, my mentor hired me on her R01. I negotiated for a salary above the NIH postdoc rate which, given that my postdoctoral fellowship was in NYC, was a reasonable salary for a trainee given the cost of living there. However, once I got my F32, my department decided to just pay me the NIH postdoc stipend and I instantly had my salary cut by more than $30,000 a year. My understanding is that the NIH stipend is supposed to be a *subsistence* level stipend. It is not intended to necessarily be someone's entire income—especially given differences in cost of living across the US. However, universities seem to see it as something they do not need to supplement, and may even think they cannot. If my mentor could have supplemented my salary through her R01, it is possible I could have convinced them to not reduce my salary. However, NIH rules prohibit NIH F32 recipients being paid with other NIH funds.

NSF includes moving costs in their fellowships. It would be great if the NIH could do the same.

I am single which means my health insurance had to come through my workplace. My married/partnered colleagues had their health insurance through their partners' workplaces. This meant that my F32 research funds (the institutional allowance?) in part paid for my health insurance—and this is on top of what I had to pay every month through my salary for my health insurance. This also meant that married/partnered colleagues had more research funds than I did, which seemed fundamentally unfair. One colleague even married her partner in order to make sure she got her full research fund amount for her F32.

Existing NIH policies, programs, or resources

This prohibition of NIH F32 recipients being paid through other NIH grants has another negative implication that unfortunately can have long term implications. During my postdoc, I helped my mentor write NIH R01 grants. I helped her carry out the research once they were funded—despite the fact that I was fully funded by an F32 and thus conceivably could focus 100% on my own research. I did far more work on the actual writing of the grant than did her co-Is (who were largely chosen because they are senior, well-funded, and well-known)—but they were paid thousands of dollars each month despite doing possibly less than 10 hours of work per year. I now have an R00 and asked my mentor if I could be written into her grants and have a certain percentage of my time covered by her grants given the amount of work I have done, and continue to do, for her. Despite the level of expertise and work I brought to her grants, she cannot add me on as a funded co-I given that there isn't sufficient funds in the grant. Had I been allowed to be funded on her grant at say 10% from the start, despite my having an F32, that could have meant that my contributions were acknowledged and valued in a way that was commensurate with my skill level and my actual contributions. Now instead I am stuck doing unpaid work on her R01s—or I have to decide to stop doing that work and threaten that relationship. This could have been prevented.

There are huge disparities in the support and help provided by program officers—mine is VERY hands off which I feel disadvantages me relative to others.

Proven or promising external resources or approaches

Mentorship on F32s: There appears to be a strong preference for mentors on F32s who are more senior and who are NIH-funded. This puts mentees and junior investigators who might have relevant expertise at a distinct disadvantage. As an F32 recipient, my mentors were all very senior and very well funded people. They were so busy and so senior, they were not particularly interested in, nor did they have time for, mentoring me. They also were so senior that their advice around professional development topics (like job searches) were not particularly relevant. If the NIH explicitly valued the unique mentoring contributions of junior faculty, I would have had mentors who were more invested in me and whose professional development experiences were more closely aligned with my own. Now as an assistant professor in the first year of my R00, I was asked to be a mentor on a postdoc's NIH K01 application but then was told I was too junior to do so and was taken off. I know that I will be providing mentorship to this postdoc once they get the K01, but it will now be informal and thus not something that really supports my tenure application nor supports my building of a reputation as a mentor so that I can become a primary mentor on a K. I think this leads to situations of shadow mentorship where junior people are doing invisible labor mentoring postdocs and students without getting formal credit for that mentorship. This also particularly

disadvantages us from groups that are underrepresented in biomedical sciences as we are likely to be asked to serve as unofficial mentors very often due to shared experiences with trainees from those same groups.

Response 2694

Perspectives on the postdoc roles and responsibilities

I see the postdoc as an opportunity to learn a new set of skills that, when combined with those gained from my PhD, grant me a unique angle/approach to the scientific problems that I will address in my future lab. In this light, I believe that postdocs should be treated as collaborators.

Fundamental issues and challenges

The lack of mentorship and collaboration in the academic labs I've considered postdoc research in have been a major reason I chose to leave my postdoc. People around me are over-committed, stressed, or hyper-strategic about their science, which I also find discouraging.

Existing NIH policies, programs, or resources

I feel like NIH has a lot of resources for early career researchers, which is amazing. I don't know how NIH can affect the culture of the places that employ them.

Proven or promising external resources or approaches

No response

Response 2695

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Poor pay

Lack of retirement benefits

Temporary position with no job guarantee

long working hours and no overtime pay

little to no affliation to an institution, under the jurisdiction of a single PI who determines ones career fate

few and competitive grants to transition into independence

Existing NIH policies, programs, or resources

Expand grant oppurtunities

Proven or promising external resources or approaches

No response

Response 2696

Perspectives on the postdoc roles and responsibilities

Having the individual F32 postdoctoral fellowship is an ideal role for me personally and I believe anyone who is transitioning from being a graduate student to being a faculty member. I think it is an incredible opportunity.

Fundamental issues and challenges

The biggest challenge I encountered was the uncertainty around whether or not I would actually receive the award before I had conferred my degree. This caused an incredible amount of personal distress. I had to pay for my relocation out of pocket and luckily, my sponsor had funding to support the time period in between my completion of my degree and the start of my F32. I believe this is unacceptable. Please give a

notice of award contingent on degree completion and have bridge funding so the student who is preparing to defend their dissertation does not have to worry about whether or not they even have a job waiting for them afterwards.

Furthermore, the status of fellows as a non-student, non-employee comes with many annoyances. Everything must be reimbursed, even health insurance. Worse, I do not have access to all campus resources and sometimes have to go through an onerous process to access such resources. It gets in the way of doing research and sometimes it gets in the way of my quality of life.

Existing NIH policies, programs, or resources

Given the previous points I made, it would be wonderful if remote work was accepted for postdocs. I understand the benefits of being immersed in the intellectual environment where you receive your fellowship. But the cost of having to move to a new place where you may not even be given access to the campus resources anyway is not worth the payoff of the supposed intellectual environment. I think there would be no shortage of postdocs if the policy explicitly allowed remote work.

If you aren't going to do this, then the stipend should be adjusted for cost of living in the area where the fellow moves to.

Proven or promising external resources or approaches

No response

Response 2697

Perspectives on the postdoc roles and responsibilities

Postdocs are in the early-career stage of their development as researchers.

Fundamental issues and challenges

It is difficult for postdocs to be classified as "trainees" and not be given full benefits. NIH should be stronger in its recommendation on benefits and compensation to compete with business/industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2698

Perspectives on the postdoc roles and responsibilities

Postdocs are hired to do the bulk of the projects for the PIs, sometimes left to your own devices with little support. Sometimes the PI expects you to mentor graduate students and interns. This is a temporary job with uncertain career goals, with very low salary, and this induces anxiety to postdocs. If you move to a different city to do a postdoc, there is no relocation fee. Postdocs are not considered as students, so you lose all the student benefit such as gym membership, writing center, etc. All of these add extra financial burden to postdocs. Particularly for international postdocs, visa is tied to employment, making them more vulnerable to mistreatment by toxic PIs.

Fundamental issues and challenges

1. Lots of grants and training opportunities are US citizens or permanent residents only. International postdocs are only eligible for K99. If you are doing a post doc in a department that doesn't get much federal funding, you wouldn't get much support to write your K99.
2. Low salary, no relocation fee, high financial stress, as most postdocs are in their early 30s, at the age of starting a family or having a child.
3. Very narrow career development options. Faculty positions are of limited supply, and highly competitive. If you want to go into industry, why do a postdoc?
4. If you want to stay in your postdoc institution, the job options are limited.

Existing NIH policies, programs, or resources

1. Increase the amount of grants, training opportunities, to international postdocs. This is not limited to the NIH, but also the AHRQ (Agency for Healthcare Research and Quality).
2. Increase postdoc salary, and provide relocation fee.
3. All institutions should give higher priorities to post doc career development.
4. Give postdocs the same benefits as students, such as gym membership fee, writing center, etc. in universities.
5. If postdocs need to have teaching responsibilities, their teaching effort should be financially compensated.
6. For Institutions: when you recruit a postdoc, consider keeping them after they finish their fellowship. And this should be made clear at the beginning to the fellowship.

Proven or promising external resources or approaches

No response

Response 2699

Perspectives on the postdoc roles and responsibilities

I view my role as a bridge one between trainee and principal investigator, but that errs much more on the leadership side than the trainee side. I am doing a postdoc to gain expertise in some new techniques, write grants, and mentor/manage other more junior scientists. But I consider myself a fully formed scientist in the majority of respects. So most of my role is to be a leader in the lab, and get used to running my own little mini-lab within the context of a larger lab, so prepare for my eventual goal as a PI. And of course my main goal is to produce research and publish good papers that I can use to build the rest of my career (and find myself a good position at an R1 institute).

Fundamental issues and challenges

My perspective is that there are two main issues that postdocs face:

1. extremely low salaries that are not commensurate with the amount of experience we bring and
2. extremely little power given how much of the actual science (both hands-on, day-to-day and big picture) we drive.

It is extremely mentally taxing to put up with #2 given #1. Postdocs are (almost always) postdocs because they see a future as a leader of an academic/government lab, and (maybe I'm generalizing but this applies to me personally), what drives that is wanting to have autonomy over the science that is done. But it's an extremely long road ahead to get to that point (and getting longer!!) and, since postdocs are likely to be personalities who want a lot of control over what they're doing, or they would not be doing postdocs in the first place, the constant reminders that you are a "trainee" who is a full adult with years of experience are grating. More often than not, I know one thousand percent more of the science than all of the principal investigators I interact with, because techniques have changed so much since they ascended, but I'm paid pennies, and stuck having little power and having to explain the basics to them in meetings. That feeling is really really challenging on mental health, and at a certain point every postdoc I know considers quitting, because if I'm going to spend 5-7 years having no power while being so highly skilled (and then maybe not even get a job), why wouldn't I at least go make 2-3x as much money and have better work-life balance?

Existing NIH policies, programs, or resources

- The #1 thing every postdoc is going to tell you: way higher minimum payscales for NIH postdocs; I'm talking starting at close to 90k in coastal cities. If this reduces the number of postdocs overall, I think that is totally fine. Academia should not rely on postdocs to the degree that it does. They should be much more competitive to get and be seen as a LEADERSHIP position within the lab. The main role of a postdoc should be to learn a few scientific techniques and then develop skills in mentorship, management, and grant writing.
- The unwritten rule that postdocs should change institutions after PhDs is annoying, penalizes folks with personal issues for staying in 1 place or being unable to move. The NIH should make sure this is not penalized in fellowships/grants.
- The K99 is a silly grant that is almost impossible to write ("look at how accomplished I am already! but I promise I need TWO MORE YEARS of training, despite already having a PhD and 3 years of postdoc, because Reasons."). I don't know what the solution is, but the K99 is bad. Perhaps more F32s and smaller R00 mechanisms for senior postdocs.
- NIH should explicitly reward team science. Post rules that it's fine to switch co-first authorships around on CVs if it's different from what is listed on the DOI. Do not allow reviewers to comment "but what did they actually *do*" in co-first papers. Science is slow, and it's more efficient in a team. Gone are the days where you can do 1 western and get a Nature paper. It's time for study sections to stop penalizing this —the rugged, ego-driven individualism is making us all mean and miserable.
- Require PIs on NIH grants to take mentorship/management classes and solicit PI reviews from trainees regularly.

Proven or promising external resources or approaches

Pay us more.

Response 2700

Perspectives on the postdoc roles and responsibilities

We have adopted the National Postdoctoral Association's 'postdoc' definition, and we highlight the word "temporary" when sharing this definition to emphasize to faculty, postdocs, and institutional leaders that postdocs are not long-term lab technicians, managers, or other support personnel. Furthermore, we recognize postdocs as being intersectional trainees; that is, they are contributing to the research enterprise, acquiring and learning a wide range of skills, and mentoring and being mentored. This recognition is central to how we advocate on behalf of postdocs.

We surveyed university faculty, postdocs, trainees, and staff, with 46 responding, to learn what experiences are most important for postdocs to have while training. All responders combined ranked these highest:

1. Networking;
2. Independent Research;
3. Business of Science Training;
4. Interdisciplinary Pursuits;
5. Mentorship Training.

Over 77% of faculty respondents placed Networking and Independent Research and Faculty-led research amongst their top five important postdoc experiences, while 82% of postdocs placed equally high value on Interdisciplinary Pursuits, Leadership Opportunities, Networking, Independent Research, Supervising Trainees.

When asked to assess which experiences are most difficult for postdocs to pursue, all responders and faculty ranked these highest:

1. Grant Writing (Lead PI);
2. Leadership Opportunities;
3. Teaching Experience;
4. Technology Commercialization; and
5. Independent Research. Postdocs, and separately

Training Grant affiliated (TG)-postdocs, mentioned similar experiences, but also included Opportunities to Supervise Trainees and Grant Writing (Any Role).

Fundamental issues and challenges

Our 46 survey responders identified the following as inhibiting recruitment, retention, and quality of life:

Challenges Inhibiting Postdoc Recruitment:

All Responders described low postdoc wages, low wages compared to industry, better work/life balance outside the academy, limited funding for international scholars and visa sponsorship, and low candidate pools as factors inhibiting recruitment. Additionally, faculty highlighted the lack of relocation funding and support as an inhibiting factor, while postdocs cited scarce faculty positions and low representation and diversity in the professoriate as inhibiting factors. All responders and Training Grant Affiliated (TG)-faculty groups had identical responses. TG-postdocs highlighted the lack of discipline-specific recruitment events as an additional inhibitor.

Challenges Inhibiting Postdoc Retention and Quality of Life (QoL):

All responders described the increased costs of living, low postdoc wages, scarce faculty positions and opportunities for career advancement, minimal time for social activities and networking, burnout and as inhibiting retention and reducing overall quality of life. Additionally QoL Policies and Benefits (e.g., postdocs not receiving the same access to vacation, sick, parental, and disability leave benefits as other staff types; relocation policies and programs not being consistent across the country and/or excluding postdocs; support programs for navigating work conflict; university programming to reduce isolation and increase belonging; and participation in standard annual raise processes given their role spans standard trainee and staff mechanisms). Additionally, faculty highlighted minimal federal and local support mechanisms (e.g., seed funding and pilot awards) for postdoc-led research and minimal support for retaining postdocs (via raises, relocation/onboarding support, and/or independent research funds). Postdocs highlighted lack of time for socializing and burnout as inhibiting their retention and lowering their quality of life. Training Grant affiliated (TG)-postdocs and faculty responses fell within those reported.

Existing NIH policies, programs, or resources

The following items were highlighted as existing programs and resources that could be improved in the NIH postdoc training ecosystem:

- More oversight and enforcement from NIH to ensure that PIs are paying postdocs, who are appointed to research grants, living wages, and that these postdocs are allocated dedicated time to pursue professional development and career advancement opportunities in addition to time spent on research activities.
- More oversight and enforcement to ensure that all faculty receiving NIH funds participate in mentorship and inclusive excellence trainings, and that these individuals are using individualized development plans (IDPs) and mentorship plans for postdocs in their labs.
- Higher pay lines, modular budgets, and reduced caps for all research grants, which will allow for increased salaries for postdocs and other trainee types.
- More funding opportunities for international scholars. This could include

1. allowing international scholars to be appointed to training grants;
2. offering diversity supplements to existing training grants for this purpose, especially in fields with limited numbers of domestic scholars;
3. expanded individual fellowship opportunities for international scholars and/or grant opportunities that include pathways to citizenship.

- More early-stage funding opportunities for postdocs to allow for preliminary data collection that can be used for pursuing existing mechanisms (e.g., K99s).
- Flexibility on including non-citizens on postdoc fellowship training grants. Highlight how much of the nation's postdoc workforce is international. Forging relationships between this community and NIH would be a great way to shore up pipelines into the U.S. research community and to maintain U.S. preeminence in emerging fields of science in the longterm.
- Expanding individual fellowship opportunities to allow non-citizens to participate.
- Make institutions commit to inclusive excellence institutional changes as a requirement for any received training funding.
- More recruitment initiatives at the national level across the biomedical science continuum to aid in identifying and recruiting potential postdoctoral candidates.

Proven or promising external resources or approaches

1. More engagement and information gathering from the postdoc community to inform future policy and programmatic changes. This could be accomplished by engaging with postdoc-led networks at local and national levels, such as university postdoctoral associations and the National Postdoctoral Association. A committee of postdocs could be established with rotating appointments to advise NIH leadership on emerging trends within the national postdoc workforce.
2. The Southern Regional Education Board's Institute on Teaching and Mentoring (SREB-ITM). (https://www.sreb.org/institute-teaching-and-mentoring)

SREB-ITM is an external resource that has dynamic engagement across disciplines, career stages, and diverse socioeconomic variables that is focused on the retention and increased quality of life of diverse scholars in STEM, biomedical, and clinical fields. The purpose of SREB's ITM is to provide equitable access to support structures that train participants in the non-academic experiences needed to succeed in the academy and industry that their home institution might not provide. Specific items they cover in their curriculum include: how to navigate the job academic job market, how to effectively network, how to mentor and advise trainees as a new faculty mentor, and how to be an effective educator. Although SREB-ITM is primarily focused on doctoral trainee experiences, we believe the approach could equally benefit the national postdoc community. NIH could do something similar to this by deploying a business of science curriculum that all NIH-affiliated trainees participate in.

Response 2701

Perspectives on the postdoc roles and responsibilities

Advancing skills, applying for grants successfully, publishing first author papers, establishing scientific connections and collaborations, attending conferences to increase visibility of your work, learning how to mentor and manage a lab, how to write grants, exploring and expanding research interests

Fundamental issues and challenges

Cliquishness, poor mentorship, mentors using your ideas and underpaying you while expositing your expertise and commitment; blackmail—nonstop work or no support, sexism. Stifling environments where collaborations do not flourish; mentors who are too old to care; mentors who don't mentor; mentors who don't understand the research you are doing in their lab; mismanage of funds; going for the low hanging fruit

Existing NIH policies, programs, or resources

Something needs to be done so that mentors are vetted before they are allowed to take on postdocs. There should be smth like rate my professors but for science mentors

Proven or promising external resources or approaches

Mentoring, training, all of these needs to be improved and there should be an anonymous way to report misconduct, negligence of your PI.

Response 2702

Perspectives on the postdoc roles and responsibilities

Postdoc should has more training and more financial support to continue career also 4 years after degree to get K99 should be moved to 5-6 years

Role of postdoc should be increased to participation in conferences specially oral presentation

Also there is great challenge to keep yourself in the track for academia without fair salary (minimum wage)

Fundamental issues and challenges

There is alot of positions but when someone apply you don't get response

The main challenge is financial after suffering you are not sure from the future if you will get position or not

any novel ideas that we participate with PIs will not return to us as financial benefit

Some PIs keep them and start to use that ideas after we leave the Labs

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2703

Perspectives on the postdoc roles and responsibilities

A post-doctoral position gives opportunity to work in a research group and develop the capability to build your own research group. As a postdoc, you learn from your mentor and utilize your skills in solving the problems for the benefit of the community.

Fundamental issues and challenges

Post-doc position is a short-term transition state from the PhD to a long term academic or industrial job. Therefore, a post-doc passes through the recruitment process and always worried about the next step. Although a post-doc position provides a very healthy and fulfilling experience but there are only three problems:

1. Immigration issue associated with the J1 visa and two year home stay rule
2. Uncertainties associated with the job market and too much dependence on the advisor
3. Low salary with respect to the cost of living and increasing family responsibilities due to age

Existing NIH policies, programs, or resources

I have some suggestions so that a post-doc can focus more on research and contribution to the community.

1. Some housing related expenditures should be compensated by either providing housing by the university or rent sharing
2. Some steps should be taken so that a post-doc position should not remain a transition state
3. A post-doc contract should be 3-5 years
4. A post-doc should be considered either as a student so that they get some recognizable degree certificate or they should be treated as a staff so that they should be less dependent on their advisor

Proven or promising external resources or approaches

The overall training system is wonderful.

Response 2704

Perspectives on the postdoc roles and responsibilities

The postdoc in Academia is a highly qualified (young) professional with a deep knowledge in one or more scientific fields (and technical skills) that takes leadership in one or more research projects in the lab. He has the responsibility to strategize on the best way to answer scientific questions using biomedical tools available and/or creating/improving methods/techniques available in the field. The postdoc is also invested in grant writing as well as in analyzing the obtained results and eventually writing manuscripts and submitting them to peer-review journals. In the postdoc position, the individual is preparing his/her him/herself to grow toward an independent position. While a postdoc is responsible for the progress of his/her research, he/she also mentors and trains undergraduate and graduate students at earlier stages of their careers.

Fundamental issues and challenges

1. Low salary for highly qualified and interdisciplinary work such as the postdoc, competition with industry salary is an issue.
2. Many postdocs are not US citizens or residents causing recruitment issues.
3. Only a few faculty positions are available every year making the postdoc training very competitive and not always productive.
4. Postdocs are mostly on short contracts, thus considered individuals "in training" rather than in a real job position impacting job satisfaction.

Existing NIH policies, programs, or resources

not sure

Proven or promising external resources or approaches

No response

Response 2705

Perspectives on the postdoc roles and responsibilities

The NPA and NIH jointly developed the definition of a postdoc. NIH should adhere to a consistent universal definition of a "postdoc" regardless of funding mechanism. "Trainee" is seen as diminutive by many, and should be avoided, while "scholar" or "fellow" is more appropriate. Postdocs should have protected time and funds to attend at least one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network.

The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities. This will assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.

Fundamental issues and challenges

The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts

in areas with defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step.

Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit.

Academia contains remnants of structural biases and institutional barriers that hinder the success of scholars from historically-marginalized groups still today.

Postdocs from historically-marginalized groups and international postdocs face increased structural and implicit barriers including: lack of inclusion, reduced resources, implicit bias, and loss of community, while often managing increased familial commitments and additional financial responsibilities. Examining and acting on these power imbalances is key to creating a more inclusive and safe environment. I also believe it is vital for mentors to get annual training on cultural competence and learning ways to support their mentees.

Existing NIH policies, programs, or resources

NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.

To increase equity, NIH should provide NIH-funded postdocs with moving allowances. Moving costs can be especially cost-prohibitive for researchers from low socioeconomic backgrounds, those with increased familial commitments and internationals.

Collecting metrics on postdoc satisfaction on an annual basis will position NIH to be nimble in its response and adjust policy accordingly based on the needs of postdoctoral researchers. These data will not only provide key insights that will determine if new policy changes are effective, but will allow postdocs to provide honest, anonymous feedback without retaliation.

Proven or promising external resources or approaches

The NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA

Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library.

Currently, institutions and NIH IC’s each develop their own professional development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In an increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc’s personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources.

We sincerely thank NIH for the platform to share our vision for postdoctoral training in the biomedical sciences. We applaud NIH’s policies and programs that have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps.

Response 2706

Perspectives on the postdoc roles and responsibilities

Thanks for bothering to ask for long time coming feedback need-bottom up type.

It would be useful to also be wider advertised at every stage in professional publications and organization. We are keeping tuned for the results.

A give all and have all taken of the brightest, most talented, hardest working and most dedicated humans with NO returns to benefit a livable life for the 99%. of them. The responsibility of profiting from the mere presence, let alone interacting with, taking the ideas and full time work of the world's most valuable resources should come with equally high responsibility and protection of them. It does NOT. When we'll all soon be back in caves, it will be too late to lament the refusal to pay the postdoctoral scientists their worth and to shelter them from neverending disrespect, bullying, harassment, assaults, violence, robbery, and ruin by the lowest lows who get away laughing. There should be a law signed to protect those human progress and development owes to. There is NO "Stop anti-scientist hate crimes" legislation. The world's incalculable loss continues.

Fundamental issues and challenges

- Lack of livable wages and benefits: medical/health insurance and vacation are basic human rights of every full time worker in most of the civilized world
- Lack of clear career path—eg you labor on minimum wages a decade to become a doctoral what? An "appointee" whose check bank tellers laugh at???)
- Lack of REAL JOBS for the 99% with doctorate in sciences
- Lack of professional REQUIRED of departments and institutions training offerings on peer reviewed article and grant writing and submission
- Lack of PAID family/caregiver support
- ALL the above and countless similar handicaps set the postdoctoral scientists up for housing and food insecurity, and render them ideal, easiest targets for crooks, violators, thieves, and limitless perpetrators all who get away every time with everything they do to the penniless, helpless scientists with doctorates everybody but them profit of.
- Lack of PAID studies/feedback. A fraction of the time let alone expertise and practical significance of a survey like this is paid $ hundred(s) by focus groups, on line surveyors, etc. Guess which ones will more and more poverty-stricken "postdocs" going to do in the future?

Existing NIH policies, programs, or resources

- Reduce "postdoc ing around" to 2 years, maximum 3 and make available REAL jobs with REAL salaries and REAL benefits at the end of the postdoc tunnel or nothing will be fixed sustainably. There is NOTHING between postdoc ing and faculty (for the 1% at a 400/opening) to give the doctoral scientist a livable salary with minimum benefits. NO other profession does this to the past college level: medical doctors get a 2 year fellowship and residency after which they become physicians with mighty well paid salaries (with a 4 years of medical school. Lawyers and MBAs after mere 3 years triple a scientists' salary. Don't be surprised if there wont's be any more fools to postdoc forever till abandoning science altogether in the near future.
- PAY LIVABLE WAGES and BASIC BENEFITS, especially health/medical and " retirement" (God forbid pension, which all high school mates with college degrees have!) to ALL "appointees"—is that even a decent professional title for someone to tell the public what do they do "for a living? the brightest and hardest workers currently humiliated at below bachelor-and even high school diploma holders wages, at poverty limit!
- Make training/workshops in peer review article and grant writing and submission required of every PI in every department at every institution responsible of graduate students and postdoctoral trainees
- Expand the options for NIH and other grants by postdoctoral scholars beyond the handful (Ruth K and Ks) at livable wages with HEALTH/MEDICAL and RETIREMENT BENEFITS
- Provide Maternal, other caregiver PAID benefits and subsidies (eg for child care) as well as nursing rooms in/around departemnt
- REQUIRE professional STEM conferences to accept at least at some sections/events STEM mothers/fathers with infants and well behaved children accommodate them
- Expand hybrid and work at home work options
- Subsidize housing vouchers, affordable rent, home buying support

Proven or promising external resources or approaches

- Hold PIs, departments, and institutions accountable for benefiting from working with and profiting from humanity's brightest and hardest workers: every NIH grant application and promotion/tenure application should include name by name former graduate students and postdoctoral trainees' current paid work positions and other professional and/or personal achievements as a result of the named grant/promotion/tenure applicant's mentorship, guidance, etc. There are "prestigious" dementors who-while "serving" on women and minorities committees neglect and/or abuse and/or sabotage women and minorities' careers and lives
- Provide national hotline to report individuals, departments, institutions bullying, harassing, and/or turning a blind eye to postdoctoral trainees -especially internationals—being harassed, abused, assaulted, robbed, and ruined by communal aggressors currently laughing away freely after destroying the lives of the world's brightest and hardest workers because nobody wants to hear about these heinous acts committed on the most vulnerable minds that shoulder this country's and the world's progress while being paid laughable wages way off the affordability of $300/hour lawyers and do not have time for being dragged through legal battles they did nothing to deserve.

Thanks for reading. I wouldn't have burnt every dish I tried to cook today (of a decade old garden bean seeds) because of preparing this survey unless my daughter, also a number one Ivory Tower STEM doctorate earner from this country and awardee of countless honors like her mother is wouldn't have also left academia she once entered with enthusiasm, endless creative ideas, and all-out hard work but was driven away elsewhere.

Letting the brain drain gush over generations of the world's best over and over and expecting different outcomes? It does not matter who said it. It is what is being done to doctorate-level scientists. now.

Response 2707

Perspectives on the postdoc roles and responsibilities

Our University views a postdoc as a temporary (generally 5 years or less) training position in which a postdoc pursues a program of research and advanced training under the direction of a faculty mentor prior to obtaining an independent position in academia, industry, government, etc. Despite this, there is disparity in the ways postdocs are treated (as research trainees or as professional scientists contributing to the research mission). A clear definition from the NIH would help focus efforts to improve the postdoc period. If they are trainees, they should develop a clear training plan with their mentors with regular review and accountability. The outcomes of the training plan should be tracked and mentorship oversight provided. If they are not trainees, they should be paid market rates and have a clear professional development plan with accountability built in for both the postdoc and their mentor.

Fundamental issues and challenges

There are several ways in which the NIH could help resolve some significant challenges faced by postdocs. Much has been said about raising recommended stipend levels and providing cost of living adjustments. Postdocs experience wildly disparate quality of mentoring, and the NIH could expand access to (and require or strongly encourage) CIMER-developed mentor and mentee training. One problem that must be solved by the NIH is the requirement that fellowship recipients are not considered employees of the university. This requirement results in numerous problems for postdocs including a loss of benefits, loss of access to retirement accounts, loss of tax documentation and income documentation, etc. By treating the F32 and T32 awards as research grants like the R series and K99s, postdocs on these fellowships could remain employees of the university and avoid myriad problems.

Existing NIH policies, programs, or resources

As noted above, increased access to CIMER-developed mentoring curricula would take advantage of a valuable NIH-supported resource to enhance training.

Proven or promising external resources or approaches

Providing or supporting a centralized postdoc hiring hub would enhance recruitment and training. Utilization of CIMER-developed mentoring curricula could improve the working environment and mentoring. Facilitating the sharing of best practices and outcomes from programs across the country would provide a valuable resource.

Response 2708

Perspectives on the postdoc roles and responsibilities

Postdoctoral training should be a defined time period to prepare for an academic research career. There should be additional skills gained and refinement of skills achieved in graduate training. It should not be a holding pattern or a second PhD. The postdoc is still a training position but also the postdoc needs to contribute and be aligned with the PI/mentor's research while defining their own pathway. This inherently poses challenges. The postdoc for me is also research training following my clinical doctorate training. While I am pursuing my second research doctorate, I am still technically post-doctorate of my clinical doctorate. That presents a unique scenario of being both a pre-doc and post-doc at the same time. It's an ill-defined scenario with fewer mechanisms to support it. It is a bit of an anomaly. For me, this postdoctoral training time is concurrent with my graduate research training. If I wasn't pursuing a research doctorate, I would be a "pure" postdoc following my clinical doctorate. However, by pursuing a PhD, I become a predoc? That seems inconsistent.

Fundamental issues and challenges

It is especially difficult for individuals with a prior clinical doctorate pursuing a second research doctorate because they are simultaneously post-doc (post a clinical doctorate) while also being a predoc. There are fewer mechanisms to support us and classification is difficult. Further, those with clinical doctorates are often older, and have lost income potential for a substantially longer time period with clinical training. It is not just income but also lost benefits of disability, retirement, and other benefits. Increasingly, it is becoming financially untenable. Further, on the other side of postdoc training is academic jobs with poor job satisfaction and an increasingly difficult funding environment. This makes postdoctoral training even less desirable.

Existing NIH policies, programs, or resources

For those with clinical doctorates, the K08 pathway is a unique opportunity for clinician scientists. However, there are few opportunities for those with a clinical doctorate pursuing a research doctorate. They are technically eligible for postdoctoral fellowships (T32 postdoc and F32 postdoc) yet since those are only for 3 years, that eligibility can be used up during their research doctorate training and then during a post-research doctorate postdoc, they have no eligibility left for the F32 and there are no longer any other support mechanisms. The F30 is meant for this situation but only if there is a formal dual degree program, which often doesn't exist for non MD/PhD tracks and also doesn't benefit those who want to enter research later. There should be greater opportunities for clinician-scientists, those with dual clinical and research doctorates and those with clinical doctorates pursuing research doctorates

Proven or promising external resources or approaches

No response

Response 2709

Perspectives on the postdoc roles and responsibilities

The postdoc position is an advanced training opportunity before transition to academic or industry leadership.

Fundamental issues and challenges

Most universities (especially those that run like business enterprises) do not recognize postdocs as employees (they call them trainees) depriving them of a sustainable wage, retirement benefits, bonuses, immigration help or tax assistance. In other words, they profit off of postdocs tremendously without due monetary compensation. Universities trying to behave like corporate America should be discouraged, especially when it comes to education.

Existing NIH policies, programs, or resources

The NIH must make universities take responsibility and give proper compensation and recognition as employees.

Proven or promising external resources or approaches

I believe if postdocs are compensated well and recognized with retirement benefits, bonuses etc. there will be a boost in recruitment numbers.

Response 2710

Perspectives on the postdoc roles and responsibilities

When I started, my ambition was to explore the unknown and understand mechanisms underlying diseases. While technically we strive to uncover new findings, it almost seems redundant in the scientific community and acquiring funds for less explored areas is tough. As a postdoc/research associate, I have largely taken on all responsibilities from experiments, writing, grant reviews, and largely what feels like technical work that should not consume so much time (e.g., ordering, equipment maintenance, inventory). I am happy to help, but it takes a lot of valuable time away from doing what is needed, publishing. Postdoc/research is not so much a joy of exploring the unknown but a race to publish as this is what defines you. In some ways, it is not fair when you are responsible for so many tasks, which spreads you thin in a small lab versus big labs that have the resources and maximize postdoc needs.

Fundamental issues and challenges

Unfortunately for myself, I feel the graduate to postdoc path has been more of a struggle than an enjoyment. I went into research because it has been a long time interest of mine, to understand the unknowns. But in short, I will not promote my kids to go into the postdoc route, nor others nearing the stage of considering PhD. First, the pay and benefits make living tough. I had to take out additional loans to get by. Second, one year contracts for PhD is stressful. Because of one year contracts, I always felt I needed to work 7-days per week. It also does not help to hear your PI say you must work all the time. Three, there are not enough guidelines/policies that help protect postdocs/grad students from abusive PIs. For instance, I had submitted a first author paper with my PI. Upon request for edit/resubmission, my PI removed my name all together as an author and my institute said it was fair practice. It hardly seems fair my first authorship can be stripped without at the very least informing me. Nor did I get any authorship. Harassment is real and it seems PIs are highly protected because they are the funded individual. Lastly, it wraps back around to pay. It is hard seeing so many other professions with 2 year degrees making more money than someone who has been committed for 5 years in training, and several more in postdoc life making 20k less than other professions. Our benefits are still bad, vacation is far less. I couldn't even take more than a week for my newborn child. It just becomes sad. Everything feels competitive and difficult.

Existing NIH policies, programs, or resources

After reaching postdoctoral status, I quickly realized that my training did not include anything regarding the NIH/grant funding process. When I was asked to submit a grant on my own, I quickly realized what a burden and daunting task that was. Especially having a PI that claims they have no idea how to submit a grant (which was not the case unless they outsourced writing/submission of their own grants). Going into graduate school, I wish I had known so much more about options. For instance, if I could start over, I would have worked towards a MD/PhD track. But I only learned about that option when it was too late. Statistics is crucial, but you are also not required to learn. Instead, graduate school felt like a repeat of my undergraduate degree. I would have like to learn more about the options/opportunities out there. Receive training for things that become crucial in grad school and postdoc (e.g., statistics, grant writing, funding mechanisms throughout ones career path). Highlighting these things in advance I think would have gone a long way in planning and decision making.

Proven or promising external resources or approaches

Respect for trainees goes a long way. Pay that matches our degrees and benefits would make life/job satisfaction much greater. NIHs presence needs to be much more early on in life (college) so students become more aware and knowledgeable. I typically learned of how others were sucessful when I was no longer eligible to apply to funding sources making stuck in a hard place. I was not eligible for K awards, but not quite established enough for early stage investigator. Not all is bad. I have had many great experiences but the pace at which things move along seem way too slow. Especially after obtaining a PhD in biochemistry, which is no easy task in a poorly funded laboratory. The playing ground for young researchers is not equal. Maybe increasing salary with some funds for research is needed for successful PhDs. Some strategies to allow us to explore our ideas rather than being forced to do specifically what the

PI wants. I feel I did more complaining but that is the only way to know what to improve on. I do feel it is sometimes hard to convey in words especially without tone. Happy to elaborate and discuss. [redacted for anonymity]

Response 2711

Perspectives on the postdoc roles and responsibilities

Necessary milestone along the way, maybe most fulfilled laboratory research time, during researcher career.

Fundamental issues and challenges

High level of administrative burdens, including general administrative issues in the academic system, residency related issues, difficulties to find appropriate grants and funding for adequate trainee time (not too short and not too long).

Existing NIH policies, programs, or resources

Fundings, programs and grant opportunities from postdoc position to partial independency are very underrated and not well established. Especially for Resident-alien researchers.

Proven or promising external resources or approaches

Mentoring should be the most important cornerstone for a postdoctoral researcher. A mentor with vision and care towards the postdoc can override the difficulties of the early carrier postdoc and can help to achieve necessary milestones, but for this, both mentor and mentee need appropriate financial and administrative support from the system.

Response 2712

Perspectives on the postdoc roles and responsibilities

I want to note that the outset that I don’t think discussions about postdocs can occur without also discussing graduate training. The two are inextricably linked, and NIH should do more to support graduate students and ensure equity within and across institutions. I think this is all very important, I will email you. If you do elect to publish anything I write here, I do ask that it not be linked to my name. I just think it’s important to give you an opportunity to follow up with me if you think I have said anything interesting or valuable.

In my view, postdoctoral positions are intended to extend training, further skill development, and facilitate the transference of skills and perspectives from one laboratory into another laboratory. Postdocs have much to offer; and in theory, they still have much to learn in service of their ultimate career goals. In my experience, their responsibilities generally include writing papers and grants, assisting with training of graduate students, sharing their knowledge/expertise, and developing new skills that enhance their career. The last point is worth emphasizing: postdocs must be engaged in activities that meaningfully enhance their career. That career need not be in academia because there are many research-related positions in industry that would benefit from well-trained postdocs.

Fundamental issues and challenges

With the word-limit, I want to focus on a few specific issues that I think have the largest impact.

1. Oversupply of PhD students. This oversupply of PhD students is particularly problematic when viewed against the available number of tenure-track jobs. I worry that many PhD students are simply brought into universities to help bolster revenue from tuition and fees since they serve as teaching assistants and help increase class sizes; they also boost other numbers that can be valuable (https://www.insidehighered.com/advice/2021/06/22/how-phd-job-crisis-built-system-and-what-can-be-done-about-it-opinion). Yet, as a country, we do not do enough to support our PhD students (see recent strikes across the country), and there are massive levels of inequity within and across institutions. We have to fix this.
2. Underpayment and too much variability in payment. Stipends should be tied to area (cost-of-living) and the time (inflation). The NIH numbers could be easily scaled based on cost of living. Moreover, it should not be left to the universities (or PIs) to pay more than the NIH guidelines because it introduces massive levels of inequity.
3. Too much diversity in roles and responsibilities. There is little to no standardization with respect to postdoc roles and responsibilities. Perhaps this is why there is so much variability in payment, but it seems like we could improve this. We simply cannot have Dr. X at Institution A and Dr. Y at Institution B earn different stipends (adjusted for cost of living) performing the same roles and responsibilities.
4. Use of postdocs has changed over time. The NSF did a study of how use of postdoc positions changed from the 1960s to the 1990s. The results at the time were interesting (https://www.nsf.gov/statistics//issuebrf/sib99310.htm), and it would be worth following up 30 years later. Perhaps those data do exist and I simply missed them.

Existing NIH policies, programs, or resources

As a recipient of the F31 and F32 and also being someone who attended a graduate institution that was highly supportive of graduate students and postdocs, I am fortunate to have a tenure-track job (and soon to have tenure if all goes well). These programs helped me immensely. I suspect I also would've benefited from NIH efforts to enhance diversity, but I did not know about these programs till recently and I didn't realize that I qualified (first-generation college student from a low-income part of South Carolina).

How can you modify these policies and programs? One simple thing would be to add a submission and review cycle for all fellowships and any K-award aimed at postdocs. This is important because these are time-sensitive positions. Having an extra submission cycle (and faster turnaround time) would almost certainly increase the odds that a trainee will be successful.

NIH should also look into the disincentive of earning a F32 at some institutions. Once I received my F32, I lost all my benefits, I received a pay cut, and I was effectively demoted. My mentor had no control over this, and it was simply the university trying to pass the buck since these awards do not (as far as I can tell) include fringe. Of course, universities aren't always thrilled to get these prestigious awards because they don't get any overhead on them. I realize you'd have to award fewer F32s if they all included fringe and overhead, but maybe that would work out fine if we had fewer PhDs entering into the crowded system.

Proven or promising external resources or approaches

I am less familiar with external resources or approaches, but I think there could be more collaborations with industry.

Beyond these resources, I really think NIH needs to take a close look at the data we have in this country. How exactly do universities differ? How do those differences contribute to postdoc training and success? Let's collect some data and study the problem.

Response 2713

Perspectives on the postdoc roles and responsibilities

It is good way to explore own ideas, to learn additionally from seniors and colleagues.

Fundamental issues and challenges

No Response

Existing NIH policies, programs, or resources

No Response

Proven or promising external resources or approaches

No Response

Response 2714

Perspectives on the postdoc roles and responsibilities

When I was finishing my PhD I could not wait to start a Post Doc because I failed in love with the science behind my project. I use to tell people that when start Post Doc, I will be doing beautiful science there is no need for me to rush to finish things. I believe postdoc is the time that you really interact with science and put it in application

Fundamental issues and challenges

The majority of Postdocs are just at the point where they are finishing the PhD and ready to also pick up on all other aspects of life that they have put on hold during PhD. For example getting married, having a baby, buying a house or both. Unfortunately, you just need to do a simple calculation to realize that you can not afford any of them with a postdoc salary in academia. Some of us who did insist to go for postdoc no matter what, it was okay to leave a rent a room in Boston when I was still single. After I got married and inspected my wife got pregnant in 2 weeks. It was a disaster financially. The only solution was to leave the postdoc and move to a cheaper city

Existing NIH policies, programs, or resources

Salary calculation and what fund can be use to compensate postdocs. Transfer of projects

Proven or promising external resources or approaches

Collaborations

Response 2715

Perspectives on the postdoc roles and responsibilities

In our view, postdoctoral training is critical to prepare junior scientists for both academic and biotech/pharma career paths. Although there are many positions that newly minted PhDs can consider without postdoctoral experience (e.g. positions in non-profit organizations or in scientific publishing), for recent graduates on either academic or industry/pharma tracks, postdoctoral training provides the necessary experience for attaining independence. After getting their PhD, postdocs often change fields or experimental systems. Starting a completely new project can be challenging, but mentored training will provide the necessary advanced experience. For industry/biotech/pharma, 2-3 years of postdoc experience may be sufficient, as a high profile 1st author publication is not critical for obtaining this type of a position. However, for postdocs on an academic track, in addition to a solid set of papers, years 3 to 5 of postdoctoral training provide an opportunity to transition to independence by:

a) Developing a K99 or similar transition project/awards or assisting with the preparation of R01/R21 grants.

b) Preparing not only a strong draft of their 1st author or collaborative paper, but leading or co-leading the publication efforts from inception to final acceptence.

c) Leading or co-leading interdisciplinary collaborations, which provides postdocs with an opportunity to work closely with a wider group of investigators and develop leadership skills.

d) Receiving invitations (facilitated by their mentors and collaborators) to participate in peer review.

e) Providing postdocs with mentorship training to establish better mentee-mentor relationship and to develop mentorship skills, as well as additional skills needed to successfully lead a research group in academia or industry.

f) Exploring teaching opportunities and mentoring undergraduate students.

Fundamental issues and challenges

No Response

There are several major issues and challenges.

a) Undercompensation is a major issue for many postdocs.

b) The "costs" of dependent health coverage and parental leave/child care are challenging, which may preclude postdoc training, especially for those with families.

c) Low number of URM mentors and mentors trained in Diversity Equity and Inclusion who can properly support the needs of URM postdocs.

d) Many first-generation/URM PhDs often support other family members from their salaries (e.g., parents & younger siblings) and cannot elect or accept to stay in a postdoc position when other positions offer better compensation and benefits, diminishing retention and diversity in research

e) Postdocs are concerned about the uncertainty of their future or next career step and they seek a reasonable level of expectation regarding their next step in the career advancement. To reduce a sense of uncertainty, particularly for international postdocs, schools should consider multi-year appointment letters.

f) Even at schools with established postdoctoral programs, postdocs are not well integrated within their departments/centers/institutes. Too many PIs are recruiting postdocs to perform routine laboratory tasks and do not actively support postdoc training.

g) Finally, there is a disturbing concern among international postdocs who are particularly worried that they will be targeted or fired due to the pay increase burden on faculty mentors.

Existing NIH policies, programs, or resources

a) Funds provided by NIH for postdoctoral training should be increased;

b) Eliminate disparity between post-docs paid from different sources and the restrictions of using NIH dollars to supplement stipends;

c) Need to ensure that NRSA-funded postdocs have the same access to benefits as employee-classified postdocs;

d) Need for increased support for K99/R00, T32, IRACDA grants and F32 fellowships, moreover, the funding for F32 and K99 at some institutes is minimal (for example NIAID);

e) Need for more support for URM trainees and trainers at every level (undergraduate, graduate students, postdocs and faculty);

f) A large population of postdocs are international. Therefore, NIH should consider opening up eligibility criteria for F32 fellowships—similar to the K99/R00 awards;

g) g) Need to support meetings and conferences that bring together trainees at different stages of their career (at Penn, we call it "vertical integration");

h) h) NIH should require that PIs report on the mentorship plan and activities related to post-doc training in annual reports. The section on mentorship in the RPPR should be expanded or emphasized.

i) i) Need to support efforts of the Coalition for Life Sciences to collect and analyze outcome data on postdocs. Currently, these data are presented at the national level. However, analyses at the level of a specific university, school or a department will be important to fully understand outcomes and trends.

Proven or promising external resources or approaches

We would be glad to share how we in the [redacted for anonymity] attempt to enhance the postdoctoral training ecosystem.

Response 2716

Perspectives on the postdoc roles and responsibilities

Fundamental issues and challenges

I am a doctoral student who was on the job market this academic year. I did not consider postdoc positions because the salaries for these positions are incredibly low. Many of them are lower than the salary I was making as a research assistant with a bachelor's degree before entering my doctoral program. To me, this was unacceptable. After training in a top doctoral program it was financially irresponsible to even consider earning less than what I made prior to my doctoral training. Even though some of the research opportunities connected to postdoc positions could have been great, I did not consider them or apply to them because of the salary. I received multiple offers for tenure track assistant professor positions at R1 institutions, but if I hadn't I would have gone into industry rather than taking a postdoc.

Existing NIH policies, programs, or resources

The pay for postdocs has to be significantly increased. It's a very simple answer.

Proven or promising external resources or approaches

No Response

Response 2717

Perspectives on the postdoc roles and responsibilities

It is great platform to build our profile to become competitive and acquire R01 funding to be able to secure an academic position.

Fundamental issues and challenges

Long working hours, followed by minimum wage standards which leads to poor work life balance and loss of motivation because we need to find second source of income just to survive specially with family.

Existing NIH policies, programs, or resources

Integrating postdoctoral fellows as staff in the academic and non-profit corporations so we can get similar benefits as other staff members.

Proven or promising external resources or approaches

Most of the places are helpless in taking any actions against bad mentors as they bring in the money and post doc are often left at their mercy. I don't think there is anything that could change this in near future.

Response 2718

Perspectives on the postdoc roles and responsibilities

The postdoctoral training period allows for a young scientist to learn new skills, scientific and professional, and enjoy a period of research that does not include distractions such as course work, teaching, or administrative duties (unless sought-out). It allows a young scientist to continue to learn the "art" of scientific investigation under the guide of an established scientific mentor. It also provides the opportunity to further establish a publication record that will assist in obtaining employment in any area of science.

Fundamental issues and challenges

Some of the biggest challenges include:

1. Non-payment of moving expenses from city of graduate studies to city of postdoctoral studies. Especially problematic for young families.
2. Post-doctoral stipends are too low in most cases (NIH funded).
3. Not all postdoctoral fellowship come with health insurance.
4. Lack of other benefits such as paid leave, savings plan.

Existing NIH policies, programs, or resources

All NIH-funded fellowships should address the issue in the previous section.

Proven or promising external resources or approaches

No Response

Response 2719

Perspectives on the postdoc roles and responsibilities

Developing and leading projects, training technicians and undergrads/grad students, helping write grants for the lab, lab orders, maintenance activities not directly related to my project

Fundamental issues and challenges

PIs and institutes use the words "training" to overwork postdocs and pay is abysmal. At [redacted for anonymity], I literally cannot afford to have kids with my partner who is also a postdoc. Discussions about supporting women in STEM are all BS if you don't support women in stem and postdocs financially!!!

Existing NIH policies, programs, or resources

Postdoc base salary should be adjusted for high cost-of-living areas like Boston and institutes receiving NIH funding should be required to pay the same in the same city ([redacted for anonymity] 5th year postdocs as of 2023 make less than first year postdocs at HMS). There should also be support/funding/childcare subsidies for new mothers who are also postdocs working on projects funded by the NIH.

Proven or promising external resources or approaches

Postdoc base salary should be adjusted for high cost-of-living areas like Boston and institutes receiving NIH funding should be required to pay the same in the same city ([redacted for anonymity] 5th year postdocs as of 2023 make less than first year postdocs at HMS). There should also be support/funding/childcare subsidies for new mothers who are also postdocs working on projects funded by the NIH.

Response 2720

Perspectives on the postdoc roles and responsibilities

When I started my academic postdoc four years ago, I was envisioning to obtain more trainings and improve my skills in my field so that I could transition to an independent career as a faculty. However, I am now basically a "technician" (though my title is still a Postdoc) helping multiple PIs without my own project that I can move forward with. I think a postdoc is very crucial in driving the biomedical research and education. The roles and responsibilities of the academic postdoc should not only be helping the PIs in their projects and train students in the lab, but the postdoc should also get opportunities to develop his/her own project and get additional trainings, including grant writing.

Fundamental issues and challenges

Based on my experience, the fundamental issue regarding the recruitment, retention, and overall quality of life of postdoctoral trainees in academic research largely depends on the PI. Many PIs, but not all, view the postdoc as a "technician" helping in their projects without any proper guidance/training on career development. I think the main challenge is funding, but even with PI having multiple funds I have witnessed a very unsupportive behavior from the PI when a postdoc asked for career enhancement, including grant submissions.

Existing NIH policies, programs, or resources

I think the NIH should extend the K99/R00 eligibility for postdoc until after at least 7 years of PhD. The current eligibility criteria says "Applicants must have no more than 4 years of postdoctoral research experience at the time of the initial or the subsequent Resubmission application." I was one of the "victim" of the current policy for K99 because after my PhD in 2018, I was working in the pandemic for almost 3 years where everything were uncertain. So, I couldn't manage my application during the hard hit pandemic and now I am ineligible to apply for it.

Proven or promising external resources or approaches

I think more training is needed for NIH-funded mentors to provide more inclusive, and supportive environment for the postdoc.

NIH also should take an effort to increase base salary of the academic postdoc.

Response 2721

Perspectives on the postdoc roles and responsibilities

I take it as additional training that prepares you for an independent research position (i.e., Principal Investigator).

Fundamental issues and challenges

The most common issues I see are

1. significantly low salaries,
2. Many institutes that claim to follow NIH guidelines for salaries just monitor the starting salary when postdocs are recruited.

But then after, most PIs do not give any raise in salary whatsoever for another five years even though postdocs are performing well. We have several examples on our campus.

Existing NIH policies, programs, or resources

No Response

Proven or promising external resources or approaches

No Response

Response 2722

Perspectives on the postdoc roles and responsibilities

As a postdoc, I want to take the opportunity this position provides to deepen my scientific and management knowledge and adequately prepare for a future role as a team leader in academia or find a satisfying alternative career path.

Fundamental issues and challenges

In order to be productive in my position as a postdoc, I require adequate child care. To me this means, ideally on site child care and most importantly no waitlist. A direct consequence of the waitlist is a stressful search for alternatives with no clear timeline. The waitlist itself appears as a black box to a foreign national. Resources and referral services are only accessible by phone (meaning you need a US number) and require knowledge of where you are going to live (which is something you likely have no idea about as a foreign national before coming to the country). This ultimately means you are on your own in finding daycare from a foreign country with no knowledge of the US system.

Existing NIH policies, programs, or resources

If child care policies could be broadened and more inclusive for foreign nationals.

Proven or promising external resources or approaches

No Response

Response 2723

Perspectives on the postdoc roles and responsibilities

I see postdoc positions as a high responsibility. We have to get data, help on writing grants to renew out own salary, and/or earn our own grant to pay our salary. Add to this we have to learn how to be independent and write our own grants, write the papers if we have some, train technicians and students, and do management of the lab. It you are not from US the opportunity to get a position is even decreased.

Fundamental issues and challenges

A fundamental issue is having all this responsibilities together, depending on the group you have, some times it turn to much work for only one postdoc. My guessing is in a lab where the Pi is young or is compose by more postdocs this responsibilities is share. It is not my particular case. The issue is you have to do all this things to continue in the system, therefore, doing postdoc/young PI work is demanding and some time not so rewarding. In part I think is because recently the way to do science changed, and it is way more competitive in the US.

Existing NIH policies, programs, or resources

I think opening a few short opportunities for postdocs (specially the ones are not resident) could be helpful. Now, I just know K99/RO1 for postdoc non resident. A few fellowship that you could apply at your first few years of postdocs would be very rewarding, and would make people prepare and practice what would be the future of becoming a PI.

Also the salary, is very low. So people tent to go to the industry because is too much work for not that much amount of money. Having a more strict regulation on the University management of the salary could be helpful.

Proven or promising external resources or approaches

No Response

Response 2724

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is

a) learn new scientific skills to become a successful independent investigator, and

b) produce quality science. For me, this means a special window of time where you are able to design and implement experiments to address interesting questions with a high level of independence.

In reality, postdocs are responsible for driving most of the science in the U.S. As such, our prestige as a leader in the worldwide scientific community is in jeopardy unless some serious and substantial changes are made to the existing system to better reward postdocs and keep them in science. I outline specific changes below.

Fundamental issues and challenges

The lack of adequate pay and benefits afforded to postdocs is the fundamental issue challenging recruitment, retention, and overall quality of life for postdocs.

Originally, a postdoc was a 1-2 year position after graduate school that almost inevitably led to a faculty position. For such a temporary position, it was ok to forego a decent salary and benefits knowing that a permanent job lay shortly down the line. Today, postdocs are extended positions (often 5 or more years) with no guarantee of obtaining a faculty position. However, we are still expected to earn a barely livable wage and miss out on contributing to retirement benefits all with no guarantee of obtaining a permanent academic job.

This system is no longer tenable. With low pay, no benefits, and no guarantee of a faculty job, it is not surprising that F32 applications have fallen precipitously over the last 17 years (https://report.nih.gov/nihdatabook/report/62). Why would someone opt for such a stressful, uncertain job when many PhDs can earn upwards of 100k with benefits immediately after graduation? Of course, the

reason why so many still go the postdoc route is because we love science. At this rate, however, only the independently wealthy will be able to pursue an academic position. I predict that, without a substantial increase in pay and benefits for postdocs, the quality and prestige of science will quickly decline as more and more talented and hard-working scientists move into industry where they are appropriately rewarded for their hard work.

Existing NIH policies, programs, or resources

The NIH needs to provide much clearer salary guidance and document avenues for rewarding postdocs that procure their own funding. For example, how can an institute give a postdoc a raise if they obtain a fellowship like an F32? If the F32 is supposed to provide a stipend for 100% of the postdoc's salary/effort, how can the postdoc's PI utilize funds from other grants? Is this even allowed? It should be.

As for existing policies, a quick scan of the links above revealed almost nothing relating directly to postdocs. So, the first step would be to provide more resources that are directly relevant to postdocs. Almost everything was devoted to grant funding, applying for other awards, etc. The only relevant policy I found was for childcare funding for postdocs: "Each full-time NIH-NRSA-supported fellow is eligible to receive $2,500 per budget period for costs for childcare provided by a licensed childcare provider (NOT-OD-21-074)." Announcing this benefit through an NOT makes it almost impossible to find. As a policy, NIH should provide a box on each grant application asking if they want this support rather than hoping postdocs discover it on the internet, e.g. "Check this box if you are requesting $2,500 per budget period for childcare costs" . When I applied for my F32, there is no way I could have found this information among all the other NOTs and grant application requirements. Currently, the U.S. tax code is easier to navigate than NOT announcements.

Next, childcare and other benefits need to be increased. Something is better than nothing, but $2,500 would cover approximately one-month of full-time childcare in most of U.S, which does not provide any relief from the already high financial stresses of being a postdoc and attempting to raise a family.

Proven or promising external resources or approaches

I don't know of many. As I mention above, NIH needs to integrate financial increases and relief for postdocs into awards rather than posting things on the internet and hoping postdocs discover them while navigating experiments, obtaining funding, etc. The default should be for NIH to ask if postdocs want a particular benefit rather than forcing postdocs to search for resources on the internet.

This last part is for the section above but exceed the word limit:

Last, fellowships need to be financially restructured. My life became HARDER financially once I was awarded my F32 as taxes were no longer withheld and I had to pay estimated tax payments. The NIH needs to figure out a way to, at the very least, not INCREASE the administrative and financial burden on a postdoc that receives and NRSA.

Response 2725

Perspectives on the postdoc roles and responsibilities

Academic postdocs are the workhorses of biomedical research in the United States, and they are responsible for training other lab members.

Fundamental issues and challenges

The NIH postdoc salary hinders the recruitment, retention, and overall quality of life of postdocs because it makes it very difficult for postdocs to save money and start families. Some of the most sought-after postdoc positions in the United States are concentrated in and around cities like Boston, New York, and San Francisco--cities with the highest cost of living in the country. Even in a city like [redacted for anonymity], where I hold a postdoc position and the cost of living is not nearly as high, the cost of daycare for my child makes it almost impossible for me to save money. Ever since becoming a parent, alternative careers outside academia have become more appealing. Those jobs pay more and they do not come with the inherent insecurity of a postdoc.

Existing NIH policies, programs, or resources

Increase the NIH postdoc salary.

Proven or promising external resources or approaches

No Response

Response 2726

Perspectives on the postdoc roles and responsibilities

Fundamental issues and challenges

I am writing from the perspective of being a postdoc with three children, ages 5 and under. And, although not relevant here, I am also speaking from being an F31 awardee with young children and who gave birth during the F31 award. I gave birth to another (third) child during a T32 position. First, when a T32 position is offered, the candidate should be given the opportunity to delay the start of the position without penalty (i.e. without losing the spot) if childbirth is imminent or recent. Second, if a postdoc on a T32 (or other NIH award) uses maternity/parental leave during the award, that time lost should be added to extend the total time of the award. It is completely unfair to force trainees with young children (who are already in a more challenging position) to get the necessary training in less time compared to childless trainees. Third, 8 weeks is much too short of a leave following the birth of a child. It should be 16 to 20 weeks of leave, minimum, for the birth of a child (and maybe 12 for a non-birthing parent). Fourth, childcare funds are appreciated, but far too low to make a significant difference especially in high cost of living areas. I would suggest a higher amount for children younger than kindergarten (or Pre-K in areas with universal Pre-K), and the amount given should be for each child to reflect actual needs. So, perhaps $2500 per child in Kindergarten and older, and $5000 per child younger than kindergarten. Finally, I'm sure this has been shared abundantly, but the salary is far too low and should be region-dependent to adjust for cost of living. In addition, relocation assistance should be offered, especially for those with bigger families and therefore higher moving expenses.

Existing NIH policies, programs, or resources

The childcare assistance policy is greatly appreciated and should be praised on many levels. However, there are some changes and expansions that could make a big difference. First, it seems overly burdensome to apply for and receive the funds. Multiple grant administrators that I have worked with have had difficulty doing this. It should be easy. Second, the amount should be for each child, not just one flat amount for any trianee whether they have 1 child vs. 3 or more children. The cost of childcare depends on the number of children you have. Third, the amount should be higher for children younger than Kindergarten age since childcare costs are much higher before they are able to participate in public schools. The amount could be higher in general to have a greater impact (or salaries could be higher, but additional childcare assistance would also help until there are federal policies that address this financial burden).

Another policy that could be improved is having clear limits on the amount of the institutional allowance for training related expenses that can be used for administrative purposes. For example, for NRSA postdoctoral trainees, this amount is $12,200 per year per trainee. My institution only saves $1,400 for each trainee to use for relevant expenses such as computers, software, travel to conferences, etc. The rest, I can presume, is used for administrative costs. But $1400 is hardly enough to attend two conferences, which is expected of us.

Proven or promising external resources or approaches

No Response

Response 2727

Perspectives on the postdoc roles and responsibilities

As [redacted for anonymity] have trained >50 postdocs and was one post medical school. The postdoc fellowship is an opportunity for the individual to identify their long term career path—including domain of interest, approach and type of job. It is their opportunity to fully develop their scholarship, leadership, writing and presentation skills, thinking, and collaboration. It is a time to become a leader in ethical conduct of science including how they treat others. All of this requires substantial independence—the opportunity to succeed or to fall short of goals.

Fundamental issues and challenges

1. Postdocs are underpaid. Consequentially, we lose many of the best, or they never pursue scientific careers in the first place.
2. We train too many. This in the long run makes them unhappy, especially if they are not independently wealthy. It contributes to very long postdoc fellowships because faculty and good industry jobs are hypercompetitive.
3. We burden postdocs with much semi-irrelevant and always very time consuming formal training and formal processes.
4. Related to the formal burdens to which we subject postdocs is the fact that we vastly underestimate their initiative and the value of their interactions with mentors, colleagues and what they can access online. Instead, of giving them opportunity we mandate activities.
5. Increasingly, postdocs are small cogs in large consortia. It means little if they were one of 100 authors and not on the writing team. many of the analyses are cookie cutter. They get good at Zoom but otherwise don't learn as much doing this type of science. It seems that the ones who are most likely to succeed in such scenarios aren't very good scientists, at least in the classical sense of being independently creative, productive and intellectually acute.
6. Next, many scientists especially of the consortium type just described, will easily be replaced by AI, of which they haven't slightest comprehension. AI is a looming problem as well as opportunity for postdocs with a career ahead.

Existing NIH policies, programs, or resources

1. Stop creating new time-wasting programs (for example, grantsmanship workshops,, equity "training", and policies). Recognize that much of this training is ritualistic, more for the organization's benefit, and individual trainings take 10x as much time as they should At least let the test out with a short quiz.
2. Give postdocs access to more resources—preferably online and optional.

Proven or promising external resources or approaches

1. $—a proven, external resource
2. Access to the most advanced electronic lab notebook systems
3. Access to high speed computing and powerful laptop and handheld resources
4. Don't allow PIs to recruit postdocs who themselves are not outstanding scientists. If they are not, its useless to train them to be better mentors.
5. The supply of postdocs exceeds demand. Therefore, let's have fewer and pay them better. Create more Staff Scientist positions to come to terms with how modern team/consortium science works and thereby more postdocs can move on to meaningful, higher paying jobs.

Response 2728

Perspectives on the postdoc roles and responsibilities

Postdocs should be leading projects and building more administrative skills to help them succeed in the future. They should be presenting their research if appropriate and writing papers.

Fundamental issues and challenges

Salary is a huge roadblock. We are highly educated and skilled employees, but our paychecks do not reflect that. In face, the number of jobs with just a bachelor degree that pay higher have me wondering why I entered into science. I have no loans and am very conservative with money, but I can't even afford a house without it being run down.

Existing NIH policies, programs, or resources

Increasing the starting salary would greatly improve the postdoc training ecosystem. Many postdocs have families and struggle to survive on this low salary. The stress of worrying about money is not conducive to

productive work. Additionally, there is little to no training on the more administrative tasks like budgeting, team management, etc that would greatly help.

Proven or promising external resources or approaches

Increasing the salary would greatly improve a lot of the issues.

Response 2729

Perspectives on the postdoc roles and responsibilities

To me I see two different types of postdocs. The first is the postdoc that would like to stay in academic research and therefore starts a postdoc to build a research program. The second type is the postdoc that wants to gain specific skills in their postdoc to eventually move into industry/non research academic position/ etc. While the end goal is different, the common thread is a highly skilled scientist gaining additional training.

Fundamental issues and challenges

There are a number of issues in recruiting and retaining postdocs. Pay, long term job prospects, and job security are chief among those issues. I have a number of friends that have graduated and immediately went to industry positions with salaries and benefits close to or in the six figure range, I will be earning the postdoc minimum when I start my postdoc in September. Many postdocs that want academic jobs feel the pressure to go to big name labs at name brand institutions where they can get the CNS papers that look good on a CV. Given the fact that the number of faculty positions has not grown with the number of PhDs awarded each year that has made the academic market more and more competitive. Finally a challenging funding landscape that does not ensure long-term academic staff scientist positions or allow for flexibility in salary is a major challenge. The fact that the NIH modular R01 budget has not increased in almost 25 years is insane. The combination of inflation and labor cost makes it such that a singe R01 is not sufficient to run a lab in 2023. As a postdoc, I'm terrified of having to write grants one day that will barely fund a lab.

Existing NIH policies, programs, or resources

Increase the modular budget or get rid of it all together. Invest in basic biomedical science and not just translational research. Support permanent PhD staff scientist positions. Increase the postdoc minimum and ensure that postdocs are treated like employees (i.e. retirement benefits, insurance, parental leave, etc). Expand career development programs like IRACDAs.

Proven or promising external resources or approaches

If the US wants to retain a strong postdoc population, we must start treating postdocs like highly skilled colleagues that they are. Paying a wage closer their worth, expanding the number of staff scientist positions, and providing a little more job security are all things that will help make this happen.

Response 2730

Perspectives on the postdoc roles and responsibilities

Transition to an independent academic career, scientific independence, on the driver seat of important projects, leader and mentor for others in the lab, learning several other skills beyond science to become a PI

Fundamental issues and challenges

Low pay

Existing NIH policies, programs, or resources

Pay scale

Proven or promising external resources or approaches

Increased postdoc pay scale in many universities, HHMI pay scale

Response 2731

Perspectives on the postdoc roles and responsibilities

I think most labs consider postdocs as a pair of "pipetting hands" rather than highly qualified, trained individuals with terminal degrees. The same is true for most institutions, where postdocs are considered as trainees and the low pay and meek benefits are "justified" because we are getting "training". In reality, there is no structured training, no respect from the institutions but rather a modern-day exploitatory relationship where postdocs struggle for their careers, financial health, and mental health. In reality, if we were in different fields, both in social sciences and other STEM fields, a doctorate would be enough to start an academic laboratory and be treated as an expert. Also, it is really hard for me to understand why academic positions need to be paid less. Individuals with similar degrees in non-academic posts earn 2x more on average in all stages of the academic ladder. If postdocs and junior faculty are paid more, this would have increased the retention of the best and the brightest. I think since there are lots of international scientists who are trying to enter the US system and thousands of new Ph.D. graduates from US institutions, postdocs are considered expendable. In fact, we train students, technicians, and junior postdocs in the lab, write grants for our PIs, work countless hours, and perform many more tasks and most of the time end up with hundreds of dollars more in debt every month. This causes people to lose productivity and start to look for non-academic jobs as soon as possible. Fair pay for the job we are doing will ease the burden on the postdocs and force the institutions to see us as the valuable members of the community thay we are.

Fundamental issues and challenges

Low pay —would you be willing to get half of your earning potential for 5-7 years, in a high-stress environment? This is the root cause of all the problems. More money will solve the issues around childcare, stress, and reduced quality of life. If the postdoc pay started from 90k instead of 56k, you would see a boost in productivity, retention, and recruitment.

Existing NIH policies, programs, or resources

International postdocs are the majority of the postdocs. It is disheartening to see that in a system built on the efforts of international scientists, the only grant we can apply for is K99/R00. I understand that NIH may feel its main responsibility towards American scientists, however improving the resources for international postdocs will benefit the US academic system in general.

Proven or promising external resources or approaches

Increased salary, improved visa processing times for international scientists, and childcare support should be considered.

Response 2732

Perspectives on the postdoc roles and responsibilities

A postdoc is a highly-specialized researcher with a terminal degree (Ph.D.) in their field. They contribute to the conception of new research directions, as well as provide mentorship and training to graduate and undergraduate researchers.

Fundamental issues and challenges

Low compensation, lack of access to benefits, non-competitive salary compared to peers in industry, lack of career opportunities within academia that are not tenure-track faculty positions

Existing NIH policies, programs, or resources

1. Increase minimum compensation to $70K a year, with cost-of-living adjustments for different cities/ states.
2. Institutions must consider all postdocs full-time, benefits-eligible employees.
3. Expand NIH funding mechanisms to international postdocs.
4. Increase childcare allowances.
5. Put in place mentor training for PIs and consequences (such as probation or loss of NIH funding) for bullying/ harassment and other behaviors.
6. Expand non-tenure track research positions and other career options within academia.

Proven or promising external resources or approaches

Democratize the academic research environment. Power hierarchies within academia are outdated and need to be changed to create a more equitable and non-toxic workplace.

Response 2733

Perspectives on the postdoc roles and responsibilities

This is an additional training period in which the postdoc gets extensive training in order to become a successfull independent researcher. The postdoc should be pushing the boundaries and exploring new research directions. The postdoc also learns how to run a lab including managing students. The training goals also need to be balanced with the needs of the PI who also requires advancing the lab's own funded research projects.

Fundamental issues and challenges

The postdoc salary is a major deterrent for postdocs. For example, I had one postdoc leave after a year in the lab--he was happy with his project and in the lab, but wanted a better life than the postdoc salary afforded him (his words). He took a job in biotech. I see this as a growing concern that will especially harm new faculty.

Existing NIH policies, programs, or resources

Increase the stipends in F grants. And most importantly, increase the modular budget of R01 grants. The $250,000 modular budget is not enough to fund a small lab of >3 people, and requires the PI to write multiple grants to keep the lights on. This takes away from directed mentorship of postdocs and adds uncertainty to the postdoc timeline.

Proven or promising external resources or approaches

Postdocs tend to be resourceful. It might be worthwhile inviting Postdoc associations from leading universities to share their tips/tricks at a NIH sponsored meeting aimed at improving the postdoc ecosystem. But the #1 concern will likely be postdoc salaries, which are tied to PI R01 grants. So fix R01 modular budgets, and it will have a huge benefit across the board (since Graduate stipends can then also be increased---a whole other bag of worms).

Response 2734

Perspectives on the postdoc roles and responsibilities

I think some people genuinely view it as a temporary position immediately following their Ph.D. For many of us, we are using it simply to gain more experience to be competitive on the tenure-track job market. Long gone are the days where the pipeline was "graduate with Ph.D --> get hired as TT faculty". That puts postdocs in a state of limbo, where we continue our "training" to apply for TT jobs.

Largely, I think the role of postdocs is to generate data and papers for their PI and simultaneously help run the lab. It is probably not like this in every lab, but I think it is a good generalization.

Fundamental issues and challenges

Money, plain and simple. In high cost of living areas, the NIH minimum is not sufficient. Ironically, this is where many of the top-tier institutions are. Postdocs have to weigh their options and decide whether a low-salary job at a top-tier university will eventually be worth it for TT ambitions. For some, it is not tenable, and ultimately this create inequity in the faculty pool. For others, it means delaying the start of a family or making other sacrifices in order to make it work. Retrospectively, some postdocs may regret these choices, as the TT job market is hypercompetitive.

From the university side, universities NEED to start recognizing postdocs as actual employees. This means retirement and other benefits. I think the NIH could easily persuade universities to accomplish this.

Existing NIH policies, programs, or resources

Ditch the K99/R00 and divert those resources to other postdoc awards with higher pay.

Proven or promising external resources or approaches

Money.

Response 2735

Perspectives on the postdoc roles and responsibilities

It is a training position with more responsibility, including slightly more research independence and mentorship of graduate students and technicians. It is comprised of practical, hands on work in addition to fellowship and paper writing with the mentor.

Fundamental issues and challenges

Salary: it doesn't have to match industry, but it should be competitive and scale with cost of living by region.

Time for both lab work and preparation for principal investigator role like mentoring and writing. Most would benefit from a technician working under them to help with this balance.

Existing NIH policies, programs, or resources

Funding for technicians to work under postdocs.

Salary scaled by cost of living, closer to $100,000 to remain competitive with industry and provide critical support for a job that consumes most hours of the day.

To accommodate the ever lengthening time to obtain a faculty position and thereby the length of the postdoc, K99 deadlines should be pushed back to 5 or more years after completing the PhD.

Require that fellowship holders are employees of the institution so that they may receive the institution's benefits, such as retirement.

Proven or promising external resources or approaches

I currently hold a postdoctoral fellowship from a private foundation that gives me a much more fair salary ($86,000), especially for living in [redacted for anonymity]. I feel like I am treated well and able to live a comfortable lifestyle with this salary. They also mandated that I receive employee status, allowing me to have retirement and tax withheld.

Response 2736

Perspectives on the postdoc roles and responsibilities

We are in agreement with the definition of a postdoc as determined by the National Postdoctoral Association: "Postdoctoral scholars ("postdocs") are individuals in a defined period of mentored training following the achievement of their terminal degrees (e.g., Ph.D., M.D., M.Eng.)."

The academic postdoc is a time-restricted period (up to ~5 years) to build skills in preparation for the next step in the scientist's career. It is intended to be a temporary career step before transitioning to a permanent job in academia, industry, government, or another sector of employment. Since the postdoc is

in career transition, the quality of mentoring and professional development that is available to them is critical to their career success.

Fundamental issues and challenges

Challenge 1. Salary requirements of the Washington State Minimum Wage Act

- Washington State Department of Labor and Industries Minimum Wage Act (https://www.lni.wa.gov/workers-rights/wages/overtime/changes-to-overtime-rules) sets a minimum salary for exempt employees, including postdocs, that is significantly higher than the NIH minimum salary: https://www.lni.wa.gov/forms-publications/F700-207-000.pdf
- l Salary implementation schedule in 2022 dollars (tied to projected changes in the Consumer Price Index):

- 2023: $65,478
- 2024: $69,264
- 2025: $79,700
- 2026: $80,964
- 2027: $91,572
- 2028: $93,288

- The [redacted for anonymity] and our faculty are challenged to find ways to pay postdocs the required increased salary when NIH budgets have been static.
- l Many of our faculty plan to hire fewer postdocs. This could potentially affect the quality and pace of research, especially for our most junior and mid-level faculty.

Challenge 2: Increasing proportion of graduate students going directly into industry and a decrease in international postdocs

In the past several years, the proportion of graduate students who go into industry without doing a postdoc has greatly increased (anecdotal reports). In addition, Coalition for Next Generation Life Science (CNGLS) data shows that fewer international postdocs are coming to [redacted for anonymity] (e.g., the percentage of Fred Hutch international postdocs fell from 49% in 2019 to 25% in 2022: https://www.fredhutch.org/en/research/education-training/coalition-for-next-generation-life-sciences/postdoctoral-fellow-data.html). The combination of these two demographic shifts has contributed to a shortage of postdoc applicants.

In addition, our graduate students give a variety of responses about why they choose industry over a postdoc, including increased salary, better management practices, better work-life balance, and better benefits.

Existing NIH policies, programs, or resources

- The NIH provides Locality Pay (https://hr.nih.gov/sites/default/files/public/documents/2023-02/total-compensation-flyer-2023.pdf) to its employees dependent on where they live. It makes sense to provide a locality pay supplement to the postdoc NIH minimum salary for communities with a higher cost of living.
- l Allowing an NIH grant to pay the difference in salary for a private fellowship and the WA minimum exempt wage would help to solve the challenge from the WA minimum wage act. Implementation threshold schedule: https://www.lni.wa.gov/forms-publications/F700-207-000.pdf
- l Increase the number of K awards funded so there is a greater success rate for those pursuing tenure track faculty positions.
- l The issue that stipended fellows (e.g., T32, F32, K99 awards) can't receive retirement benefits, participate in a flexible spending account, or receive full WA state parental/medical leave benefits is a disincentive to applying.
- l Create an improved funding mechanism for non-tenure track staff scientists.
- l The career track into the biotech industry presents an opportunity to create a new funding mechanism that encourages industry to engage in academic postdoc training programs. This could potentially reside in the NIH SBIR program and/or engage the Foundation for the NIH (FNIH) to manage the public private partnership.
- Require programs in resiliency training, stress management and managing health and wellness for all T32 or F32 trainees and encourage it for all NIH-supported trainees. The NIH OITE Becoming a Resilient Scientist (https://www.training.nih.gov/nih_becoming_a_resilient_scientist_series) series is exemplary and is designed to be disseminated and implemented at any research organization. All scientists, from graduate students to junior faculty and beyond, could benefit from this training.
- It is commendable that NIH awards for graduate students and postdocs now include a childcare subsidy. It would be helpful if the childcare subsidy included a locality supplement for areas with higher COL and higher average childcare costs. The cost of infant childcare in Seattle can be over $2000/month.

Proven or promising external resources or approaches

The [redacted for anonymity] provides health care benefits, life insurance, disability benefits, transportation benefits, an employee assistance program and a childcare subsidy to all postdocs regardless of funding source. Parental leave, vacation and sick leave duration is sometimes subject to funding limitations. In addition to institutionally paid family and medical leave, [redacted for anonymity] provides up to 18 weeks of partially-paid family and medical leave to employees (not on stipends). Finally, salaried (but not stipended) postdocs receive retirement benefits and access to use a flexible spending account. All postdocs can also participate in our comprehensive professional development programs to help them successfully transition to a permanent position.

In addition to the above benefits, recommendations include:

- Require management and mentoring training for all faculty who will train postdocs and graduate students in their lab. CIMER Mentor Training (https://cimerproject.org/) is exemplary and is being implemented at many institutions around the US. This training will preferably occur early in their faculty career. The training should include an understanding of the unique vulnerabilities of minoritized and international postdocs.
- l Require a minimum level of benefits for T32 and F32-supported postdocs, including health care, paid parental and medical leave, and vacation benefits.
- l Require a minimum level of professional development for all T32 and F32-supported postdocs and encourage the same for all NIH-funded postdocs to help them move to their next career step.

Response 2737

Perspectives on the postdoc roles and responsibilities

We write on behalf of [redacted for anonymity]. Our Workgroup consists of ~20 investigators, research assistants, and trainees (graduate students and postdoctoral fellows) from [redacted for anonymity]. We

work to develop training and professional development opportunities for [redacted for anonymity], including ~200 trainees (RAs, undergrad/grad students, postdocs).

Our group had several thoughts for this RFI:

One of the primary concerns is the transition beyond postdoc. Unlike graduate training, many postdocs are indefinite with no clear end. Even things like F32's, while theoretically helpful, can prolong the postdoc phase. It is time consuming to start in a new lab, create a new research idea, write and submit an F32 or K99/R00, then wait to hear back. There are too many "career postdocs" ; clearer end-points and means of transitioning are needed.

In contrast, one-year post-doc appointments can dissuade potential applicants from clinical psychology programs, as they will have recently completed multiple application processes and will not want to begin the application process again so soon after starting the postdoc position.

Another noted concern is the role of postdocs within labs. While postdoctoral fellowship is an additional stage of training, it is not uncommon for postdocs to be thought of as "workhorses" within a lab where the PI of the lab restricts them to complete the PI's aims. The training of the postdoc becomes secondary to the goals of the PI. Though many postdocs may be aiming to transition to independent scientists, their goals and research objectives are often limited by the PI's research priorities/funding.

We feel it would be helpful to have more clear guidelines on training components necessary to transition from a grad student to a postdoc to an independent scientist.

Fundamental issues and challenges

Within [redacted for anonymity], many of our postdocs are funded from two-year T32s and diversity supplements. This is beneficial for postdocs and mentors alike, as positions can be more clearly and quickly offered to potential postdocs. As noted above, F32's and other mechanisms are beneficial, but the length of time to acquire such funding makes it harder to use as a recruitment tool. Several institutions within the [redacted for anonymity] are also part of the [redacted for anonymity] system and, due to new postdoctoral contracts, [redacted for anonymity] PIs are struggling and often unable to fund postdocs even at the required levels by the [redacted for anonymity] system. PIs need more financial support and flexibility to be able to recruit and pay postdocs a livable wage. We believe that expanding the T32 program may be beneficial to ensure that a larger pool of excellent candidates obtain funding. T32s also have a fixed 2-year time period, which can work for some candidates but having an option to extend for a few months in some cases would be helpful.

Existing NIH policies, programs, or resources

Existing career development K awards are highly valued funding pathways for postdocs, and improvements in the clarity of how K-awardees can achieve independence could further accelerate the success of these mechanisms and postdocs' career development. For example, there is a lack of information on how exactly a K99/R00 awardee successfully makes the transition to the R00 phase (e.g., when is it truly ideal to start looking for faculty positions during the K99 phase, what is NIH looking for in offer letters from institutes to kickstart the R00 phase, etc). Additionally, some postdoc institutions are not prepared to provide financial support for K applicants even though this is a required letter for K submissions. Having more communication between NIH and the proposed R00 institutions, and/or more clear information on which institutes are able to support K awardees for the R00 phase would be helpful.

Proven or promising external resources or approaches

While postdoctoral fellows are extensively evaluated before being accepted into a lab and/or receiving NIH funding, the same is not always the case for mentors. Yet mentors have one of the most profound impacts on a postdoc's training, experience, and transition into early career positions. Encouraging and, if possible, requiring mentors to receive ongoing training in mentorship and DEI (perhaps through something like the NRMN) would be highly beneficial for the mentor and their current and future trainees. Postdocs themselves would also benefit from explicit training on how to supervise and mentor trainees.

In learning to navigate larger NIH systems, it also could be helpful to employ more search engine optimization (SEO) techniques. NIH often emails out useful tools and webinars; however, outside of the email, it can be difficult to find resources through something like a Google search. Integrating more SEO techniques to raise the profile of resources for trainees on common search engines would be helpful, as Google tends to be the first technique trainees use to garner answers. For instance, in finding which NIH

PO to contact, https://reporter.nih.gov/matchmaker is a wonderful resource but does not readily show up when searching "find an NIH program officer" on Google.

Response 2738

Perspectives on the postdoc roles and responsibilities

A researcher within a lab working on an independent project. Still considered a trainee, but very little formal training, more of an apprenticeship.

Fundamental issues and challenges

Low salary compared to industry or alternative roles. For postdocs with families, very high cost of child care ($25-30k per year), makes staying it impossible to stay in low paid academic postdocs.

Existing NIH policies, programs, or resources

Raising the NIH minimum salary for postdocs. Providing grant support for postdocs for child care. Re-evaluating the NIH modular budget.

Proven or promising external resources or approaches

HHMI increased the minimum postdoctoral salary to $70k with the option of up to $90k for high cost of living areas.

Response 2739

Perspectives on the postdoc roles and responsibilities

From my current perspective, the roles and responsibilities of an academic postdoc center around conducting independent research that is semi-guided by the principle investigator. Although the postdoc period is still considered "training", postdocs are expected to be independent in their research pursuits. Additionally, postdocs handle many additional responsibilities at once on top of their intellectual/scientific pursuits, depending on the lab/mentor of course. It is my strong opinion that the postdoc should be solely focused on the research, as the research itself is extremely challenging alone in a vacuum. However, in reality, postdocs wear many hats (varied depending on lab to lab and PI style): lab manager, undergrad mentor, grant writer, document editor for PI, equipment technician, etc.

Fundamental issues and challenges

Overall, I think the biggest issue is poor pay on top of the deluge of non-scientific tasks that are expected of post docs. For example, why would one want to subject themselves to an environment where they are so overloaded with managerial responsibilities and helping PI secure funding, on top of their research pursuits, for substantially less pay? And in rare cases when things go south (i.e. overburden responsibilities and long hours lead to a few honest errors in scientific publications and presentations that can hurt a trainees scientific career before it even gets off the ground.) it is completely the trainees fault? From personal experience, I am convinced that no matter what I do, I am destined to fail at handling everything well while keep good progress on my research in a careful manner. There is such intense pressure to publish from the PI in many research groups. It's impossible to adequately focus when so many things are going on at once, which so much pressure. Throw family responsibilities into the mix (I am a parent) and it quickly gets too overwhelming. When, in comparison, if I were to go to industry I would receive maybe 2-3 fold higher compensation for less responsibilities and working more normal hours—and be able to put more focus on the research problem at hand while in the lab, to do good rigorous science.

Existing NIH policies, programs, or resources

1. increase the pay to compete with entry-level industry positions (industry positions for newly minted PhDs). Postdocs also have PhD level training and experience, and need to be compensated as much.
2. provide investigators with more resources to hire support staff (lab managers, technicians, etc). Relieving managerial burden most post docs deal with would greatly help postdocs focus on their research
3. encourage or require PIs to pre-print most of their scientific findings. Most PIs don't want other research groups to see the manuscript before publication, due to intense competition. But to me, pre-printing provides an extra layer of verification/feedback from colleagues in other labs in the field before the work is accepted for publication. Also pushes the PI to encourage and support the identification of errors in their work earlier in the manuscript preparation process, as the work will be viewable by other researchers earlier. Personally, I think this relieves a lot of the severe anxiety related with publishing that trainees face.

Proven or promising external resources or approaches

No Response

Response 2740

Perspectives on the postdoc roles and responsibilities

A postdoctoral position extends the PhD or MD Fellowship training of a junior scientist. This position involves data collection in the form of benchwork/participant recruitment and conducting study visits/accessing and analyzing big data (dependent on specialty), particularly learning new techniques, and gaining expertise in study design and grant writing with an experienced mentor or mentorship team. Often as postdoctoral fellows advance through this period, it is a time to learn mentoring skills particularly with more junior postdocs. For many scientists, this will be their first experience conducting a study from conceptualization to completion, so it is a valuable skill acquisition and experiential learning period. It is a time to build the skills that lay the groundwork for independent scientific success. Independent scientific success could be in any scientific arena: academia, industry, non-profit, or government.

Fundamental issues and challenges

1. Low NIH postdoc salary, which is often lower than that for research assistants that postdocs might supervise. This is an inequity and negatively affects quality of life. Postdocs have already gained a terminal degree and are qualified, without postdoc training, for many professional positions with much higher pay, a structured career ladder, and peer respect as experts. Many new postdocs are being recruited to industry, which offers higher salaries.
2. Institutional recognition as professionals and HR protections. Postdocs are continuously referred to as "trainees" and are not eligible for academic faculty appointments. They are a special HR type, which increases the risk for pay and benefit inequity/injustice and decreases HR protections against harassment and other forms discrimination.
3. Long work hours. Postdocs, personally invested in studies, often pick-up after hours and weekend work that research assistants do not do and must also immerse themselves in grant writing. Long hours lead to burnout and dissatisfaction.
4. Lack of a structured career ladder or fixed maximum term postdocs. Postdoc positions are perilous because they do not have the same HR protections as faculty positions. Some postdocs get "trapped" doing multiple postdocs, adding many years to their training and delaying independence. This is not in the interests of the postdoc, their field, or the funder. Many postdocs find the length of postdoc training unacceptable and end their academic career early to get a more structured, better paying job. It is in everyone's best interests to keep postdocs moving along a career ladder (or to alternative employment).
5. Lack of institutional knowledge. Because postdocs are not faculty, they do not attend faculty meetings and are often not on departmental faculty distribution lists. This makes it hard for them to gain institutional knowledge which could give them a stronger sense of purpose and identity within the institution.

Existing NIH policies, programs, or resources

1. K awards are too long, frustrating awardees. They provide salary support but very little funding to conduct any research, causing postdocs to be completely reliant on their mentors to do their research. More funds for research projects as part of K awards would alleviate this stress and promote earlier independence.
2. Higher salaries on T32—and F32-funded postdoctoral grants.
3. Problem 1 and other barriers mentioned above, including lack of transition between K and R awards, lack of a career ladder and institutional recognition/faculty protections, could be overcome by eliminating or curtailing K awards and replacing them with completely restructured K99/R00 awards instead. The K99 would be an initial K award, rather than a second/third postdoc award. Provide a 3 year K99 component, where recipients are expected to be faculty, before a three year R00 component. This would provide transition from the K to R stage (with R00 allowing more salary support than an R01, a progressive step down model as opposed to the current salary "cliff") and also the structure and assurance to move from a "trainee" to a faculty position within a defined and realistic time frame. Under this model, the K and R phase would require adequate funds for research projects, with maximal amounts higher in the R than the K phase. These funds could come from the shortened K phase of the program. Additionally, the heavy reliance on didactic training during current K awards could be more tailored so that awardees can gain more experience with grant writing and financial and personnel administration, which are essential for independent success but are not emphasized enough in current K training (partly due to lack of any research budget). This model provides visible and timely progression to independence for postdocs.
4. Adequate R01 funding so that mentors can support trainee activity.

Proven or promising external resources or approaches

No Response

Response 2741

Perspectives on the postdoc roles and responsibilities

It is serving as a critical link between my interest in science and how much of a meaningful impact I can make with this interest as a an academia. To me it has been a powerful force in building my scientific confidence and simultaneously building that of others.

Fundamental issues and challenges

My little experience has shown that one fundamental issue out of many is post doctoral remuneration. Many of the postdoctoral scientists are parents and they can hardly survive with current recommended minimum salary. Not forgetting that research work sometimes steal away their family time, but theit current salaries might not be enough to compensate for this family time loss.

Existing NIH policies, programs, or resources

Expanding on the number of local and international conferences that postdocs can attend to boost their professional development.

Proven or promising external resources or approaches

HHMI recently acknowledged the important role that postdocs play in raising new scientists and therefore made some policy modifications in their interest. A major aspect of these policy modifications is setting the minimum salary for new post doc to $70k.

Response 2742

Perspectives on the postdoc roles and responsibilities

An academic postdoc is an early career scientist hired to carry out a specific research program while gaining the necessary skills and experience to become an independent scientist in one of the many fields where a scientist is needed (i.e. academia and industry but also policy, justice, healthcare and journalism

to name a few more). Therefore, the role of a postdoc should be partly to move this research program forward and partly to develop his/her career towards the desired path.

As a trained scientist, a postdoc takes on many responsibilities including experimental design and implementation for multiple research projects, conducting experiments by performing various specialized techniques, data analysis and interpretation, training and mentoring students, writing manuscripts, and presenting the research findings in the scientific community.

In sum, our view essentially agrees with the NIH's definition of a postdoctoral scholar. However, we'd like to highlight the fact that this is not the reality for many postdocs, not even the ones employed to fulfill NIH's goals and perform NIH funded research. Most postdocs lack a clear and explicit agreement with their supervisors regarding what their role **and responsibilities** are. Therefore, being often the most skilled and experienced scientists working for their supervisors, they are overburdened with work. Often, postdocs take on some (if not all) aspects of laboratory management or serve as co-directors for undergraduate or graduate student projects without being asked or even acknowledged. And although they take on all these responsibilities, they are frequently not allowed to make big decisions on the research projects, or to work on their own career development. So, although they are supposed to be well on their way to becoming independent scientists, they shoulder the responsibilities but are in effect treated as trainees.

Fundamental issues and challenges

Unclear career trajectory and job insecurity: According to the 2023 National Postdoctoral Association Report, almost 86.6% of postdocs are impacted by job security concerns and over 90% are negatively affected by the lack of clarity in transitioning to the next position. The scope of graduate and postdoctoral research training is narrow and limited to seeking tenure-track faculty positions as the only accepted aspiration. After years of education and training, dealing with the uncertainty of their career prospects, along with an extensive workload, has made these positions less desirable to early career scientists. NIH should provide information and resources that will help newly graduated PhDs and postdocs to make an informed decision of their career choices before and during their postdoctoral training.

Low compensation: The inadequate wage has negatively impacted postdocs' professional and/or personal lives and resulted in a severe decrease in retention and recruitment of these researchers. The current stipends with respect to living expenses can be described as poor and discouraging. The NIH should increase its stipends to postdocs on NIH training and fellowship grants and enforce a regulation ensuring that all institutions respect the minimum salary requirements for NIH-supported postdocs.

Lack of mentorship: The lack of mentorship and guidance can create confusion and uncertainty for postdocs. This issue can be compounded by insufficient feedback and communication from their mentors, leading to feelings of isolation and dissatisfaction. NIH should invest in mentorship training for NIH-supported faculty and periodically evaluate the progress of the mentoring. Successful (or not successful) mentoring needs to be reflected in evaluations of the principal investigator.

Existing NIH policies, programs, or resources

Given the current crisis in low interest for PhD graduates to pursue postdoctoral positions, the postdoctoral experience must be revamped. This may be done by modifying current funding systems and expanding other successful initiatives.

Postdoctoral fellowships: the NRSA F32 program provides funding for postdoctoral researchers to conduct research in a variety of scientific areas. The program could be improved by

1. increasing the existing payscale to match the increase in cost of living experience since the last update to the pay scale; and
2. expand the eligibility criteria to include non-US citizens.

Immigration reforms: the J-1 visa is a very flexible program that allows foreign scholars to spend up to two years in academia. However, after 2 years scholars must return to their countries and spend two years before they attempt to migrate back to the US. In addition, J1 visa holders are in constant immigration peril since their legal status is dependent upon employment (i.e. they cannot have any unemployment gas or the visa expires). As such we recommend increasing the flexibility on current immigration restrictions imposed on J-1 visa holders.

Proven or promising external resources or approaches

Postdoctoral associations (PDAs), mentoring programs, and funding opportunities are crucial external resources for enhancing the postdoctoral training ecosystem. Strengthening partnerships with PDAs, implementing effective mentorship programs, and providing targeted funding opportunities are promising approaches that can create a more inclusive and supportive environment for postdocs, leading to increased job satisfaction and success in research.

PDAs provide a platform for postdocs to connect and network with peers and mentors, and offer professional development workshops to enhance their skills and knowledge in communication, leadership, and project management. They also provide workforce diversity and inclusion initiatives and establish policies to solve postdoc problems and hear their concerns. The NIH can partner with PDAs and leverage their expertise and resources to create a more inclusive and supportive environment for postdocs.

Mentoring programs are also essential for postdocs' success, and NIH-funded PIs can play a crucial role in implementing these programs. Effective mentoring improves the quality of mentoring and increases job satisfaction. The use of postdoctoral compacts, such as UW Madison, can enhance the quality of mentorship by establishing clear expectations between the PI and the postdoc. NIH-funded PIs should be trained in mentoring postdocs, including discussions on addressing the unique challenges that postdocs face. Additionally, PIs should build time into postdocs' training to attend NPA and/or PDA meetings to provide them with access to valuable networking opportunities and career development resources.

More funding opportunities in addition to NIH F32 and K-Awards is crucial for postdocs to succeed in their research. Additional fellowships provide targeted funding opportunities, financial support, and additional resources for postdocs' research and professional development. Greater financial support through fellowships removes uncertainty and will improve postdocs' work environment, leading to increased productivity and job satisfaction. NIH can work with academic institutions and external organizations to provide these funding opportunities for diverse postdocs.

Response 2743

Perspectives on the postdoc roles and responsibilities

My aim to do a postdoc is to prepare myself for a faculty position in academia and for an independently funded principal investigator position. I see postdoc as a training period to prepare myself for these next positions and also to become aware of my research interests, develop an expertise as well as a research niche. Also, postdoc is a unique chance to get experience in teaching and mentoring more junior scientists such as graduate students and technicians as well as establishing collaborations with other scientists which will be useful in the future.

Therefore, a postdoc's responsibilities include doing high quality research, engage in training and mentoring while he/she is also preparing himself/herself's next academic appointment. Postdocs are the essential pieces of the research groups who are highly skilled and educated people and maybe the main drivers of scientific work in the lab.

Fundamental issues and challenges

Unfortunately there are several issues and challenges that postdocs face during this period. The main challenge is the very poor pay that they receive which makes life very difficult. Although postdocs are highly trained, highly skilled people with already a doctorate, their pay is below the minimum wage. Especially, in the more expensive parts of USA (e.g. Boston Area), the rent for an apartment almost equals to a postdoc salary. The average age for postdocs is above 30 and it is very normal that these people want to start their families however due to these financial challenges this is not possible. Most postdocs are international non-residents and even going their home country to visit their families are almost impossible with such low salaries.

I have no doubt that postdocs are interested in science and academia, however because of this low pay and financial issues, many are considering to switch to academia where they can get at least 2-3 fold more of their postdoc salaries. In summary, how postdocs are paid at the moment is unfortunately "ridiculous". The situation is even worse for international female postdocs. The child care is around 3000 usd/month. Since they don't have families to support them with baby care here in USA, they have to quit postdoc and find a well paid job for baby care. For people who are above 30 and who are well educated, this level of financial struggling is very challenging and frustrating.

Existing NIH policies, programs, or resources

The postdoctoral salaries need to be increased "significantly". I believe that offering better pay will help recruiting postdocs with good backgrounds. Since they will not have to think about surviving anymore, they will be more focused to science and be more productive and engaged.

Proven or promising external resources or approaches

Response 2744

Perspectives on the postdoc roles and responsibilities

The postdoc is an essential training position in which the trainee learns skills essential to running a lab (such as grant writing and project management) while working to establish the basis of the research that will provide the foundation of their independent careers. Good postdocs are also a tremendous asset to the labs in which they work by pushing research forward, bringing in new expertise and ideas, and helping to train students.

Fundamental issues and challenges

Insufficient lab funding to pay adequate postdoc stipends and to support their research over the 4-6 years necessary for them to receive sufficient training to progress in their careers.

Existing NIH policies, programs, or resources

Increasing the modular budget is the #1 thing that could improve the quality of life of postdocs by allowing PI's to pay them a living wage appropriate to their skillsets. Increasing lab funding would also increase the number and duration of postdoc positions available, particularly in smaller research environments in which they are likely to receive more attention and higher quality mentorship.

Proven or promising external resources or approaches

No response

Response 2745

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Fellowships punish you by taking away your benefits. This is asinine. Fellowship eligibility often ends after only a few years, biasing fellowship recipient demographics toward individuals who come from academic families (have people helping them) and/or have ended up in a well-funded lab with a supportive advisor and are working on a project that "works" (i.e., leads to publications). Many postdocs are not properly supported during training, are forced to work on dead-end projects, are taken advantage of by PIs (teach their classes with no additional pay and same research expectations, etc.). Many talented people are "not competitive" for fellowships because they are considered too "old" (in trainee years) to "still" require training support while many people (of varying talent and drive) are awarded funding based on the lab they are in, not their own skills and achievements. The rich get richer and the pipeline leaks. Postdocs (and grad students) need subsidized, on-campus childcare. We've tried everything else. We still have gender equity issues. Ask women in academia why they delay having children—it's because they feel they cannot (don't have time, can't afford) and still keep up. Government or campus-level resources need to be available to support parental leave or else PIs will always decide not to hire or reappoint someone who suddenly is pregnant or is working 10 instead of 16 hours a day following the arrival of their child. NIH budgets need to increase to take salary/stipend increases into consideration or else junior faculty will never be able to afford postdocs and.the rich (old tenured professors) will continue to get richer on the same old ideas, while we lose the new ideas and innovations of the younger generation.

Existing NIH policies, programs, or resources

Change eligibility for postdoctoral fellowships to not arbitrarily decide when a person is "past the point of needing additional training." Change NIH ESI definition to depend on the start of an independent career, not the date of graduation from PhD. That is ludicrous. You punish people for NOT giving up, NOT dropping

out of the pipeline by telling them it took too long for them to make it here. You reward luck more than you reward perseverance. Encourage universities to revisit the 5-year maximum that many have implemented for postdoctoral appointments. If the logic was to protect postdocs from "languishing" in their positions, it failed. It has lead to many hard-working, talented individuals being kicked out of their labs with little notice, their prospects for a career in academia destroyed because no one will hire them since a PhD level scientist costs way more than a postdoc. Ensure that NIH-funded labs supporting postdocs are participating in regular assessments of postdoctoral progress, career development, conference attendance, etc. Too many trainees end up in labs with PIs who don't care about their training, only their output. Trainees are vulnerable, fear speaking out, and frequently cannot easily change labs, especially with arbitrary time limits applied to their career development, which is frequently stalled by their PI.

Proven or promising external resources or approaches

No Response

Response 2746

Perspectives on the postdoc roles and responsibilities

It is an additional training opportunity to focus on expanding research skills and publishing under someone's super vision.

Fundamental issues and challenges

I think the two main challenges are

1. pay, and
2. academic culture.

After completing a doctoral degree, many people are in debt (and need to start paying back student loans), looking to start a family and/or buy a home, or occurring new health or family costs. While the pay is better than graduate student pay, it is still very low given the necessary qualifications, and in many states/cities, it is not enough to live on without constant financial worry, let alone start a family or purchase property. An increase in pay, or at least guidelines around cost of living pay, would definitely increase the interest in postdoctoral positions.

The other, secondary, issue is academic culture. Many people experience toxic work environments in graduate school and are eager to get into a culture that does not pressure 24/7 availability to work, puts less importance on number of publications, or is friendlier and less competitive.

Existing NIH policies, programs, or resources

Increase the recommended postdoc pay, since most positions, regardless of location, pay the NIH salary.

Proven or promising external resources or approaches

Make more trainings free for postdoctoral students.

Response 2747

Perspectives on the postdoc roles and responsibilities

Postdocs are integral part of the academic system and research. Most of the times, if not always they are one driving the objectives of the lab. They are ones spearheading most often the high risk projects of the lab. Personally for me its no different. I like to use this opportunity as a postdoc to learn as much as I can, not just in terms of just doing science but also how to manage and most importantly communicate science. I like to use my experience that I have acquired over the years to train the next generation of young and brilliant mind who often come to lab as an undergraduate trainee or PhD students. For me postdoc experience is one of the most fulfilling experience where I enjoy the freedom to explore various projects that may necessarily not in direct connection to my lab's objective. I hope to use experience as a postdoc to further advance my career in academia and secure a position as a faculty.

Fundamental issues and challenges

The Fundamental issues and challenges at the moment for most postdocs is the postdoc salary. The amount of money they get as a postdocs is peanuts. With most postdocs at this stage, have family and kids to looks after, with meagre salary that averages around $53000, it is almost living like hand to mouth, even worse in cities and parts of USA where cost of living is high. As an immigrant postdoc, the problems are manifold increases. The temporary nature of postdoc with so little pay, makes the life of a researcher and their dependents very difficult. I hope US science funding agencies such as NSF and NIH would take some concrete step towards alleviating some of the problems faces by postdocs currently specially with regards to salary.

Existing NIH policies, programs, or resources

Apart from the salary of postdoc that needs to be raised, I think yearly pay raise also needs to be strictly enforced. Lot of NIH labs do not do that including mine which means you continue to get the same salary even after years of experience and it is not sustainable given the rate of inflation that we are seeing.

Proven or promising external resources or approaches

I think NIH can hire some of the scientific experts and brainstorm ideas how to improve the overall postdoctoral experience.

Response 2748

Perspectives on the postdoc roles and responsibilities

Research, mentoring, gaining new skills, publishing, career advancing, networking, attending conferences, presenting research,

Fundamental issues and challenges

1. Salary is not enough. We postdocs live paycheck to paycheck considering the rent increase and inflation. This financial hardship makes it very difficult when you are responsible for your family. We do not feel appreciated or valued financially considering our contributions and previous training.
2. Most of the international postdocs are on J1-Visa which limits them to advance in careers like taking up internships or getting training in the industry. It also limits them to transition to jobs.
3. Some of the postdoc fellows do not get institutional health benefits.
4. Disparity in salaries for postdocs in different fields.

Existing NIH policies, programs, or resources

1. Increase the salaries for postdocs, including the cost of living as well as the inflation point.
2. Equality in postdoc benefits

Proven or promising external resources or approaches

No Response

Response 2749

Perspectives on the postdoc roles and responsibilities

Being a postdoc feels like being caught in limbo. You supposedly have more skills and knowledge than a graduate student and are using the position to gain further training, but you are still treated as a grunt worker, not often valued for what you bring to the table. You're supposed to have more responsibilities for experiments and mentoring than a graduate student, but everything (collaborations, trainings, grants, etc) require significant contributions from your mentor, restricting independence. I feel incredibly undervalued by my institution as a whole; I am luckier than some of my peers because I am classified as a full employee rather than a mere trainee and therefore enjoy more benefits (retirement fund, tax withholding, etc) than them, and I am frequently treated as "other" by my administration, and which does not seem to want to recognize how valuable my (and other postdocs) research contributions are. Essentially, being a postdoc feels like being a graduate student, with all those troubles and trials, but without coursework and with a slightly higher paycheck.

Fundamental issues and challenges

Institutions will only pay the minimum NIH-required stipend, with no adjustments for inflation or cost of living (and barely any raise from year to year to adjust for these factors or reflect the amount of work a postdoc is putting in). Benefits (health insurance, retirement funds (with institution matching), dental insurance, etc) vary widely depending on the institutional classification of a postdoc (employee vs trainee), and make it extremely confusing and difficult as funding sources dictate a switch in classification (and often a subsequent loss of benefits). There is less camaraderie or cohesion amongst postdocs as compared to graduate students, so there is not a built-in support group to help each other out. Work-life balance is abysmal, with long hours, nights, and weekends expected of you and few to no holidays and minimal allotted paid leave.

Existing NIH policies, programs, or resources

I genuinely don't know that much of this can be improved at the NIH policy level; perhaps an increase in stipend and standardized benefits would help? Much of the trouble seems to be with general academic culture and not the NIH specifically, so I'm at a loss for what to suggest.

Proven or promising external resources or approaches

Unknown.

Response 2750

Perspectives on the postdoc roles and responsibilities

Main Point: Postdoctoral scholars (postdocs) and other early-stage scientists funded by NIH Training, Fellowship, Career Development, or R25 Research Education Program awards are not required to receive formal coursework, evaluation, and practice in science communication during their postdoctoral experience in STEM. This omission can decrease the trainees' success and satisfaction in science, and result in an inability to engage effectively in discourse with colleagues and diverse audiences. Like the requirement to receive formal "Instruction in the Responsible Conduct of Research", we recommend that all NIH funded trainees be required to receive formal "Instruction in Science Communication".

In an era of science skepticism, scientists need to be excellent communicators.

- As early stage scientists that are preparing for a career in science, postdoc science communication (sci comm) skills such as public speaking are directly related to their success as leaders, influencers, and teachers.
- Science is a very collaborative profession, and we communicate with other scientists, as well as administrators, students, technical staff, and the publics. Effective communication requires scientists to listen to and engage in a dialogue with diverse audiences.
- During their postdoc experience, much emphasis is placed on scientific discovery, while very little on communication skills.
- The National Postdoctoral Association lists "Communication Skills" as a Core Competency that is considered essential for career progression. Postdocs must speak with policymakers, news media, funding agencies and a variety of general audiences; deal with conflict resolution; be able to negotiate; write scientific papers and op-eds; make conference presentations; teach; and, interact with others in the workplace, institution, and society.
- Scientists who have good communication skills can combat misinformation and disinformation.
- Distrust and denial of science threatens all of science. Scientist who speak well are seen as trusted and truthful.

Fundamental issues and challenges

- Right now, sci comm training for most postdocs is often informal, infrequent, sporadic, or entirely missing.
- Poor communication skills inhibit recruitment, retention, and overall quality of life of postdocs (and scientists at all levels).
- Postdocs with good writing and speaking skills report higher satisfaction with their work, more success in getting jobs and promotions, and an increased likelihood of receiving funding. Learning to communicate well helps the researcher think clearly, explain science logically and build trust with the audience. These skills are essential to combat science disinformation and misinformation.
- Data from NIGMS funded programs provide evidence that the decline in PhDs persisting in academic faculty careers is related to their ability to communicate science. Their research shows that trainees who engage in sci comm will be more likely to stay in an academic research career. (Cameron et al., 2020). R01-GM85600
- Scientists trained to communicate with the public and teach students are better prepared to stand up for evidence-based scientific data that informs policy and public health.
- Scientists can be taught to be clear, confident speakers, but this takes formal coursework and practice. A fear of public speaking (and engaging in outreach activities) is a disincentive for scientists to interact with the general publics.
- The best candidates for jobs demonstrate clear, confident speaking skills, simplify complex research data, and understand how to connect with a diverse range of audiences.
- To stay successful and satisfied in science, the postdoc must continue to communicate their scientific creativity, discoveries, and value of their work to society.
- Scientists who communicate well are successful and satisfied because they get funded, publish their research, are asked to give lectures, receive awards for their work, and are recognized as good teachers, colleagues, and trusted members of the organization.

Existing NIH policies, programs, or resources

- In FY2022, NIH awarded nearly $1.2 billion for ~6900 T, F, K grants, and R25 grants. Less than 1.3% of these awards mention offering any “science communication” training in the award abstract. (NIH Reporter)
- Providing formal science communication coursework (not just short-term workshops, seminars, or one-and-done training events) should be an integral requirement for receiving a T, F, K or R25 award.
- The NIH already requires trainees receive formal “Instruction in the Responsible Conduct of Science”. A similar requirement for formal “Instruction in Science Communication” would prepare our early stage scientists for future engagements with the people who support and depend on their work, such as the next generations of scientists, policymakers, and other publics.
- Communication is a core competency for NIH intramural trainees. The Office of Intramural Training and Education provides science communication training programs that could serve as models for extramural training sites.

Proven or promising external resources or approaches

- The reasons for improving our science communication in science has been recognized in reports from the National Academies of Sciences, Engineering and Medicine, and the American Academy of Arts and Sciences, and COMPASS.
- Early stage scientists want to become better communicators but often are not given access to learning opportunities.
- A recent Research!America poll indicates that the public wants to hear researchers talk about their science and careers in science. Americans are concerned about the impact of misinformation/disinformation on public health (88%), climate change (79%), and stable democracy (85%).
- Certification in formal sci comm coursework can bolster a postdoc's prospects for employment.
- Many training programs have emerged to prepare scientists to communicate and engage with different audiences. However, these programs are reaching only a small self-selecting subset of postdocs and must be greatly expanded. Institution, faculty, and Federal grant support is urgently needed to set up, sustain and grow these sci comm programs.
- Some universities and research centers already have sci comm programs that offer formal courses, certificates, or graduate degrees, and could be modeled. Examples are:
  - Harvard Chan's Center for Health Communication
  - Rutgers Science Communication Initiative
  - Duke University STEAHM Forum
  - University of Maryland Science Communication
  - University of Oregon Center for Science Communication Research (SCR)
  - Stony Brook Alan Alda Center for Science Communication
  - University of Wisconsin Life Sciences Communication
- Toolkits, curricula, books, videos, and instruction choices are available to teach sci comm. (for more information, see Resources at the Chalk Talk Science Project website .www.chalktalkscience.org)
- Literature supporting the best ways to communicate science is available. (National Academies of Sciences, Engineering and Medicine)
- A recent National Postdoctoral Association report found 82% postdocs report "Lack of professional skills development opportunities" as having a negative impact on their professional and/or personal lives.

Response 2751

Perspectives on the postdoc roles and responsibilities

I am a graduate student at [redacted for anonymity] planning to graduate in the next few months. Due to the inherent precarity and low pay of academic postdoc positions, I am essentially not considering an academic postdoc as my next job. This is a major failing of the social contract between postdoctoral scholars and the institutions responsible for them. Therefore, my perspective on the roles and responsibilities of an academic postdoc are that a postdoc is responsible for shepherding the vast majority of a lab's impactful research from conception to publication, and that postdocs deserve both higher pay and some guarantee of consideration for long-term positions, whether as a staff scientist or faculty member.

Fundamental issues and challenges

1. Low pay
2. Lack of assurance as to future career opportunities

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No Response

Response 2752

Perspectives on the postdoc roles and responsibilities

The postdoc is a critical time in one's academic science research career. While traditionally, the postdoc period is considered a "training" phase, many postdocs spend more than 5 years in this role. Additionally, many postdocs are of family-rearing age, but many times struggle with the disadvantages associated with being considered a "trainee" at their universities. Thus, I believe many postdocs struggle with the decision to remain in academia or leave academia (or research!) altogether.

Fundamental issues and challenges

Based on my own experience as a postdoc and as our university's postdoc association president, many of our postdocs struggle with quality of life due to the apparent inequalities among the PI/Postdoc relationships/arrangements across campus and the lack of retirement and other university benefits. This inequality was apparent for citizen vs. non-citizen postdocs, NRSA vs. non-NRSA funded postdocs (the NRSA-funded being the disadvantaged party), and among all postdocs due to lack of enforcement that protects elements that could contribute to improved quality of life among all postdocs.

Existing NIH policies, programs, or resources

The NIH could spearhead a more streamlined process for transitioning talented postdocs to and from NRSA-funded grants and require protections regarding the postdoc term and benefits provided to postdocs.

Proven or promising external resources or approaches

As our university's postdoc president, after experiencing my own issues as an NRSA-funded fellow and listening to other postdoc concerns, I wrote a letter to the university outlining my primary suggestions for how to improve postdoc recruitment and retention at our university (a goal outlined in our university's research strategic plan). As a postdoc, I had intermittently researched and collected information over approximately 2.5 years in order to learn more about how other university's across operated and their common issues. As the PDA president, was then able to work my suggestions all the way up to the Vice Provost's office who coordinated meetings involving different departments in an effort to implement some of these changes. Unfortunately, much of the senior leadership has since changed at our university and thus, I assume the issue was placed lower on the priority list. Regardless, I feel that a solution originating from the NIH would be the best option to improve postdoc recruitment and retention. I was, therefore, very excited to see this solicitation for feedback. I would be happy to share the letter and any other information I gathered over those years. I would also be happy to discuss this matter further if the NIH is interested. Thank you.

[redacted for anonymity]

Response 2753

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The main issue, in general, is the low salaries. Although, it is worth mentioning that a significant number of Institutions do not consider post-docs as employees, so they are not considered to receive some benefits, like for example, retirement accounts.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2754

Perspectives on the postdoc roles and responsibilities

a stepping stone for a faculty position

Fundamental issues and challenges

low salary for the amount of time we spend in the lab (almost 10hrs per day including most of the weekends), very few or no fellowship opportunities for foreigners, lack of serious programs for professional development if postdocs want to switch to industries

Existing NIH policies, programs, or resources

increase the salary (it should be comparable to the amount a software professional with 3-5 years experience earn here), more fellowships for foreigners, more programs targeting industry placement, more job openings in educational and research institutions

Proven or promising external resources or approaches

No Response

Response 2755

Perspectives on the postdoc roles and responsibilities

Postdocs are by nature a temporary position —meant for people in transit. In the current climate, I feel like postdocs SHOULD be very much focused on skill acquisition, both technical and intellectual, with the goal of preparing for a next career stage whether that be an industry role or even the impossibly difficult academic faculty route. However, it FEELS like right now postdocs are not at all treated this way, and are instead viewed as an underpaid, highly trained workhorse that drives the progress of the labs yet reap almost 0 benefits for doing so.

Fundamental issues and challenges

Quite frankly, it's salary and career prospects. For highly trained people ie people who went through 6 years of graduate school to get a PhD, when faced with a choice between getting paid a pittance (~50k) for working long hours for a single digit percentage chance at obtaining a faculty position in an unknown location, or a choice between getting paid 3x that amount immediately to start in industry and already get a foothold onto a future career in biotech, the choice is oftentimes very simple. This also means that people who DO choose to do a postdoc oftentimes take a pragmatic approach to choosing postdoc labs, as it's very obvious that the large, well-funded labs provide the highest chance to obtain faculty positions. This leads to intellectual stagnation and bottlenecking across the entire scientific discipline, as we now have ended up in a state where only a few mega-labs spread their scientific progeny far and wide in faculty positions, choking out other perspectives/approaches from developing.

Existing NIH policies, programs, or resources

Significantly raise the NIH minimums for postdoc salary. At least 70k a year, possibly with cost of living adjustments for area/city. It may even require a higher salary if the current dismal state of the postdoc-to-faculty career path doesn't change; the uncertainty of poor long-term career prospects is much easier to stomach when the salary is calibrated to offset that uncertainty.

This is not an easy task and may not fix inequality, but as it currently stands the dire state of academia is already an incredible driver of inequality across the entire system.

Proven or promising external resources or approaches

No response

Response 2756

Perspectives on the postdoc roles and responsibilities

To my friends and family outside of science, I equate the postdoc to a medical residency or fellowship: you have the degree to practice in your field, but you are still affiliated with a professional mentor in order to

further cement or expand your skillset and establish your own independence as a practitioner. However, to be clear, I don't consider the postdoc to still be a "trainee" position, in the same way that anyone who works under a project manager in business or marketing would not still be considered a "trainee".

Fundamental issues and challenges

Money. Biotech now provides higher salaries and quality of life than academia by lightyears. The postdoc years are the times in earlier adulthood when people are planning families and beginning to plan for retirement, and wages are crucial to our quality of life. Academic science will dry up if there is not competitive compensation available to recruit postdocs, no matter how flexible the working hours are or how prestigious your institution is. The lack of financial security also deters individuals from disadvantaged economic backgrounds to continue in academic science, which directly contributes to the lack of diversity we see at department and institutional levels. If we are to prioritize the recruitment and retainment of underrepresented minorities in science, this has to include competitive financial compensation.

Existing NIH policies, programs, or resources

Money. Raise the minimum salary lines significantly for postdocs at all levels. Direct salary increases are the best way to improve overall quality of life and to enhance diversity within academia.

Proven or promising external resources or approaches

No response

Response 2757

Perspectives on the postdoc roles and responsibilities

I see the academic postdoc as a training position to learn new skills in the path to a more permanent career position. If the goal is to stay in academia, then the academic postdoc is meant to build up a body of work that will form the basis for a new laboratory.

Fundamental issues and challenges

Quality of life as a postdoc is hindered primarily by financial concerns. While I can get by, everyone is aware that similar positions in industry make 2-4x the salary of an academic postdoc. Coupling this with a lack of opportunities to stay in academia permanently, many postdocs may decide it is not worth the financial strain to stay longterm. Additionally, the postdoc period comes at a time when many scientists may aim to start a family, which adds additional strain, both financial and personal. It is difficult to withstand these pressures without adequate financial support.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2758

Perspectives on the postdoc roles and responsibilities

An employment opportunity to gain additional research training, mentorship from experts, and to have protective time to conduct postdoc-initiated research.

Fundamental issues and challenges

Not offering health insurance coverage, not offering a competitive salary, not paying postdocs a salary but as a fellowship stipend which keeps them from paying into FICA (social security and Medicare benefits), cannot apply for a mortgage to purchase a home when not officially employed as a postdoc fellow, and time spent as a postdoc does not qualify as qualified work towards the Public Service Loan Forgiveness Program, limited time off or services/resources for persons with disabilities or new parents or with child or elderly care responsibilities. The expectation that postdocs come from families with wealth and therefore can work for low wages for the experience. Nepotism is real in academia. It is difficult for postdocs who

are first generation or come from low income or marginalized backgrounds to "fit" in a system that is not supportive. Additionally, it is known that postdocs are for two purposes:

1. additional training before launching one's own lab or
2. "cheap labor" for a PI to pay someone to do their work. Sometimes it is difficult to know what postdoc one is walking into—actually training experience or working as cheap labor.

Existing NIH policies, programs, or resources

Hire postdocs as employees and pay postdocs a living wage based on cost of living/inflation and require health insurance coverage. Mentors need protective time to mentor and sponsor their postdocs in support of the postdoc career. Postdocs should not be viewed as "cheap labor" because the research enterprise does not pay research teams appropriately.

Proven or promising external resources or approaches

Examine the successes of the RWJF funded doctoral program, Health Policy Research Program, to learn how to recruit, retain, and support scholars from underrepresented and/or marginalized backgrounds.

Response 2759

Perspectives on the postdoc roles and responsibilities

Postdoctoral research is a training period where one may gain skills that may be missing, but is necessary for their chosen job market (mostly for academic positions).

Fundamental issues and challenges

While postdoctoral scientist is a transitional position, the research is taking longer and longer to output tangible achievements to better our job application packages. In our field of biomedicine/bioengineering, it is not unusual to postdoc for >6y, which is the longest time spent in a single institution/position since elementary school. Additionally, postdocs are in an age range where one frequently starts a family, and must start considering two-body options for settling down and feeding the growing household. Thus, postdoc package must come with income and benefits on which one may acquire housing and cover living costs, with some savings. Many of my fellow postdocs tend to switch careers to industry in their 2nd-3rd year of research due to these realistic concerns. Another factor is in the cut-throat nature of research output, where it is commonly believed that one must publish in a top-impact journal in order to secure a position in academia. If one does not have a project that is projected to publish in such top-tier journals before their 2nd-3rd year mark, they often quickly pivot to an industry position. Either way, many of my fellow postdocs leave academia after years of high-stress, feeling like failures.

Existing NIH policies, programs, or resources

Setting the example for higher standardized wage and benefits for postdocs. Funding more training opportunities and programs. Funding more DEI-driven hiring programs. More programs for early-stage academics so that they may be able to better afford postdocs once their income rises.

Centralized Postdoc-Mentor matching program/resource so that postdocs are able to find potential mentors and reach out to them more easily, and potential mentors are able to hire postdocs with specific expertise more easily. This proposal is based on the general trend that postdocs often have the best chance of entering a lab when they have a credible middle-man that can introduce them (usually the PhD advisor recommends their graduating PhD student to a potential postdoc mentor). Without such a network, many potential postdocs (often from smaller graduate labs or schools) are often left without any options, but to join the industry.

Proven or promising external resources or approaches

No response

Response 2760

Perspectives on the postdoc roles and responsibilities

The roles and responsibilities of academic postdocs can vary depending on the field of study, the institution, and the specific position.

However, there are some general Perspectives on the postdoc roles and responsibilities of academic postdocs.

Conducting research: The primary responsibility of academic postdocs is to conduct research. They work on research projects, design experiments, analyze data, and publish papers. They may work independently or as part of a team, and they are expected to make significant contributions to the research projects they work on.

Mentoring students: Academic postdocs may also be responsible for mentoring undergraduate or graduate students. This involves guiding students in their research projects, teaching them research skills, and providing feedback on their work.

Collaborating with colleagues: Academic postdocs often collaborate with colleagues within their research group or department. They may work on joint research projects or help to organize research seminars and workshops.

Teaching and outreach: Some academic postdocs may be responsible for teaching undergraduate or graduate courses or participating in outreach activities to promote science education.

Professional development: Academic postdocs are expected to continue developing their research skills and knowledge in their field of study. This may involve attending conferences, workshops, and training programs or seeking out opportunities to learn new techniques and approaches.

Overall, the roles and responsibilities of academic postdocs are diverse and demanding. They require a high level of expertise and dedication to research and teaching, as well as a commitment to ongoing professional development.

Fundamental issues and challenges

Postdocs drive the science in the labs and play a critical role in mentoring graduate students. Postdocs have been underpaid for decades. Today, many postdocs are parents and it is impossible to survive on the NIH

minimum of $56,484 in high-cost-of-living areas of the USA. High cost of living, extremely low salaries for highly skilled Ph.D.-level personnel, and increased competition with significantly better industry-offered positions and benefits.

Existing NIH policies, programs, or resources

The NIH scale should be significantly increased and funding per R01 should allow for this increase without burdening the investigators. At a minimum, the postdoc salary should increase to 70,000$ per year.

Proven or promising external resources or approaches

The new HHMI salary scale has the flexibility to bring on new postdocs at up to $91,000 in high-cost-of-labor areas where private industry competes with academia for the best scientists.

To ease the transition to the new, higher salary scale, HHMI established a Postdoc Bridge Fund to assist Investigators in increasing their postdocs' salaries.

Response 2761

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as the best opportunity for academic scientists to make their major individual contribution to the field as lead scientists. Entailed within this is establishing a domain of expertise and building out that domain of research.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Increase NIH Postdoc Minimum Salary to $70,000. This is the best way to retain talented postdocs in academia.

Proven or promising external resources or approaches

HHMI has just increased postdoc salary to 70,000 minimum with up to 90,000 for certain fields.

Response 2762

Perspectives on the postdoc roles and responsibilities

To advance a research aim and provide valuable insights and data on phenomena of interest.

Fundamental issues and challenges

Low rate of pay and stagnant NIH minimum salaries drive most people away from the field. Pay scales are similar to those for graduate students in many areas yielding no upward trajectory in wages despite more expertise. Pay is also generally only 30-60% of equivalent salaried positions of the same profession not stymied with NIH minimums being used.

Existing NIH policies, programs, or resources

Increase the NIH minimum salary for postdoctoral research and use an inflationary calculation to adjust it annually.

Provide funding within grants and programs to support salaried research staff within academic programs but outside of postdoctoral and graduate training pathways to retain high skill researchers that do not wish to remain within the trainee pathway or start an independent research program.

Proven or promising external resources or approaches

Pay scale is currently the largest hurdle as the cost of university training has increased and is now twice as expensive and cost of living in every area where advanced training can occur has also increased at rates far beyond inflation.

Response 2763

Perspectives on the postdoc roles and responsibilities

The postdoctoral position allows an individual to develop the skills required to be an independent scientist, particularly in academia. This position should provide ample opportunity for the postdoc to develop an independent project that can be used to start a new lab and advance the postdoc’s critical thinking, writing, and mentoring skill set in order to provide a good foundation for becoming an independent scientist. This position should provide a great level of independence and the postdoc’s mentor should be available for guidance, but allow the postdoc to control the direction of their project within reasonable limits.

Fundamental issues and challenges

1. Jobs in academia, especially as a PI are few and far between and the competitive nature of such is not appealing.
2. The politics associated with many academic institutions is a turn-off and postdocs in particular have little to no say in institutional changes at the department or university level.
3. Postdocs are incredibly undervalued, we have more education and experience than most MDs and lawyers but are making the salary of someone with one year of experience and a bachelor's degree. Universities don't treat us as equal to faculty and staff and therefore often do not get as good of benefits, no matched retirement, and fewer vacation days. Inflation far outpaces the salary that we earn and it is no longer a living wage.
4. There is little flexibility for a PI or university to increase a postdoc's pay. There is no opportunity to "get a raise". The yearly increase in postdoc salary is 1-3%, less than yearly inflation increases and there is no opportunity to receive a larger raise until you "phase out" as a postdoc (after 5 years). In all other PhD jobs, you can grow your salary much more quickly.
5. Postdocs end up taking on responsibilities outside of their job description. As a postdoc, I have spent most of my time training graduate students and writing grants for my PI. This has given me little time to work on my own independent project and develop my career.
6. You can make 2-3x more in industry without a postdoc than you can in academia, so why waste my time trying to get one of those coveted academic PI jobs, when I can just start my career 5 years earlier?
7. PIs now view a postdoc as a 5-year position when it was once considered to be a 1-3 year position.

Existing NIH policies, programs, or resources

1. Increase grant funding.
2. Change how PIs can use their grant funds, allowing PIs to decide how much their postdoc is worth rather than capping the amount that a grant can pay a postdoc.

Proven or promising external resources or approaches

No response

Response 2764

Perspectives on the postdoc roles and responsibilities

I saw it as a training program for a faculty position and how to be an independent scientist.

Fundamental issues and challenges

- Access to funding as an international postdoc, we are far less likely to get fellowships due to eligibility (MORE F05 calls!!).
- No actual formal training. Just "go and do science". If we're going to be trained to be faculty, then train us i.e. budgeting, hiring, grant writing, project management etc.
- Salaries are not in line with standard living wage and although we know we won't get paid the same level as industry, we would like to get paid enough so we're not living pay check to pay check with no savings or retirement.
- There are not enough faculty jobs for us all so the idea that we are training for faculty is very out of touch with the current academic world.
- The standard to "be successful" is so high i.e. CNS papers, prestigious fellowships, etc. that working 9-5 or even 8-6 every weekday is just not enough. This is also a major problem at the faculty level. There needs to be some sort of major overhaul to the system since this clearly is not sustainable. The level of burn out, depression and anxiety is through the roof.

Existing NIH policies, programs, or resources

https://researchtraining.nih.gov/infographics/research-scientist—no info for immigrant scientists. A recent Nature study showed that 60% of postdocs are international. Please make your resources clear for those too.

Informational webinars regarding how to apply for funding (maybe these exist but we never hear about them).

Proven or promising external resources or approaches

1. Increase payline to a minimum of $65,000 (in line with recent salary raises i.e. Princeton, MIT, University of Washington, Universities of California, St. Judes, Penn)
2. Make all fellowships eligible for those on visas—just like American Cancer Society did this year.
3. Define what a postdoc is and set out a training scheme to be implemented by universities—also get input and/or funds from industry since most NIH trained scientists ultimately go to industry where they didn't invest any money in their training.

Response 2765

Perspectives on the postdoc roles and responsibilities

Postdoc position to me means aquiring new knowledge and at the same time using the existing opportunities to make a progress in scientific carrier

Fundamental issues and challenges

I am disappointed by my progress hear and feel that I'm wasting my time here. My previous postdoc experience (outside USA) was disregarded, while I've already know a lot on grant application and conducting research with my own research group.

Existing NIH policies, programs, or resources

I was very disapointing to know that on my current place most of the funding is for faculty, so I just made a few steps back in my career. Most of the things that we have to listen on courses (i.e. cource of responsible conduct of research) I already knew, I just need real opportunities for carrier development

Proven or promising external resources or approaches

Modify the policy in the way that individuals can develop their path according to their previous experience. Publication record, years of postdoc experience, grants that person had earlier, should be taken into the account for promotion to faculty position, as these echievements evidence of individual's high independence and erudition

Response 2766

Perspectives on the postdoc roles and responsibilities

The postdoc position in the field of Immunoengineering is treated almost as a second PhD, where trainees either grow expertise in new areas or drill down into their established subspecialties. The outcome of this second round of training is ideally an independent career in academia, combining proficiencies from both PhD and postdoc training into a unique and innovative research program. As a postdoc, I am expected to drive several difficult projects to completion, train junior researchers, nurture collaborations, and support the functioning of the lab all while developing myself scientifically and professionally and preparing for the next step. I also serve on institute committees like DEI Counsels and perform community outreach. In short, it is a research-based second PhD with slightly higher compensation and enormously greater expectations and responsibilities, all under the often crushing impending crisis of getting a "real job".

Fundamental issues and challenges

In theory, the postdoc is the best job there is: a combination of scientific competency, creative independence, and security where funding is secured by the PI. In practice, it is a crushing juggernaut filled with economic stress, years of failed experiments, isolation from peers and family who are often far away, and career insecurity due to the hypercompetitive and statistically unlikely probability of securing

the holy grail R1 academic position. In Boston, cost of living is so high that postdocs continue to live subsistence-level no different from grad school, struggling to afford housing, flights home, enduring estrangement from spouses and families and limited work-life balance. All in contrast with peers who skip the postdoc and go straight to lucrative industry positions where they are immediately compensated much more for similar or less-grueling work. Postdocs in the life sciences can last 5 years—a second PhD—where the lost earnings and lack of benefits put us at financial disadvantage potentially for decades and prevent us from starting families during our waning reproductive years. We are told this sacrifice is necessary if we want independent academic research careers, which many of us enter the postdoc thinking we do, an unfair demand on every level. Many postdocs slowly realize academia is a dream that won't happen for them—too competitive, family concerns, geographic restrictions, timing, luck—and cycle out, often after a period of grieving and subsistence mental health that lasts for years. We cannot save money to secure us from financial calamity; we put our futures on hold to do the groundbreaking work that moves science and wealthy, established PIs ahead; we are beholden to the fates and our advisors for the high-impact papers and favorable letters we need to compete for the few academic jobs in our field.

Existing NIH policies, programs, or resources

Increased salary guidelines and scale to area cost of living! The current guidelines from NIH are not sufficient to survive in the high cost of living hubs like Boston and SF, and thus select for postdocs with extra sources of income, continuing cycles of disparity and inequity for researchers from underrepresented backgrounds. More fellowships! Implement more independent transitional funding pathways for postdocs to successfully enter the academic role; provide support for more academic positions including and outside of traditional PI like research scientists.

Proven or promising external resources or approaches

Encourage publication of negative results! Think of the billions of dollars in resources and time that could be saved by not repeating experiments and approaches that others who tried them already know will fail, of the H indices that would exist or grow from dissemination of negative results. Implement training resources for PIs who so often need management training and standardize PI mentoring review for accountability.

Response 2767

Perspectives on the postdoc roles and responsibilities

There are two types of postdoctoral roles

1. Training and
2. Post-doctoral Fellows are akin to Junior PIs.

The first involves gaining the skills necessary to manage labs, grants, junior and senior graduate students and more; typically adding some necessary research skillset to complete the fellows research program. The latter provides more to the environment as a Post-doctoral fellows can build out a niche under the umbrella of the lab's work adding to complexity to the work done in the lab while also contributing critical resource management to aid the primary mentor. Especially as labs of many sorts tend to move to a cascading mentorship model whereby postdoctoral fellows have responsibilities only second to the PI the discrepancy between the two positions decreases as the post-doctoral fellow becomes more advanced.

Fundamental issues and challenges

There are several fundamental issues with the post-doctoral fellow position that is devastating to retention. Compensation for postdoctoral fellowships has several issues—first the compensation rate has not kept up with reasonable income for a PhD let alone fair market value—PhD graduates have a highly desirable skill to organize, model, and synthesize data taking a post-doctoral scientific position requires that scientists be willing to take a 45.2% to 66.77% pay cut to work for public institutions. A recent senate and presidential (in the state of the union) call for public school teachers to make more calling for at least $60,000 a year; a post-doc fellow would have to work 4 years after a PhD to make this salary rate (a salary rate that is still 41.75% below market value). NIH fellow benefits are not comparable to post-doctoral faculty positions or industry positions. This leaves post-doctoral fellows balancing the benefit of the fellowship to their career against the personal cost to their ability to retire, have childcare, and manage their own taxes. These are not trivial costs to an inidvidual's time, wealth, or quality of life.

Inherently this contributes to a loss of lifetime wealth accumulation—a significant barrier to diversity in science esp those lack generational wealth. Second, there is no room in the compensation scale to provide performance-based distinction or to leverage. Different roles should have distinct pay scale and benefit for a postdoc that is learning versus providing a skill. 1-or-2-year structure of postdoctoral positions prevents the stability necessary to make important life transitions and alienates them from building community support negatively impacting quality of life. Training grants tend to emphasize trans-/multi-disciplinary work whereas departments tend to focus on having a person to fulfill a specific long entrenched niche.

Existing NIH policies, programs, or resources

1. Provide more comparable market value compensation scales including comparable tax and benefits—including more market comparable benefits for retirement and childcare—could match benefits of federal government for standardization
2. Provide different types of pay scales and contract lengths for different types of positions or roles (trainees versus emerging to junior faculty) with possibility for more like 4 or 5 year contracts
3. Incentivize universities to hire trans-disciplinary faculty

Proven or promising external resources or approaches

1. Provide more comparable market value compensation scales including comparable tax and benefits—including more market comparable benefits for retirement and childcare—could match benefits of federal government for standardization
2. Provide different types of pay scales and contract lengths for different types of positions or roles (trainees versus emerging to junior faculty) with possibility for more like 4 or 5 year contracts
3. Incentivize universities to hire trans-disciplinary faculty

Response 2768

Perspectives on the postdoc roles and responsibilities

To me, the postdoctoral position represents a critical stage in my academic career where I am expected to deepen my knowledge and expertise in my field of study, publish research, and contribute to the intellectual community. It is a period of intense learning, growth, and development that will shape my future career trajectory. However, the reality is that many postdocs are paid wages that do not reflect the value of their work and the skills they bring to their research institutions. This can make it challenging to maintain motivation and focus on research, particularly when the cost of living is high, and financial pressures are mounting. Furthermore, the lack of job security and limited opportunities for career advancement can be demotivating and create a sense of uncertainty about the future. It can be challenging to see the path forward when the prospects for job stability or advancement are limited, and the financial rewards are meager.

Fundamental issues and challenges

Lack of job security: Postdoctoral trainees are typically appointed on a fixed-term basis, and there is often no clear path to permanent employment or job security. This lack of job security can be demotivating and create a sense of uncertainty about the future.

Low pay and inadequate benefits: Many postdoctoral trainees are paid wages that do not reflect the value of their work and the skills they bring to their research institutions. They often lack benefits such as health insurance, retirement plans, and paid time off, which can impact their overall quality of life.

Limited career advancement opportunities: Postdoctoral trainees often face limited opportunities for career advancement within their institutions. This lack of career progression can lead to frustration and can inhibit retention.

Inadequate mentorship and support: The quality of mentorship and support can vary widely between research groups and institutions. Inadequate mentorship and support can lead to feelings of isolation and hinder the development of postdoctoral trainees.

Work-life balance: The demanding nature of academic research can make it difficult for postdoctoral trainees to maintain a healthy work-life balance. Long hours, weekend work, and limited time off can impact their overall quality of life.

Bias and discrimination: Postdoctoral trainees may experience bias and discrimination based on their race, gender, sexuality, and other factors.

Visa issues: Postdoctoral trainees face challenges with visa renewals and career changes tied to their visa type

Limited access to resources: Postdoctoral trainees may have limited access to resources such as funding, equipment, and space. This can hinder their ability to conduct high-quality research and contribute to the academic community.

Addressing these Fundamental issues and challenges requires a comprehensive approach that involves policymakers, institutions, and individual researchers to ensure that postdoctoral trainees receive fair compensation, adequate mentorship and support, and opportunities for career advancement.

Existing NIH policies, programs, or resources

1. Increase the basic postdoc pay to $70,000
2. Open the application to the NRSA F32, and T32 awards to international postdocs.
3. Expand the SWDO outreach
4. Diversity supplements to support postdoctoral researchers from underrepresented groups in biomedical research.

Proven or promising external resources or approaches

The National Postdoctoral Association (NPA): The NPA is a professional organization that provides resources, networking opportunities, and advocacy for postdoctoral researchers. The NPA has developed several resources and best practices for postdoctoral training, including recommendations for mentorship, career development, and work-life balance.

The Future of Research (FoR): FoR is a grassroots organization that advocates for the success and sustainability of early-career researchers. FoR has developed several resources and recommendations for improving postdoctoral training, including suggestions for improving mentorship, promoting equity and diversity, and enhancing career development opportunities.

The Academic Career Readiness Assessment (ACRA): ACRA is a tool developed by the University of California, San Francisco that helps postdoctoral researchers assess their readiness for a career in academia. The tool includes several modules that assess skills in teaching, research, mentoring, and leadership, and provides feedback and guidance for career development.

The Center for the Integration of Research, Teaching, and Learning (CIRTL): CIRTL is a network of research universities that promotes the development of effective teaching practices and mentoring for early-career researchers. CIRTL offers workshops, training programs, and resources for postdoctoral researchers to develop their teaching and mentoring skills and enhance their career readiness.

The National Research Mentoring Network (NRMN): NRMN is a nationwide consortium of biomedical professionals and institutions that provides mentorship and professional development opportunities for early-career researchers from diverse backgrounds. NRMN offers several mentorship and coaching programs for postdoctoral researchers, including the MyMentor program and the Entering Mentoring program.

Overall, these external resources and approaches can inform NIH’s efforts to enhance the postdoctoral training ecosystem by providing evidence-based recommendations for improving postdoctoral recruitment, training, working environment, mentoring, and job satisfaction.

Response 2769

Perspectives on the postdoc roles and responsibilities

I primarily view the academic postdoc as a launching point for applying for faculty positions or for more senior positions in industry. Thus, an academic postdoc should emphasize independent scientific research and opportunities for mentoring/teaching.

Fundamental issues and challenges

The biggest challenge is financial. Salaries for postdocs are often insufficient to support families. In some locations across the country, salaries are also insufficient to support individuals who do not have a partner who can provide additional income.

I also think that graduate students are hesitant to pursue an academic postdoc as they feel that faculty job prospects after a postdoc are slim.

Existing NIH policies, programs, or resources

1. An increase in salary.
2. Making sure that postdocs that receive NIH fellowships are still eligible for employee benefits.
3. Better support for postdocs who are/wish to become parents.
4. Proven or promising external resources or approaches

Response 2770

Perspectives on the postdoc roles and responsibilities

The postdoc position should be a transitional stage to allow for the fellow to still carry out research under supervision and guidance, but at the same time to gain more independence towards developing their own scientific path and career. As part of this training, the postdoc should gain experience in grant writing and in mentoring junior members of their host lab.

Fundamental issues and challenges

In a postdoc in biomedical sciences their is a bargain in which we accept low pay (around half our market worth in the industry), but have academic freedom and relative independence to lead a research project, as well as receive mentorship and support from our advisor not only on the science, but even more on building their academic career. Sadly, many times the second half of this bargain is unfulfilled, and some postdocs experience abuse and exploitation, and even without anything dramatically "bad", the prospects of landing an academic position seem bleak, and as postdocs become older, the idea of having a precarious position, with uncertainty about the future, and the possible need to uproot their entire family for the next position becomes less and less attractive, especially in regions where industry alternatives are relatively abundant.

Existing NIH policies, programs, or resources

Some key issues:

1. A huge proportion of postdocs in the US are on a visa, while almost no NIH training grants (except K99) are offered to non-citizens/permanent residents. More options for training funds will help retain the highly trained population of international scholars within the US, to further support US research activities.
2. Increase funding per award to allow PIs to pay postdocs more to carry out the proposed research.
3. Virtually no protection or support for postdocs that have to transition to a different lab (due to abusive PI, loss of lab funding etc.). The post doc is usually left to figure it out for themselves, and act fast enough to not lose their visa, if relevant.

Proven or promising external resources or approaches

Response 2771

Perspectives on the postdoc roles and responsibilities

- A stepping stone to an independent position, most likely in academia
- A mechanism by which one can gain additional experience in grant-writing and in mentoring junior trainees
- It is also viewed as a way by which trainees can judge whether they're interested in academia or not

Fundamental issues and challenges

The NIH-scale salary for postdoctoral fellows is highly outdated and falls much below the living wage of many of the cities. This is, by far, the biggest issue in recruiting and retaining postdoctoral trainees and seems, frankly, quite an easy fix to me. There are other challenges too (see below), but nothing surpasses how severely underpaid we are, despite having spent many years in our PhD training.

Existing NIH policies, programs, or resources

It is illogical that international trainees cannot apply for many of the NIH-sponsored grants. We pay taxes to the US government and contribute to the US economy and many of us receive our PhD training in the US itself, but we are viewed differently based on our citizenship status. Non US-citizens likely make up a huge chunk of the postdoctoral trainee workforce in the US. A higher salary, advocacy for ease in receiving US citizenship, and the freedom/flexibility to apply for any and all NIH-sponsored grants would improve the training ecosystem, increase postdoc applicants, and contribute to furthering academic research.

Proven or promising external resources or approaches

The NIH should advocate that international trainees (particularly those who also received their PhD in US universities) be able to receive US citizenship, which might improve the postdoctoral experience. The NIH should also consider formalizing the postdoc application process across Universities and set up a system wherein the training of individual postdocs is supervised by committees comprising of academic PIs from the department/University, from NIH (perhaps), from other Universities (perhaps), or even from the industry (perhaps). All of this together would provide a more well-rounded experience.

Response 2772

Perspectives on the postdoc roles and responsibilities

I view it as an in between graduate student and faculty, where you can work more independently with the critical scientific and thinking skills from your PhD. Become more involved with the academic field and start to formulate the questions you would want to answer with your own lab

Fundamental issues and challenges

quality of life & salary. I'm paid below the poverty line for my county so I have to heavily rely on parental finances to survive. Post-docs have the highest degree obtainable & not financially supported/appreciated to an according level. The salary isn't reasonable/reflective of cost of living in areas outside of the NIH or appropriate for raising children.

Existing NIH policies, programs, or resources

Increasing post-doc funding opportunities and training grants for international students who performed their graduate work in the US to retain and utilize the skills they learned here. Sponsor green cards

Proven or promising external resources or approaches

Academia remains discriminatory against women especially when considering starting a family. There needs to be financial support for maternity leave & childcare & not affect employment opportunities. Women continue to be treated below men with the same/more scientific experience (eg less lab space)

Response 2773

Perspectives on the postdoc roles and responsibilities

My postdoc encompasses many roles. As a I train to become a PI, I take on many roles of a PI. I manage multiple collaborations, mentor multiple students, conduct scientific research, design projects and experiments, construct and write papers, make figures, present at multiple meetings a year, aid in the peer review process for journals, support lab mates, grad students, postbacs, undergrads, design and run outreach events.

Fundamental issues and challenges

Income. I have 2 young children, and my salary barely covers the cost of daycare for them. Without my husbands income, I would not be able to stay in academia (and I love my job!). Our income does not reflect the length of time spent in training, to have the level of specialized expertise that postdocs have in

other industries would result in a much higher salary. Also, long non-workday hours and expected additional 'service' on top of our normal work can be demanding.

Existing NIH policies, programs, or resources

Increased salaries, help for working mothers and families. If we truly want to retain women in academia, we have to be correctly supported as we raise our children and be able to pay for their care while we work.

Proven or promising external resources or approaches

No response

Response 2774

Perspectives on the postdoc roles and responsibilities

Key stepping stone for PhD and for MD/PhD to complete their maturation and develop a research portfolio that can launch them into a career as an independent scientist, usually in academics in my arena but also in industry.

Fundamental issues and challenges

the cost of living and salary required for postdocs has grown tremendously at my institution while grant funding has been nearly flat for two decades. I know can barely afford a postdoc unless they have a T32 position or can gain F32 funding. Postdocs are demoralized by the job prospects and increasingly I'm seeing senior grad students skip postdocs and find a job outside of biomedical research where their data skills lead to a better salary and lower stress life.

For MD/PhDs completing residency, they have to accept a much lower salary to do a fellowship than they could otherwise earn and this is a disincentive for continuing in academic research careers. I am seeing more and more attrition even though our department comes up with creative ways to boost their salary.

Existing NIH policies, programs, or resources

1. F31 and F32 should be funded at a greater rate.
2. Stipends should be larger
3. There should be "F32+" options for physician-scientists to have a two year fellowship to bridge the gap from residency to faculty status. The academic departments could provide additional support for 20% clinical effort, but the base stipend needs to be more realistic.
4. K99/R00 program is very useful and

Proven or promising external resources or approaches

APA colloquium, NARSAD young investigator awards, K99/R00 is a good program

Response 2775

Perspectives on the postdoc roles and responsibilities

Our institution views the postdoc position as a temporary mentored experience focused primarily on developing the postdoc's research expertise and skills. We also strongly believe that the postdoc experience should include professional development that encompasses all the core components recommended by the National Postdoctoral Association (https://www.nationalpostdoc.org/general/custom.asp?page=CoreCompetencies) with the goal of supporting the postdoc in their move toward independence.

Fundamental issues and challenges

Our institution believes that there are several significant problems that make the NIH-supported postdoctoral experience less than attractive:

1) low salaries (compared with NSF, for example);
2) not allowing postdocs who are on fellowships (e.g., F32, T32) to be university employees (and thereby cutting them off from university benefits);
3) the paucity of NIH grant opportunities for international postdocs (an exception being the K99/R00);
4) the lack of small grant opportunities for postdocs (something like the R03) to support smaller independent projects;
5) having less-than-ideal mentors who, for example, do not allow their postdocs to pursue professional development opportunities and do not take into account the training/mentoring aspect of the postdoctoral experience. Potential NIH-based solutions are offered in response to the next question.

Existing NIH policies, programs, or resources

This institution believes that the following changes to NIH policies and programs would improve recruitment, retention, and quality of life for postdocs:

1) raise the minimum salaries for postdocs; this will improve quality of life for postdocs and entice more PhD's to pursue postdoctoral training rather than going directly into industry where they will make a much better salary;
2) allow postdocs on fellowships (e.g., F32 and T32) to be university employees; this will encourage more postdocs to apply for fellowships because they will be able to have/retain university benefits;
3) open up more grant opportunities to international postdocs; most of our institution's postdocs are international and therefore, most of our postdocs cannot apply for their own NIH funding (except for the K99/R00);
4) provide more grant opportunities for all postdocs, especially a small grant mechanism (a postdoc version of an R03) to allow them to conduct small independent projects and, thereby, be better prepared to apply for larger grants (K99/R00, R01, etc.);
5) require that postdocs who are hired on research grants (such as R01's) spend a designated amount of time/effort (e.g., 10-20%) on professional development

(https://www.nationalpostdoc.org/general/custom.asp?page=CoreCompetencies) require that the PI include a training plan that specifies what professional development activities the postdoc will participate in; and require the PI to report on the progress of that training plan in annual progress reports.

Proven or promising external resources or approaches

One of the most serious problems faced by this institution is that NIH does not allow postdoctoral fellows to be university employees and, therefore, we are unable to provide them with university benefits. This results in major inequities among the postdocs in a way that makes it seem like we are treating the NIH fellows as second-class citizens. This institution wants to provide the same resources to all of its postdocs, but it is not able to due to this NIH policy. The best solution to this problem would be for NIH to allow fellows to be employees. NASA is an example of a major funding agency that now provides postdocs the option of being university employees for some of its fellowships (e.g., https://www.stsci.edu/stsci-research/fellowships/nasa-hubble-fellowship-program/nhfp-host-institution-employment-policy).

Another serious problem is the low salary minimum set by NIH. If the salary/stipend were increased, this would improve recruitment, retention, and quality of life. Contrast the NIH salary/stipend with the much higher stipends offered by National Science Foundation (e.g., $80,000/year for fellowship in biology) and Department of Defense ($115,000/year).

There are very limited opportunities for international postdocs to apply (as a PI) for NIH funding. There are agencies (e.g., American Cancer Society, Department of Defense) that allow both citizens and noncitizens to apply. We believe that NIH should do the same.

Response 2776

Perspectives on the postdoc roles and responsibilities

A hybrid between training focused on the transition to independence and highly skilled thinker and worker.

Fundamental issues and challenges

Salary, benefits, job security make recruitment and retention difficult. Overall quality of life can be excellent IF there is a positive and supportive training environment and good communication between advisor and postdoc.

Existing NIH policies, programs, or resources

Increased salary guidelines, which would help the postdoc but put more strain on the advisor's budget. To combat that, higher percentage of F32/K99 grants funded.

Proven or promising external resources or approaches

Perhaps some specific training for advisors on how to support and mentor postdocs

Response 2777

Perspectives on the postdoc roles and responsibilities

Postdoctoral studies provide a necessary step in the development of biomedical researchers, allowing them to expand their scientific vision, technical skills, and experience beyond the narrow focus that is typical of graduate training. Postdocs have the opportunity to validate their success as a graduate student and develop the deep level of self-confidence in their abilities that is key to successful career outcomes long-term. As a mentor of over 60 postdocs through my career, I have seen many times the wonderful metamorphosis from an enabled and skilled technical scientist to a true scholar and independent investigator. This is also the period when critical communication skills are honed and highly informed career choices are made.

Fundamental issues and challenges

There is a current sense heavily circulated within certain academic circles, even emanating from NIH, and highly proliferated on social media that postdoctoral studies are highly undesirable for reasons spanning from mentors are unscrupulous to the training is a waste of time. In this period of highly active recruiting by industry and the leveling out of faculty positions, graduate students hear that there is no value in a postdoc. The pandemic has exacerbated a growing general anxiety in young people in general about the world falling apart (climate change, war, political polarization), which drives a desire to stop the education process and find employment immediately upon completing graduate training (if not before). What is missing in their viewpoint and currently underappreciated is the great value in a postdoc for their ultimate professional development—not just in academia, but in industry and other sector of the biomedical research enterprise.

Existing NIH policies, programs, or resources

NIH should be strongly advocating to trainees the values of postdoctoral studies. Of course, more funding for dedicated postdoctoral training in the form of T—and especially F-type positions would be valuable, assuming the funds can be found. The idea of increasing salaries is ideally a good one, but there is great concern that this becomes another unfunded mandate imposed on the essentially flat R01 budgets that fund the majority of postdoctoral fellows yet are not increased even in line with inflation.

Proven or promising external resources or approaches

Many good ideas come to mind but most of them would come with a hefty price tag. The most direct and feasible step would be to develop a approach where postdoctoral (and graduate student) mentors would be evaluated for their mentoring skills in order to be granted T, F (as mentor) or R funds for a postdoc (and/or graduate student). This should include data on how many students or postdocs have joined a lab, how long each trainee remained in the lab, and the reason for leaving the lab. This would provide evidence-based discussion to negate the sense that most mentors are poor mentors, and rather provide a platform to highlight excellence in mentoring along with advertising the value of postdoctoral training.

Response 2778

Perspectives on the postdoc roles and responsibilities

The postdoc position, as it stands, is not worth it unless someone is really keen on applying to academic professor positions. I had an excellent postdoc mentor, but otherwise, it was an infantilizing experience.

The university treats you as a student or as an employee, whichever is convenient to deny you access to resources. There are very few university resources and support specifically for postdocs.

Fundamental issues and challenges

I hope there are more eloquent responses with policy recommendations, but I will share my experience as a postdoc in neuroscience and my thoughts based on my time since being a postdoc. I completed a PhD in neuroscience and then was selected to participate in a T32 Autism Research Fellowship program. Participating in this program involved a cross-country move, and relocation expenses were not covered. Considering many graduate students struggle financially as it is (see news stories about universities opening food pantries for their students and teaching graduate students how to apply for food stamps), the only way I could do this was to exhaust savings. I then remained underpaid as a postdoc, and it wasn't until I took on my first non-trainee job that I realized how pursuing graduate school and then a postdoc position truly positioned me in a precarious financial position that will take years to recover, if ever. I cannot afford to buy a home in the city that I work in (DC) and my retirement savings are a joke compared with peers in my age group. Let alone any costs incurred for health and other such life expenses that come along the way. And I do not even have children. Many parents leave academic science because it is too unsustainable to support children (especially ones that need day/childcare) with the financial resources one has after years of being underpaid as a graduate student and postdoc.

Subjecting trainees to these struggles are not "testing their love of science." This old fashioned cultural attitude has contributed to the current problem of draining scientific talent from research and needs to be eliminated. Everyone has a right to pursue a job that will positively contribute to their quality of life.

Existing NIH policies, programs, or resources

The premise is that the university can go above and beyond the NIH pay scale, in reality, is not what happens. The NIH pay scale sets the tone and furthermore does not take into account cost of living adjustments. This absolutely needs to be raised in other to retain talent. With cost of living adjustments.

There is a storm coming as graduate schools bolster their resources to advertise and connect students to non-academic positions for STEM PhDs. Graduate students are learning that they do not need to subject themselves to further exploitation by the academic system by working as a postdoc. Two ways to improve the extramural research system from within is

1. Pay postdocs more
2. Develop more pathways in STEM for career scientists that are not academic professors, such as staff scientists and the like.

I didn't discuss this last point here, but there are other places to review this discussion.

Proven or promising external resources or approaches

Postdoc unions have collected data from postdocs to inform their union contracts. I suggest reaching out to them.

Response 2779

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a training position where the postdoc is given increasing responsibility and freedom to explore their scientific goals, while receiving ongoing mentorship towards achieving these goals. New skills should be learned and career development opportunities provided.

Fundamental issues and challenges

1. Salary—the main culprit here is NIH funding. Given the crippling stagnation of the NIH modular budget, low paylines and mandatory budget cuts, it is not impossible to pay a postdoc an adequate salary that is reasonable to cover cost of living in New York
2. Postdocs are getting longer and longer—mostly due to the burgeoning demands of journals and the now often 2 year process after submision to do revisions to get a paper accepted into a high impact journal. Postdocs are older, have family responsibilities and increasing frustrations with career uncertainty and stagnation.
3. The US is becoming inhospitable to foreigners. Many postdocs come from other countries and now see the US as an unfavorable environemtn for career progression.
4. As a junior faculty member, due to these factors it is nearly impossible to recruit a qualified postdoc. this is contributing to a growing disparity between the "haves" and the "have nots".—famous old HHMI funded (within minimum postdoc starting salary of $70,000 guaranteed) PIs are able to attract the dwindling numbers of qualified and motivated postdocs. Junior faculty dependent on modular budget + mandatory cut NIH grants, have no resources or name brand to attract good postdocs—these factors contribute to a downward spiral with junior faculty becoming less and less able to compete with the famous established labs to get science done, move work forward and publish well. This is simply unsustainable.

Existing NIH policies, programs, or resources

1. Increase NIH modular budget and increase postdoc salaries by at least double the current NIH minimum. If this comes at the cost of the payline, so be it. Funding at least some labs adequately is important otherwise the entire ecosystem will fail. One immediate strategy would be to minimize funding diverted to organized programs/science by committee and redirect funding towards investigator initiated R01s that are funded at an appropriate level, inflation linked an not as is current, linked to magical thinking about how much a modular budget with a mandatory budget cut actually funds.
2. Adjust modular budget based on cost of living in different place and allocate additional funds for postdoc stipends
3. Mandatory maternity/paternity leave and funding to cover this (including perhaps technician support to cover such gaps so that careers are not jeopardized.
4. Encourage preprinting and alternative publication models to reverse the journal driven trend of needing ore and more time to publish a high impact paper.
5. Provide NIH funded mentor training to all PIs.
6. Programs for long term, funded staff scientist positions.
7. Ban fully or mostly soft money based faculty appointments. Provide more long-term support for PIs and staff scientists.

Proven or promising external resources or approaches

1. More NIH oversight and no tolerance policies to minimize abusive environments.
2. More support for international trainees, including funds and support for visas, support for international trainees so they are not bound to abusive PIs and prevented from changing jobs.
3. More funding and career support for longer term staff scientist positions.

Response 2780

Perspectives on the postdoc roles and responsibilities

The postdoc role should be a short-term position (3 years or less) meant to supplement training received during PhD training. It is not helpful, however, for postdocs to be labeled as "trainees". We are a highly trained workforce that have completed 4-6 years of training in graduate school.

Fundamental issues and challenges

Postdocs are not compensated adequately—both in terms of pay and benefits. The fact that individuals can earn 2-3 times more in industry highlights just how undervalued academic postdocs are. The lack of compensation would be more tolerable if postdoc positions were truly short term (less than 3 years), but in my field it is routine to be in a postdoc position for 6+ years. I feel that the policies and structures around academic postdocs were built with the assumption that a postdoc is a short-term endeavor. The reality, however, is that postdoc training in many fields can last 6+ years. Being considered a "trainee" for a period of 6+ years is not a sustainable policy. The trainee label is used as an excuse to provide meager compensation to postdocs, when the reality is that most new training is received during first 1-2 years of a postdoc. The rest of the time is spent churning out data without major additional training.

These policies stunt professional and personal development of postdocs. I don't know how someone in their mid-30s with ~10 years of training beyond a bachelor's degree (e.g. 5 years as a PhD student and 5 years as a postdoc) is still considered a "trainee". In contrast, my peers from college who pursued engineering degrees are in mid-level management by now. Postdocs also fall behind their peers financially, with very little saved for retirement and little means to buy a house or pay for child care.

Existing NIH policies, programs, or resources

NIH should increase pay rates for postdocs to keep more in line with what individuals with PhDs can earn outside of academia (often 2-3 times the current postdoc pay rates).

I know that many universities have policies that postdocs must transition to a more "staff-like" position after ~6 years, however I feel that this should be applied earlier, perhaps after 4 years. This should include earlier access to retirement benefits. Academic postdocs are taking longer and longer, and the inadequate pay and benefits are not sustainable for 6+ years.

Proven or promising external resources or approaches

No response

Response 2781

Perspectives on the postdoc roles and responsibilities

While I view the postdoc as an opportunity to receive additional training, I will also have a PhD at this point. I believe that postdocs should be viewed as early career faculty and be compensated appropriately for their level of training.

Fundamental issues and challenges

Salary—the salaries for NIH T32's do not account for the cost of living or inflation. Many postdocs also have to move to a new city, and the cost of moving can be quite high.

Existing NIH policies, programs, or resources

No Response

Proven or promising external resources or approaches

No Response

Response 2782

Perspectives on the postdoc roles and responsibilities

I see a postdoctoral position as a stepping stone to academic independence. I view post-docs as wanting/needing to get additional experience or publications before applying for a more permanent role.

Fundamental issues and challenges

The main barrier that I see is the pay-grade. I know most graduate students who I talk to regularly at this point want to graduate and go immediately into industry without first doing a post-doc (or doing an industry one). I think this remains the biggest hinderance to recruiting and retaining post-docs.

Existing NIH policies, programs, or resources

I think changing the pay-scale would recruit more researchers to do a post-doc and also retain the current post-docs. I think having more information on the OITE site for post-docs could help with exiting the post-doc position into another role. This could include another grant that isn't necessarily a K99 path to independence. Some may want to pursue staff scientist or minimally supervised roles.

Proven or promising external resources or approaches

Response 2783

Perspectives on the postdoc roles and responsibilities

A postdoctoral position provides training beyond the terminal degree for junior scientists. This position involves direct data collection, particularly learning new techniques geared towards an independent research niche, and practice in study design and grant writing, in a safe environment with an experienced mentor or mentorship team. It is an opportunity to pursue a study from conceptualization to completion, which is rare during graduate studies. It is primary a time for assembling expertise and skills to launch an independent scientific career. Independent scientific success could be in any scientific arena: academia, industry, non-profit, or government.

Fundamental issues and challenges

1. Low NIH postdoc salary. Postdocs have a terminal degree and are qualified for many positions with higher pay and respect as experts rather than "trainees" (as postdocs are commonly referred to).
2. Postdocs are referred to as "trainees" and are often not eligible for faculty appointments. They are a special HR type, which leads to pay and benefit inequities and decreases HR protections against discrimination.
3. No structured career ladder to independence. Postdoc positions do not have the same HR protections as faculty positions. Many people do multiple postdocs over 5—10 years, adding years to their training and delaying independence. This is frustrating and unacceptable. The reason for multiple postdocs fall into many categories: being assigned or choosing very long projects (eg. long human intervention or observational studies), poor mentorship, lack of agreement with the mentor on what intellectual property belongs to the postdoc and what belongs to the mentor. Many postdocs find the length of postdoc training unacceptable and are ending their academic career to get more pay, equity, and recognition, and work less hours to achieve work/life balance.
4. Entering the postdoc without a clear vision or path to independence. Intellectual property issues may lengthen postdocs. Oftentimes postdocs have look for available paid positions or mentors with sufficient funding/projects/time rather than looking for positions that align with their overall career goals. Time to independence would be more finite.
5. Inadequate funding under K and T awards to conduct research.
6. R01 grants have not increased in dollar amount for decades. They are always unfunded and, often, award amounts are cut from the proposed dollar amounts. This leaves mentors with no time or money to support postdoc research projects but needing "cheap" postdoc labor.
7. No clear expectations or guidelines on the "right time" to apply for an R01.

Existing NIH policies, programs, or resources

1. More funds for research projects under K awards to promote earlier independence and provide a way for awardees to gain valuable financial and personnel management experience.
2. Higher salaries on postdoctoral grants.
3. Most major barriers could be overcome by eliminating K awards as they currently exist and replacing them with transitional K to R awards, similar to a K99/R00 grant but completely overhauled to meet current needs. The K portion would be the only available K award and would run for 3-4 years, with the end of the 3rd year tailored to the R transition—R00 application, interviewing at new institutions, etc. All recipients should be faculty. Follow the K with a 2-3 year R00 component, based on applicant progress and strength of the R00 application (3 years for those successful in year 3, 2 years for those that require reapplication into year 4). This gives recipients more NIH application experience and would provide direct transition from the K to R stage (with R00 allowing more salary support than an R01, to step down from K protected time). Both the K and R phases require adequate funds for research projects, with maximal amounts higher in the R than the K phase. The K didactic training during current K didactic component needs to emphasize experience with grant writing and financial and personnel administration, which are not emphasized enough in current K training (due to lack of research budget). This model provides visible and timely progression to independence.
4. Establishing targeted guidelines on optimal timing to apply for R funding. Many trainees wait too long to apply, or are advised to do so by their mentors to be more competitive. This creates unnecessarily long postdocs.
5. Adequate R01 funding so that mentors can support trainee activity.

Proven or promising external resources or approaches

No response

Response 2784

Perspectives on the postdoc roles and responsibilities

Given the current reality of the tenure-track academic job market, the majority of postdocs will not become independent researchers at academic institutions. With this in mind, it is not right to hire postdocs with salaries and benefits reflecting a "training" position. Postdocs provide a significant portion of research productivity in academia and this work should be valued.

Fundamental issues and challenges

Postdoctoral quality of life is challenging on the given salary. This is even more in our 30's when most of our peers have already had children and honestly we should be saving for retirement by now. We've been pushing back starting a family for our entire academic careers (4 years bachelors, 4+ years grad school) and here is another 4+ years of our lives. Unfortunately cost of childcare is very high and it is not feasible on a postdoc salary. We need child care supplements and higher salaries. Thank you so much for asking this important question, I think these issues are driving the "postdoc" shortage we keep hearing about.

Existing NIH policies, programs, or resources

Please please please make NIH salary guidelines cost-of-living adjusted. This is CRITICAL for recruiting talent to major cities.

Proven or promising external resources or approaches

No response

Response 2785

Perspectives on the postdoc roles and responsibilities

more academic training and more research outcome.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2786

Perspectives on the postdoc roles and responsibilities

Mentored period of training to develop research independence.

Fundamental issues and challenges

- postdocs are "too long"
- low salary, esp in larger cities
- treated by many faculty as cheap labor
- lack of support to independence if not affiliated with a structured program

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2787

Perspectives on the postdoc roles and responsibilities

I view a post doc position as an opportunity to learn and develop your career. It should act as a stepping stone to becoming independent. It should also allow you time to develop yourself, needs and research in a collaborative environment. You should be treated as a senior researcher who comes with experience and skills but still need mentorship.

Fundamental issues and challenges

-poor pay, no work/life balance, bullying by PI's, no mentorship, PI's who are out of touch with careers, PI's who don't publish, zero opportunities to explore other avenues of science,visiting fellows are threatened by PI's that they will not to support visa's if they don't do what they are told to do, even if it's bad science, long work hours-told to work 12hrs a day and weekends, no family life, zero support on anything, post-docs do all the work and it is the PI's who claim the glory, staff scientists are are bad idea as if there are any opportunities it goes straight to them and not the post-docs, told you cannot take federal holidays/badly designed experiments (by PI's), waste of resources, mental health issues not supported by PI's—if you have one and trust your PI you are then told your contract won't be extended as you've done no work here, PI's are too old and are out of date with science and so don't do cutting edge experiments, immigration policies need updating-bad for spouses on J1 visa's, lonely experience—no team work, back-stabbing nature, PI's need to be accounted for their bad behavior, PI's need to be fired if they invoke threatening behavior, post-doc's need protection without retaliation, not publishing because the PI doesn't want to publish in the journal as its not high impact enough, site reviews need reviewing—PI will choose to publish which papers they want for that cycle meaning that fellows miss out on getting their paper published—fellows need this for their career, no stability or security, no voice. This has been the worse post-doc experience I have ever had (and this is my second). I would not recommend to anyone where I am.

Existing NIH policies, programs, or resources

You need to start with the lab chiefs and look at how badly they treat post-docs, as this trickles down to the PI's and their treatment of post-docs.

A VF should be able to move labs and the money goes with them, not the PI. If a post-doc puts in a complaint and it is known that the PI is a bad one then that PI shouldn't be allowed to recruit more post-

docs, there needs to be accountable for the PI and why management has allowed this to continue happening.

You need to make sure that meetings do not go past 5pm—this isn't fair for anyone, especially those that have children and most likely affects woman. A policy needs to implemented for 'core hours' that meetings must adhere too.

Proven or promising external resources or approaches

Need an external source that can come in (like site reviews) but can recommend in to departments and make changes (without repercussions to the young researches).

Response 2788

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs are treated poorly in terms of compensation and benefits. Postdocs' dedication to academic research is used to take advantage of them as cheap labor.

Existing NIH policies, programs, or resources

Developing an independent research program is the only path that is incentivized with the current structural. Staff scientists roles that are fairly compensated are needed to ensure high quality research in the academic environment (technical expertise, continuity of knowledge within the laboratory).

Proven or promising external resources or approaches

No response

Response 2789

Perspectives on the postdoc roles and responsibilities

We thank you for the opportunity to respond to this RFI on the state of postdoctoral research training at the NIH. We outline some of the notable challenges faced by current postdoctoral fellows—and highly qualified researchers who could complete a postdoctoral fellowship with the NIH—as well as proposed solutions to address these major challenges.

The shortage of highly skilled researchers pursuing postdoctoral fellowships in the biomedical sciences is driven by the quality of life issues faced by most postdoctoral fellows. Much of this, from our perspectives, stems from inadequate financial compensation, which not only limits quality of life, but also effectively reduces the diversity of the biomedical workforce. The economic and financial challenges detailed below are inextricable from issues of diversity, equity, and inclusion. Efforts to attract postdoctoral applicants from diverse racial, gender, and economic backgrounds may be stymied by the fact that for many applicants, the stipend that is offered to fellows cannot support individuals without supplementary sources of funding and income. The resulting bottleneck holds implications for the future makeup of our biomedical workforce, almost ensuring that it will resemble less and less the country overall and the communities we serve, who are likewise affected by socially and structurally determined health disparities.

These barriers to participation in the scientific workforce threaten to deny opportunity to the many interested, passionate, qualified future early career scientists in this country, and in turn, hinder the major potential contributions from these diverse, energetic minds toward solving the many daunting problems affecting U.S. population health. We strongly urge the NIH to provide to the postdoctoral research community a timeline outlining their decision-making activities on these matters.

Below, we share a list of the challenges we perceive to be most prohibitive to fostering a diverse body of biomedical researchers and potential strategies to address these challenges.

Fundamental issues and challenges

Challenges

1. Postdoctoral fellows living in high cost of living cities are paid much less than the amount required to afford living in these cities. In [redacted for anonymity], a standard requirement for renting an apartment is earning 40 times the cost of monthly rent. This means that postdoctoral fellows in NYC earn less than half of the annual income needed to rent a basic studio apartment. The inability to live on a postdoctoral income and no accounting for family inevitably means that postdocs are living paycheck to paycheck, struggling to make ends meet, and delaying life stages like marriage, having a family, saving for a home, opening retirement savings accounts, or saving any amount.
2. Postdoctoral fellows should be considered employees and not contracted workers. Treating postdoctoral fellows as contracted workers creates a large tax burden on fellows—coupled with being charged with paying taxes on our healthcare costs—means that every third paycheck is essentially paid back in taxes.
3. The childcare stipend, while an appreciated and much-needed benefit, is not sufficient to cover the costs of childcare for postdoctoral fellows who are parents.
4. The NIH Loan Repayment Program, while a critical initiative to reduce inequity and promote quality of life among NIH-funded investigators, only allows an annual submission and funds less than half of applications. Most funded applications come from mid-career investigators who have previously applied. The low rates of funding for postdoctoral fellows reflects a structural disadvantage that prevents life-changing loan repayment from reaching those who need it the most—early stage investigators with low wages who are living precariously in time-limited positions.

Existing NIH policies, programs, or resources

Solutions

1. Increase the stipend of postdoctoral fellows to provide competitive pay that fosters a quality of life and is based on the cost of living in the city in which fellows live and work.
2. Make postdoctoral fellows employees, not contracted workers. This will alleviate the unmanageable tax burden faced by postdoctoral fellows.
3. Integrate the NIH Loan Repayment Program into T32 and F32 fellowships so that fellows automatically receive life-changing student debt relief while working on training grants and carrying out critical NIH-funded research. Integrating the LRP into training fellowships for early career scientists provides necessary assistance at a time point in which career decision-making based on finances leads many to abandon research careers to work in industry to earn a living wage instead; thus, this change would retain scientists in biomedical careers who would have liked to stay but could not afford to do so.

Proven or promising external resources or approaches

We also invited comments from T32 alumni. We share their additional comments here.

Challenges:

The pipeline from fellowship to job is not always clear and not necessarily supported by the University, that is, from T32 here to faculty position here. Nor is applying for a K necessarily supported. Furthermore, the University may be more supportive of “soft money” positions than “hard money” positions, which likely speaks to structural inequities. Note: The current endowment of our university stands at $13.3 billion. With a hypothetical return rate of only 5% per year, that means the University could have investment income of over $600,000,000 per year.

Solutions:

Require a true public-private partnership such that Universities of a certain rank (to be discussed) and who receive NIH funding for training and/or non educational grants provide a certain percentage of in-kind salary support to T32 trainees. If they don’t, they get a slightly reduced indirect cost rate or a limit on the total grant monies they can receive. In line with this, provide a clear, financially supported pathway from fellowship to “hard money” positions for T32 fellows at the institution.

Response 2790

Perspectives on the postdoc roles and responsibilities

In my professional experience I would say that the postdoc roles and responsibilities in most labs are poorly defined. Whereas philosophically the postdoc is a trainee developing skills in independent research conduct they are more often used as a tool to fix gaps left in a lab due to poor structuring/planning/funding. Thus I would say that postdocs are more often found acting as managers, data analysts, technicians, educators, writers, artists, and community/profession liaisons, sometimes all at once, and sometimes simply relegated to a small handful of these roles. In my experience these roles are completed with the promises to receive morsels of guidance on grant-writing, career progression, and networking. This is simply not the experience which most graduates are hoping to get after competing tooth and nail for the position.

Fundamental issues and challenges

Salary and lack of a structured training program are the two largest detriments to the postdoc eco-system.

Some thoughts on funding:

1. The NIH minimum salary needs to be reconsidered, and monitoring of appropriate budgeting and salary progression needs to be implemented as a requirement of postdoc funding. After studying for close to 10 years (international), >10 years (domestic), PhD graduates enter the workforce with a salary that matches what many entry-level BS graduates might receive in a job with far fewer skill requirements. This is simply one argument in favor of increasing NIH R spending limits.
2. Budgets at the lab level are often made up of multiple grants with different start and end times. Although the NIH sets out a plan for salary increase this is difficult to match in many cases due to how salaries are constructed. To imagine that every postdoc is budgeted for out of perfectly timed R01s is to live in a fantasy land. The reality is that many postdocs continue to receive only the bare-minimum.
3. The lack of bursary programs for international trainees makes it difficult to relocate.

Some thoughts on training:

The NIH has a duty to enact policies which support the training of postdocs and protect them from exploitation. NIH funding of postdocs should require a training plan to be presented at the time of funding, and this should be monitored at annual and final reports.

Existing NIH policies, programs, or resources

Remove citizenship requirements for K-awards.

Proven or promising external resources or approaches

No response

Response 2791

Perspectives on the postdoc roles and responsibilities

I view it as a job NOT a learning opportunity. I learned as a graduate student now I am producing capital for the institution at a more efficient and higher rate.

Fundamental issues and challenges

Money, respect, options

Existing NIH policies, programs, or resources

PAY MORE MONEY

Proven or promising external resources or approaches

PAY MORE MONEY

Response 2792

Perspectives on the postdoc roles and responsibilities

Within academia, it's a means to publish and continue to the path of PI but comes with a lot of competition and hardships, including very low pay for the amount of work required and no guarantee. Non-citizen/PRs have an impossible situation in doing all of that while on a visa that can be easily threatened by the lack of PI funding and next opportunities.

Industry postdocs provide higher pay and industry experience, which usually ends up providing an H1B visa and much better job prospects.

Fundamental issues and challenges

1. Low pay! This does not support any kind of lifestyle, particularly if the postdoc is carried out in a city.
2. Competition with better pay and quality of jobs available/ work life balance in industry positions.
3. The ridiculous amount of power that academic PIs have with little to no oversight towards the wellbeing of their postdocs. Postdocs rely heavily on the PI for funding/visa and international postdocs are particularly threatened.
4. Very few PI tenure track job prospects in academia after postdoc.

Existing NIH policies, programs, or resources

1. Pay postdocs more.
2. Have some kind of oversight of postdoc treatment.
3. Have an age-limitation on PIs to open up more positions for junior scientists.

Proven or promising external resources or approaches

Industry pays postdocs more and provides a much better work life balance, visas and job prospects. Perhaps promoting collaborations between academic and pharmas would encourage postdocs to join.

Response 2793

Perspectives on the postdoc roles and responsibilities

The academic postdoc in its best form should be an opportunity to gain additional specialized training, develop a robust research portfolio, and transition from being a supervised graduate student to an independent researcher. Postdoctoral positions should, and often do, enable the individuals who take them to gain valuable new skills that will enable them to run their own research programs. While in the past, an academic postdoc was an optional supplement to the PhD research experience, at present it is an absolute necessity for all but the most lucky and/or exceptional researchers to obtain the most desirable faculty jobs, whether at R1 research institutions or small liberal arts colleges (my ultimate goal). The academic postdoc can be a tremendous opportunity to learn and grow, but it can also easily be an opportunity for abject exploitation by abusive PIs. Because postdocs are generally not part of some larger program at an institution (unlike graduate students) and do not receive hourly wages or overtime, many faculty correctly identify us as vulnerable to pressure from them to become publication factories, as a necessary period of academic hazing prior to obtaining our own status as PIs.

Whether one has a good or a bad experience as a postdoc (if one is lucky enough to only do one), it has become an essentially obligatory add-on to an already long PhD program. I am in an exceptionally good and supportive environment—many if not most postdocs are not so lucky.

Fundamental issues and challenges

The biggest issue is the low pay. While NIH provides a minimum postdoc salary, in practice almost all universities treat that salary as the salary that all postdocs will earn, not a minimum. While I am lucky enough to have a partner with a well-compensated job outside of academia, many postdocs are not so lucky. While some faculty and administrators may argue that this low level of compensation is justifiable due to the temporary nature of a postdoc and an expectation of higher pay in a future faculty position, the reality is that many people work as postdocs for 5 or more years and not all of us will successfully obtain tenure-track faculty jobs. We deserve fair pay commensurate with our high degree of training and the fact

that universities rely on both our labor and that of even more underpaid graduate workers to perform the research, publishing, and teaching duties that generate their prestige. The current system is unsustainable and will succeed in driving out most would-be scientists who do not come from wealthy backgrounds.

In addition, the quality of life for postdocs (and graduate students) is almost entirely dependent on the largess of their supervisors. I am lucky enough to have a very generous supervisor and numerous mentors who allow me flexibility in work environment and scheduling, intellectual stimulation, and the ability to take time off as needed. Most postdocs are not so lucky, and I have personally observed the intentional exploitation of international postdocs who have little recourse against abusive PIs. There need to be both institutional and national minimum standards that are actually enforced to prevent abusive PIs from yielding this exceptionally high level of power against vulnerable postdocs and graduate students.

Existing NIH policies, programs, or resources

As mentioned in my last answer, salaries are a huge issue. Similarly, minimum enforced standards for work environment, time off, etc. would be very helpful.

There are many funding opportunities to apply for, but as I am sure you are well aware, they are extremely competitive, so in reality most postdocs will never receive any extramural funding from their own efforts. It is unclear to me how to resolve that issue without a substantially increased budget or a dramatic reduction in the number of postdocs in the applicant pool.

Proven or promising external resources or approaches

See above. Better pay, better and more uniform job standards, more accountability for abusive PIs and institutions.

Response 2794

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Expand the budget for R01 and similar grants to allow PIs to pay higher stipends. Allow PIs to pay the difference between the institutional salary and the NIH minimum out of federal funds for those postdocs who are awarded fellowships (currently PIs/postdocs are essentially punished for being awarded fellowships, as they cannot pay the difference between the NIH minimum and the institutional-determined salary).

Proven or promising external resources or approaches

No response

Response 2795

Perspectives on the postdoc roles and responsibilities

This response is from [redacted for anonymity]. This committee is comprised of 17 [redacted for anonymity] faculty members who represent basic science, clinical science, and social science researchers in the health sciences. We are grateful for this opportunity to provide our perspectives on this important issue.

Postdoctoral scholars are in a career stage in which they function both as highly skilled and valuable full-time employees and as advanced trainees preparing for their next career steps. This role is analogous to early-career employees in other contexts who receive on-the-job training but are also expected to contribute as employees. Although postdoctoral scholars receive training, they also have doctoral degrees in their fields and contribute important expertise, provide training to more junior employees, and are among the primary producers in the research apparatus. Thus, postdoctoral scholars deserve to receive remuneration comparable to that of full-time early-career employees within other organizations.

Fundamental issues and challenges

A major challenge to recruiting and retaining postdoctoral scholars, particularly in high cost-of-living regions, such as the San Francisco Bay Area, is offering competitive compensation. Highly qualified postdoctoral scholars often have significantly more lucrative opportunities outside of academia. Within academia, private institutions can offer more competitive compensation than public institutions can.

Both salaries and benefits for postdoctoral scholars need to be increased to make these positions competitive with other opportunities. For example, postdoctoral scholars at our institution have difficulty affording housing, face challenges accessing and affording childcare, and do not have access to the retirement benefits typically provided to full-time employees. More support for multi-year postdoctoral positions that include affordable childcare and retirement benefits would provide postdoctoral scholars with more latitude to focus on their work.

Finally, a lack of centralized policies and procedures for postdoctoral scholars at their institutions meaningfully impacts their quality of life. Postdoctoral scholars are often hired by individual labs or research groups rather than through centralized hiring processes. Thus, postdoctoral scholars have different levels of access to resources depending on their departments and PIs. Faculty are often the primary touchpoints for postdoctoral scholars to access institutional resources, but they are not always as knowledgeable about these resources as a centralized postdoctoral office would be, and their bandwidth to connect postdoctoral scholars to these resources may vary. Based on conversations with postdoctoral scholars, we believe that encouraging institutions to establish centralized offices to provide resources for postdoctoral scholars would help to improve their overall experience.

Although individual institutions are primarily responsible for addressing many of these issues, we feel that funding agencies like the NIH can both help promote institutional cultures in which postdoctoral scholars receive the necessary support and raise the current stipend to improve recruitment, retention, and quality of life for postdoctoral scholars.

Existing NIH policies, programs, or resources

The NIH should increase its pay scales for postdoctoral scholars to reflect cost-of-living growth and allow Pis to offer competitive compensation, particularly for postdocs supported on T32 grants. Furthermore, the sizes of NIH grants, such as R01s, should be expanded proportionate to cost-of-living growth in the United States over the last several decades. Caps on NIH grants should be revisited so that PIs do not have to compromise in other budget categories, such as by making artificial reductions to their own percentage efforts, to pay postdoctoral scholars competitively. Support to provide postdoctoral scholars with standard benefits, such as childcare stipends and access to retirement accounts, is also needed.

As representatives of a public institution in [redacted for anonymity], a region with a very high cost of living, we encourage the NIH to consider developing flexible policies to allow for higher salaries in high-cost-of-living areas, as is done for federal employees. Although we acknowledge that such policies can create new equity issues, we ask that the NIH carefully evaluate whether they can be constructed and implemented equitably, using cost-of-living adjustments for federal employees as a possible model.

Finally, we suggest that the NIH loosen the restriction that NIH Diversity Supplements and T32 grant funds cannot be combined with other federal funds. Currently, NIH Diversity Supplements for postdoctoral scholars are below the minimum salaries that postdoctoral scholars can receive at our institution. PIs must fill this gap with discretionary funds, which they often lack. Allowing NIH Diversity Supplements to be used in conjunction with other federal funds, such as R-series grants, would promote the use of this important funding mechanism for historically underrepresented postdoctoral scholars. Similarly, allowing PIs to supplement T32 grants with funds from their other federal grants would help them recruit and retain postdoctoral scholars.

Proven or promising external resources or approaches

First, we recommend that the NIH conduct surveys and qualitative interviews with postdoctoral scholars to better identify and understand their needs. These interviews should represent a broad range of disciplines (e.g., basic sciences, clinical research, population health, social sciences, etc.), geographies, and demographics. Second, we recommend that the NIH seek input from postdoctoral scholars and faculty to identify exemplar public and private institutions that have excelled at enhancing their postdoctoral training ecosystems. The NIH should then determine the key characteristics and practices that make these exemplars successful environments for postdoctoral scholars and broadly disseminate this information for emulation by other public and private institutions.

Response 2796

Perspectives on the postdoc roles and responsibilities

I am generally happy with my responsibility as a postdoc, that I have freedom to pursue my interests. This is mainly because I have a very good relationship with my PI. I am able to do research, and also participate in teaching and service with my PI's blessing. However I know that is not an option for everyone; some positions I interviewed for said that was not ok because my primary responsibility as a postdoc was research. This reflects the challenging status of "trainee"—because we are often treated as employees and denied options for professional development, but paid (lower) because we are trainees.

Fundamental issues and challenges

Pay is challenging especially where cost of living is high. I am only paid fairly because there is a postdoc union at my university. I received F32 which actually hurt my pay/benefits status at the university which I was told I should be ok with because of the "prestige." Prestige is not enough when I also lose retirement benefits and maternity leave, and it makes my tax status challenging because the university does not have to report my fellowship-funded wages to the IRS. Also getting my fellowship actually made funding situation more challenging for my PI because she has to pay the remainder of my salary + additional to make up for lost benefits (my wage is determined by the union) off of non-NIH grants, and most of the lab funding is from NIH.

Existing NIH policies, programs, or resources

NIH fellowships are very useful but actually hurt my pay as a postdoc. Having clearer policy about benefits and pay that come from NIH would make it harder for universities to lower the pay or reduce benefits of postdocs. Having cost of living adjusted wages or wage brackets based on cost of living would help reduce the burden on my PI to get non-NIH funding to supplement by F32-funded salary up to the pay level required by the university.

Proven or promising external resources or approaches

No response

Response 2797

Perspectives on the postdoc roles and responsibilities

The postdoctoral position should be a position that allows a newly minted PhD to conduct research in a semi-supervised fashion, forging their unique research niche in collaboration with their mentor. The emphasis needs to be on the additional training in techniques and intellectual novelty that best serve the postdoc —NOT an emphasis on simply churning out a high-impact paper for the lab.

Fundamental issues and challenges

1) money. The best postdoc positions are often in the highest cost of living area (speaking as a postdoc living in Los Angeles). The low pay is a serious detriment to the quality of life of postdocs, perpetuating a work-life imbalance by making it difficult to have a reasonable quality of life outside of work that then encourages more work. Importantly, as someone trying to have a child, I simply do not know how I can afford childcare while working in the lab. My partner also works full-time. University-sponsored daycare is 70% of the monthly salary. I moved away from family and friends for this position and have no personal network to rely on for childcare. It is a serious cause of concern and may make me drop out of the postdoc workforce.
2) job insecurity. I am a highly educated, highly trained professional, yet there are few positions that use my unique research skills outside of academia. If academic institutions had more staff scientist roles (that paid meaningfully better than an entry postdoc), there would be more career options for me.
3) work-life balance. The practical benefits of academic research (flexibility, freedom of scheduling) are not utilized enough, instead encouraging a 'work all the time' mindset rather than a 'create your own schedule' mindset.

Existing NIH policies, programs, or resources

Postdoc NRSA salary guidelines are used as a standard across most universities and are wildly low. They need radical adjustment upward, similar to the new HHMI postdoc pay guidelines (minimum 70k). NIH raising their NRSA salaries for postdocs would drive the entire country to do the same. This understandably causes a crunch on lab budgets, including R01s that have gotten weaker over the years. But something has to give. Raising postdoc pay may be enough pressure to drive an increase in R01 budgets that can accommodate the raise. But we cannot fix the system all at once. We can only fix one piece at a time. And we can start with postdoc pay.

Proven or promising external resources or approaches

No response

Response 2798

Perspectives on the postdoc roles and responsibilities

An important step transitioning from finishing training as a graduate student to more independent positions.

Fundamental issues and challenges

- Post-docs' pay should be better adjusted to current levels to stay competitive with the industry to recruit the best professionals and provide them with salary to focus on research. Institutions currently treat the NIH's recommended minimal post-doc salary as THE salary that post-docs receive, not as minimal recommendation. Therefore, it's crucial it would be adjusted to the market to stay competitive, especially in high costs-of-living areas. An annual increase of the salary to accommodate inflation, rent increase etc.
- Guaranteed benefits that are standardized nationally.
- Independent funding so post-docs wouldn't be trapped in abusive groups. And Individual Development Plans shouldn't be 100% dependent on the PI, as it may lead to further abuse.
- Institutions should be forced to publicly release all policies before recruitment of the post-doc, so it's known beforehand.
- A kind of ration of PIs should be implemented, where the knowledge of all publications, sources of funding, and most importantly, quality of the training (given by trainees) is available to the recruited post-doc candidate.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2799

Perspectives on the postdoc roles and responsibilities

Without my postdoc, my research program would suffer from lack of continuity. Postdoc help in both training students and performing experiments is indispensable for my work.

Fundamental issues and challenges

It is difficult to hire extremely specialized workers for very short-term and low-paid positions.

Existing NIH policies, programs, or resources

Postdoc salaries should be increased to compensate for the uncertainty inherent in the position, but this would require a substantial increase in lab budgets since postdoc salary + benefits is already the major expense in my budget.

Proven or promising external resources or approaches

No response

Response 2800

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Why do I lose retirement when I get an F32??? Benefits should NOT change just because I got an F32!

Existing NIH policies, programs, or resources

Why do I lose retirement when I get an F32??? Benefits should NOT change just because I got an F32!

Proven or promising external resources or approaches

Response 2801

Perspectives on the postdoc roles and responsibilities

Post-doctoral fellowships are opportunities to hone skills, develop new skill sets, and explore career options. One critical component lacking in many traditional scientific post-docs is the inclusion of technology transfer (TT) training. Whether pursuing a TT career or another path, TT has become an important part of the research landscape. Post-docs may be exposed to TT through their PI's experience or if they seek it out themselves, but do not receive the full picture of the commercialization process. TT is necessary for basic research (materials/data transfers, etc.) and translational research (collaborations, patents, licensing, etc.). Thus, there is an unmet need for formal and expanded TT education for post-docs.

The National Cancer Institute's Technology Transfer Center offers several educational programs to suit various needs and interests of post-docs and would like to suggest that other institutions consider adopting similar programs:

"Technology Transfer University"—Free seminar series open to the entire NIH intramural community as a way to share information on TT topics, without the need to attend every session.

"Technology Transfer Ambassadors Program"—geared toward post-docs ready for a career shift who want to gain more in-depth and hands-on TT experience.

"Transition to Industry" fellowship—For post-docs interested in an industry career and are working towards commercializing an invention.

"Advancing Innovations through Mentorship"—Like I-Corps, post-docs participate or lead teams with NIH intramural investigators and business partners working toward developing research into commercial products.

Knowledge of TT and commercialization is vital for investigators whether they pursue careers in academia, industry, law, or non-traditional paths to navigate collaborative research or to bring new therapies and other impactful products to market to benefit public health. Therefore, TT should be included in a more strategic and purposeful way in the post-doc curriculum, including the adoption or expansion educational programs such as those mentioned above.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

One of the most exciting translational programs, I-Corps, has recently been made available to a limited number of intramural researchers at NIH Institutes/Centers. Advancing Innovations through Mentorship (AIM) is a new program for NIH investigators that pulls from traditional I-Corps programming but has been re-designed to meet the needs of and advance federal discovery/invention development arising from

the NIH Intramural Research Program (IRP). AIM helps participants gain valuable insights regarding how to translate technologies from lab to market.

AIM was developed through a partnership between NCI's Technology Transfer Center (TTC), NCI's Small Business Innovation and Research Development Center (SBIR), and NIH's National Center for Advancing Translational Sciences (NCATS). AIM is based on the I-Corps-at-NIH program, a successful entrepreneurial training that helps Phase-I SBIR/STTR-awardees assess technologies, recognize commercial opportunities, and build scalable business models. Recognizing the gap that no such program exists for the NIH IRP to support discovery advancement and development, AIM was founded.

Since 2020, NCI TTC has sponsored 15 teams (with 67 participants, of which 28 were trainees). AIM teams learn from stakeholder interviews what the most important market considerations are for their research. Feedback through post-course surveys and discussion showed that all teams thought AIM either met or exceeded their expectations, with one participant commenting: "AIM was great. All NIH scientists should go through this program."

NIH scientists who complete AIM report that they are better prepared to communicate effectively about their research to various audiences (business, scientific, layman), can identify how their research can make the largest impact & support the trajectory of their research, and have an expanded professional network of potential collaborators. Thus, the impact of AIM for early career scientists is substantial and the program would be beneficial as an NIH-wide initiative for all scientists and those across academia, especially post-doctoral trainees.

Proven or promising external resources or approaches

The pursuit of careers in research translation, commercialization, and industry is rapidly growing, but it doesn't seem like the traditional scientific post-doc has changed much to address this shift. For example, NIH might not be the typical organization post-docs turn to if they are interested in a career in industry or entrepreneurship, but there are plenty of NIH investigators with these commercialization skills and new pockets of training programs have sprouted to help NIH trainees interested in these areas. If NIH, or other organizations, are not traditionally known for these efforts, they are at a disadvantage for recruiting this subset of enthusiastic post-doctoral candidates.

To fill this need, the National Cancer Institute (NCI) recently developed a Transition to Industry (T2I) Fellowship for postdocs/research fellows in NCI's Center for Cancer Research (CCR). T2I Fellows spend 80% of their time in the lab and 20% learning to accelerate the development of an NCI invention towards commercialization. Trainees learn about business development and entrepreneurship, receive hands-on training with experienced Technology Transfer Managers and Small Business Innovation Research (SBIR) program experts, and develop a professional network dedicated to moving research from bench-to-bedside. T2I Fellows expand their skills at the bench and beyond. This uniquely positions them to do high-impact, translational research that has a greater chance of being commercialized, benefiting society and public health.

T2I and similar programs should be further developed, supported, and expanded across NCI, NIH Institutes/Centers, and academia to improve postdoctoral recruitment, bring new commercialization and patient focused minds to these organizations, and provide current interested post-docs with actionable experiences to better prepare them for industry.

Response 2802

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2803

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is most useful for learning new methods and developing a scientific portfolio and plan for getting an independent position.

Fundamental issues and challenges

The biggest tradeoff of the postdoctoral position is the pay that you leave on the table by not pursuing a job in industry. While postdocs function relatively independent, the position is considered a 'training' position so the compensation has been limited.

In addition the position has no definite end date, but is considered temporary. Thus there is a large amount of uncertainty when it comes to the length of time you will spend as a postdoc, and the geographic location in which you will end up once the postdoc is over.

For senior postdocs, the limited opportunities for external funding and the slow progression of transition awards to younger postdocs has made it more difficult to establish a history of success in getting grants. This hurts postdocs who are transitioning into new areas, work on fields that are traditionally slower, who had limited publication history as graduate students, or who must juggle family responsibilities. This also hinders the ability to get an independent position.

Existing NIH policies, programs, or resources

In addition to the K99 awards which now bias toward younger postdocs (and highly overlap with the age group for F32s), more transition to independence awards are needed for postdocs who have 'clocked out' of eligibility. The external funding for these awards are also now adding in time limits that more closely reflect the K99 award so the overall opportunities for more senior postdocs is limited.

Proven or promising external resources or approaches

No response

Response 2804

Perspectives on the postdoc roles and responsibilities

It is a mentorship/training experience that requires commitment by investigators and institutions to the career advancement of the trainee, while at the same time supporting rigorous and meaningful research. The trainee must be 100% committed to the training opportunity, the mentor, and the project and be willing to put in the effort to improve their scientific credentials and professional skills. Regular assessment of the training program is necessary to ensure that the experience is to the mutual benefit of the trainee and the mentor. The trainee must be committed to establishing specific milestones and working to the best of their ability to meet those milestones.

Fundamental issues and challenges

Not in order of significance, the following are increasingly impacting our ability to recruit and retain high quality applicants:

1. pay—after so many years of being a student and in most cases not having much/any income, it is increasingly difficult to convince well-trained, highly educated early career investigators to work for what we are having to pay bachelors degree research assistants—yes, passion is necessary to make it in science, but the world is changing and some improvement in pay for trainees would likely help the current dire situation;
2. benefits—many institutions do no supplement NIH training salaries (even if medical benefits are covered by the additional NIH allotment), which means no retirement benefits, no sick time, no vacation—a trainee supported by an R01 is far better off than one supported by a T or F, and neither one is as well off as they need to be to keep the workforce strong; and
3. expectations—I do not believe that the bar needs to be lowered for early career investigators to get their first grant (less expectation brings lower performance), but I do think the path to funding needs to be crystal clear and actively facilitated—young folks are often so discouraged about funding that they do not attempt to get funding —while those who submit applications are still getting funded —it is a matter of perception that needs some sophisticated marketing.

I also think that mentors need a roadmap so as to clarify and optimize their role in the training experience. Some terrific scientists are lousy mentors, perhaps because they had a lousy mentor and/or they were never informed as to what a good mentor is—word travels and trainees lose interest.

Existing NIH policies, programs, or resources

Increase pay, provide benefits, give guidelines to trainees and mentors so that the training experience is as positive as possible for both parties, and provide incentives for early career scientists to submit grant applications.

Proven or promising external resources or approaches

Recruiting fairs (especially at institutions that are not tier 1 research—there is a massive talent pool out there that is not being reached and that does not know the opportunities that exist), incentives with milestones, guidelines (for trainees and mentors) to clarify expectations and pathways to success.

Response 2805

Perspectives on the postdoc roles and responsibilities

Postdoc position is an opportunity for me to broaden my training, follow my passion and do a meaningful science to help people.

Fundamental issues and challenges

Very low postdoctoral compensation is a problem. Majority of my talented classmates leaves academia to work in industry as the postdoctoral salary is not enough for a person starting a family or even a single living in the NYC or California where we need to compete to rent expensive apartments with people having a salary many times higher than postdocs, frequently with a lower education status. It is really discouraging to stay in academia when you end up applying for income restricted units or ask your parents for support. Postdocs are not students anymore. Those highly educated people starting their families. Think about it.

Existing NIH policies, programs, or resources

NIH funding should be expanded for international researchers, who most of the time are discriminated and just not eligible to apply for most fellowships. That makes them go back to Europe to pursue their career being discouraged to stay in the USA without a chance to build up their rÃ©sumÃ©s.

Proven or promising external resources or approaches

There should be more training available preparing postdocs for pursuing a tenure track positions. More grant writing courses should be available. Moreover, PIs should be trained to be a good mentor for trainees. A good scientist doesn’t necessarily mean they are good mentors to support your researchers and encourage them to stay in academia.

Response 2806

Perspectives on the postdoc roles and responsibilities

For me is more than a training. You are already a professional scientist when you starts a postdoc, but it is the only alternative to grow as a researcher until have a faculty position.

Fundamental issues and challenges

Most of PIs look as postdocs as a cheaper hand for research, specially the international postdocs, where they belief there is no hours for relaxing even in the weekends, you should be 100% work

Existing NIH policies, programs, or resources

First, we are qualified professionals and should have an increase in the base salary. We are studying for years when we enter in a postdoc position.

Proven or promising external resources or approaches

Give international postdocs a more specific visa that could easily been transformed into green card, after proven of work and accomplishment in scientific career. Understand that post docs are very qualified people and need to be recognize by that, also in terms of salary.

Response 2807

Perspectives on the postdoc roles and responsibilities

I view a postdoc as a necessary transition phase from graduate student to independent scientist. For me, I hope to be prepared for a career as a PI in academia.

Fundamental issues and challenges

Money! The average pay for a postdoc starting is $53K. Are you kidding? I will be 29 when I get my PhD. I will have dual bachelors degrees and a PhD in neuroscience from [redacted for anonymity] and that's worth $53K a year? I don't think so. It's hard to want to stay in academia.

Existing NIH policies, programs, or resources

Raise NIH minimum postdoc salaries! Look at HHMI—$70K starting now.

Proven or promising external resources or approaches

HHMI minimum salary increase

Response 2808

Perspectives on the postdoc roles and responsibilities

postdocs conduct semi-independent to independent research and are, in turn, responsible for mentoring/training graduate students, undergraduates, and high school students. a high degree of professionalism is expected

Fundamental issues and challenges

postdoctoral salaries are not competitive with private institutes or industry; the lack of benefits, parental support also limits the talent that can be retained. the lack of parental support also places undue stress and limits research productivity; the calculus for deferring any meaningful retirement investment of a postdoc vs industry position means those who do a postdoc will need to work many more years and have less flexibility in career decisions

Existing NIH policies, programs, or resources

the NIH modular limits and budgets need to be aligned with new graduate student and postdoctoral stipends or there will be an imminent loss of productivity on grants due to personnel shortages

Proven or promising external resources or approaches

No response

Response 2809

Perspectives on the postdoc roles and responsibilities

- Opportunity to develop independent research trajectory in an environment that allows supervised training and mentoring
- Learn interdisciplinary skills
- Opportunity to enhance publication and leadership training

Fundamental issues and challenges

When to apply for a postdoc—time for a postdoc to actually start the position—be clear on how long the hiring process take

- Beginning of postdoc, share about pathways for retention, what are the options, and what is expected for the postdoc to have to get in there whenever they are at the end of the training
- Benefits—such as health insurance, dental, 401k, maternity leave
- Support for moving to a new location
- Better information about taxes report—W2
- Compatible salary for Ph.D. in other positions
- Mental health resources—work balance, career development—overcome the stress of uncertainty about the future
- Postdocs do work that is not related to their career development. Instead can be used to do all types of work when PI doesn't hire proper research staff.

Existing NIH policies, programs, or resources

- Eligibility of visiting fellow to K awards. Right now, only K-99, other institutions such as AHA, now ACS allow visa holders to apply for grants as long as the research is developed in US territory. Many international postdocs are on the pathway of permanent residence or citizenship. Limiting opportunities beyond of limiting science also limits the researchers from entering the residence or citizenship pathway.
- Expand benefits for 401k
- Clarity on policies for international researchers, what we are eligible and what we are not
- Allow international researchers to apply for diversity supplements. Same as the K award justification.
- Make the IDP mandatory and not suggested. Institutions and PI should have a clear contract with the postdoc on what the postdoc will provide to them and what the expectations are.
- Postdoc should have precise time for the development of independent researcher vs research staff activity, such as bench work non-research related research staff activity.

Proven or promising external resources or approaches

Recently the American Cancer Society (ACS) removed the legal permanent residency criteria for grant applications. The same approach was already taken by the American Heart Association (AHA) and the American Association of Cancer Research (AACR). As long as the project is developed and conducted in the USA, visa holders can be funded to conduct research with grant money from the US.

Response 2810

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2811

Perspectives on the postdoc roles and responsibilities

At [redacted for anonymity], we define our postdoctoral fellows (PDFs) in accordance with the 2007 definition by National Institutes of Health and National Science Foundation: "[a]n individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or

her chosen career path." We consider our PDFs neither student nor staff, but a unique class of scholars that come to this institution to prepare themselves for careers of their choosing. Our PDFs represent an invaluable talent pool that enrich our institution with scholarly achievements and impactful contributions to the community.

We view the PDF position as one of training and growth. Time as a PDF should be designed to provide the scholar with the necessary tools and guidance to develop the skill sets, knowledge and credentials to embark on careers of their choosing. While day to day life of PDFs varies tremendously across fields, training is not limited to research, but encompasses all levels of professional growth through opportunities for coursework, teaching and mentoring, by enhancing communication and networking skills, and by exposing PDFs to various career opportunities. Although many PDFs seek careers in academia, we recognize the value in exposing them to a broad spectrum of career options across industry, government and private sectors. It is the responsibility of the institution and the mentor(s) to bring out the best in PDFs by providing an environment that promotes equity and inclusion, and that prepares these scholars as the next generation of leaders in research, education and service.

Fundamental issues and challenges

There are several challenges expressed by our community of PDFs.

- Financial: We require all PDFs regardless of discipline to receive at a minimum, the salary equivalent to year 0 of a NRSA fellow. While PDFs supported by NRSA fellowships receive annual increases, others do not necessarily receive these increases. Furthermore, most PDFs do not find even the NRSA pay scale to be competitive with other opportunities. Many PDFs are starting families and purchasing their first home, with many financial obligations.
- Childcare: The high costs in childcare are a significant burden to PDFs with families. This, too, can make it non-competitive for postdocs to stay in this type of training.
- Disenchantments with academic careers: A career in academia is becoming less desirable to recent PhD grads, based on struggles they witness among faculty, particularly with respect to maintaining work-life balance and having to sustaining research programs with low funding pay lines.
- International PDFs: In addition to the many challenges associated with moving aboard, international PDFs have limited funding opportunities. They also experience pressures to find employment after the postdoc as many would prefer to stay in the U.S. to conduct their professional work, but can only do so with the promise of a position that will sponsor them.
- Professional development: Our institution has professional development offices dedicated expressly for PhD students and postdocs, and we have policies requiring annual IDPs. However, we feel that faculty mentor support of professional development can vary, especially for PDFs who are exploring careers outside academia.

Existing NIH policies, programs, or resources

We very much appreciate all the current policies and programs sponsored by the NIH for PDFs. To help alleviate noted concerns and challenges, we recommend the following modifications:

- Require PDFs supported on NIH research grants and other federal sources to follow the NRSA pay scale for annual salary raises, and consider an external review of the NRSA pay scale in light of the current (non-academic) job market for scientists
- Expand the childcare subsidy program recently implemented for NRSA recipients to include all PDFs supported on NIH research grants.
- Develop additional funding mechanisms or expand on pre-existing ones to increase the number of grants PDFs are eligible for, particularly in the case of international PDFs which have limited options for funding.
- Require faculty funded by NIH research grants to complete a mentorship training program and to submit training plans for PDFs supported on research grants.
- Require all NIH funded PDFs to form mentoring committees comprised of at least three faculty, including one from outside their primary department.
- Increase NIH support for professional development, particularly with PDFs exploring non-academic careers. Require all NIH funded PDFs to engage in a minimum number of professional development hours per year, unrelated to what they are doing as part of their primary research.

Proven or promising external resources or approaches

Many private foundations, such as Loreal have PDF fellowship awards that include a funding allowance for research. This provides the PDF with a strong sense of independence, having an ability to create and execute research they may call their own. Our own institution also has a small number of such slots, but they also are supported through philanthropy. The NIH may consider modifying their current fellowship or F32 award mechanisms to provide certain PDFs with an allowance for research to foster independence.

Our institution has devised and implemented a number of university wide policies that ensure equitable and fair treatment of 1600 PDFs across 11 divisions regardless of PDF research discipline or funding source. One example of such equity is health care benefits. Many peer institutions struggle with inequitable health care options for PDFs on salaries versus stipends, whereby PDFs on salaries are automatically enrolled in staff health care plans while PDFs on stipends are required to find their own health care using the NIH provided institutional allowance. Our institution has solved this issue by creating an affordable health care plan just for learners where PDFs on salaries and stipends are automatically enrolled in through a fringe-based mechanism. The NIH may encourage other institutions to strive for similar equity among PDFs by providing guidance on policies and mechanisms for supporting PDFs on salaries and stipends alike.

Response 2812

Perspectives on the postdoc roles and responsibilities

I view this position as a period of expanded training, with emphasis on acquiring new skills, exploring a new discipline, maturing as a scientist and gaining more independence.

Fundamental issues and challenges

The biggest challenge facing post-docs is pay. The starting salary of a postdoc at my institution coincides with the NIH minimum, although I am located in San Francisco, an extremely high cost of living area. As a person in my 30s, I feel that I have few savings, no assets (no car, no home, no investments, little to no retirement savings), and am failing to meet financial and life milestones of my peers in other industries. I have to live in a shared apartment with roommates, because I cannot afford to live on my own. If I didn't have family assets to rely on as a source of emergency funding, I would not have chosen to do a postdoc. As a woman in science, I cannot imagine having children at my current pay scale, especially given the high cost of day care and the extremely limited maternity benefits (too little time off during pregnancy and postpartum, no financial support for childcare, little availability of childcare onsite at my institution).

Existing NIH policies, programs, or resources

NIH postdoc payscale needs to be radically altered to adjust for inflation and high cost of living in many institutions. Best institutions (often the ones that get the most funding) are largely located in high cost of living areas, and fellowships/training grants should have built in mechanisms to adjust for this. NIH, rather than private foundations, many of which provide fellowships with much better pay and benefits, needs to be a leader in terms of benefits related to work-life balance, maternal leave, and childcare subsidies.

Proven or promising external resources or approaches

Interact with postdoc unions!! Many unions have formed in different institutions across the US and they have a very up-to-do view on postdoc challenges and initiatives to address them. This is one of the most important and most effective catalysts for change in the postdoc communities that I have seen. NIH should support postdocs right to strike and unionize. NIH should also follow, or better yet, exceed, benefits that have been recently announced by HHMI ($70,000 minimum salary).

Response 2813

Perspectives on the postdoc roles and responsibilities

At [redacted for anonymity], Postdoctoral Fellowships are mentored training positions with a limited term (five years max) designed to support individuals' transitions to a wide variety of permanent career positions.

The inclusion of a "wide variety" in this definition reflects our efforts to support postdocs at a time when faculty-level academic roles are challenging to obtain and also recognizes the lack of career exploration

support historically provided at the graduate level. The "postdoc culture," largely propagated by outdated policies and norms that impact their experiences, needs to change.

In alignment with the response of our academic partnering institution, the [redacted for anonymity] we submit that:

For industry/biotech/pharma, 2-3 years of postdoc experience may be sufficient

For those interested in academia (faculty/teaching roles), 5 years of postdoctoral training are required provide an opportunity to transition to independence

We also believe that career exploration should be a more direct and focused experience during graduate training. This includes career paths that do NOT require postdoctoral training, from administration to science writing and similar career paths.

In regard to the postdoc experience, we also align with UPenn (and the National Postdoc Association, NPA) and believe that the following are critical components of postdoc training:

Protected time for professional development (lab management, science communication, mentorship, teaching, etc.), including soft skills

Grant writing AND reviewing experience

Mentor/mentee expectation setting

Required research-specific performance evaluations and individual development plans (IDPs)

Finally, we believe that the postdoctoral position needs to be reimagined to recognize postdocs as research professionals rather than "trainees." Postdocs commenting on this response shared that fellows are underpaid, underappreciated for their advanced technical skills, and not provided the room to grow as independent researchers. This is largely due to long-held scientific norms that diminish the critical role of postdocs in science.

Fundamental issues and challenges

Many issues and challenges factor into recruitment and retention. The following includes direct feedback from postdoc leaders in the [redacted for anonymity] community:

Insufficient salary for highly educated and trained researchers at odds with similar positions in industry and elsewhere, often which do not adequately consider cost of living (the NPA 2023 Postdoctoral Barriers to Success report indicate that salary has a negative impact on 95% of postdocs' professional and/or personal lives)

Perhaps associated with poor salaries, postdocs are frequently treated as highly-skilled, but inexpensive labor, with faculty treating them as technical workhorses without focusing on supporting their advancement to independence

Poor mentorship, often the result of lack of PI mentorship training

A poor work environment, often the result of a lack PI management training

A long-standing, propagated culture that postdocs "must go through the paces" of a challenging postdoc experience to earn their way to advancement

Uncertainty in the job market and financial climate leads postdocs to explore roles perceived to be more stable or financially worth the transition risk

Complicated visa and immigration processes and a lack of NIH funding opportunities for non-US citizen researchers

A lack of diversity in the US academic scientist workforce, especially among academic faculty

Existing NIH policies, programs, or resources

Funds for postdoctoral salaries and postdoctoral training should be increased

Expansion of or more grant opportunities like the K99/R00 Pathway to Independence Awards

Reevaluation of the T32 funding mechanism based on outcome studies showing that it may not be effective in producing intended career outcomes

K awards should provide funding for students/assistants/techs to support mentorship training of fellows, as well as providing technical research support

Additional grant programs supporting international postdocs

Graduate training should invest in formal career education and exploration, including hands-on training; part of that career exploration and training should include preparation for postdoctoral training as a means to enter academic/faculty roles

Additional financial incentive to create postdoc offices at underfunded institutions

Modify the Research Career Pathways infographic (NIH Resources webpage) to highlight how graduate research training compliments other career paths, including science administration and management, science policy, science communication, and regulatory science.

Faculty mentorship training should be required or strongly considered when evaluating NIH grant proposals

Mentee training for postdocs should be formalized as a fundamental competency for postdoc training

Mentoring committees should be strongly recommended or required for all fellows funded by NIH grant funds

NIH should create or expand programs to support staff scientist positions in academic labs (this would benefit academia by maintaining continuity of lab knowledge, providing additional career options for postdocs, while providing clear differentiation between these positions and postdoc positions)

Postdocs should receive equitable benefits packages (including well-being support), regardless of their source of funding

More data should be collected and presented, including outcome data, to ensure that the postdoctoral experience can be refined and shifted to meet the evolving needs of the US biomedical research enterprise

Proven or promising external resources or approaches

Create an External Resource Clearinghouse

The NIH Working Group should refer to the NPA Recommended Postdoctoral Policies and Practices, the triennial NPA Institutional Policy Surveys from the last decade, and more specific pieces within the NPA Resource Library. Currently, institutions and NIH IC's develop their own development resources, which is inefficient and leads to inequity among postdocs at different institutions. NIH should provide a centralized hub linked to resources from NPA, Postdoc Academy, PDHub, OITE, professional societies, and individual ICs/universities. In an increasingly virtual environment, a comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally funded research but also its community resources.

Reimagining the Traditional Postdoc Office

We recognize that the size and funding of administrative—and faculty-based postdoc offices (PDOs) vary wildly across the US. At [redacted for anonymity], we have utilized growth trends across the enterprise to create new tiers of support in what was originally a PDO with one administrator. Since 2003, we have grown to incorporate student programming, diversity, specialty research education programs, and research staff development to bolster our impact, bringing our total FTE staff to 16.

While this expansion may not be feasible at all research institutions, we believe that PDOs should take steps to "future proof" their offices by expanding their reach into other communities. In particular, career/research/professional development support for research staff (technicians, PhD researchers, etc.) aligns in many cases with programs provided to postdocs. Should NIH initiate changes postdoctoral salary/support/training, we may see a decrease in the overall postdoc population. Increasing the scope of support of PDOs will ensure that we don't see a knee-jerk reduction in PDOs and personnel during this period of change.

Response 2814

Perspectives on the postdoc roles and responsibilities

Gain training and more experience in the field to become an independent researcher and supervisor

Fundamental issues and challenges

Money. Hours. Work/life balance. Money, money, and more money. Whether salary or grant funding.

Existing NIH policies, programs, or resources

More experience in learning new techniques in our fields to help improve research aspects later on. More start to finish career pathways that are similar to K99 but allow for those that attended smaller universities to have a better chance.

Proven or promising external resources or approaches

Unsure

Response 2815

Perspectives on the postdoc roles and responsibilities

I view it as a stepping stone to a career in science. In other words, a temporary training position with increased independence after graduate school.

Fundamental issues and challenges

1. Faculty stress about funding, even when they are funded. PhD students see their major advisors constantly chasing the next grant and it is not an attractive career / lifestyle for most. They look for industry or jobs that don't depend on grant writing.
2. Industry salaries are higher, for the most part.
3. Inhibiting retention: There is a shortage of career technicians in most academic labs compared to 10 years ago, because salaries are not competitive. As a result, PI's are forced to utilize their postdocs for tasks normally performed by technicians (animal colonies, for example), Postdocs see no path to publication and leave.

Existing NIH policies, programs, or resources

Number one issue that postdocs bring up at least weekly in our postdoc office: the rule that postdoctoral fellows cannot be considered employees. The lack of a W-2 /1099 makes it difficult for them to obtain mortgages, or even leases. They aren't building retirement equity because no FICA. They want to be "adulting"and being a fellow does the opposite. (Not true for K-awards) Most postdocs supported by a T32 or F32 at some point change from an employee to a non-employee while at our institution and when this happens they have to go through all of the onboarding steps again as if they were a new employee. It would be such a relief to postdocs and admins to allow postdocs supported by training grants to be treated the same way as those supported by R grants.

Proven or promising external resources or approaches

No response

Response 2816

Perspectives on the postdoc roles and responsibilities

There should be well defined roles **and responsibilities** for postdocs. Most postdoc positions are non exempt positions, which means they are expected to work more than 40hrs per day if required and does not involve extra pay for the same. It is understandable that lab work cannot happen in the boundaries of 9-5 everyday, but there should be more specific boundaries under the 'non exempt' description so that postdocs are not exploited.

Fundamental issues and challenges

Roles and responsibilities for US postdocs are not well defined in most labs. They are expected to do anything and everything under the roof, and still considered as not enough. We expect to polish our training in research after our PhD. Sadly, we are not treated with respect and treated as cheap labor. Sadly, this is genuinely how most postdocs feel. There is zero work-life balance: I personally have been in labs where the PI directly orders to work for minimum 55-60 hours a week, in addition to sending aggressive emails. This is not what we envision when we start our journey from our home country to a foreign land, leaving behind our families and coming so far from home just to hone our skills and make our lives/careers better. In the fear of losing jobs, most postdocs remain quiet and tolerate these sufferings. We are here for the love of science, but that is what we are not allowed to do because if one is so mentally harassed and not happy, one cannot perform or contribute to science. This is the basic thing that most PIs do not understand, and they just impose tyranny in their labs.

Existing NIH policies, programs, or resources

There should be more guidelines for PIs in an institute just like for others, in the sense, yes they have the liberty to run their lab their way, but I think there should be some courses that they need to take on how to mentor, how to treat their employees. Regulations should be such that postdocs are not afraid to report the truth to the institute where they are employed at. There should be strict rules where PIs would be warned to a level that they do not treat their employees badly (after the institute receives atleast 2 bad exit interviews against them). Exit interviews should be taken seriously and not just as a formality. Bad PIs just keep continuing their bad deeds year after another, and postdocs keep coming and going. This way their happens no growth at the level of science nor at the individual levels (both employer and employee). This does not mean that good PIs do not exist, but that is mostly a rare event these days. Firing policies should also be reformed from time to time so that PIs cannot take advantage of the postdoc,s visa situtaion: most international postdocs come on a J1 visa which does not allow employment gap in between two employments. PIs take advantage of this particular situation and fire postdocs at their whims. Rather there should be proper work plans so that there is enough justification for firing someone.

Proven or promising external resources or approaches

As mentioned above

Response 2817

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

NIH postdoc salary scale needs to be raised. It is below many institutions’ post doc scale.

Existing NIH policies, programs, or resources

NIH postdoc salary scale needs to be raised. It is below many institutions’ post doc scale.

Proven or promising external resources or approaches

NIH postdoc salary scale needs to be raised. It is below many institutions’ post doc scale.

Response 2818

Perspectives on the postdoc roles and responsibilities

Critical workforce for academia, and training of the next generation of scientists. Losing them to industry will ultimately grind an academia to a halt.

Fundamental issues and challenges

Need to pay them far more than we do

Retaining them is hard right now, and many talented trainees are leaving or bypassing post doctoral training altogether

Existing NIH policies, programs, or resources

Increase grant funding so we can pay postdocs more , provide more resources to keep them in academia

Proven or promising external resources or approaches

No response

Response 2819

Perspectives on the postdoc roles and responsibilities

Traditional postdoctoral training prepares trainees for becoming sole PIs of R-level grants in a tenure-track position in academia. Historically, many PIs amassed substantial funding without unfunded periods. This path is less and less common due to several factors:

First, the complexity of research has increased, and multiple PI (MPI) and large multi-site collaborations/consortia have become the norm. Large, multidisciplinary teams of many co-investigators are needed. To address this, NIH-funded postdoctoral training needs to train staff scientists and co-investigators who may not be PIs themselves but are key lab members. For them, postdoctoral training should focus less on 1st author publications, project leadership and competing for funding, and more on lab management and technical skills. The duration of training (e.g., T32) or mentored research (e.g., K award) may need to be longer to allow acquisition of increasingly complex skills.

Second, funding rates have decreased and it is harder to obtain a first R-level grant and to keep uninterrupted NIH funding. Many trainees and early stage investigators leave academia -despite a commitment to science—because of failure to obtain or maintain funding. This can be addressed by offering bridge funding and increasing funding rates for early stage investigators.

Third, NIH postdoctoral stipend levels have not kept up with salaries in clinical practice, industry or STEM start-ups. Of note, MD salaries during clinical training (residency/fellowship) are much higher than NRSA T32s stipends. Therefore, to recruit an MD to a T32 after clinical training requires a substantial salary cut. Not surprisingly, it has become very hard to recruit MDs and MD/PhDs to postdoctoral training grants. Likewise, K award and NIH salary caps are much lower than the salaries of faculty in clinical positions at the same rank. MD and PhD graduates are fleeing to positions in industry and start-ups, in search of fair wages.

Fundamental issues and challenges

One key issue is that the stipends for postdoctoral training and K awardees and the NIH salary caps are not competitive compared to the salaries of other jobs available to MDs and PhD graduates (e.g., industry, clinical practice and start-ups). Moreover, postdoctoral trainees and first time R01 awardees keep getting older and older. Therefore, they are more likely to have children and other caregiver responsibilities and their financial needs are higher. The increasing amount of loans from undergraduate and graduate school also contributes to this financial pressure. In addition, most large academic institutions are in urban areas with very high cost of living. Of note, these financial pressures are a key barrier to recruit and retain scientists of color and members of other under-represented groups, who lack family wealth to support themselves through long underpaid training. To keep MDs and PhDs in academia, these issues need to be addressed by increasing postdoctoral training stipends, K award stipends, the NIH salary caps and the R01 funding pre-authorization cap.

Another important issue is the lack of flexibility of NIH postdoctoral training to accommodate life events, family leave, illness, etc.

Finally, research is international; however non-US citizens and individuals on a visa are excluded from many training (e.g., T32) and career development (e.g., K23, K08) funding opportunities.

Existing NIH policies, programs, or resources

NRSA stipend scales and the K award salary caps need to be substantially increased and should be location-specific to cover at the cost of living in a given location. The NIH salary cap and the R01 pre-authorization cap should increase commensurate with inflation and with competing jobs in industry, private practice and start-ups.

T32 grants should provide protected effort/salary to program directors and should cover more administrative costs (e.g., for a fellowship coordinator) to be feasible/attractive to the PI and the institution. The administrative burden of applications should be decreased.

The indirect costs for T32 and other training grants should be higher (e.g., similar to that of non-training R grants), to reflect the true operational costs of the institution.

Citizenship and permanent residency restrictions should be removed from T32s and K awards. The current policy is inconsistent: why some grant mechanisms are available to individuals on a visa (e.g., K99/R00, R01, R21, etc.) while others are not (e.g., T32, K23, K08) is not clear.

NIH-funded postdoctoral training needs to offer opportunities to train staff scientists and co-investigators who may not be PIs themselves but are key members of a lab. For these individuals, postdoctoral training should focus less on 1st author publications, project leadership and competing for funding, and more on lab management and specific technical skills. Also, the duration of training (e.g., T32) or mentored research (e.g., K award) may need to be longer to allow acquisition of increasingly complex skills.

To decrease attrition, NIH should provide more flexible bridge funding, increase the funding rates for early stage investigators, and extend the early stage investigator period. It is our experience that many trainees and early stage investigators leave academia -despite a commitment to science—because of failure to obtain or maintain funding.

Proven or promising external resources or approaches

Comprehensive benefits, family and medical leave need to be incorporated in all training and other grants. This is a proven approach that attracts MDs and PhDs to other fields which offer these resources (e.g., industry, clinical practice).

Also, if a trainee or co-investigator is on extended leave, supplements should be available to cover grant goals or extend the grant duration. The childcare benefits for T32 trainees represent a first step forward but are insufficient.

Supporting laboratory leadership and mentorship training especially for diverse trainees.

Require practices that promote work-life balance.

Response 2820

Perspectives on the postdoc roles and responsibilities

Postdocs should have the ability and be encouraged to train/develop/participate in activities that build non-lab/bench skills during normal working hours. The NIH should work with institutions so that there is accountability and progress towards an environment that takes all forms of postdoc training seriously. Guidelines / formal mechanisms for official performance reviews as and onboarding so that both parties have clear ideas of scope, expectations, timing, etc. of the position.

Fundamental issues and challenges

Compensation should reflect the amount of education and training required to be a postdoc, it should also be subject to federal locality pay adjustments. To take my current position I had to take a pay cut even though my previous position was as a state employee (scientist) from a state with a lower cost of living and it only required a bachelor’s degree. There should also be a policy that postdoc pay is increased (to the appropriate level) with the fiscal year. My experience level increases 8 months into the fiscal year, because there is no bump at the start of the new fiscal year I spend 3/4 of the year at the previous fiscal year’s pay level. This year, there is a $1668 difference (approx my rent bill), this is exacerbated by the fiscal year splitting the calendar year in half. I will be moved to 2022 stipend levels in May 2023.

Existing NIH policies, programs, or resources

Postdocs should not lose their status as an employee for being awarded and accepting an NIH fellowship. If I were to accept a fellowship award I will lose: healthcare, disability insurance, dental insurance, employer matched retirement benefits, and all the protections that come with being an employee.

The NIH should expand programs and funding opportunities for staff scientists. There is a general attitude that after a postdoc you either go start your own lab or you leave academia. There needs to be real opportunities to continue as a highly trained scientist. In addition to providing another career trajectory

for postdocs it also allows for the continuity of lab knowledge from the day-to-day aspect in addition to the overall direction of the lab provided by the PI.

Proven or promising external resources or approaches

Having a central resource would be favorable for equitable distribution and access of resources.

Response 2821

Perspectives on the postdoc roles and responsibilities

Science communication is a core competency for all scientists and should be formally taught during early stages of their careers, as is cultural competency.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2822

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Lack of stipend and salary parity with other non-NIH-funded positions available to MD and PhD graduates (e.g., industry, clinical care, VA, etc)

Existing NIH policies, programs, or resources

T32 and R25 grants should allow more flexibility for how funds are spent. For example: given the increasing specialization and complexity of methods, in many cases postdoctoral T32 trainees cannot find adequate training for a specific technique in the graduate school course catalog. Rather, tuition funds could be re-budgeted to attend a workshop or fund an away rotation in a lab to learn and master the technique. Another example is that for R25 grants the current caps for research-related costs are too low and do not allow trainees to lead any meaningful projects in expensive areas of research -e.g., MRI, stem cell, etc.—("Up to $5,000/year for individual NIMH R25-supported residents who are committing less than 50% effort in a given Post Graduate Year. In years where participating residents are committing 50% or more effort to the R25 program, up to $10,000 annually may be requested for research support"). Funds from other R25 allowed costs could be re-allocated to increase research-related costs.

For R25 grants, the current policy is that trainee effort needs to be cost-shared to the Graduate Medical Education resident fund. This is the case even if the residency program already has built-in research protected time. This policy should be removed for residency/fellowship programs which already have built-in research protected time.

Individuals on a visa should be allowed to obtain T32, R25, and K award funding beyond K99/R33.

Proven or promising external resources or approaches

Complete benefit and family/medical leave packages should be provided to all postdoctoral trainees.

Policies that foster work-life balance should be mandatory.

Response 2823

Perspectives on the postdoc roles and responsibilities

Given the career landscape and the lack of academic jobs, a postdoc should be a period of training for scientific positions inside and outside the academy, and not just faculty positions in the academy. Their role in the research enterprise should be acknowledged and their roles should be protected by the universities they work for, as opposed to being at the mercy of their PIs. Perhaps different types of postdocs should exist depending on professional goals of the postdoc and relationship to the mentor and the university with different funding models.

Fundamental issues and challenges

Pay; the NIH and universities are unwilling to pay postdocs what they are worth, and reliance on the federal funding for postdoc pay sets up a system that encourages less pay. NIH will need to demand that institutions pay more and request more funding federally.

Childcare, institutional racism, inadequate and hostile hiring practices at universities, unchecked mentors and a postdocs relationship with the PI instead of the university, terrible treatment of international postdocs.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2824

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity] is an organizational member of the National Postdoctoral Association (NPA). We agree with the NPA's definition of a postdoc as "an individual holding a doctoral degree who is engaged in a temporary period of mentored research and/or scholarly training for the purpose of acquiring the professional skills needed to pursue a career path of [their] choosing" . Postdocs are first and foremost trainees and their position in a research lab should serve as a steppingstone toward their future career. A postdoc position should not be viewed as a long-term job, and it is the responsibility of both the postdoc and their mentor (i.e., principal investigator; PI) to commit to the postdoc's individual career development. For example, a postdoc pursuing an academic research faculty position should work with their PI to develop a project that they can take to their next institution. This postdoc should also receive training in grant/paper writing, leadership, and managing lab budgets from their PI and sponsoring institution.

Postdocs comprise a critical portion of the biomedical research workforce. Postdocs are experienced, highly trained scientists who conduct a large portion of laboratory studies that bring funding and recognition to institutions via grants and publications. In addition, they often serve as mentors to graduate students and lab staff, sometimes functioning as a bridge between the PI and other staff and trainees in the lab. The current academic system relies heavily on postdocs to generate data and drive research forward, yet postdocs receive little monetary compensation in return. Such a system is unsustainable, as NIH-funded institutions across the country struggle more each year to recruit and retain postdocs.

Fundamental issues and challenges

At [redacted for anonymity], salary is the number one barrier to recruiting and retaining postdocs. Like many institutions, [redacted for anonymity] postdocs are compensated in accordance with NRSA stipend levels. For a first-year postdoc, this would be $56,484/year. In contrast, a new PhD would make $83,000-$128,000 in industry. Many new PhDs forgo a postdoc position in favor of a job offering greater financial security. Low salaries also have a greater negative impact on parents and URM PhDs.

Postdocs funded by NIH fellowships are often not considered employees of their institution and do not receive adequate benefits. Due to ambiguous language in the NIH Grants Policy Statement, institutions do not know how they are allowed to supplement or classify NIH-funded postdocs.

70% of postdocs at [redacted for anonymity] hope to become PIs. However,

Existing NIH policies, programs, or resources

Generally, PIs want to offer higher stipends/salaries for their postdocs, but they are limited by their NIH grant(s). Over the past 3 decades, the average R01 grant amount has increased only enough to account for standard inflation. However, the costs of new research technologies have far outpaced inflation, and the amount of data required for publishing has also increased. PIs are being asked to do more and more with stagnant funding. The NIH must invest significantly more money into biomedical research grants if the current system that relies so heavily on postdoc labor is to continue.

The NIH should address the confusion and lack of transparency regarding employee benefits for postdocs. A first step would be a policy requiring NIH-funded institutions to provide employee-equivalent benefits for its postdocs. In 2012, the NIH Biomedical Research Working Group recommended this exact action. This same working group found that female postdocs who start a family often pause their research careers or leave academia due to the cost of childcare. Nine years later the NIH announced that NRSA postdocs could receive up to $2500 per year childcare support. While this policy is a step in the right direction, it is not sufficient and international postdocs are ineligible for this support. The NIH and the institutions it funds should offer childcare support to all postdocs, regardless of funding source, to ensure they have an equal opportunity to succeed.

To improve and standardize postdoc training and career development, the NIH could increase the number of T32 training grants that fund pre—and postdoctoral career development programs and open them to visa-holders. Additionally, the NIH could increase the availability of career development and transition awards that include a mentoring plan. These programs may encourage postdocs/their PIs to invest more into training and career development.

Proven or promising external resources or approaches

The Accreditation Council for Graduate Medical Education (ACGME) provides oversight of medical residency and fellowship programs. ACGME monitors teaching hospitals via surveys, data collection, and on-site visits to ensure trainees are receiving a high-quality education and are treated fairly. Residents and fellows also provide the ACGME with regular feedback about their programs. Because ACGME is a third-party entity, trainees are more empowered to speak up when issues arise, as there is less fear of backlash from their mentors. A similar accreditation system for research postdocs could help prevent exploitation and improve postdoc training.

To encourage PIs to devote more time and effort to career training, institutions could make mentorship a more important criterion for promotion and tenure. Institutions should better acknowledge and reward PIs who perform activities that foster a supportive culture, such as completing lab management/leadership courses, developing curricula for T32 and similar training programs, teaching undergraduate and graduate classes, and having regular check-ins with trainees. The National Academy of Sciences has made calls for these changes, recognizing that current tenure and promotion requirements emphasize scientific/financial productivity over many values of higher education.

To help postdocs explore non-faculty career options, institutions could offer fellowships or internships in which postdocs receive real-world job experiences. [redacted for anonymity] has a Research Administration Fellowship in which postdocs learn about the roles of different administrative offices and then complete a project lasting 6-12 months in a department of their choosing. Past fellows have found meaningful administrative careers in trainee affairs; DEI; and faculty recruitment. Another example is the Biotechnology and Life Sciences Advising (BALSA) Group at Washington University in St. Louis. BALSA is composed of local executives, faculty members, postdocs, and graduate students who team up to provide consulting services to biotechnology companies. BALSA alumni have become successful industry scientists, consultants, entrepreneurs, and patent agents.

Response 2825

Perspectives on the postdoc roles and responsibilities

Postdocs are the lifeblood of academic research. They have the skills, expertise, and resources (RE: time, which PIs do not have) to make the largest contributions to scientific progress. These positions are becoming almost uniformly 4+ years, which is essentially the length of a PhD, and those long periods carry immense pressure to be productive to set up and then follow through on job searching and also due

to low quality of life. Getting paid what is often near poverty wages for a PhD and then again for a similar period as a postdoc, all while working long hours in often stressful environments with varying (and often poor) institutional support is a huge barrier for anyone. Those barriers are insurmountable when individuals face additional challenges related to financial resources, health, and/or personal and structural discrimination. Still, a postdoc is often reported by successful academic faculty as the best times in their career due to the freedom and lack of administrative burden that weighs on faculty (though note the role of survivorship bias). Therefore, these positions have the possibility to be desirable if the quality of life is tolerable, and it is absolutely critical for the endeavor of science to minimize the stress and maximize the wellbeing and happiness of postdocs.

Fundamental issues and challenges

There are many factors at play, but for now I'll focus on financial burdens. Low pay during a PhD can be justified by the increased earning potential the degree provides on in industry or academia, but no such incentive can justify low wages for postdocs, who again are some of the most skilled and productive members of the scientific workforce. Many people unfamiliar with the academic career path are completely baffled by adding another 4-6+ years (standard for biomedical sciences) of "training" with low wages, poor-to-mediocre benefits, and a huge hit in opportunity cost for the earnings if one went to industry. This means only graduates with individual means can make it work, or they must make sacrifices in living arrangements, prolonging the start of a family, or tightly regulating spending habits that most people would consider standard or at least strongly desirable for adults in their 30's. Again, these problems are greatly amplified for parents, international workers with tenuous contract and visa status, and individuals that consistently confront discrimination in their workplace and personal lives. This is not a sustainable path, even for those who want to go for it. Science will slow and remain exclusionary unless these systemic factors are meaningfully addressed.

One other issue is the current credit system which only rewards first and last authors on papers. Most fields of science are becoming more complex and interdisciplinary, and therefore models for credit to members of large teams need to be normalized (e.g., hundreds of members of teams in physics).

Existing NIH policies, programs, or resources

Raise the stipend levels! At the very least, be very welcoming for faculty that want to use their grant budgets to pay students and postdocs higher than minimum wages, but more importantly, NIH sets the bar across the nation and to some degree the world for what other institutions pay their postdocs. If you change, that raises the floor for other sources of funding to follow your lead, and as long as you are paying poor wages, that justifies the same from other institutions.

Another issue is increasing requirements for management training. There are many bad apples in academic science, but there are also many faculty that are not intentionally biased but still have enormous negative impact on trainees through careless or ignorant actions. It's not clear how well training on sexual harassment and simplicity (and explicit!) bias work, and while those are important avenues to pursue, I believe that training in good management practices can mitigate many of these issues as well! Many scientists that become faculty have had little to no training in small business management (i.e., a lab), and therefore fumble through hiring and training, establishing lab culture, and supporting/accommodating trainees. The intense pressure for productivity (papers and grants) leaves these essential tools ignored. Adding explicit training requirements or other incentive schemes for FACULTY, who we all know are the least likely to take advantage of existing training opportunities, would be important for improving working conditions for postdocs and other trainees.

Regarding credit for team science, some way to credit postdocs for non first/last author work in grant reviews would be helpful. Perhaps instructions for reviewers to pay attention to a more diverse set of contributions would be helpful (e.g., other parts of the bio sketch).

Proven or promising external resources or approaches

HHMI is a leader in many of these areas, including funding models (see their recent increase to a minimum of $70k for postdoc salaries!) and training programs to increase inclusivity. Also note they require faculty to participate in these trainings when their students and postdocs are awarded grants!

Response 2826

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The NIH sponsors far more biomedical post-docs than could ever have a full-time academic career. In a massive survey of over 7,600 postdocs (the first of its kind), Nature recently found that 63% hoped for a career in academia, but 56% of them felt somewhat or extremely negative about their job prospects, and nearly 75% thought their prospects were worse than in prior generations.
https://www.nature.com/articles/d41586-020-03381-3

Look at the hard numbers.

—Number of PhDs awarded in biological and biomedical science in 2021: 8,149.
https://ncses.nsf.gov/pubs/nsf23300/data-tables

—Number of post-docs supported by NIH grants in 2022: 28,953.
https://nexus.od.nih.gov/all/2023/03/02/number-of-postdoctoral-researchers-supported-by-nih-grant-awards-fy-2017-fy-2022/

—Number of first-time R01s that NIH awarded to new researchers in 2021: 1,513.
https://nexus.od.nih.gov/all/2022/07/18/more-early-stage-investigators-supported-in-fy-2021/

The US is producing 5x the PhDs every year that could get an academic job with an NIH grant, and that we essentially have nineteen years of a backlog of post-docs competing for the few academic jobs that come available.

We could quibble over the specific numbers. But no one can deny that we are producing far more PhD's and post-docs every year than the number of tenure-track positions that come open.

This scenario isn't sustainable.

To add to the calamity, it isn't just about individual job prospects. When it is so competitive to get an academic job, researchers face a dual temptation: Study only marginal, incremental topics so that you can guarantee success, but then exaggerate the importance of your work.

The end result is that hypercompetition harms both reproducibility and innovation. In order to have high-quality science that pushes the frontier, researchers have to feel comfortable with failure. That won't happen unless we calibrate the number of researchers to the amount of funding available.

Existing NIH policies, programs, or resources

Many graduate students and post-docs end up being funded on R01 or similar grants, working for a principal investigator (PI) on that grant. The result is disastrous.

The direct result: People spend way too many years as a "trainee" because no academic jobs are forthcoming. In some unfortunate cases, they are susceptible to exploitation and even harassment by their boss, because they are beholden to his grant.

We have known about this problem for many years. Back in 1998, a National Academies panel recommended that "all federal agencies that support life-science education and research to invest in training grants and individual graduate fellowships as preferable to research grants to support PhD education."

Similarly, ten years ago, [redacted for anonymity] (then the president of [redacted for anonymity]) chaired an NIH working group that called on NIH to "divert funding from research grants to training grants for graduate students, support more postdocs on training grants, increase pay and improve benefits for postdocs, and boost the prestige and remuneration of staff scientist positions in academic labs."

The report argued that trainees are ill-served by being put on PI grants, because they are viewed as "laborers rather than scientists in training," and that with a greater use of training grants, "NIH could better monitor students' training and ensure broader exposure to careers outside of academia—and better training in the skills needed to perform well in those careers."

What has happened since these national reports in 1998 and 2012, respectively? Virtually nothing, at least not that would change the overall system.

We need to stop trapping so many people in trainee status hoping for an academic job that might never materialize.

Proven or promising external resources or approaches

First, NIH should only fund a limited number of post-docs for a limited time on training grants, rather than an unlimited number of trainees on other researchers' grants. Indeed, perhaps we should ban NIH-supported post-docs, or else limit them to 2 years at the most.

Alternatively, the NIH could simply mandate that post-docs be paid at least 3 times the average cost of a two-bedroom apartment in their vicinity. In some cases (e.g., Palo Alto, California), this would mean that post-docs would be paid over $120,000 a year. That sort of requirement would both keep the number of post-docs in check, and would help enable post-docs to survive on an income more in keeping with their abilities and training.

It is absurd for the NIH to allow a system in which post-docs (who already have PhD's) are kept in something close to minimum-wage-level poverty for several years. That is a disgrace both to NIH and to universities.

Second, universities don't provide sufficient information to trainees about their likely outcomes. They should be required to do so. Otherwise, trainees can be actively misled about their career possibilities. After all, how many college seniors would knowingly sign up for up to 2 decades of low-paid jobs only to get their first tenure-track job after age 40?

The National Academies recommended in 1998 that "accurate and up-to-date information on career prospects in the life sciences and career outcome information about individual training programs be made widely available to students and faculty." It's long past time for NIH to require that all universities track and publicly report up-to-date statistics on:

1. average length of graduate program before the PhD is awarded;
2. average length of a post-doc; and,
3. 1-year, 5-year, and 10-year outcomes for every graduate student and post-doc.

[redacted for anonymity]

Response 2827

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

As industry positions are an increasingly common career path for postdoctoral trainees, NIH-funded postdoctoral training programs should incorporate training experiences within industry and foster collaborations with industry (e.g., rotations in industry to learn drug development and clinical trial methodology).

Training should include consulting best practices, investigator-initiated studies, etc.

Proven or promising external resources or approaches

No response

Response 2828

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

As an NIH funded postdoc at an institution in one of the most expensive cities in America (San Francisco), it is increasingly clear why colleagues of mine are leaving academia and not pursuing postdoctoral employment in academia and instead are choosing to enter the industry market: between $56,000-57,000 is not a reasonable or living wage for someone with a PhD. I have found that the need to make an increased salary is pushing me to find ways to leave my postdoc position early for research positions that would not incur the financial penalty of leaving my training early. To be paid less than what most people in the city (and at the very institution) I work in make in an entry level job with a PhD is disheartening and demoralizing.

Existing NIH policies, programs, or resources

In addition to the need for increased salary, it is imperative that the NIMH change their taxation policies; at this point in time, the requirement to pay quarterly taxes that can incur significant financial penalties if not paid correctly or on time is incredibly problematic. With the intention and hope of diversifying science, making difficult required procedures that are complicated, time-consuming, and potentially financially detrimental, the NIH is doing the opposite and making postdoctoral positions inequitable for those who are not well-versed in the financial system or have generational or spousal financial support to pay for expert assistance.

Proven or promising external resources or approaches

No response

Response 2829

Perspectives on the postdoc roles and responsibilities

We believe that postdoctoral scientists are training to be independent researchers within a mentoring network, and this should come with the freedom and opportunities to prepare them to transition to a career of their choice. Further, postdocs may have student loans, or their training may coincide with adult milestones like starting a family. To make postdoc positions attractive to PhD graduates, there needs to be:

1. a competitive remuneration structure, that includes market-appropriate salaries and policies around parental leave;
2. professional development resources
3. transparent, valued, and funded path(s) to career progression within the academy outside of tenure-line faculty roles. These benefits, policies and opportunities need to be equitable between postdocs across institutions, and independent of the funding sources that support them.

Postdoc training outcomes must be emphasized beyond T32 training grants into all grants and programs that support postdocs. Postdoc positions funded by any NIH/federal grant should require mentoring plans and professional development for postdocs, not just those grants explicitly focused on a defined training environment.

For postdoc training to be a valued aspect of research institutions, their training outcomes must be tracked and contribute to the promotion and tenure process of faculty mentors, similar to undergraduate or PhD student training.

Fundamental issues and challenges

NIH salary/stipend levels are currently not commensurate with a doctoral degree plus training and experience in their area of research, or responsive to cost of living within high volume research cities (such as Boston, where our university is located). NIH salary/stipend levels should be substantially increased and factor in cost of living. The current NIH salary and stipend levels are not tied to important economic drivers such as market or cost of living by region, which means they do not reflect the lived experiences/needs of postdocs.

Training postdoc positions (those funded by F, K, T) should be paid professional salaries and not stipends, as postdocs are professionals, though in training, regardless of their funding source. Receiving a stipend for living expenses minimizes their professional status, treats them as student employees, and reduces

the number of employment-based benefits institutions can provide and stay compliant with the terms and conditions of these awards.

International postdocs are a vital part of U.S. research enterprise, and yet they are not explicitly provided with the same access to training opportunities, support, and professional development as their domestic peers funded on training awards. It would also benefit this population if the NIH could partner with foundations and professional societies to create fellowship opportunities to support international postdocs.

Professional growth for postdocs is unclear and not uniform across institutions. While we can define the structure for growth, the practical reality is that these promotion pathways would still be primarily grant funded. NIH mechanisms to support growth in workforce for those in staff roles beyond the postdoc would help support career progression in the academy.

Existing NIH policies, programs, or resources

We would like to suggest that all postdocs are paid a salary rather than training mechanisms requiring a stipend, so that they can be fully included in our institutional benefits as employees. This will ensure that postdoc fellowships through T, F, K mechanisms are attractive to domestic PhD graduates or postdocs, as presently many choose not to apply so as to not alter the benefits they are eligible for at [redacted for anonymity].

Student loan debt affects postdocs from low socioeconomic backgrounds and can deter postdocs from underrepresented groups from persisting in the academy. Expanding the mechanisms that support Loan Repayment Programs for extramural researchers would remove a barrier many postdocs have to remaining in academia.

It would be helpful if R01 and other types of faculty-awarded grants also were restructured to explicitly emphasize training and mentoring postdocs. This would reinforce the importance of faculty building skills to mentor postdocs using culturally aware practices. There is a significant gap between the mentoring that is currently happening in many academic institutions and the mentoring that postdocs need to support their training and career transitions. [redacted for anonymity] has developed University-wide training opportunities to support faculty mentors to develop strong mentoring practices. However, there are limited incentives to reward the faculty that prioritize the time it takes both to develop these skills and intentionally mentor well.

Funding opportunities like the recent NOSI supplements acknowledge and recognize promising and demonstrated mentoring practices by PIs and are an important incentive signal to those not engaged. It would also benefit institutional programs to have access to funding calls to support innovative ideas in mentor training and faculty professional development, similar to the NIH BEST program that supported career development opportunities for PhD students and postdocs.

Proven or promising external resources or approaches

Members and leaders of National Postdoc Academy and Graduate Career Consortium, AAMC-GREAT group

Resources and best practices garnered through NRMN (https://nrmnet.net/) and NSF funded AGEP, Professorial Advancement Initiative(https://btaa-pai.btaa.org/pai)

Postdoc Academy, https://www.postdocacademy.org/

Response 2830

Perspectives on the postdoc roles and responsibilities

Prolonging my role as a trainee—as if a PhD wasn't long enough. But it seems like a postdoc (and often an extensive one) is a requirement for a career in academia, so if you want to do that you have no choice.

Fundamental issues and challenges

- Temporary employment, once again. postdocs are often in their early 30 by the time they start a postdoc but are still not able to "settle down"
- Minimal opportunity to gain management/mentoring skills when you are still mostly seen as a trainee yourself (might be an individual issue)
- Financially challenging in some research universities located in places with high living expenses, when salary is based on NIH stipends

Existing NIH policies, programs, or resources

As a non-citizen, I got the impression that a lot of NIH resources are not available for me. If that is a wrong impression, then the communication about this could probably be improved.

Proven or promising external resources or approaches

No response

Response 2831

Perspectives on the postdoc roles and responsibilities

In my view the academic postdoc is a mentored apprenticeship in which a scholar will advance their scientific training and professional development. This position will take the scholar beyond the graduate school level to a highly independent status preparing them to take on an independent position.

Fundamental issues and challenges

The biggest issue with the recruitment and retention of postdoctoral trainees is financial in nature. Given that the average PD time for those wanting to go into an academic position is 5-6 years this is a big stretch of time to be making less money and lower benefits than could be gained in biotech/pharma or most other industries. Especially as potential PDs consider starting a family and balancing work and life, this can be quite inhibitory.

Existing NIH policies, programs, or resources

While increasing PD pay is clearly essential it is critical that parent grants be increased accordingly. Otherwise PIs will simply hire less or no PDs moving forward.

Proven or promising external resources or approaches

No response

Response 2832

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity]) endorses the steps that NIH has taken to understand the current state of postdoctoral research training and career progression within the biomedical research enterprise.

[redacted for anonymity] believes that postdoctoral training is a formative step for those pursuing an academic career. Postdoctoral training provides protected time, dedicated mentorship, high-quality didactic and experiential training, resources to publish high-impact publications and to develop effective presentations, opportunities to develop new collaborations, write grants, and time to conduct a job search.

Fundamental issues and challenges

The [redacted for anonymity] notes several Fundamental issues and challenges inhibiting recruitment, retention, and overall quality of life of postdoctoral trainees.

These include inadequate salary support for postdoctoral trainees, particularly in expensive cities where many academic medical centers are located and rising debt for postdoctoral trainees which is substantial and a significant deterrent to candidates pursuing research training.

Additionally, NIH salary caps impose burdens when academic institutions are not positioned financially to supplement the NIH stipend. This is problematic for all institutions but particularly for departments and divisions with limited resources (e.g. where clinical services are provided at a loss, like primary care and geriatrics). It is also true for less resourced academic institutions where PIs with NIH grants cannot easily supplement salaries and benefits to livable wages from other sources. This not only leads to challenges recruiting candidates but also is a disadvantage to potential candidates from historically excluded or underrepresented backgrounds who may not have family resources to provide financial support.

We are also concerned that the expectation that institutions and, by extension, divisions and departments, have the resources to supplement faculty or staff time to support program operations can have a negative impact on mentoring and training for institutions that don’t have those resources available. This is particularly important to address given ongoing efforts to increase the racial/ethnic diversity of the

pipeline in academia, it will be particularly important to pay for the time of program directors who are from racial/ethnic minorities. Paying adequately for program director time would allow more faculty from historically excluded populations to serve in T32 leadership or faculty roles.

In addition, there are challenges accessing data expeditiously enough to meet productivity metrics early on (e.g., abstracts, papers); a lack of explicit and structured barometers for success both within and between institutions.

Existing NIH policies, programs, or resources

These are some recommendations [redacted for anonymity] has for improving existing NIH policies, programs and/or resources:

- Increase salary scale and adjust for area cost-of-living, e.g., both T32s and R01s
- Increase funding for T32/postdoctoral leadership, faculty, and administrators
- Combine loan forgiveness programs with postdoctoral training programs (T32s or K awards), in an effort to minimize the burden of debt and recruit talented trainees.
- Provide resources for postdoctoral training and coursework
- Increased the allowed tuition expenses for post-docs, including both those seeking an advanced degree, and those who are not.
- Increase the allowed per post-doc expenses to account for costs of family health insurance
- Support attendance to present at two conferences per year
- Require PIs to submit evidence of ability to mentor/train scientists and include training plans that support the postdoctoral trainee progressing towards independence
- Improve pathways to early-stage funding as well as loan forgiveness programs/incentives
- Consider parental leave and childcare stipends, including travel stipends for trainees with children to attend national conferences
- Develop clearer expectations of mentorship
- Develop clear expectations of T32 program leadership and administration (e.g., recruitment and selection practices) and support levels of faculty and staff effort commensurate with these expectations
- Provide early exposure of aging-oriented clinician trainees to researchers and potential research careers by partnering with professional societies
- Consider offering a "bridge" grant that supports the transition from trainee to faculty such that universities/institutions don't have to unilaterally bear this burden (e.g. the NIH StARR program)
- In order to build robust programs with enough slots for engagement, community building, and programmatic infrastructure, the above changes will necessitate increasing the 500K per year threshold for T32 programs.

Proven or promising external resources or approaches

The [redacted for anonymity] recommends updating the repository of NIH resources to better support individuals in finding a job after postdoctoral fellowship. This would provide incentives for people considering a postdoctoral fellowship. Also, providing resources for mentors and mentees that offer guidance for developing and implementing individual development plans (IDPs) and individualized mentoring plans would optimize the mentoring and training experience.

Response 2833

Perspectives on the postdoc roles and responsibilities

The postdoctoral position traditionally fills much the same role of an apprenticeship in other professions, where a less experienced professional works for a more experienced professional. The more experienced professional (mentor) gains the benefits of the work of the less experienced professional (trainee) for a modest salary, while the trainee benefits from the experience and connections of the mentor to eventually move on into independence and mentoring their own trainees. This mutually beneficial exchange is the basis of the academic postdoctoral position.

Fundamental issues and challenges

In brief, competition for too few slots has led to ever increasing requirements at every level of academia prolonging the predoctoral and doctoral experiences even before one could apply for a postdoc. You have people in their late 20s or early 30s who have already been working for years at the high standards of current academia for a graduate student stipend now being asked to "begin" their careers as an apprentice for a reduced salary for the privilege of mentorship. To restate, the postdoc experience asks people who have already worked hard and likely delayed their pursuit of personal life goals to work even harder and delay even longer for the ever diminishing chance of a faculty position where they will work yet harder for a pay level their friends outside of academia where making more than a decade ago. I am not oblivious to the fact that we pursue science for the love of science and not to get the highest paying job. But the current system asks postdocs to willingly cut themselves with a double edged sword of working harder for less pay and to keep cutting themselves for longer and longer. This pressure cooker has no reward structure for good scientists, and we've reached the breaking point where postdocs and graduate students have realized they are in fact well trained and highly skilled and deserve to have a life, and so they are going to careers where they are rewarded as the assets they are.

Existing NIH policies, programs, or resources

Why on earth is there a time limit on the K99? People aren't staying in postdoctoral positions because they want to, they are staying in it because science takes a long time, good science takes even longer, and the requirement gets higher and higher for a faculty position. Missing a single career milestone is terminal.

I won't say increase paylines, because I realize the reality of NIH funding. But it would be lovely to require that academic institutes hire us as full employees rather than this "gray area" of fellowship where we need to report our own taxes and take student level benefits with no retirement plan.

Limit or do away with postdoctoral positions, that by definition are in pursuit of limited faculty jobs, and create more positions and a culture of research scientists and non-tenure track positions. Recruit the person who is a technical expert to remain a technical expert rather than telling them their only change of career advancement is sitting at a desk writing grants.

Proven or promising external resources or approaches

No Response

Response 2834

Perspectives on the postdoc roles and responsibilities

Individual self-dependent training for my future job.

Fundamental issues and challenges

The minimum salary is too low.

Existing NIH policies, programs, or resources

Increase the salary.

Proven or promising external resources or approaches

Increasing the salary.

Response 2835

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity], appreciates the opportunity to comment on the request for information on re-envisioning postdoctoral research training and career progression within the biomedical space. We applaud the National Institutes of Health (NIH) for recognizing the need to reimagine young investigators' research training and career progression. The future of academic science in the United States depends on the training of young investigators. Without these investigators we will lose understanding of complex rheumatic diseases and rational treatments. The NIH has been instrumental in maintaining this pipeline through grant mechanisms that directly or indirectly support postdoctoral training. In response to the NIH request for information, the [redacted for anonymity] has compiled the following: An academic post-doc is

meant for individuals with a doctoral degree to increase their training in a research career, either building upon a foundation established during a Ph.D. training program or developing research skills after completing clinical training (MD, PT, etc.). Successful postdoctoral training is generally seen as a prerequisite for advancement into a research-oriented tenure-track position in an academic medical center. During postdoctoral training, the trainee gains skills through an apprenticeship working on an established research program with the intent of developing a rigorous independent path. When the trainee is pursuing clinical training in parallel, as is often the case, they have additional responsibilities separate from the research program that requires the protections set forth by formal research training programs to ensure adequate time can be devoted to research training.

Fundamental issues and challenges

The [redacted for anonymity], appreciates the opportunity to comment on the request for information on re-envisioning postdoctoral research training and career progression within the biomedical space. We are now observing severe reductions in the number of trainees and early-career researchers pursuing careers in rheumatology in academic research centers. This attrition will harm our capacity as a nation to advance scientific and clinical innovations for the benefit of people with rheumatic and musculoskeletal diseases. The [redacted for anonymity] submits the following:

1. One of the most significant challenges in recruitment, retention, and quality of life is the current NIH post-doctoral stipend. This needs to be increased to be competitive with current market value and standards of living. This is particularly important as some Ph.D. training programs are unable to retain recent graduates due to competitive offers from industry. In addition, the salary increase for post-doctoral training should be reflected in the funding of all NIH mechanisms, which commonly fund post-doctoral fellows.
2. Clinical trainees pursuing research careers often face lower salaries/stipends to participate in a post-doctoral training program because they are limited from holding certain appointments within their institution. For example, an MD who has completed clinical training can either take a faculty position with greater pay and benefits or remain a fellow for T32-supported research training at a much lower salary and benefits package. Allowing for research training while holding a clinical faculty rather than a trainee appointment may entice physicians to remain on a research path.

Existing NIH policies, programs, or resources

The [redacted for anonymity], appreciates the opportunity to comment on the request for information on re-envisioning postdoctoral research training and career progression within the biomedical space. The NIH has been instrumental in maintaining this pipeline through grant mechanisms that directly or indirectly support postdoctoral training. Efforts to mitigate reductions in the academic rheumatology pipeline should be pursued by the NIH and professional societies like the ACR. The rhe submits the following:

- Address the challenges of attracting physician researchers by considering an increase in the T32 salary levels.
- Re-evaluate the restriction of being able to supplement salaries for both MD and Ph.D. T32 trainees.
- Expand eligibility to include international medical graduates, enhancing their ability to stay in the US and seek citizenship, thereby expanding the potential pool of productive academic researchers.
- Provide stability of funding for a minimum of two years in all NIH-administrative supplements so that postdocs will consider applying.
- Support post-doctoral fellowships independent of R01 grants or USA-mentored mechanisms that favor international collaborations to allow the influx of foreign post-docs in the USA.
- Work with medical institutions to increase the visibility of research training opportunities for rheumatology fellows. Partner with organizations such as ACR to facilitate awareness of research training opportunities by compiling a list of active NIH T32 training programs affiliated with Rheumatology fellowships (and other non-NIH training opportunities where they may exist).
- Re-evaluate the trainee title for rheumatology fellows so they can perform clinical duties concurrently with their training.

Proven or promising external resources or approaches

[redacted for anonymity]

- Physician scientist training pathway programs such as Oliver Langenberg Physician-Scientist Training Program at Washington University in St. Louis are an example of how to recruit, retain, and promote the success of graduates from Medical Scientist Training Programs (MSTP). Keys to the program's success include focused and integrated clinical and research training, career mentorship separate from research mentorship bi-annually throughout the program, monthly program meetings for career development, and significantly supplemented stipends above the post-graduate year benchmark. As a result, the program at Washington University has resulted in 58 out of 68 graduates being retained in academic research careers in the past 20 years, with 181 NIH-sponsored grants and over $100 million in funding through NIH and other sources.
- A similar course is the VERITY/Brigham Course in Rheumatology Clinical Research. This is a course for early rheumatic and musculoskeletal disease investigators performing clinical/epidemiologic/patient-oriented research. The course participants refine specific aims for a grant or develop methods/statistical analyses for ongoing/proposed clinical research projects. Long-distance mentorship is offered after the course from a VERITY faculty member to obtain further guidance on their research project and career development. Participants are eligible to compete for a grant opportunity for up to $20,000.
- Creating Adult Rheumatology Mentorship in Academia (CARMA) was established in 2018 and has attracted approximately 100 mentees and 56 mentors. In a recent review of the program, 90% of mentees strongly agreed that they had received valuable information from their mentor and were very likely to recommend CARMA to their colleagues. For mentors, 91% were very likely to recommend CARMA to their colleagues. The top 3 areas of mentoring were discussion of types of grants, research/science topics, and developing independence as a researcher.

Response 2836

Perspectives on the postdoc roles and responsibilities

Post-doctoral researchers are highly skilled individuals who are the (quite literally) working horses of academic science.

Fundamental issues and challenges

Post-docs are being significantly underpaid, especially when you think of the highly unique skillset that a post-graduate individual has, the amount of money someone with a PhD can make outside of academic science, and in comparison to clinicians. Lack of benefits, social security, paid family leave, and childcare, and the pressure to publish and submit grants is not helping either.

Moreover, foreign post-docs that are in the US on a visa are disadvantaged in severel ways: they often are significantly underpaid (willing to work for free to get a spot in a well-known university), don't always have access to the same funding opportunities, and face additional visa-related rescrictions (for instance, to be promoted to faculty level, post-docs are required to change from a J1 to an H1B visa, which often unnecessarily delays someone's promotion and career development).

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

I'd highly recommend taking a look at the current efforts that are underway in The Netherlands, to modernize the system of 'recognition and rewards' in academia: https://recognitionrewards.nl/

Response 2837

Perspectives on the postdoc roles and responsibilities

In my (4+ years) experience, my position as an academic postdoc has developed alongside my career as a scientist. My position included years 1-2 spent applying for grants and driving preliminary research, years 3+ spent working towards publication and preparation for the academic job market, and year 4 spent applying for faculty jobs. One challenge has been that time budgets and expectations are self-driven or driven by a mutual agreement between advisor and postdoc, while the realities of future job prospects are abstract. For example, there is no clear rubric for what a "successful" academic faculty applicant will look like with regards to teaching preparation, type and scope of service contributions, research output

and funding acquisition, and other factors considered important for a faculty role. This impacts the choice of activities to pursue during postdoctoral training, such as developing coursework and teaching philosophy alongside a robust research program. I have also found that additional administrative responsibilities build during this crucial transition towards independence, including project management, mentorship for younger laboratory members, and other administrative tasks relevant to the postdoc's role in the university/department/laboratory.

Altogether, the postdoc experience appears to transition from one that resembles the early stages of a PhD (project development, research skills training) into an administrative role that resembles a junior academic faculty member. This transition can feel ambiguous, as the next career stage may or may not require the skills developed during earlier stages.

Fundamental issues and challenges

The choice to pursue particular postdoctoral training experiences includes

1. scope and topic of the research,
2. relationship with mentor, and
3. quality of life in the place of residence. I believe that the third point currently drives many of the challenges facing postdoctoral recruitment, since postdoctoral salaries must be considered before choosing a location for postdoc training over 3+ years.

To put a finer point on this, many postdoctoral researchers past an age (30+ years old) where retirement savings, children, aging parents, healthcare expenses, work/life balance, and other issues are at the forefront of life and career planning decisions. I believe any of these can motivate an individual scientist's decision to stay in a given laboratory or even pursue postdoctoral training at all. Cost of living balanced with institutional training environment to motivate me to choose Philadelphia for my postdoc, rather than other more expensive cities with institutions that would serve my training goals such as Boston, San Francisco, or New York. The uneven cost of living between these environments has certainly motivated this choice for many of my postdoc peers.

Existing NIH policies, programs, or resources

I have benefitted from a successful F32 NRSA fellowship to fund most of my postdoctoral training, in terms of networking opportunities, research visibility, and freeing up resources and funding in my sponsor's laboratory. It would have been challenging to live on the NRSA stipend in a more expensive city and meet my other financial and life goals. I believe that NIH fellowship programs should increase postdoctoral stipends commensurate with other factors such as cost of living and health insurance costs. The Howard Hughes Medical Institute (HHMI) has just announced a $70,000 starting salary for postdocs and certain universities (e.g. the University of Pennsylvania, Princeton University, state universities in California and Washington) have announced recent increases. I believe that competitive NIH postdoc policies should include a similar stipend increase and healthcare considerations to meet the needs of postdocs today and remain competitive with these other institutions.

Proven or promising external resources or approaches

Extending or expanding career transition mechanisms (e.g. the K99/R00 mechanism) would serve postdocs well. Many postdocs who started before the COVID-19 pandemic did not receive K99 eligibility extensions despite their research being demonstrably affected by the pandemic. I believe this mechanism should be extended or expanded into other opportunities for career training, such as industry, policy, and science administration. Furthermore, I believe there should be additional mechanisms in place to promote the careers of senior staff/project scientists at academic institutions outside of government-specific opportunities. Given the high level of competition for academic tenure track jobs, these positions would be an excellent investment for laboratories to maintain long-term research programs and retain institutional knowledge that is lost when postdocs transition to other careers or locations.

Response 2838

Perspectives on the postdoc roles and responsibilities

I believe that it is a training period that enhances the experience and research depth of the candidate. Typically, recently minted PhDs are somewhat narrow in their research experience having been mostly

trained and guided within a single research group. The Postdoc allows them to extend their training and thereby become competitive and capable of success in an independent program.

Typically, I have to provide significant training to postdocs in order for them to succeed in learning a new field, and moving to a stage of productivity in that area.

Fundamental issues and challenges

There are inequitable challenges for entering postdocs to move institutions and sometimes, fields. These must be addressed with sufficient and appropriate support, such as relocation costs and accommodations for parental rights. However, the majority of postdocs require a large degree of additional training and guidance, and the degree of subsequent productivity is quite variable. The fact that most postdocs have been led to believe that they don't require such training has created a disconnect in expectations, and it makes it difficult to provide them the training they need to be successful.

Existing NIH policies, programs, or resources

As PhD training has proven to be insufficient for most independent scientists to succeed, there needs to be recognition that postdoctoral training is training. As such, it should be monitored and regulated not just by individual PI postdoc training plans, but also through university and disciplinary oversight. Learning objectives for postdoctoral training should be explicit, and should be used to monitor success.

Proven or promising external resources or approaches

No response

Response 2839

Perspectives on the postdoc roles and responsibilities

The postdoctoral fellow is a skilled scientist in the sense of the ability to think deeply about a project and design a plan with less and less "guidance" from the head of the laboratory in order to carry out research that tests or modifies a hypothesis. Further, this person is someone, who will grow into a laboratory leader over her, his, their tenure in the laboratory. As part of this growth, a postdoc should be given the opportunity to train/educate others, who are earlier in their scientific pursuits, including undergraduate and graduate students, to become better researchers. They should not, however, be the only person responsible for such training.

Fundamental issues and challenges

As I am sure most people, who responded to this survey, would state the stipend/salary issue is a major challenge in academic research to recruiting and retaining postdoctoral trainees. Regarding the issue of the overall quality of life would also include the lack of excellent and affordable child care support for our trainees. As a PI, I am very happy that my postdocs have children, but realize that this has not only a financial impact on them but also a downstream impact on their science, which in turn clearly impacts the quality of their lives, as they feel that they are a disadvantage relative to those without children.

Existing NIH policies, programs, or resources

Obviously, the first change would be to lift significantly the stipend levels of postdoctoral researchers that make them competitive with biopharma/biotech. However, if this were to be implemented the NIH should be obligated to increase the funding to existing grant holders, who currently have postdoctoral fellows on their grants, to cover the new stipends. Perhaps the NIH could open a new series of small grants that help postdocs with daycare expenses. Allow more senior postdoctoral fellows, beyond their 5th year, the opportunity to obtain funding using the K99/R00 route, which now does not take into account female postdoctoral researchers, who have started families during their postdoctoral training that interferes with their "scientific" progress. This seems inherently unfair.

Proven or promising external resources or approaches

No response

Response 2840

Perspectives on the postdoc roles and responsibilities

Postdoc is a crucial step to transition from being a student to having the possibility to open your lab and manage a team of people working together in answering important questions to understand better humans and the environment where we live.

Fundamental issues and challenges

Some challanges to recruitment are fundings. Several PIs do not have the funding to support postdocs in their labs, mainly considering the recent salary increase, that was needed but was not paired with increase in funding. DEI and salary are important aspects that play crucial roles in the postdoctoral quality of life. Postdocs are getting more aware of their values and they look for places that share the same values and where they are valued and seeing as a resource.

Additionally, internationally postdocs are a very important resource for many laboratories and it is challenging for them to be as competitive as the American colleagues on the job market since there are less opportunities for them to apply for fellowships.

Existing NIH policies, programs, or resources

Ideally there would be:

- more financial support for PIs that hire postdocs
- more fellowships available for international postdocs
- push the institutions to hire Faculty that support DEI activities
- more grants that support DEI activities or postdoc career development activities
- push institutions to establish official postdoc training programs

Proven or promising external resources or approaches

Ideally there would be:

- more financial support for PIs that hire postdocs
- more fellowships available for international postdocs
- push the institutions to hire Faculty that support DEI activities
- more grants that support DEI activities or postdoc career development activities
- push institutions to establish official postdoc training programs

Response 2841

Perspectives on the postdoc roles and responsibilities

It is a stage of training that prepares one to become an independent investigator.

Fundamental issues and challenges

The purpose it serves is rather narrow, unless someone wants to become a professor, there are very few career trajectory that would require a postdoc.

As less and less people want to become faculty, or put it another way, that there are more and more PHDs trained but roughly the number of faculty position stays the same. It gives the people the sense that become faculty is just too hard, so people don’t ever try it anymore. If PhDs don’t want to become faculty, then they have very little reason to do a postdoc.

Especially you consider how laughable they are getting paid. Why would anyone in their early 30s and just forming a family want to go through that?

Existing NIH policies, programs, or resources

pay postdoc better.

increase the numbers of faculty positions, and shorten the avg length of postdoc. both makes it a more feasible option for people who might be interested in

Proven or promising external resources or approaches

No response

Response 2842

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salary. In my opinion, the salary is the number 1 issue and challenge faced by Postdocs. For someone to study many years and then do a PhD and end up getting paid very little is a huge challenge. The only reason a postdoc would live with this challenge is because they are passionate about science. But at some point, life priorities will result in postdocs leaving for other jobs such as industry just for the extra money which is in most cases at least 2x-3x what a current postdoc makes.

Existing NIH policies, programs, or resources

Fix the NIH review system. My experience with grant submission has been very discouraging. The reviewers are terrible and in many cases dont even read fully through the grant. They add weaknesses in the summary statement in which the response is in the grant and they just need to read through it. The future of a postdoc's career is usually tied to grants, especially training grants such as K99/R00. So if reviewers are not fair in their review process, this significantly impacts the applicant. I dont know what the exact solution is, but all I want is for my proposal to be reviewed in a fair manner to me.

Proven or promising external resources or approaches

No response

Response 2843

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The biggest issue is funding. With the increasing cost of living, postdocs are not being enough for the amount of work they do. Not being paid enough directly impacts recruitment and retention.

Existing NIH policies, programs, or resources

NIH needs to become more friendly to people who are not US citizens/permanent residents. Not being a US citizen/permanent resident puts us at such disadvantage and we are not able to apply for so many career development training grants, F32 or T32. Given the high percentage of postdocs who are not US citizens/permanent residents and the high quality of work that is being done by them despite being at such a disadvantage, they should be provided with somewhat equal opportunities as well.

Proven or promising external resources or approaches

No response

Response 2844

Perspectives on the postdoc roles and responsibilities

The primary role of a postdoc is to do research. If they want to continue on to a faculty position, then their time as a postdoc is also a training opportunity for their future as a PI. However, I think that a postdoc is much more a worker than they are a trainee.

Fundamental issues and challenges

The low salary and subpar or nonexistent benefits (retirement, childcare) are the biggest problems with doing a postdoc. I don't think any other issue can hold a candle to the poor compensation that postdocs receive.

Existing NIH policies, programs, or resources

Postdocs need to be compensated fairly for their work and expertise. If the NIH wants to recruit and retain postdocs, postdocs need to be paid more. I understand that this is difficult due to the funding supplied by congress, but I really don't think any other change to postdoc training will matter if salaries remain so low.

Proven or promising external resources or approaches

No response

Response 2845

Perspectives on the postdoc roles and responsibilities

Additional training while working as scientist advancing the field of interest

Fundamental issues and challenges

Pay

Existing NIH policies, programs, or resources

Increased pay

Proven or promising external resources or approaches

Increasing pay

Response 2846

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

our institute keeps their levels at NIH levels, and one of our recruitment issues is lack of funding—people getting industry jobs and we can't compete.

Existing NIH policies, programs, or resources

Disparities with F32 funding, how much funding, and how that works out for % effort for their project? The percent effort is shrinking all the time, and nothing has been done to increase funding for these fellowships so a student can allocate more effort.

K funding—salary levels vary by institute and ether don't cover all salary, (sometimes even covering less than the 75% effort) while other institutes result in the PD's to receive large raises.

NIH should allow for budgeted PD raises? Outline funding cuts so people understand why a cut happened, and how they can still perform the research.

Proven or promising external resources or approaches

Maybe NIH can implement some sort of accountability from PI's regarding mentorship? Our institute tries to do this with the annual Postdoctoral Development Plans, but if required by NIH, maybe it will be more formal.

Response 2847

Perspectives on the postdoc roles and responsibilities

1. Opportunity to explore challenging and risky research questions
2. Opportunity to shadow a group leader, learn project management skills, and foster a group of scientists with similar research direction
3. Opportunity to mentor graduate students
4. Opportunity to establish potential lifetime collaborations

Fundamental issues and challenges

1. Low salaries
2. Poor job security
3. Poor job benefits (e.g., child support)
4. Lack of independence of thought and research direction
5. Short-term duration for postdoctoral fellowships
6. Few tenure-track academic posts
7. Pressure to "publish or perish"
8. Dependence of independent funding support (ie., funding should belong to postdoctoral fellowships and not PI/institution of training)
9. Low level awareness and mentorship
10. Needless administrative workload

Existing NIH policies, programs, or resources

ALL

1. Expanding funding support for non-citizens
2. Increasing nominal value of funding to match inflation

Proven or promising external resources or approaches

All the above

Response 2848

Perspectives on the postdoc roles and responsibilities

Lead more at least 2 projects managing the planning, execution, and keeping up with literature. Working more than official 8hrs and coming on weekends too. Giving less time to the family. Due to increased rent of 1 apartments, 55% of my salary goes towards paying my rent. After paying installments, not much is left for my family to enjoy.

Fundamental issues and challenges

Very low salary.

Increased rent.

Increased prices of groceries.

More expenses for an infant.

More expenses if the spouse is not working or cannot work due to limited educational background or work experience.

Existing NIH policies, programs, or resources

Increasing starting salary of a Postdoc to at least $75000 will enhance the quality of life.

Proven or promising external resources or approaches

Webinars and seminars for professional development are really great!

Response 2849

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Need to increase salary with cost of living adjustment

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2850

Perspectives on the postdoc roles and responsibilities

Developing an independent research project and fulfilling it under supervision of a professor.

Fundamental issues and challenges

Low salary, high expectations from individuals to produce data constantly.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2851

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Financial difficulties as a result of salary that doesn’t commensurate with qualifications is topmost among challenges postdocs across the country face.

Foreign postdocs are sometimes also faced with immigration issues.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2852

Perspectives on the postdoc roles and responsibilities

A scientist working on independent research projects under the aegis of an established lab. The postdoc designs their own research plan, in consultation with the PI. They also train more junior staff or students who may help with their research, and may act as a mentor as well. Postdocs are expected to be working toward leading a lab of their own, but I think this expectation is unfortunate and precludes a lot of

valuable research and mentoring that more senior (postgraduate) lab members could perform if they were allowed to stay in labs for many years without needing to go on the job market.

Fundamental issues and challenges

Pressure to publish (only means we have of measuring "productivity") leads to intense work requirements, even without having a PI put those pressures on the researcher. Pay is not good compared to other careers I could enter with my skills at this point in life. Moreover, the outlook for getting an academic job is poor and the competition for tenure-track positions seems cutthroat and demoralizing, so I'm not confident the academic track will ever result in better pay or more stability/job security.

Existing NIH policies, programs, or resources

Collect and legitimize alternative metrics for "productivity" besides publications (e.g., extent of collaborative work and references from collaborators; ways of valuing teaching, mentoring, and service work that is expected of "good" senior scientists, but rarely rewarded).

Funding for postdocs who do not wish to compete for tenure-track positions or become head of an independent lab, but would like to stay in academic research as a career, making a modest but improvable salary.

Proven or promising external resources or approaches

Sorry that I can't think of examples!

Response 2853

Perspectives on the postdoc roles and responsibilities

Independent researcher

Fundamental issues and challenges

SALARY, BENEFITS, RETIREMENT, PARENTAL LEAVE

Existing NIH policies, programs, or resources

PAY AND BENEFITS

Proven or promising external resources or approaches

PAY AND BENEFITS

Response 2854

Perspectives on the postdoc roles and responsibilities

I believe that an academic postdoc is an extension of our PhD training, with the added advantage of having more freedom to execute, plan and choose our projects. It's a chance to gain the kind of independence that you don't always achieve within the limits of your PhD program. Whether that Independence is to start your own lab or to choose a different career route should not matter.

As a postdoc, it is not just our responsibility to learn and gain independence, but also to teach others. As such, trainees should get the opportunity to teach and mentor during their postdoc, so they have a sense of what managing people or a lab would feel like.

Fundamental issues and challenges

I think one of the biggest hurdles with recruitment and retention of academic postdocs is the pay/salary. Postdoctoral researchers are often underpaid as compared to their counterparts in the industry, which makes retention difficult. Additionally, the lack of an alternative career path in the academic sector (other than being a PI and starting your own lab), contributes further to the lack of retention of academic postdocs. This disparity unfortunately has a profound effect on the overall quality of life of postdocs, especially those that are looking to have a better work/life balance.

Existing NIH policies, programs, or resources

Most postdocs are paid as per the NIH standard; hence I believe that this may be the first step to increasing recruitment to the academic sector. Additionally, introduction and creation of separate, additional career paths apart from being a tenure track professor would also increase the retention and recruitment of postdocs in the academic sector. Improved pay and improved chances for growth/ increase in career options will contribute to improving the quality of life as well.

Proven or promising external resources or approaches

Increasing engagement with the postdoc community, (like this RFI initiative) would be a good way to address issues.

Response 2855

Perspectives on the postdoc roles and responsibilities

I've viewed the academic postdoc as a stepping stone toward running my own independent academic lab. During my postdoc, I aimed to learn how to approach problems from new angles, expand my skillset and breadth of knowledge, and develop a unique research trajectory that will define the lab I run. In addition, I aimed to gain further experience grant writing and mentoring.

Fundamental issues and challenges

While I always understood that the postdoc would be a challenging phase of my career (as would grad school and becoming a new PI), the current state of the academic postdoc has deteriorated to the point where it is challenging to continue. Indeed, it often seems like there are no paths forward other than to leave academia altogether. What makes the situation particularly discouraging is hearing from new PIs how difficult it is to hire good postdocs (let alone ANY postdocs) right now with so many opportunities available in the private sector. Therefore, it is no longer that I have to "get through" the postdoc to establish my own lab, but now I worry even more so about the next steps. That is, even if I do land the TT faculty position I desire, the task of getting the lab up and running and hiring high quality postdocs seems nearly impossible. This, together with the stresses of securing funding, struggling to pay rent in a high cost-of-living area, among many other things make it all too obvious that the academic postdoc is not viable in its current state. The options in industry (even industry postdocs) essentially guarantee double or higher salary, better and well recognized work-life balance, and overall a vastly improved quality of life. There is no way I can start a family right now with the low funding, but leaving academia would allow me to do so. Oh ya.and it felt like a slap in the face when the K99 eligibility window extensions were removed. I was a starting postdoc at the beginning of covid and had no data for a year because of quarantine restrictions.

Existing NIH policies, programs, or resources

It's so obvious that paying postdocs better would make the world a better place. Because I am so stressed about my personal finances, the complete lack of any retirement savings in my late 30's, the inability to start a family, the K99 timeline, writing grants (For my PI), etc.there is no time to critically think about my experiments and conduct them in a thoughtful way. The current system forces quick, unthoughtful science and in my opinion is dangerous because it also promotes data mismanagement and fabrication. When postdocs are expected to secure their own funding, write grants for their PI, do experiments, mentor the newer postdocs and grad students in the lab, and teach courses, all while writing their manuscripts and applying for jobs, it would at least be nice to not have to stress about living with 5 roommates and whether I'll be able to eat anything other than a frozen dinner since I have to go back to lab at night to make sure I can accomplish all of the things necessary for me to achieve my career goals. The K99 needs to be reworked—postdocs should be able to apply for funding earlier with less of an expectation on publishing in the first couple of years. Publishing takes forever right now due to how overburdened everyone is, among other things, and it is insulting to have a K99 rejected for the lack of a postdoc publication. There need to be more resources for child care. Ultimately, if postdocs were paid better they would be able to focus more on their work, do thoughtful, careful and impactful science, have higher self-motiviation, and not be facing an existential crisis that is causing the current brain drain of academic postdocs. We just want to feel valued.

Proven or promising external resources or approaches

More institutional support. Institutional postdoc associations are in a sad place ever since COVID. The moral is low, people are no longer excited, everyone is leaving for better pay, so why not leave and do the same? There needs to be an increased sense of professionalism in what a postdoc is. At times, the postdoc and postdoc associations seem very childish—almost an excuse of a profession to not join the "real world" and tackle real issues. I think more professional events, or even meetings with NRSA, K award, etc. postdocs would help make this seem more like a profession and less as a hobby. Again, pretty much everything would be better with increased pay. When postdocs are happy (which they aren't right now), it's a positive feedback cycle. More postdocs will be encouraged to join the lab (instead of now when I tell them it isn't a good choice to move to a high COL area), postdocs will be more encouraged to train others as well as seek out new skills, postdocs will more collaborative and productive, and overall postdocs will be more satisfied with their positions when they feel valued and can go home and night knowing that they aren't one month's rent away from living on the streets. PAY US BETTER. But it's important this burden does not fall on PIs, or else how will I hire anyone as a new PI. -sincerely, a concerned postdoc that wants to stick around and see an improved, healthier academic system wherein trainees are happy and valued.

Response 2856

Perspectives on the postdoc roles and responsibilities

They receive advanced training and research opportunities, and provide high-level assistance and collaboration.

Fundamental issues and challenges

A lack of adequate and reliable funding.

Existing NIH policies, programs, or resources

I think all postdoc programs could benefit significantly from training in science communication.

Proven or promising external resources or approaches

No response

Response 2857

Perspectives on the postdoc roles and responsibilities

I've heard early/first-post-docs are for learning new skills or becoming familiar with new fields, and later-post-docs are for working on one's own projects; however, later post-docs have less chance of becoming professors as they are seen has having something wrong with them. I take that to mean only people who stay in the exact same niche after graduate school have a serious chance of becoming professors, which seems poorly thought-out since more complicated topics require broader expertise.

I have also heard that where graduate students learn to think through a research project, post-docs learn to manage multiple research projects and begin mentoring undergraduates. I think this is designed for social-climbers who think the end goal is managerial positions, social status, and prestige.

Fundamental issues and challenges

Academia will never outcompete industry with monetary reward. Instead academia offers academic freedom—in this context, the freedom to study the topic or problem the individual thinks is important. This freedom is rarely offered at the post-doc level. Instead post-docs must compete to become professors in order to obtain academic freedom.

Biomedical Academia trains too many people for professorship. Too many graduate students expect to become professors; however, there is too little funding for that to be realistic. Moreover, increasing funding would only be a temporary solution since PhDs grow at a rate far above the necessary replacement rate. Mathematically, if a professor trains more than one student to become a professor it will be twice the rate required for replacement. While some students may go to industry, at least half of students in my class plan to go to academia. If we assume a professor trains a mere six students, they are at three times the replacement rate. In the face of this basic math, newly minted PhDs are forced to realize that academia

has too much competition. It is simply unrealistic to hope to outcompete other post-docs and become a professor.

If we maintain the current career training narrative, this extreme competition eliminates the incentive to stay in academia and thus the natural response is to pursue other career paths in industry.

The fundamental solution is to create research positions that do not train, manage, or mentor but do retain a large amount of academic freedom.

Existing NIH policies, programs, or resources

While I'm not deeply familiar with existing policies, moving funding away from graduate students and towards positions analogous to PhD level staff-scientists should balance out the current crisis while preventing future repeats. This should minimize disruption to the research, and possibly even improve spending efficiency.

I would also encourage funding classical research professors—who are in the lab doing work rather than constantly writing grants. Specifically, not funding more graduate students unless there is a dramatic increase in demand from industry in the niche field.

Proven or promising external resources or approaches

I have read of non-profit research institutes outside of academia offering fellowships (2year) or even long term (6year) professor equivalent position funding for researchers without managerial responsibilities. Shifting funding towards grants such as these would be good.

I would also point out that many old-time famous scientists were not PIs. Watson and crick were the only authors on their famous paper. It is important to recognize these researchers themselves, rather than merely attribute all their work to their bosses. I recommend creating awards specifically for this class of non-managerial scientist. That type of recognition would be a substantial social incentive.

Response 2858

Perspectives on the postdoc roles and responsibilities

independent researcher who generates ideas and executes research to develop their own independent research program as they receive mentorship from their PI and gain mentorship experience

Fundamental issues and challenges

low salary is a huge challenge in addition to lack of benefits such as retirement plan, childcare, immigration benefits.in addition, bullying as a mean to use postdocs as labourers drives people out of academia.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2859

Perspectives on the postdoc roles and responsibilities

I see the postdoctoral position as the place where a researcher consolidates their knowledge and gets the freedom for independent thinking. During the postdoctoral training a researcher learns new skills that will prepare them for a future position as a principal investigator, industry or other jobs. Postdocs are highly trained scientists.

Fundamental issues and challenges

1. Low salary (imposible to live with this salary for postdocs with family). Postdocs are normally over 30 years old. Most of them with family. They can't afford living in underpaid conditions.
2. Poor benefits (most universities don't give retirement plan or help for daycare). Universities don't do much for postdocs as they do for PhD students.
3. Poor work/life balance. Its getting really hard to publish and stay in academia. Those who succeeds normally work 6 or 7 days a week.

Existing NIH policies, programs, or resources

Increasing the postdoctoral salary and benefits. That is the number one thing to change.

Proven or promising external resources or approaches

Postdocs are normally people over 30 years old. They are highly trained and smart. They are not leaving academia for the work environment or the training, they are leaving because they cannot afford living underpaid.

Response 2860

Perspectives on the postdoc roles and responsibilities

High skilled cheap workers.

Fundamental issues and challenges

Low wages for postdoctoral scholars specially ones with family really impacts their quality of life.

Existing NIH policies, programs, or resources

Increase in wages as per industry standards so that the skill set is properly remunerated for scientists in academic world.

Proven or promising external resources or approaches

Increase in job satisfaction by providing proper mentoring and competitive remuneration as per industry standards can help to improve the work—life conditions tremendously. They are more skilled than workers arriving on H1B visa but paid poorly.

Response 2861

Perspectives on the postdoc roles and responsibilities

As a postdoc, I am not only responsible for research, but also for general lab maintenance, student mentorship, and funding acquisition. This career path is a necessary intermediate step to a faculty position, which is my ultimate goal.

Fundamental issues and challenges

Salary levels should vary depending on location and factor in cost of living. Postdoc fellowships should include funding for benefits (insurance, retirement). Child care allowance should be included.

Existing NIH policies, programs, or resources

I would have appreciated more guidance on navigating NIH grant submission—not necessarily writing the application, but navigating relationships with SROs and POs. A description of how to select an appropriate institution

Proven or promising external resources or approaches

No response

Response 2862

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is an opportunity for continued training and development in two equally important ways. First, as a means to expand scientific training involving new subjects/fields, and/or techniques. Second, as a means to expand training in regard to career development and to gain experience relevant to those seeking an academic faculty position (ex. grant writing, personelle training/management, project management, ordering and budget management etc.). Generally speaking, I view the role of the postdoc as primarily independent but with guidance from the PI predominantly related to career development. It is also an opportunity to build one's network and CV-relevant accomplishments (publications, grants, awards, etc.) in the field of interest. In regard to general research responsibilities, I feel that a postdoc should have their own project(s) that are sufficiently differentiated from their PI and largely managed independently (albeit with guidance from the PI), which would serve as the foundation for their own future lab and career. However, a postdoc is generally also expected to assist with the needs of the PI in accordance with their current and future grants and applications.

Fundamental issues and challenges

The primary challenge for postdocs is the low salary coupled with the expectation or necessity for long work hours. Many prospective postdocs have spent the last 4-7 years in graduate school earning an extremely low salary/stipend, often resulting in personal debt and must also start or continue making student loan payments. Additionally, at this stage of their life/career, many have additional essential life expenses. On a postdoc salary it is virtually impossible to afford to buy a house (especially for those not in a household with a second income). Some may already have or wish to start a family, which one can hardly afford to support on this salary. This leads a majority of grad students to gravitate toward the considerably higher paying industry positions. Another major issue is that many postdoc positions come with the expectation of exceptionally long work hours and thus a minimal work-life balance (especially if one wants to be competitive for a future faculty position). Calculating out the effective hourly wage for a postdoc (especially one working 60+ hours/week) shows just how undervalued we are compared to almost any other position in or outside of the sciences. Furthermore, there is no guarantee that the desired position will ever be achieved despite these major sacrifices, due to their highly competitive nature. Finally, while career transition grants such as K-grants offer a great deal of promise, there is a short time frame for their application, which often competes with meeting PI expectations and thus further necessitates extra long work hours to be achievable. In summary, postdocs are often extremely exploited, undervalued, underpaid, and over-worked, under constant stress, and often fail to recieve the necessary career mentoring and freedom to achieve their career goals and maintain a reasonable quality of life.

Existing NIH policies, programs, or resources

Alongside increasing the criminally low salaries afforded to postdocs, the various training grants (ie. T— and F—grants) should provide higher stipends, as they are often only beneficial on one's CV. Many institutions do not even provide benefits to postdoctoral fellows, leading to an effectively reduced income to cover these additional expenses. These grants and NIH policies in general also make it nearly impossible to achieve any sort of raise (as would otherwise be standard in any other field, especially at this level of expertise) other than the meager (and only suggested) increase after each year as a postdoc. Furthermore, while it is commonly recommended to change fields from grad school to postdoc in order to broaden one's knowledge-base and explore other interests, this can make it exceptionally difficult to be successful, as the need for increased training time makes it difficult to reach critical milestones oobtain valuable grants and awards in the required time-frame to stay competitive. Additional grants for field transitions would be very helpful for those wishing to stay in academia while changing their field of interest. Additionally, policy changes to deter exploitation of postdocs (such as not allowing for the freedom necessary to achieve these grants and differentiate oneself from the PI) are greatly needed. Many PIs view postdocs as a means to accomplish their own project goals with little to no need for the provision of training or guidance. Finally, the shortage of desirable academic positions is inherently discouraging for postdocs, given the otherwise highly undesirable nature of the position. Increasing salaries as well as the availability of grants (with higher stipends) and ultimately achievable and desireable academic career opportunities and better mentoring is desperately needed if more postdocs are expected to be recruited and retained.

Proven or promising external resources or approaches

Industry positions are made desirable through higher salaries commensurate with the level of training/experience/expertise and a reasonable work life balance (ie. 40hr weeks with the potential for compensated overtime). Additionally, many PIs do not provide sufficient mentoring or offer promising project opportunities to properly prepare PhD students for an academic career and this is often discovered far too late.The current system favors those who join strong labs, never change fields, and are fortunate enough to work on very successful projects under very reputable PIs (despite this not necessarily correlating to future success as an independent academic scientist). This system discourages the majority of potential postdocs who were not so fortunate from remaining in academia. Other PIs drastically exploit and overwork their grad students thereby severely jading their view of academia. Improving the experience and mentoring for grad students seeking academic careers would go a long way toward enhancing postdoc recruitment. Furthermore, providing "fresh-start" opportunities for those wishing to change fields or labs/mentors (potentially from overly exploitarive or otherwise undesirable labs/mentors) that will better prepare postdocs for their desired career would further help with retention. There is a well-known "academic clock" by which postdocs must meet critical milestones (ie. 4 years for a K99) before their chances for achieving their desired career diminish significantly and thus lead them to turn toward industry jobs. Additionally, while career transition grants can provide a fast-track to independence there should be other opportunities to work your way up to an independent faculty position more slowly without effectively getting "stuck" in positions such as staff scientist (which is somewhat notorious for being harmful to achieving independent faculty positions in academia). Finally, to compensate for low academic job availability, alternative pathways, such as an entrepreneurship postdoctoral training program may also expand interest and retention.

Response 2863

Perspectives on the postdoc roles and responsibilities

An opportunity for a recent PhD holder to further their training, skillset and independence, preparing for an established career in academic science.

Fundamental issues and challenges

- Low, non-competitive salaries
- Quality of postdoc experience largely depends on the mentor and institution, so there's a huge ariability across the board
- Culture of "publish and perish" facilitates the creation of toxic work environments and poor science.
- The "PI" is the ONLY 'succesful' exit of the postdoc, which shouldn't be the case. Biomedical research requires a lot of staff scientists in permanent/semi-permanent position, who are highly skilled to do research but DO NOT want to progress into the managerial role of a PI position.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2864

Perspectives on the postdoc roles and responsibilities

Training on being more independent, being an appropriate mentor and manager, and learning expertise on a technique one hasn't master yet.

Fundamental issues and challenges

Lack of financial stability. Currently I am a 5th year postdoc with a salary of 66,100 living in NYC, one of the most expensive cities to live in. As a postdoctoral fellow for 5 years, I have been penalized, instead of rewarded, with dealing with my own taxes, having health insurance counted as imputed income, which forces me to pay more money on taxes, and I have no retirement and other benefits. With lack financial

stability, as a child-bearing woman, as most entering female postdocs are, I am forced to stall family-life plans, or go through with them and suffer the financial/emotional costs, and career setbacks given the rigorous NIH timeline for funding. I have a partner who has a PhD and went down the biotech track five years ago (same time as me), and currently they make 4x the amount the salary a typical postdoc makes. If you compare our base salary and salary increases over the five year span, it does not match AT ALL. Why stay in a career where you are not pay your worth and effort, and are not given appropriate experience-based raises?

Existing NIH policies, programs, or resources

Set the minimum to match competitive salaries that biotech companies pay their postdoctoral fellows/scientists. Increase grant funding (i.e. RO1s) to allow PIs to pay their postdocs competitive salaries. Require/encourage universities to pay a portion of a postdoc salary if you can't increase RO1 funding.

Proven or promising external resources or approaches

Response 2865

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity] appreciates the opportunity to provide feedback to the National Institutes of Health (NIH) on the re-envisioning U.S. postdoctoral research training and career progression within the biomedical research enterprise. [redacted for anonymity] is a public, academic health science center in [redacted for anonymity], in the top 2 percent of research institutions receiving NIH funding. Despite this funding, [redacted for anonymity] postdoctoral (postdoc) population has decreased over the last decade from 150 to 100 individuals, with two-thirds being international. Essential to [redacted for anonymity] research enterprise, postdocs are individuals who have received a terminal degree of Ph.D. or equivalent and are engaged in temporary research training. Because most postdocs still have not decided on a career path, [redacted for anonymity] requires all postdocs to enroll in a certificate program to foster the development of transferable skills.

Fundamental issues and challenges

Several factors have contributed to the decline in our postdoc numbers. Low stipends set to the NRSA scale are one reason, but career instability after postdoc training is a greater challenge. Many postdocs have lost interest in pursuing academic careers after witnessing mentors and early-stage scientists struggle to sustain active research programs, cope with burdensome institutional expectations, and maintain a healthy work/life balance. Another challenging factor that has driven promising scientists away from research is inequality in the training and training environments provided by mentors.

Existing NIH policies, programs, or resources

To address the above challenges, the NIH should continue to emphasize and strengthen programs that improve the research environment, including monitoring pay lines, identifying investigators at risk of losing grant support, and supporting career development and recruitment programs for postdocs. Regardless of the funding mechanism, the NIH can encourage stronger mentorship by requiring a mentorship plan be submitted for every trainee on a research grant and by providing guidelines on its research awards as to the expectations of the institutions, mentors and trainees.

Proven or promising external resources or approaches

More support for programs like Standford's Prism program and K99s and implement requirements for the use of mentor/trainee compacts and individual development plans, and establishment and implementation of AToRT policies.

Response 2866

Perspectives on the postdoc roles and responsibilities

The purpose of an academic post-doc is to gain additional experience prior to launching a career in academic science, biotech, or pharma. For those progressing to tenure-track positions, an academic post-doc provides time to amass data and resources necessary to launch an independent lab. Training gained

during the post-doc period is somewhat distinct from the pre-doctoral period when the focus is learning how to perform scientific research.

Fundamental issues and challenges

Competition with higher paid positions in non-academic positions is a major limiting factor. Additionally, post-docs are often expected to work longer hours for these lower wages.

Existing NIH policies, programs, or resources

The NIH could increase the stipend paid on all training fellowships (F30/F31/F32/T32) to match the current academic standard, which is around $45,000-50,000 for pre-docs and $60,000-70,000 for post-docs in major academic centers (or perhaps a tiered system based on cost of living). The NIH could consider supporting the salary of non-US post-doctoral fellows through these mechanisms. The NIH could decrease the administrative burden of running training programs by allocating a pre-negotiated number of slots to academic centers based on NIH funding levels.

Proven or promising external resources or approaches

I'm not sure.

Response 2867

Perspectives on the postdoc roles and responsibilities

Definitions provided by both the NIH and the University of California (UC) describe the postdoctoral researcher as an individual employed in a temporary position with fixed end dates for the purpose of receiving additional academic preparation and research training for academic/research careers. In general, I agree with the work duties and training goals ascribed to the postdoctoral position. I do believe, however, that the inclusion of the term "temporary" in the position descriptions for postdocs does not accurately reflect the years that most postdocs spend in this position. A recent survey showed that the average respondent spent 6 years between completing a PhD and obtaining a faculty position (Hsu et al., 2021, Sci Adv.). Relatedly, there is a disconnect between the NIH's 5-year limitation on the postdoc job period and the average time spent as a postdoc. I recommend that the NIH remove the "temporary" characterization from their postdoc definition as to not minimize postdocs' dedication to science. I also recommend the NIH extend the postdoc period to at least 6 and the eligibility of career development grants (like the K99) also by at least 1 year.

Fundamental issues and challenges

The union representing postdocs across UC fought hard during contract negotiations on several issues that, we believe, affect recruitment and retention of postdocs in academia. The biggest issue was fair compensation that reflects cost of living. In an effort to offer equity in the variance in cost of living between the 10 UC campuses, we made the following proposal that I think would work well for the NIH. We proposed a base salary for postdocs across all campuses and a supplementary stipend to account for higher cost of living in some cities. Specifically, we proposed that base salaries be determined such that 30% of the salary is equal to the average cost of a 2-bedroom apartment in the city/campus with the lowest cost of living. For example, if Merced, CA had the lowest, average cost for a 2-bedroom apartment, at $1,400 a month, a postdoc with 0 years of previous experience should start with a salary of $56,000 (determined so that rent is 30% of total salary). Then, for all other cities with higher costs of living, the difference between the average cost of rent for a 2-bedroom apartment in Merced vs. the other city will be offered as a stipend. For example, a postdoc at Level 0 hired at [redacted for anonymity], with an average rent for a 2-bedroom apartment at $3,000 (and a $1,600 rent difference with Merced), will receive the $56,000 starting salary plus $19,200 rent stipend. Again, this system was proposed to keep salaries equitable across cities with different costs of living and prevent rent burden amongst postdocs. This system could also be enacted at NIH, using national-level rent data. *Please note I am a volunteer with the union, not a formal representative.

Existing NIH policies, programs, or resources

An issue in the training ecosystem that I have witnessed is an absence of accountability for poor mentorship and/or abusive behavior from a mentor towards their mentee(s). NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded PIs and mentoring

committees at all institutions receiving NIH funding, similar to those provided under NIH mentored training programs. Such training should be offered to non-PI's acting as postdoc mentors. Mentors who are found to violate the ethical treatment of their mentees, as outlined in their mandated training programs should face repercussions from the NIH. A consequence to consider amongst possible repercussions is not allowing mentee funding without an additional mentorship team or a reporting structure within the PI's institute for any PI found to be in violation. I am offering this as a possible suggestion to consider. I recognize it may seem extreme, but I have also worked directly with mentees struggling with abusive PIs and it is incredibly frustrating to move a trainee out of a toxic environment, only to be dealing with the next mentee facing abuse by the same PI. I believe that required mentorship procedures and consequences for abusive conduct coming from the primary funding source will better motivate abusive PIs to adjust their behaviors.

I also support other policies put forth by the National Postdoctoral Association, including:

Requiring all NIH-funded postdocs to complete IDPs with their mentor on an annual basis and submit this as record to the NIH.

Expanding programs and funding to support staff scientist positions for postdocs needing more time to secure the increasingly difficult faculty positions.

Annual surveys of current postdocs on their job and mentorship satisfaction, if they are currently or soon plan to enter the job market, and metrics on the success of their job market search.

Proven or promising external resources or approaches

Again, I would like to echo the recommendations made by the National Postdoctoral Association. They would point you to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library.

As a women in science who is planning on having children, I also acutely aware of the very leaky pipeline in my immediate future. I hope to see the recommendations made by The Pregnant Scholar enacted into NIH policy, including: an increase in the allowable parental leave from 8 weeks to 12 weeks at least, inclusion of the non-birthing parent in the right to take parental leave, right to extend a postdocs current grant and early career researcher status to any postdoc who took parental leave. I would also like to personally suggest that the NIH create an office to coordinate parental leave rights with universities and follow-up with postdocs returning from parental leave to ensure that the relationship with their mentor is still strong and that no retaliation has occurred.

https://thepregnantscholar.org/parents-in-the-pipeline/

Response 2868

Perspectives on the postdoc roles and responsibilities

Spend a lot more time towards a career that will likely not result in a meaningful academic position. If it does it will likely not pay that well and require more personal sacrifices.

Fundamental issues and challenges

Pay, benefits, long-term career prospects.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Centering minorities and actually being proactive and real about DEIA efforts.

Response 2869

Perspectives on the postdoc roles and responsibilities

To me the postdoc position is a chance to develop skills in an area tangential to your PhD while also gaining leadership and lab management skills.

Fundamental issues and challenges

Postdocs are treated as neither grad student, staff, or faculty, which means they have no rights and no protections. They're basically a temporary worker with a PhD who have uprooted themselves and their family at the whim of a PI who they hope will be just and fair. Postdocs need more protections in terms of job security and to be treated as valuable members of the academic research enterprise. Additionally, post docs should be paid a higher salary and should be supported in part by the department as they often do a significant amount of training and service work.

Existing NIH policies, programs, or resources

More readily available postdoctoral training grants that aren't dependent on the PI, training grants like the t32 but for postdocs, and MUCH more involvement from the NIH to help potential post docs find labs that have grants where they listed they'd be funding a postdoc.

Proven or promising external resources or approaches

Postdoc recruitment is the one step of the academic pipeline that has no formal process. It's either who you know or you get lucky and cold e-mail someone and they have funding and are interested. Training and mentoring could also be improved to make sure that postdocs are gaining skills for future faculty positions and not just serving as a data generating robot.

Response 2870

Perspectives on the postdoc roles and responsibilities

Most postdoctoral researchers are more independent than they are given credit for. A postdoctoral research position is a regular job like any other and should not be considered a "training" position. Any training component of the position does not make it any different from a large number of other jobs that also have a training component. In any other field of work, you wouldn't call employees "trainees" just because the undergo sone level of training as part of their job.

Fundamental issues and challenges

Academics in general, but especially PhD students and postdocs, are largely underpaid, partly with the justification that they are just "trainees" . This rhetoric couldn't be more wrong. Postdocs and PhD students produce almost all of the Scientific research in the U.S. They ARE the main workforce in research, not simply "trainees" . Furthermore, the major motivation for postdocs has been the mostly fake promise that after working hard for a few years and being underpaid, they will get to enjoy becoming faculty and starting their own lab. This promise is mostly fake because the number of new faculty positions available is only a very small fraction of all postdocs who are ready to apply to faculty jobs every cycle. Given postdocs' underpayment, lack of credit for what they really represent, lack of hope of getting a faculty job, and lack of good alternatives to remain in academia, it is not a surprise that new PhDs are choosing alternative career paths to the postdoctoral position, leading to a postdoc shortage.

Existing NIH policies, programs, or resources

1. Increase postdoc salaries to make them competitive with salaries of alternative career paths in industry and other fields.
2. Modify the vocabulary and rhetoric used to describe postdocs. Stop calling then trainees, and make the positions sound exactly like any other legitimate job.
3. Take initiative to begin modifying the scientific labor system so that postdocs for whom there are not enough faculty positions have other opportunities to continue working in academic research, professionally growing, having proper salaries that account for their years of experience. These alternative positions should be sustainable over their entire working life span, and should allow them to properly retire after reaching retirement age. These positions should have all the features and benefits of alternative jobs, such as those in industry.

Proven or promising external resources or approaches

No resources to add, but I would like to emphasize again the inappropriateness of the usage of terminology such as "postdoctoral training" .

Response 2871

Perspectives on the postdoc roles and responsibilities

It is part of the career transition process, i.e., from being a graduate student to an independent principal investigator.

Fundamental issues and challenges

Poor wage. In a place like the bay area, it is impossible to survive on the NIH-prescribed post-doctoral salary as a single individual. At this career stage, we expect one to be able to afford a studio apartment and not have to live in a dorm-like situation.

Existing NIH policies, programs, or resources

Increase wage to HHMI prescribed post-doc salary scale and more.

Proven or promising external resources or approaches

No response

Response 2872

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Post-doc salaries are so low that nearly every graduate of our program takes a position in industry rather than applying for an academic post-doctoral fellpwship.

Existing NIH policies, programs, or resources

The NRSA pay scale is inadequate to support cost of living in most large cities. Many institutions are now establishing minimum salary requirements for post-docs that exceed the NRSA pay scale by 10-20%. The challenge for mentors is to find non-federal funds for salary supplementation. NIH should liberalize policies to allow mentors to supplement NRSA stipends from other NIH grants, such as R01s.

Proven or promising external resources or approaches

No response

Response 2873

Perspectives on the postdoc roles and responsibilities

In a nutshell, a postdoc is cheap, disposable labor for the PI.

Fundamental issues and challenges

Postdoc pay needs to better match postdoc abilities. Or at least be equal to other kinds of postdocs. For example, ORISE postdocs make more than the NRSA payscale—why can’t you match this? Funding instability is also a MAJOR issue. I need to be able to better plan my life at this age and the stress of having no idea if I would have a job in a year ultimately led me to jump off the academia train. I also deserve to have full benefits and it is absurd that NIH STILL has not fixed the issue of NRSA postdocs having fewer benefits than grant paid postdocs.

Existing NIH policies, programs, or resources

GET RID OF OR EASE THE NRSA PAYBACK AGREEMENT!!! This is a stressor for me right now, as someone who was a pandemic postdoc (an unstable time funding/job wise) and only allowed to have one year on a T32 because I wasn’t a “new” postdoc. It is unfair considering there are other government sponsored postdoc fellowships (e.g., ORISE) that do not come with this payback agreement. I have a position that I think will fulfill it but there is some uncertainty. What did you expect me to do after my 1 year on the T32 ended—take an unstable, low paid academic research position that I wasn’t sure would even last a year but was 100% sure the duties would meet the payback requirement, or take my stable, permanent

position where the pay better reflects my abilities??? It isn't 1993 anymore, getting a faculty position is harder, comes with more uncertainty, and you must now more seriously consider less traditional jobs as backups (which may be a mix of research and non-research duties). I can MAYBE understand why clinicians on NRSAs are subjected to this (their high salaries offset the payback), but see NO reason why those of us with research based degrees are. If you value postdocs, get rid of this or at least make it less stressful/uncertain to fulfill. For example, it's ridiculous that you won't accept someone doing 10 hours/week or research for 2 years, but are okay with 1 year at 20 hours/week. Why be so rigid? And the fact that this is an exception you might grant for disability, but only if cleared at the start of the payback period? You do realize that disability can happen at anytime?? This is exploitative.

Proven or promising external resources or approaches

No response

Response 2874

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are an opportunity to lead research of interest to the postdoc without all of the associated administrative burdens of being a faculty member. Postdocs are contributing valuable skills and are able to independently conduct research, all while learning new skills and/or topic areas and preparing for the next stage of their careers.

Note: Just because a postdoc receives training, does not mean that a postdoc isn't a highly skilled position. Many high paying and high status jobs also involve significant on the job training—the need for training does not necessitate a low salary in other fields and it should not be the case in academia either.

Fundamental issues and challenges

1. Salary/low pay
2. This is a primary consideration when accepting any job, especially a PhD-level position after years of low pay in graduate school
3. Suggestions for revisions include: Base pay + locality pay (per base NIH GS system), raises to match inflation, higher minimum salary
4. The NIH pays its own postdocs more than its suggested base pay for non-NIH-based postdocs
5. Benefits
6. Lack of benefits is a major hindrance and raises concerns about retirement savings and healthcare
7. Suggestions for revisions include: Access to 403(b), matching, maternity leave and childcare benefits
8. Postdoc descriptions
9. 3a: Postdocs are described as 'trainees' instead of scientists, situating people with years of training and relevant experience lower in the hierarchy than their background deserves. Postdocs are supposed to be prestigious but 'trainee' language does not reflect that
10. Suggestions for revisions include: Updated language that respects postdoc skills, education, and status
11. Student loan forgiveness
12. Many postdocs have student loans that further hinder them financially from proceeding in academia or accepting/staying with a postdoc position
13. Suggestions for revision include: Student loan forgiveness for postdocs
14. Perception of postdocs as expendable labor
15. Postdocs are sometimes seen and treated as cheap, expendable sources of labor, rather than as skilled colleagues who are leading research projects
16. Suggestions for revision include: Solicit feedback from postdocs and investigate researchers who are reported to be abusing postdocs. Create metrics for success and track postdoc trajectories
17. Career uncertainty
18. Postdocs are temporary positions for adults who often have families, mortgages/educational debt and career progression is critical
19. Suggestions for revision include: Better support in terms of funding for early career investigators, career development pathways including non-academic jobs

Existing NIH policies, programs, or resources

Provide additional budget support for hiring in grants

Update language describing postdocs from 'trainee' language to something that reflects their experience and training

Support postdocs in discovering their next career steps, in academia, industry, or government

Loan forgiveness for postdocs

Permit postdocs to take on outside employment opportunities such as consulting

* Thank you for putting together this RFI. It gives me some hope that things will improve, but please act meaningfully upon the findings

Proven or promising external resources or approaches

HHMI increased postdoc salaries to a 70k minimum: https://www.hhmi.org/news/hhmi-announces-postdoc-salary-changes

Consider the Nature survey of postdocs: https://www.nature.com/articles/d41586-023-00332-6

Universities including Princeton, Penn, and MIT raised their minimum postdoc salary to ~65k

Please consider other peer-reviewed research on the low life satisfaction and general unhappiness of postdocs: https://elifesciences.org/articles/75705

Response 2875

Perspectives on the postdoc roles and responsibilities

Postdocs are the intellectual boundary pushers of the lab. They develop new projects and avenues of research in the lab, while helping to train the younger scientists in the lab

Fundamental issues and challenges

The first year postdoc pay is so low that people cannot eat or rent a house in big cities such as San Francisco (where I am). It is the number 1, 2 and 3 reasons that I have trouble recruiting and retaining postdocs.

Existing NIH policies, programs, or resources

Minimum postdoc pay. Simple.

Proven or promising external resources or approaches

HHMI, MIT, UW all have raised their minimum postdoc pay.

Response 2876

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The compensation is not sufficient at all and has not scaled with inflation in recent years. In particular, computational postdocs are payed a lot less than market value. NIH recommended levels are used as an excuse to not pay a living salary to postdocs. The current salary levels make it very hard to stay in the academic track specially for postdocs supporting a family in expensive cities such as Boston, New York, etc. Right now, I pay 75% of my net salary for rent which is not sustainable at all.

Existing NIH policies, programs, or resources

NIH pay levels for postdocs should be increased significantly. They should also be adjusted based on the cost of living in different cities. It doesn't make any sense to have the same scale for a postdoc in Boston vs a postdoc in Illinois; the cost of living including rent is incomparable. Also, since the funds come from research grants to PIs, the R01s and other grants should be increased and adjusted accordingly based on the inflation in the last two decades.

Postdoctoral fellowships (F32s) should also be expanded to non-US citizens or permanent residents. It's unfair to deprive them of career development opportunities while they play a crucial role in the advancement of science in the US. Let's put this unfair policies to bed once and for all.

Proven or promising external resources or approaches

No response

Response 2877

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low salary. There is low flexibility for PI's to increase postdoc salaries when modular budgets are constrained and many investigators lack access to large amounts of non-federal dollars required to pay postdocs above NRSA-scale. Institutions are unaware and are resistant to allowing investigators to increase postdoc pay beyond the NRSA scale even when they have the resources to do so.

Existing NIH policies, programs, or resources

The childcare stipend given to NRSA fellows could be larger, although helpful, the stipend only covered 1 month of care for my family specifically. Additionally, postdocs paid from larger research grants (such as R01) should also be eligible for childcare stipends possibly through an easy supplement application. A greater variety of K-awards (such as K01's) would be helpful, as not all postdocs immediately decide that an academic career is what they want (and miss out on the tight window). NIH has a great deal of influence over policies at individual academic institutions, and clear guidelines for postdoc compensation would help tremendously.

Proven or promising external resources or approaches

See [redacted for anonymity] negotiated contract with postdoc union. The [redacted for anonymity] will now have a recruiting advantage over many other academic institutions.

Response 2878

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdoc salaries are too low, and institutions/labs with NIH funding are allowed to pay below the NIH minimum if the award is not directly to the postdoc. Additionally, postdocs who win awards often receive paycuts due to overhead taken out.

Existing NIH policies, programs, or resources

Require all labs with NIH funding to pay postdocs the NIH minimum. Raise the NIH minimum salary. Do not allow institutions to take overhead out of F31/F32 grants.

Proven or promising external resources or approaches

Higher pay improves diversity, equity, and trainee happiness. There is no single issue that comes anywhere close to postdoc pay in importance. The current postdoc shortage will only get worse until this is fixed.

Response 2879

Perspectives on the postdoc roles and responsibilities

I'm positive the postdocs are the driving force of the American research. Our roles expand way beyond our publication record and the advancing of scientific knowledge, but often represent training of undergraduate students, lab management, literature review and grant writing.

Fundamental issues and challenges

For sure one of the biggest struggles for postdocs currently is the pay inequity. The minimum entry-level salary for a position that REQUIRES as PhD is way too low in general and not adjusted for inflation rate annually.

In my specific case, being a postdoc in Boston with a wife a daughter, this gets even worse. Housing and childcare are ridiculously expensive, and impossible to afford by myself. As a foreign, it's common to not own a house and, therefore, to be in the hands of the landlords and potential abusive rental agreements. For example, I was requested an increase of 20% in rent from 2021 to 2022 due to new administration of the building.

Supporting the moving cost is also critical to attract postdocs, as its really intimidating to move from a country with a currency most likely weaker than the US dollar, and having to pay up to 4 months of rent upfront (security, first and last month + broker fee). Institutions securing part of the negotiation could help reduce some of this burden.

Additionally, as mentioned, postdocs with kids face a great lack of childcare support. Kindergarten cost can get up to 80% of the stipend of an entry-level postdoc, and even the ones associated with an institution are not that cheaper. Benefits are also not tailored for those with family, with healthcare getting a big chunk of the paycheck. Attention to postdocs with family is critical to maintain their adherence to the academic track.

Immigration could also be facilitated for postdocs. Many of these scientist come from foreing countries with temporary visa, that increase the pressure for fast production, stress and a source of power against postdocs by mentors and institutions.

Also, increasing of clarity in bullying, retaliation, and harassment policies.

Existing NIH policies, programs, or resources

For sure more effective ways to communicate such policies, programs or resources are necessary, as I'm not familiar with many of them. Perhaps by a standardized talk with the Postdoctoral offices to present main opportunities for that specific institution and on regular updates of such policies.

Additionally, opening of NIH K awards for foreign students should be a must, and is possible reality. The postdoctoral populations is already formed mostly by foreign individuals, with some labs having no resident individuals. This reduces the funding opportunities for a great chunk of the postdocs, that sometimes are asked to seek residency to increase funding opportunities, and punishes laboratories who doesn't have residents.

Proven or promising external resources or approaches

Some suggestions were included above. Although no direct approach will be mentioned, it's widely recognized that fellows transitioning to the private sector, which addresses many of the problems mentioned above, report an sensitive improvement in their quality of life and engagement with research. This even when performing similiar tasks as they were doing in academia.

Therefore, to keep the pace of the academic research, which is critical for both social and economical prosperity, actions need to be taken immediately to support the life of the Postdoc population, which has been neglected for many years now.

Response 2880

Perspectives on the postdoc roles and responsibilities

To me, the postdoc period should be protected time to mature as a scientist, develop additional professional skills needed for the desire career outcome, and to establish an independent research program if an academic career is the desired outcome. As it currently stands, postdocs are key to the academic system, often serving as additional (or sometimes primary) mentors for graduate students and providing highly skilled labor forming the backbone of many established labs.

Fundamental issues and challenges

One of the great tensions of the postdoctoral position is whether this should be considered a "training period" or simply a "career step" along the path to an independent career. Often, the fact that the postdoc

is a "training period" is used as a rationale to pay low wages and expect long working hours. Postdocs often lack benefits granted to typical "employees" such as retirement benefits and a salary commensurate with the level of education and skill. This is a particularly difficult situation for people in high cost of living areas and who do not have other means of financial support or who have families. There is no doubt that these financial pressures are a rationale for some to leave academia after graduate school. In the past 5-10 years with the biotech boom it has become very common for companies to not require any postdoctoral training prior to hiring for entry level scientist positions that pay much better and have the benefits and stability of a "real job". There is also a personal/social cost to feeling like you are falling behind your peers who have real jobs that pay real money and you are still "training" until you are 35-40 in many cases. Additional concerns include bullying and harassment due to the power dynamic of the PI over the postdoc and the ability to greatly influence a career outcome.

Existing NIH policies, programs, or resources

1. Funding for postdocs that is not tied to a specific lab or institution. This would allow postdocs to move labs more easily if there are problems with a specific mentor.
2. Increase R01 budgets!! For postdoc salaries to be competitive, we need the money to pay them.
3. Start the K99 clock based on the start date in the postdoc lab, rather than PhD degree date. For many reasons (family concerns related to moving cities, extending timelines to complete publications) many people are unable to start a postdoctoral position immediately after graduating and should not be penalized for these personal decisions.
4. Extend K99 and ESI "clocks". It is understandable that the NIH wants to minimize time in training, however this may disproportionately discourage certain groups to leave academia. Besides people who are unable to start postdoctoral training immediately it also penalizes people doing science that naturally takes more time, switching fields, or establishing something completely new. In my experience, K99 applications without publications are not successful, so let's consider a possible timeline: Maybe someone started their postdoc 6 months after their degree date, had to set up a new system in the lab which takes 1 year; does experiments and writes a paper for another 1 year; spends another year publishing; and now we're at the 3.5 year mark with one shot to apply for a K99. But, everything in the postdoc needs to go perfectly and efficiently with no room for deviations to make this work. There is no time for trial and error or working on big questions that take more than a year or two. For many areas of research, this is simply not realistic. The NIH needs to think carefully about what types of scientists do and do not benefit from this system.

Proven or promising external resources or approaches

No response

Response 2881

Perspectives on the postdoc roles and responsibilities

In my experience, an academic postdoc is usually treated as a staff scientist--they perform the majority of the work covered by grant funding. There is also an aspect of training to the position, as most people accept a postdoc position to improve their skills for independent research and eventually running their own lab. However, the training usually seems secondary to carrying out research, as postdoc position advertisements usually require certain skills up front.

Fundamental issues and challenges

It seems that there are three fundamental issues with retention of academic postdocs:

1. Postdoc pay is too low for the level of skill involved--far below market price were the postdoc to move to industry. Often the justification for this low pay is that this is a training position. However, as stated in the previous answer, the training generally seems secondary to actually performing the research the postdoc was hired for--if this were not the case, the mass postdoc exodus would cause little concern about funded research not getting done. Rather the main concern would likely be that not enough people were being trained to fill open faculty positions--something that seems patently false at the moment.
2. Following on this, the second issue is that the personnel structure of academia is fundamentally flawed and unsustainable. In a sustainable structure, each tenure-track faculty member would train on average only one or two postdocs, for a stable replacement rate. Instead, PIs train many postdocs, and without a substantial increase in open tenure-track positions year over year, the majority of postdocs must leave academia, regardless of interest, for lack of open positions. As of now, academic career paths for postdocs other than a tenure-track position are quite limited.
3. A third issues is that postdocs generally have to keep uprooting their lives to continue on the academic career path. Given that the time as a postdoc is also a time when most people are settling down and starting families, it becomes difficult to both pursue and academic career and have a comfortable, stable family life in one place until the postdoc gets a permanent position.

Existing NIH policies, programs, or resources

The fundamental issues in the previous answer could be addressed by changing the academic career pathway. As of now, great focus is placed on PIs starting up their own lab. Instead, there should be more emphasis on forming and funding consortiums of researchers for common goals, with staff scientist as a viable career trajectory with compensation at least somewhat competitive with positions outside of academia. I believe this can be achieved by changing the makeup of grants being funded to involve more collaborative work, as well as incentivizing universities to build such consortiums. Such a change would likely improve postdoc retention, as there would be viable career paths outside of starting an entirely new lab, and it may also reduce the need for postdocs to uproot their lives every few years to chase an academic job.

Proven or promising external resources or approaches

No response

Response 2882

Perspectives on the postdoc roles and responsibilities

Communication is a core competency for all scientists and should be formally taught during early stages of their careers.

Fundamental issues and challenges

Investments needs to be made in much earlier phases of education, long before beginning postdoctoral education, to bring more talent to academic careers that is currently being wasted because lack of educational resources in large areas of the country.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2883

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

https://www.hhmi.org/news/hhmi-announces-postdoc-salary-changes

Response 2884

Perspectives on the postdoc roles and responsibilities

As a training program director funded by NIH, I think highly of the academic postdoc. For me, the postdoc is a time in which an academic in training can focus on developing their research agenda. They can go deep on methods they might have studied during their doctorate, learning how to really work with the methods to make discoveries and advance science. This time is also for making human connections with mentors, peers, and others who will support the academic in developing their career. Individuals who have a successful postdoc experience become leaders in field and strong mentors for the next generation. Postdoctoral positions do not receive the credit they are due as individuals who skip them often become burned out or rise quickly but may not have the ability to mentor others—this may be why we are facing the current crisis of the postdoc as many over the last decade have skipped postdocs in favor of lucrative private industry jobs or immediate faculty positions but which ended with them leaving academia. The postdoc period is special, and it requires robust mentorship to help someone develop into a productive scientist who will advance science while giving back to the field through mentorship of the next generation.

Fundamental issues and challenges

There are many challenges that face postdoctoral training programs. First, wage growth in the data sciences makes it challenging to recruit top scholars in fields like computer science, informatics, and biostatistics who can make 2-3 times more in the private sector. The PGY scale has not kept pace with inflation, especially in the past three years. Second, many institutions are hiring individuals who do not complete a postdoc leading many junior scholars to intentionally skip the postdoc period in favor of a non-tenured research track position. Third, rising health insurance costs put a strain on institutions to supplement training grant dollars. Moving forward, public universities and some private institutions will no longer be able to afford supplementing what NIH allows with respect to salary and fringe benefits like health insurance. Fourth, datasets and training related expenses (e.g., grad students) now cost more and the allowances offered in T programs are not sufficient to provide adequate support for post trainees. Fifth, many postdocs now arrive with a doctorate and a master's degree in a STEM related field. Asking postdocs to complete a formal degree is not necessary. Perhaps for MDs and other clinical doctorates but many PhDs also have MS and MPH degrees before coming into our program. Allowing these costs to be used for short-term trainings (methods workshops) and/or travel to conferences would provide more flexibility. Finally, recruitment requires significant investment of time and money. As training program director, I spent 5-10% of my effort recruiting postdocs. This is not covered by grant expenses, neither are the costs associated with advertisements which are also getting more expensive.

Existing NIH policies, programs, or resources

There are several modifications that would enhance the postdoctoral training experience. First, total support costs must increase. Salaries and fringe costs need to increase. Postdocs should also be supported with travel funds and have flexibility in how their training costs are spent. A workshop on a specific method or week-long class for developing propensity scores should be viewed as valuable training on par with a 3-credit course on biostats. These costs should be covered fully to allow for individuals with Masters degrees to forego a second masters in favor of some targeted methods development training.

Second, there need to be more resources to reduce recruitment burden. If the postdoc was more competitive relative to salary, fringe, benefits, etc. perhaps that would make recruitnig easier. Yet there are additional burdens that could be lifted if NIH were to stand up a centralized portal for postdoc positions that would become the Indeed of postdoctoral hiring. Let programs post their positions and

direct people to this site. It is hard to find details of postdoc positions through traditional platforms. Streamlining recruitment would reduce burden on training program directors.

Third, expand access to non-citizens. We receive 3 times as many applications for non citizens as we do for those who are eligible based on birth origin. If non-citizens could be funded we would fill our slots each year easily. Perhaps there are new policies like allowing someone who has been in the country for several years earning their advanced degree who demonstrates a desire to become a citizen to be allowed funding for a postdoc. These individuals desire to have science careers in the U.S. Give them the opportunity to demonstrate their skills and contribute to the knowledge base.

Proven or promising external resources or approaches

Our program focuses a lot on mentorship. We train all mentors and require them to attend periodic workshops to enhance their mentoring skills. We find it rewarding to have open discussions about our mentorship approaches, sharing ideas and discussing strategies. We also find it rewarding to discuss case examples where things went wrong. Our faculty embrace quality improvement and take ideas from these discussions back into their work with the trainees.

Response 2885

Perspectives on the postdoc roles and responsibilities

It is a training period that required heavy mentoring. Trainees have typically acquired good science skills but need to add a skillet, solve more risky, elegant problems. This requires mentoring, financial support, being recommended for opportunities that increase visibility such as seminars etc. Postdocs propel forward a labs productivity and need to be compensated better monetarily as well as more weight age for authorship.

Fundamental issues and challenges

Most postdocs are in their thirties. Approximately 50% of postdocs are women. This means most of them are in their prime child bearing age and yet many face the choice of either foregoing family responsibilities in lieu of their career or are forced to leave academia.

Better wages, subsidized childcare, accessibility to childcare can all increase chances of retaining women in science.

Further low wages again force postdocs, men and women, to leave academia to support their families.

Unclear rules regarding how to balance work-life, maternity, paternity, family responsibilities etc are exacerbated with abusive advisors.

Existing NIH policies, programs, or resources

NIH needs to expand their transition to independence grants (k99 etc). Also provide meaningful compensation for childcare. 5000 is ok but daycare costs $2000 PER MONTH. The small amount nIh provides doesn’t even begin to fill the gap postdocs face having to pay rent, daycare, and provide for the family.

Proven or promising external resources or approaches

Postdocs can be tailored to provide an appropriate training experience based on the trainees future goals. For e.g. a postdoc who wants to go to the industry needs a short 2-3 yr postdoc experience primarilyearning project management, unique skills, and training people.

Someone who wants to stay in academia needs to first publish a paper within 2-3 yrs, obtain a fellowship, and work on a bigger, more novel project.

This can easily be tailored for the trainees and still provide output for PIs.

Response 2886

Perspectives on the postdoc roles and responsibilities

It’s important for me to continue my academic career. It’s also important for me to be trained work individually.

Fundamental issues and challenges

VISA problem for international scholars, culture conflict, communication skill,

Existing NIH policies, programs, or resources

salary problem, paper pressure

Proven or promising external resources or approaches

research pressure,

Response 2887

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a launchpad to running an academic lab as a PI. I value intellectual freedom and independence during a postdoc. Postdocs should receive sufficient resources and support to take scientific risks and develop innovative new projects.

Fundamental issues and challenges

The job market to become an academic PI is hypercompetitive. Many exceptional postdocs suffer through 50+ job applications over multiple years and may end up with zero to few options at an academic institution. Meanwhile, we are poorly compensated financially and unfairly asking our families and partners to sacrifice their quality of life for our pursuit of scientific research. The geographic and financial limitations of being a postdoc and the lack of a secure future are immense challenges for retention and recruitment.

Existing NIH policies, programs, or resources

Increase NIH budgets and grants to compensate postdocs more fairly nationwide. In this economy, postdocs should receive a minimum of $85,000/year. Also, remove the salary cap for postdocs. Postdocs should be able to receive bonuses for exceptional work. Lastly, implement a retirement savings plan for postdocs. We are losing out on 5+ years of retirement savings without contributing to a 401K.

Additionally, build incentive for universities to hire more tenure track PIs. Expand funding for career transition awards so that postdocs receive more financial support and leverage when deciding on their next position.

Proven or promising external resources or approaches

No response

Response 2888

Perspectives on the postdoc roles and responsibilities

Learn new skills, develop as a scientist and professional

Fundamental issues and challenges

By far, the primary issue facing postdocs is salary. Especially in high cost of living areas, the average compensation for a postdoc is not enough to financially sustain a person, especially one in their late twenties and older. At this age, many postdocs are contemplating having children, or already have children, and daycare costs are not feasible with current postdoc salaries. Additionally, we are at the age where we should be saving for retirement. Not only do postdocs not have retirement plans available to them (401k etc), but the low salary means that many cannot save for retirement on their own either. This problem is additive, since postdocs have already lost 5+ years of decent salary as graduate students with low stipends. This is especially burdensome for postdocs from economically disadvantaged backgrounds — often first-gen graduates or from groups underrepresented in science. Thus, low postdoc salaries are fueling further gaps in diversity, equity, and inclusion in science/academia. When industry positions easily pay 2x the salary of an academic postdoc, it is understandable that PhDs are not choosing to go into or stay in postdoctoral positions.

Existing NIH policies, programs, or resources

Increase funding: both at the R level so PIs can pay postdocs more and at the F/K level so postdocs on fellowships are better compensated. Additionally, implement policies to ensure that postdocs are able to take full advantage of pay bumps they may get when awarded an F/K award. Numerous postdocs at a variety of institutions have not been able to draw the full salary of a K award due to institutional red tape.

Proven or promising external resources or approaches

No response

Response 2889

Perspectives on the postdoc roles and responsibilities

A postdoctoral fellowship is seen as a necessary but precarious step to becoming an esteemed, independent research scientist in academia. Although postdoctoral fellows are viewed as "trainees'' and compensated as such, they are highly trained researchers that produce the bulk of biological and life sciences research. However, unlike graduate trainees, they do not benefit from the structured training environment or student support offices offered by graduate programs. Postdocs are often not afforded the protections offered by formal employment, and thus these valuable early career scientists are vulnerable to isolation and mistreatment.

Unless the resolute goal of a trainee is to become an academic independent researcher, a postdoctoral position is generally avoided. Even if a doctoral degree holder ultimately seeks a professorship, the number of academic positions open to them is small compared to the number of people graduating with the same degree. Thus, pursuing an academic postdoc is often a gamble on their future careers.

Finally, the role of the postdoctoral trainee should be different from that of a staff scientist. While some of the duties of both positions may be similar, they have distinct purposes. The role of the postdoc should focus on honing the skills of a future primary investigator, while the role of a staff scientist is to use their doctoral training to produce research under primary investigators. As such, staff scientist positions should not require previous postdoctoral training, while postdoctoral training programs should focus on mentorship, grantsmanship, and professional development of the trainee. The differences between the roles of these two important groups in our ecosystem must be solidified and enforced. If one of NIH's major concerns about the postdoc shortage is research productivity, then additional staff scientist positions must be considered in that solution.

Fundamental issues and challenges

A highly generalized summary of the issues facing postdocs is that postdoctoral positions demand trainees sacrifice pay, benefits, and work-life balance for small, unguaranteed gains in professional development and career advancement.

Academia often expects postdocs to have a single-minded passion for research at the cost of their own wellbeing. Many potential postdocs have already delayed major life milestones, such as planning for retirement, owning property, starting a family, or caring for aging family members due to the length of predoctoral training. They are asked to do it again during postdoctoral positions, for which compensation and benefits are limited.

As the largest source of biomedical research funding, the NIH has an obligation to address the issue of low compensation for a specialized and heavy workload. Most research universities follow the regionally uniform NIH minimum stipend, which is often inadequate for living in locations surrounding research institutions. Benefits, such as health insurance, childcare subsidies, parental leave, and retirement savings opportunities vary by institution and not funding mechanism. Postdocs also frequently divide their attention between publishing predoctoral work, establishing new research projects, securing funding, managing junior lab members, and professional development. This leaves little room for much else. Consequently, postdocs often face isolation and lack of community. Low compensation also poses a fundamental equity problem, as trainees from historically marginalized and under-resourced groups are unable to afford these positions.

Finally, academic postdoctoral positions, unlike other postgraduate fellowships, do not offer clear professional development opportunities. They could be more valuable by offering formal training in key skills, such as mentorship, lab management, and grant writing. Additionally, the transient nature of the

postdoc model exacerbates existing economic and social challenges. This could be remedied by creating bridge programs at local institutions with a clear path to a permanent position in industry or academia.

Existing NIH policies, programs, or resources

The [redacted for anonymity] supports increasing the minimum postdoctoral stipend, even at the cost of fewer awards. The minimum stipend should start at GS-11, with locality adjustments, and increase with additional experience according to the general schedule. Because the NIH stipend is often the floor set at research institutions, this increase stands to benefit even non-NIH funded postdocs. However, this must be implemented such that it does not only benefit highly resourced institutions already supplementing stipends. One option could be guaranteeing a base stipend benefit per trainee while supplying additional NIH support on a sliding scale up to the full locality adjustment. This sliding scale, based on the endowment of the awardee's institution, would provide no additional funding to the highest endowed institutions.

Furthermore, NIH should find mechanisms to support benefits like affordable child care and health insurance, especially for under-resourced institutions. For example, NIH could allocate a percentage of an award to a separate category only for benefits. This could make postdoctoral positions more competitive with industry jobs.

Programs that should be built upon are the Institutional Research and Academic Career Development Award (IRACDA) and the K99/R00 Pathway to Independence Awards like MOSAIC. These programs offer a clear training time-frame, mentored research, and professional development training. IRACDA also offers specific training for teaching and other areas of interest to the postdoctoral trainee. Programs similar to IRACDA should be developed to focus on lab management or industry skills instead of teaching.

Additionally, postdoctoral T32 programs must be held to a higher standard to address academic culture and support systems. T32 applications must clearly define expectations for trainees' work hours, research commitments, and professional development in applications. Programs that build cohorts of postdoctoral fellows, integrate inclusivity into training, and build comprehensive alumni networks should be prioritized.

Proven or promising external resources or approaches

The National Center for Science and Engineering Statistics (NCSES) recently revamped the taxonomy of their Survey of Earned Doctorates and created the highly NIH-relevant field of Biological and Biomedical Sciences (BBS). From the most recent data, BBS is the only field to see a drop, let alone one larger than 10%, in the postdoctoral rate over the past 20 years. Collaborating with NCSES to better understand these trends and how they are distributed across groups could be beneficial to the ACD Working Group.

We also suggest looking at other successful postdoctoral programs. For example, the Lawrence Livermore National Laboratories' postdoctoral program allows trainees to allocate up to 25% of their time to professional development. How that time is spent is directed by the trainee. Additionally, this program offers a starting salary of $96,000 annually; 71% higher than the current NIH NRSA minimum stipend for postdoctoral fellows and more than $15,000 above the GS-11 locality pay. Finally, this postdoctoral program provides a clear path to a research scientist position at the lab, either in their current division or another division of interest.

The American Association for the Advancement of Science (AAAS) Science and Technology Policy Fellowship program is another postgraduate training program worth modeling. Although it is designed to bring scientists into policymaking, it has several strengths such as: a defined timeline, annual cohorts for fellow support during the program, well-developed alumni networks, and often a path to a permanent position post-fellowship in participating government offices.

Finally, we suggest looking at the Simons Collaboration Transition to Independence Awards, which outline specific funds to be used for professional development in addition to research support similar to the K99/R00 mechanism.

[redacted for anonymity] thanks the NIH ACD for its work and looks forward to continued stakeholder engagement on postdoctoral issues.

Response 2890

Perspectives on the postdoc roles and responsibilities

An academic postdoc gives scientists mentored time to explore career options while further developing research skills and knowledge. Postdocs might not be aware of all their career options beyond academic

research so NIH should support scientists at this stage to guide them to the professional path that best suits them and give them the training to succeed. It's a way to optimize our return on educational investments.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

I recommend more training in science communication of all forms: oral, graphical, written.

I'm a grateful NIH trainee (PhD training grant level) who now works as a scientific editor for a peer-reviewed journal and a research institution. I now realize the overarching importance of science communication. Being able to communicate your science to multiple audiences: funders, reviewers, legislators, collaborators, and the public is essential for a successful career.

Proven or promising external resources or approaches

I've seen a strong interest among early career scientists in workshops on grant and manuscript writing, oral presentations, and figures and tables. Thanks for the opportunity to comment.

Response 2891

Perspectives on the postdoc roles and responsibilities

Postdocs have full hands-on responsibility for designing, implementing, and analyzing experiments that form the core of NIH-funded research programs. They often mentor graduate students, undergraduates, and technical laboratory staff, and execute research for their mentor's program while endeavoring to build their own independent research portfolio.

Fundamental issues and challenges

Primary concerns are the lack of immediate financial and medium-term job security that dissuade many from pursuing academic postdoctoral positions.

Existing NIH policies, programs, or resources

The NIH should actively and routinely vet funded institutional T32 pre-/postdoctoral training grants to ensure they are fulfilling the training objectives they proposed to provide to trainees at the time of application. I was on a postdoctoral T32 at an R1 institution that literally provided no training to the grad students and postdocs on the grant. No journal clubs, no trainee seminars, no coursework of any sort, no interaction with training grant faculty, not even any kind of training in the responsible conduct of research. NIH needs to ensure that the institutional training grants that it supports actually fulfill their promise of educating postdocs as well as grad students. Instead of asking training grant PIs to report on the training activities that their T32 provides, all grant reviews and renewals should include surveys of current and former trainees funded through the T32 to assess if its training objectives are actually being met.

Expand funding support for academic staff scientists in R01-type grant mechanisms. Better yet, support funding for staff-level academic scientists at research institutions, to support a stable professional workforce of academic scientists. Not all grad students want to be PIs, and many default into a postdoc to get a job that is kind of like a staff scientist. Meanwhile, postdocs that are interested in developing their skills and research programs to eventually run their own research labs are all too often saddled with mundane, "non-promotable" work that is needed just to keep their mentor's lab running, to the detriment of their career advancement. This is especially true for women and minorities. Increasing NIH support for academic, staff-level scientists would help address both of these issues.

Proven or promising external resources or approaches

Match NIH/HHS postdoctoral stipend levels to those provided by other government agencies. For example, the Department of Energy currently pays year 0 postdocs a starting stipend of $92,000 per year at Los Alamos National Lab. This is over 60% more than the starting NIH-funded postdoctoral stipend level of $56,484, for what amounts to a government-supported scientist of equivalent training and qualifications. This discrepancy in funding across fields and federal government agencies cannot be explained away by private sector market forces, as biomedical scientists, like physical scientists, can make phenomenally

more money in private industry than they can in academia or government. If the NIH wants to maintain a top-notch biomedical science workforce across the national academic enterprise, it has to be willing to pay for it or risk losing talented young scientists to other sectors.

Response 2892

Perspectives on the postdoc roles and responsibilities

My lab is a post doc heavy lab with my PI being away most of the time. In this scenario my day to day learning happens because of very talented post docs around me. They have taught me the daily workings of building and executing a project. I see them as experts who bring in diverse ideas to the lab and test them while also being mentors to graduate students, undergraduates, and post-bacs.

They are experts not only in the area of research, but also in project management, time management, collaboration, good communicators of their work. These are all the qualities that I as a graduate student have learnt both actively and passively from them. If I were to imagine my PhD without post docs in the lab, it would be a difficult journey. Without their training and collaboration, I do not my work making any progress.

Fundamental issues and challenges

We all understand that the academic job market is tough. This facts hangs heavily on the shoulders of post docs. This keeps them stressed which often leads to overwork. While this requires a more systemic solution, some of the worries that they go through are economical. I have post doc friends living on the coasts of the country and are at times worried about having enough money after paying for rent and groceries. As post-doc ages are getting older and are stretching longer it is normal to expect to start saving some money. With the current pay this rarely happens. This day to day anxiety is debilitating and impedes progress in research. This leads to attrition of highly skilled and trained talent pool of the academia. The stress about daily bills leads oneself to question their wish to stay in academia. Post docs are working as much as a project manager in a company. When the corporate world values all the talent and the skill that post docs can bring, it becomes hard to justify to oneself to remain in a job that they love the most, i.e. to be working at the bench and training new generation of scientists.

Existing NIH policies, programs, or resources

As majority of the US post doc pool is made up of internationals, it is necessary to provide people with moving allowances at the beginning of the appointment. Secondly, most of the post-doc fellowships are not available for internationals. I understand that part of the reason is that NIH is a federally funded institute, but to keep this talent pool in the country it is essential to have more opportunities for internationals to participate in.

Proven or promising external resources or approaches

The recent news by HHMI to increase the base salary is appreciated by everyone. I think HHMI also takes into account the cost of living into account and adjust salaries accordingly. I think NIH needs to do this. We also need to think of rewarding post-docs on a yearly basis. Since it is independent work and most of the times post-docs may not be recognized for all the work that they put in to run the lab. A majority of the time spent on these issues are not acknowledged and accounted for. This needs to bring in more defined roles of post-docs in the lab while honoring their efforts in mentoring with financial rewards.

Response 2893

Perspectives on the postdoc roles and responsibilities

I am writing in my capacity as [redacted for anonymity]. Postdocs carry out the majority of scientific research in the United States and serve a critical role in mentoring graduate students. We at [redacted for anonymity] are very concerned that without decisive again—and action taken soon—that the future of academic research is imperiled. Many PhD students are opting out of continuing in academic science and are being drawn to the private sector. The dramatic reduction in the pool of postdocs applying to HHMI Investigator laboratories is widely acknowledged and concerning.

Fundamental issues and challenges

In our view, postdoc salaries are too low to reflect the contemporary reality that postdoc training now often extends well into their 30s, and postdocs are often parents. In inflationary times, cost of living has made the NIH standard starting salary of ~$55,000 unlivable in many high cost of labor cities. While salary is only one of many problems faced by postdocs in [redacted for anonymity] laboratories, a decisive and meaningful increase in salaries will rapidly improve the plight of our postdocs. Other problems that [redacted for anonymity] has noted is the drop in international scientists choosing to come to the US to continue their work here—due largely to immigration/visa challenges. The high cost of childcare and its limited availability are also challenging for postdocs with children. Issues with the long process and inefficiencies of scientific publishing unnecessarily extend postdoc training duration and slow the dissemination of science. However, in [redacted for anonymity] view, salary is the one first step that all institutions and funders can take now to improve the status of postdocs in the United States.

Existing NIH policies, programs, or resources

There is an urgent need to prioritize postdocs in NIH budget considerations. Starting on April 9, HHMI has raised the salary for a starting postdocs to a range between $70K-$91K. More information can be found at this website: https://www.hhmi.org/news/hhmi-announces-postdoc-salary-changes. To avoid this being an unfunded mandate, we have budgeted for a Postdoc Bridge Fund to ease the transition to the new salary scale. We urge NIH to consider increasing the NRSA minimum to $70K, and to implement corresponding changes to research budgets. The $250K modular budget has not changes in a quarter century and NIH must prioritize the people who do the science by taking bold and immediate steps to invest in postdocs.

Proven or promising external resources or approaches

Again: raise NIH NRSA minimum to $70K will have an immediate impact on the health of the US academic science ecosystem.

Response 2894

Perspectives on the postdoc roles and responsibilities

A big part of postdoc work is publishing. Being able to communicate clearly is crucial.

Fundamental issues and challenges

Many postdocs don’t know how to follow instructions by grant funders, nor the submission guidelines of academic journals. Many have been taught to write in a stilted, jargony, passive voice. This can hamper their careers.

Existing NIH policies, programs, or resources

Fund workshops for postdocs on

a) effective science writing;

b) grantsmanship;

c) following journal submission guidelines.

Proven or promising external resources or approaches

The Open Notebook runs a successful series of online workshops for science writers. There are also several excellent master’s programs in science writing. Perhaps an RFP inviting workshop development could target resources like this?

Response 2895

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

As a PhD level position, postdocs are working professionals, not only trainees. Often, the ‘working professional’ component of their role is rendered invisible by the inequitable access to policies and

practices that fully support them as workers and not only trainees. Areas of the Post Doc experience that can be strengthened includes:

- Pay inequities; the need for above low-income level salaries nationwide and need for inflation rate adjustments annually.
- Cost of living adjustments are needed, one possibility would be to use the existing GS-11 salary scale which is already used for government-funded researchers with similar experience.
- The current startup cost associated with becoming a postdoc (moving expenses, 4 months of rent up front in some cases) can increase barriers for people from historically marginalized communities to becoming a postdoc.
- Postdoc parents are currently really struggling. Support for them could be improved by providing childcare subsidies, 16 weeks for both maternity and paternity leave, cheaper family health coverage.
- The need for strengthened policies related to harassment and bullying.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2896

Perspectives on the postdoc roles and responsibilities

This type of appointment provides a basis for a newly minted PhD to reflect on their recent experiences, refine their career goals and interests, and to continue to grow as a trained professional, particularly in the area of communication.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2897

Perspectives on the postdoc roles and responsibilities

A postdoctoral researcher is a highly skilled scientist, trained in a particular field who has proven to be capable of pursuing long scientific over many years, often in collaboration with other scientists. This involves project management skills, student mentoring, paper publishing and different types of presentation (informal (group meetings, 1:1 discussions, etc) as well as more formal (conference presentations, grant reviews). This role is not an intermediate role between the PhD and the next role, shall it be in academia, industry or startup, but a real job requiring all the previously mentioned skillset.

Fundamental issues and challenges

Despite being highly trained and skilled, postdoctoral researchers are often largely underpaid compared to what they would make in industry (at least 2 or 3 times more industry), largely impacting their ability to continue their postdoctoral journey and in a way limiting the postdoc to people who already have resources prior to starting their postdoc. The local cost of life (typically very high, especially in Boston) has increased significantly while the postdoc salaries have not. Inflation is not compensated in the salaries. Having a family is therefore becoming a luxury that postdocs cannot afford if their significant other is not making significantly more than they are. In addition, international postdocs are suffering from limited visa durations and types (often J-1) which doesn’t allow them to easily switch to other types of

positions and apply for grants. PI status is not often possible for postdoctoral researchers. In addition to the previously mentioned factors, postdoctoral experience is a very lonely experience and can vary from institution to institution significantly as well as within a specific institution and department, depending largely on the PI and lab size, culture. The mentoring varies significantly and may have a tremendously negative impact shall the PI not dedicate significant time and resources.

Existing NIH policies, programs, or resources

Several points could be made to improve the postdoctoral experience:

- A geographically dependent salary to account for areas where the cost of life is very high. Inflation based increased as well as annual experience-based increases should be taken into account. The salary received is currently too far from what industry offers to make postdoctoral position competitive.
- A better integration of what pursuing a scientific career and having a family at the same time means.
- Longer visa duration and a more flexible visa (H1B)
- A proper mentoring plan together with allocated time and resources from the PI and from the institution
- Institution based training for several aspects needed for the next stage of the career: grant writing, scientific communication, lab management and hiring.

Proven or promising external resources or approaches

The National Postdoctoral Association is providing many insights in how to improve the postdoctoral experience.

Response 2898

Perspectives on the postdoc roles and responsibilities

A research scientist position to either assist in accomplishing a lab's goals or, if independently funded, further establish the research program of the Postdoc. This is not a training role.

Fundamental issues and challenges

Postdocs aren't paid enough. That is the fundamental issue.

Existing NIH policies, programs, or resources

Increase Postdoc salary. The main reason I am likely to not continue to be an academic is I cannot afford to live on a postdoc salary in my high cost of living area.

Proven or promising external resources or approaches

Look at HHMI's recent restructuring of postdoctoral salary offerings and look at industry standards. That would have a significant impact on recruitment.

Response 2899

Perspectives on the postdoc roles and responsibilities

Postdocs are junior scientists preparing for a career in science. In training junior scientists, very little emphasis has been placed on communication, yet communication is highly relevant for professional success for scientists across different career trajectories including academic, government, industry, and non-profit. The skills to communicate scientific information and/or results to varied audiences (media, students, university administrators, civic society, government, etc.) is critical for scientists to learn and hone as early as possible. Communication skills including public speaking, written communication, and visual representation are directly related to a scientist's success as a leader, influencer, and teacher. Learning to communicate well helps scientists think critically, explain science logically, and build trust with the audience. It also builds listening skills, enhancing scientists' ability to engage in constructive dialogue and mutual learning.

The National Postdoctoral Association lists "Communication Skills" as a Core Competency that is considered essential for career progression. Postdocs must speak with policymakers, news media, funding

agencies and a variety of general audiences; deal with conflict resolution; be able to negotiate; write scientific papers and op-eds; make conference presentations; teach; and interact with others in the workplace, institution, and society (NPA document: https://www.nationalpostdoc.org/page/CoreCompetencies).

Fundamental issues and challenges

Successful and satisfied scientists get funded, publish their research, are asked to give seminars, speak with the media, receive awards for their work, and are recognized as good teachers, colleagues, and trusted members of the organization. Recent evidence shows that the decline in PhDs persisting in academic faculty careers is related to their ability to communicate science. Their research shows that trainees who engage in science communication (including writing, conversational speaking, and rehearsed presenting) and who have positive expectations about doing so will be more likely to stay in an academic research career (Cameron et al., 2020): https://pubmed.ncbi.nlm.nih.gov/32074107/.

Today, science communication training for junior scientists is often informal, uneven, sporadic, or entirely missing. Poor communication skills can inhibit recruitment, retention, and overall quality of life. For the grad student to be recruited to a postdoc position, or the postdocs to a junior faculty position, they must explain who they are, what they do and why they would be good candidates for employment. Individuals typically sought for these jobs demonstrate clear, confident speaking/delivery skills, the ability to simplify complex research data, and an understanding of how to connect with a diverse range of audiences. Those who cannot do this are at a significant disadvantage at every hiring and promotion opportunity throughout their career.

Existing NIH policies, programs, or resources

The NIH supports the development of junior scientists through an extensive system of training (T), fellowship (F), and career development awards (K). Providing formal science communication coursework should be an integral requirement of receiving any T, F, or K award, and most R25 awards. Training grant funds could be used, for example, to expand existing science communication courses, train more instructors, or set up new programs to help improve junior scientist communication skills. These funds would help incentivize faculty and their organizations to teach these courses.

Proven or promising external resources or approaches

The importance of communication in science has been recognized in reports from the National Academies of Sciences, Engineering and Medicine (https://www.nationalacademies.org/our-work/the-science-of-science-communication-a-research-agenda) to the American Academy of Arts and Sciences (https://www.amacad.org/publication/public-face-science-america-priorities-future). Scientists want to become better communicators and as reported in the just-released Research!America poll, the public wants to hear about their research (https://www.researchamerica.org/press-releases-statements/survey-shows-strong-bipartisan-support-for-investing-in-research/). As evidenced by my own career, communication has been crucial to my success as both a leading academic scientist and my current role as chief scientist for the world's largest conservation NGO.

Some universities and research centers already have science communication programs that could serve as models, and a few now offer formal courses in science communication (e.g., Harvard, Rutgers, Duke, Stanford.) Many Business Schools recognize the value of good speaking and have set up formal communication courses. For example, the Harvard Art of Communication (https://pll.harvard.edu/course/art-communication?delta=0) is designed for business students to learn speaking and writing skills. Similar courses could also be offered to junior scientists. The Harvard T.H. Chan School of Public Health has set up the Center for Health Communication (https://www.hsph.harvard.edu/chc/) with formal courses. Rutgers established a Science Communication Initiative "to enhance the effectiveness, coordination, and visibility of Rutgers efforts in education, research, and outreach" (https://scicomm.rutgers.edu/). The Rutgers program offers science communication education (courses, a minor, workshops, continuing education courses), research and outreach activities. One of the most well-known science communication education centers is the Alan Alda Center for Communicating Science at Stony Brook University (https://aldacenter.org/). This Center offers graduate degrees and formal professional coursework with dedicated staff and financial resources.

Response 2900

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2901

Perspectives on the postdoc roles and responsibilities

Postdocs are the driving force of the excellent science done by our institution. They are highly trained, motivated, and willing to take risks. They are often the ones driving innovation/projects/papers, while also training junior scientists (graduate students, undergraduate students, summer students, staff scientists).

Fundamental issues and challenges

The current payscale is not appropriate in our location (Boston area), where we compete with many companies that can offer much higher salaries. With current pay, postdocs feel severely undervalued for their important contributions. Here in the Boston area, the current NIH-set payscale is simply incompatible with life. Rents are incredibly high. Postdocs who plan or already have family face childcare costs in the 3k to > 4k range. I have seen many postdocs leave for industry jobs to support their families. If we as scientific community want to increase diversity at the faculty and leadership level, we need to ensure women, parents, and minority postdocs who might not have extra support will be able to complete successful postdoctoral training.

As PI, it has been very hard to recruit new postdocs. Graduate students do not even consider this possibility anymore, seeing the precarious situation of many postdocs.

Existing NIH policies, programs, or resources

Adjust the NIH payscale to reflect the value of postdoc work and allow them to live without having to worry about rent or childcare.

Increase funding to allow PIs to pay postdocs, including on existing grants so salaries can be increased immediately (e.g. as a supplement).

Proven or promising external resources or approaches

No response

Response 2902

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a transitional training period. This is a time when you do research and try to transition to independence.

Fundamental issues and challenges

The major issue is that if you haven’t come out of graduate school ready to be a faculty you have to write your grants and publish all within an unreasonably short time. An important study can take 2-3 years, if there is no real clear picture of the future when you enter a postdoc it becomes frightening to start one. On the other side, when hiring a postdoc there’s a tremendous burden to be confident you can place them: and all sorts of things can happen. The clock is so tight these days with the realistic way the world is structured. It’s asking too much to do the postdoc in 5 years, i think. It has the effect of condensing the

research program into the grant writing process and transition to independence process. There needs to be more transitional positions than only the K99 mechanism, perhaps staff scientists but without the burden of losing a path to independence. The problem is that when you embark on a postdoc you worry that it's career suicide and for some people it really is, and seeing that all around you is not reinforcing. Other people in "regular jobs" are starting to take flight and gain security by this stage and maybe that's not achievable in science but it has to be closer. It's not close at all now.

Existing NIH policies, programs, or resources

There should be a greater emphasis on exit plans. Postdocs can reduce your market value if they're not configured optimally and it can be scary to commit to do one not knowing the outcome of your research project (impossible) and sort of being beholden to the grant envious at the same time. It's not as much dedicated research time as it seems like it "wants to be" . I think this also reduces the quality of research in general because so much emphasis is placed on publication, job searching, and so on. The staging of how postdocs progress and are placed in jobs after is also highly lab dependent and I think this could be orchestrated differently. If people have a quality research program but it takes a little more time to get started—for example. Maybe the solution is extending the postdoc and k99 window with higher pay in the back years and creating more temporary staff scientist type positions that can still lead to independence. This would give more time to cultivate people in the research environment and let them stand on their accomplishments rather than relying on luck as much.

Proven or promising external resources or approaches

NIH probably has thought about the options. They're expensive and complicated and they are hard to implement. But mostly it's expensive. Salaries have been fairly level until recently. I think salary increases aren't as scary to program admins though as creating more transitional jobs because that could change the landscape of research.

NIH needs to make sustained investments in projects and people. Things like the postdoc are almost like 1-2 year commitments to research and then you spend a lot of time grant writing etc. not everyone is ready by that time. It's somewhat arbitrary how the clock starts in the PhD and not everyone is at the same level.

I think there is also just tremendous and obvious brutality in the ranking and sorting of postdocs where if you're heading in the right direction you're the golden child and if you're not you're a pariah and you basically suffer until you're choked out of the field. As people talk more on social media about what it's really like to live like that people are frustrated and scared of that kind of lifestyle and it's also not as meritocratic as people like to think. We all know there's some luck in science. But none of the policies provide for clear pathways. You just become miserable enough eventually that you apply to industry or wherever you think you'll be a human again. Not that this has been my experience but I know it has been the experience of other people I know who you'll probably never hear from because they left. But we hear from them more and more. It's a commitment to take people on and you have to be committed to where they go and how they're being treated.

Response 2903

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a scam that keeps early-career researchers in poverty and toxic work conditions.

Fundamental issues and challenges

We are asking these people to relocate with no expenses covered for a temporary job that often does not pay a living wage. Professional organizations typically offer travel and awards for graduate students and not postdocs. PIs see postdocs as short-term labor and often do not mentor them in any meaningful way.

Existing NIH policies, programs, or resources

Pay postdoctoral researchers a livable wage, provide opportunities for them to receive meaningful mentorship, community, and paid professional development. Make your PIs prove that their postdocs are able to find jobs afterwards before allowing them to take on more postdocs.

Proven or promising external resources or approaches

A 3-year research assistantship with cost of living adjustments and funding for relocation, professional development, and travel. Aim to have less postdoc fellowships that are extremely high quality.

Response 2904

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

- F grants could provide incentives and increased earnings in addition to the normal pay
- Fellowships not removing benefits packages (if there is one) at the institution (ie. you get a F grant, you lose retirement since you are no longer an employee) this is antagonistic since the postdoc wants to apply and receive grants but puts their financial situation in jeopardy
- R, P, U grants that PIs apply for have to have more funding for the postdoctoral researchers that contribute to the project

Proven or promising external resources or approaches

No response

Response 2905

Perspectives on the postdoc roles and responsibilities

The postdoc position is the opportunity to gain the research and nonresearch skills needed to establish an independent research program. But postdocs also play a central role in American academic research productivity.

Fundamental issues and challenges

Low salary makes the postdoc position very undesirable, especially in high cost of living areas. The low salary also makes taking and staying in a postdoc position until an independent faculty position challenging for individuals with families.

Existing NIH policies, programs, or resources

Adjust salary to account for cost of living. Adopt the cost-of-living adjusted scale for GS-11 to provide postdocs with compensation that matches their skills and worth within academic research.

Proven or promising external resources or approaches

No response

Response 2906

Perspectives on the postdoc roles and responsibilities

PI has too much power. NIH needs to add mentorship or letter from trainees as part of R01 grant review process. Toxic PI should not be given NIH grants

Fundamental issues and challenges

Salary not adjusted to inflation so postdocs are moving to industry.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

NIH grant review needs to add a process where the trainees are asked anonymously about their PI and how the lab is run to avoid bad apples ruining the academic experience.

Response 2907

Perspectives on the postdoc roles and responsibilities

Science today is really complex, and everyone wants to hit that Science or Nature paper. Learning new, complex technologies and concepts and framing the correct hypotheses to test, running several different assay systems at the same time, maintaining rigor and all datasets perfectly, etc., results in the most prepared postdoc. However, having this happen in less than 3 years plus, is very difficult especially for those postdocs who have a life and family outside the lab.

Fundamental issues and challenges

I have directed a legacy T32 from NIDA for the last 10 years. We have ~50% women and ~40 URGs over the last five years, so our program is successful in recruited top notch, diverse fellows. However, there is a very strong move in our mentees to seek careers that do not include tenure-track faculty positions. Thus, our T32 recent review noted that ONLY 40% were in faculty positions, even though 100% of mentees are in research-supportive career roles. In addition our fellows have partners and caregiver responsibilities and cannot survive on the NIH stipend level. To keep the best, we must find non-NIH, institutional monies to boost their salaries to over $100K—this is not easy to do in the current post-pandemic climate. With rising inflation and cost for housing, this is nearly untenable at present.

Existing NIH policies, programs, or resources

Based upon my comments above, NIH needs to reframe the philosophy underlying training programs. The NRSA scale should be a livable wage with benefits/insurance, and indexed to inflation. Because the R01is the main support mechanisms for postdocs, the NIH needs to raise the $500K cap to allow living wages for postdoctoral mentees. T32s and F award are actually punitive to appointed trainees, unless all awards carry terms and conditions, like the institution is REQUIRED to receive parity. NIH must end this.

There is inequality biased towards “super labs” with many many grants, mostly located on east and west coasts, indicating a “location discrimination”. There is great diversity of incredible science in the rest of the country and great laboratories which frequently get poor grant reviews because of their environment is great, but cannot compare to these super labs and institutions. This further widens the gap.

Proven or promising external resources or approaches

Smart postdocs see the landscape and are taking roles in industry of all sorts, because the have competitive pay, paid leave and support for caregivers. The positions are often now virtual allowing persons to live where they want. We are bleeding talent because academia is not competing. IMHO, this situation is only going to get worse.

Response 2908

Perspectives on the postdoc roles and responsibilities

I view my postdoctoral fellowship as the gateway to becoming an independent investigator in my field. The post doctoral training I’m receiving is fantastic and highly valuable to both future academic and industry positions. I am completely happy with the opportunities, roles, **and responsibilities** afforded to me during my postdoctoral training, but every single one of my personal goals and each of my responsibilities to my labs, departments, and the two institutions that I work for are substantially stifled by my financial circumstances. I have been handed an opportunity to follow my dream of becoming an NIH-funded independent researcher and yet my total work output is constantly lower in quantity and of poorer quality than it would be if I wasn’t constantly working under enormous financial strain.

Fundamental issues and challenges

I work in San Francisco and am paid 57k /year through my fellowship. I can never meet my bills each month and have to use credit cards. Neither of my parents graduated college and I am the first doctor in

my family ever. I already have >100k in student loans and I did not expect to have to take out more and higher interest debt during my postdoc, which has been a very stressful revelation and ongoing circumstance. I am willing to sacrifice to receive this training, but there is a limit past which it makes no sense to me, my institution/lab, or the NIH. Adequate compensation is required for me to meet my full potential and perform optimally. I am doing psychiatry research in a top 10 psychiatry department and yet I am constantly struggling and wasting enormous energy cutting costs and corners to lessen the debt I accumulate. I would need a minimum of 70-75 k as an entry level postdoc to be able to live in this city without debt or very poor quality of life. My PIs have additional funding, which they have offered me and I accepted. They have been trying to provide this additional support to me for 10 months now, but their hands are tied by NIH standards and institutional barriers to providing additional support to postdocs. Hopefully we will find a way, but for now, I am in a very bad situation. I am going to hold on as long as possible, which will hopefully be sufficient to allow me to get a CDA or K award, but depending on how long that takes, I may be financially forced to leave academia for an industry position due to the substantial debt load. Many postdocs have already left for industry for this reason.

Existing NIH policies, programs, or resources

My training is great. I don't need anything except a reasonable amount of money. Please provide us with adequate funding to not have to live on debt. We already do that during graduate school. I am a doctor with responsibilities for millions in grant money and I should get paid as such. Postdoctoral funding should be much higher overall and regionally-dependent. If you want brilliant people to stay in academia and you don't want to destroy the mental health and finances of the people who are already holding on by a thread, we need adequate support. We should be required to receive healthcare, all benefits, dental, retirement, etc. I do not currently have dental or vision or retirement. Postdocs do most of the scientific work. The current policies are reducing the quality of American scientific research. If we want to continue to be the top country in the world for scientific innovation, we need to pay our trainees like the doctors they are.

Proven or promising external resources or approaches

Paying people adequately will vastly improve recruitment, training, working environment, mentoring, and job satisfaction. Each of these is damaged by the stress of living on debt, bad food, and low resources overall. Many people don't even consider a postdoc because the salary is so low.

Response 2909

Perspectives on the postdoc roles and responsibilities

Its the only job an average PhD graduate can get in academia.

Fundamental issues and challenges

Low pay. No benefits at most universities for fellowships. Penalized for bringing your own F32. PIs do not want applications from postdocs unless they are eligible for T32. Postdoc Career development is low priority for many PIs. PIs expect postdocs to write the grant but can't be included as a Co-I

Existing NIH policies, programs, or resources

Give F32 awardees guaranteed benefits. Pay post-docs more in areas with a high cost of living. Make career development a requirement of the PI. Dont let PIs pay the bare minimum salary. Allow people to budget grants for postdocs with more than 1 yrs of experience.

Proven or promising external resources or approaches

No response

Response 2910

Perspectives on the postdoc roles and responsibilities

Skill Building

Postdocs should have access and time to further develop the skills they'll need in their next career step. This includes opportunities for professional and career development outside the lab. In particular, soft skills such as leadership, mentorship, and management need to be cultivated for postdoctoral success.

Independence

The temporary nature of postdoctoral training as currently defined by the NIH necessitates that postdocs need to develop themselves towards scientific independence. This is not to say they need to be monolithic. Rather, postdocs need to gain the skills and confidence to lead in their career of choice.

Mentorship

Postdocs should receive clearly defined mentorship from a senior faculty member who is an expert in their field and possesses the management and mentorship skills needed to help cultivate independence in their postdocs. Ideally, a mentorship team is put into place for postdocs, similar to teams established for new PIs.

Training

Postdoctoral positions are inherently about training and development. The faculty mentor should offer needed training to build research skills and allow for time for career and professional development. Additionally, mentorship plans and IDPs should be established to offer a roadmap toward independence.

High specialization

Postdoctoral trainees must have a doctorate (terminal degree) in their area of expertise. Postdoctoral training allows the individual to further specialize, potentially carving out a new line of research that they can pioneer. This hyper specialization may limit the faculty mentor options/postdoctoral positions available to the trainee.

Fundamental issues and challenges

Salary and stipend

While the increase in pay from graduate school is significant, the salary/stipend of postdocs is not enough to continue attracting academic-oriented scholars. When taking their talents to other industries, scholars receive larger paychecks as well as training, which is appealing when leaving graduate school with student loan debt.

Lack of institutional support

Postdocs spearhead a huge amount of the research conducted at universities/research centers; however, academia pays very little attention to them. There is a general sense of postdocs paying their dues before being allowed to become a professor. If they exist, postdoctoral offices generally have only few staff members and minimal budgets to oversee a huge portion of the institution's early career scientists.

Many institutions do not consider postdocs as alumni, so little effort goes into tracking outcomes after completion of the postdoc. Additionally, while training grants may want their trainees to continue in academic research, no career path should be considered failure should a trainee choose it over academic research. The lack of tracking exacerbates the lack of university support and adds to the sense of transience that many postdocs feel.

Mentorship standards

While the form/style of mentorship is unique to every relationship, mentorship is a skill that can be trained and honed. Yet very few postdocs and even fewer faculty mentors receive mentorship training. It is extremely rare for a postdoc to have an opportunity to reflect on the mentorship they are receiving and have that reflection lead to positive change. As mentoring achievements are not part of tenure, promotion, or grant awarding, faculty who create poor (even toxic) environments for their postdocs go into successful careers while using the data and experience of the researchers they mistreat. In extreme cases, poor mentorship leads to HR involvement in situations that could have been avoided had proper mediation channels existed.

Existing NIH policies, programs, or resources

To improve: NIH position about employee status of fellows

The NIH is clear about whether its fellows can be employees. The language used in the policies and regulations is open to interpretation. Most institutions have decided to act on conservatively by considering NIH fellows as non-employees. This creates disastrous consequences affecting the living and working conditions for fellows, as their health benefits may be more expensive than those of their employee-status peers, they may not be able to make contributions to a tax-deferred retirement, they may no longer be paying into Social Security (FICA) or Medicare, they may no longer have FMLA benefits, and their time as a fellow is not eligible for the Public Service Loan Forgiveness Program. This generates unjustified stress during a critical stage in the researcher's career. Also, with the average age of postdoctoral appointees increasing across the country, it creates difficulties for family planning, wellness, and financial stability.

Fund staff/research scientist

Protected time for professional development

Current language can be improved: 100% effort for research. It should say 100% effort for research, training, career/professional development, and other scholarly pursuits as defined by the institution

Hours per week

For T's you're able to work OUTSIDE of your grant time, allowing you up to 10 hours. NIH is saying "this is okay" for people to work 50 hours/week

Define postdoc experience

NIH uses no "less than 5 years of relevant research experience." On NRSA, "Relevant experience may include research experience (including industrial), teaching assistantship, internship, residency, clinical duties, or other time spent in a health-related field beyond that of the qualifying doctoral degree."

To modify: Inclusion of international scholars

Postdocs on temporary visas constitute more than 50% of the postdoctoral population in the U.S. Only K99/R00 mechanism (except for MOSAIC) accepts international scholars, who pay federal taxes as well as state and local taxes where required.

Proven or promising external resources or approaches

There should be training grants for various career tracks that have protected time for Postdocs to learn skills needed for jobs outside academia. NSF Accelerating Research Translation (ART) translational science, tech transfer, entrepreneurship, NIH could create similar mechanisms.

Create mentorship networks/teams

Redefine what a postdoc is

NPA resources and those of OPA offices across the country

Dedicated time for professional development as part of effort

Includes professional development in crucial areas for early career scientists. Career exploration and skill development. Immigration education/ tax education (support system for how to pay taxes in the U.S.)

Some PIs have MANY grants—and have created a research factory

National retirement—there was an age when people retired from NIH and federal funding, and now that has been removed. This has led to continuous funding to "reliable" PIs and so fewer and fewer Assistant prof jobs are opening up

Response 2911

Perspectives on the postdoc roles and responsibilities

Theoretically, the postdoc is a training position that bridges the roles of graduate student and independent investigator. This is absolutely why one should do a postdoc, however, this is a much longer position than one would prefer.

Fundamental issues and challenges

My main concern and the concern of many postdocs is a low salary. The choice for many to not do a postdoc is based on how many years can you afford to have a low income.

Salary caps should be eliminated nationally or at least eliminated from certain regions, ie Boston, New York and California.

Existing NIH policies, programs, or resources

Remove salary caps or raise postdoc salary to $100,000. In my institution, when I started an incoming postdoc made $53,000 whereas a starting technician made $80,000.

Proven or promising external resources or approaches

Mandatory management training

Response 2912

Perspectives on the postdoc roles and responsibilities

I believe the academia postdoc has now become a required additional "training" position to get most jobs in both academia and industry. Few will hire a PhD with no additional experience to perform wet-lab science, whether this is as a project scientist in academia or a scientist in industry. For those that want to continue into academia to become a principal investigator, it is a time of high-stress and competition as we are constantly reminded that there are few positions available in academia with the market saturated with candidates. We must therefore "sacrifice" in order to obtain a job in a field we want to pursue. That includes sacrificing financially, as postdocs are underpaid considering their degrees and experience, and with time. To succeed in a publish or perish culture, we have to dedicate majority of our time to work. We must also accept that we will live in a transitory state, as these are often 1 year contracts dependent on progress and that we will have to move again in a few years to anywhere in the country that will gives us a job if we are lucky. That could mean stalling usual next steps in one's life, such as establishing a family or stability.

Fundamental issues and challenges

Postdoctoral salaries and the bleak options future careers in academia.

Existing NIH policies, programs, or resources

Increase the salary requirements by increasing the NIH grant budgets. Provide better ways through funding for academia and industry to funnel trainees or collaborate on projects.

Proven or promising external resources or approaches

Punish PIs through preventing funding access when there are legitimate reports of misconduct and abuse of their trainees.

Response 2913

Perspectives on the postdoc roles and responsibilities

Being a postdoc is a means to an end for me. This is a temporary position until I am ready for the next stage of my career (hopefully a faculty position). I am here to learn new skills and, in the process, create a niche for my future lab.

Fundamental issues and challenges

The most obvious issue is the pay. At my institution, the minimum salary is ~$56,000. At best, a 1 bedroom apartment in this area costs $2k/month and doesn't include the cost of utilities, parking, etc. (tiny studio apts

Existing NIH policies, programs, or resources

NIH needs to make it clear that the stipend levels that they publish are minimums. Most institutions interpret these numbers as maximum possible salary which hurts postdocs and graduate students. Ideally stipend levels would be regional and reflect the cost of living or postdocs should be able to apply for a

housing supplement if they live in a high COL region (something similar to a basic housing allowance in the military).

Expanding K99 eligibility due to COVID would be beneficial. I finished my terminal degree in the spring of 2020 but couldn't start my postdoc for nearly 8 months due to a hiring freeze at my postdoc institution. NIH is ignoring that some of us had unproductive starts (1-2 years) to our postdoc research due to supply chain issues, lack of in-person training, and hiring freezes but they stopped extending the eligibility window in 2022.

Offering low cost or free career development opportunities to all postdocs would improve the academic environment. Not all institutions have postdoc offices and resources for postdocs. FAES classes and workshops should be more affordable as well.

Creating smaller/pilot grants (maybe $10-20k to cover supplies--not salary--for 1 year) for postdocs that don't require preliminary data. In smaller labs, it is difficult to start a project that is separate from my mentor's research. If I had a pilot grant, I could get preliminary data on my own independent projects that would help me apply for a K grant or help me secure a faculty position.

Proven or promising external resources or approaches

I've seen several institutions increase minimum postdoc salaries to $70k or $75k in addition to a starting bonus and/or money to cover moving expenses in an effort to recruit and retain postdocs.

Setting maximum time that someone can be a postdoc. For example, an individual can only hold the title of postdoc for 5 years, after which they are promoted to a different title with similar responsibilities and get an increase in salary. It is a huge disserve to let someone be a postdoc for 8 years given the low pay and the fact that you only have ESI status for 10 years after your terminal degree.

Response 2914

Perspectives on the postdoc roles and responsibilities

On behalf of [redacted for anonymity] more than 54,000 members consisting of laboratory researchers, physician-scientists, other health professionals, and patient advocates who constitute our national and international membership, we thank the National Institutes of Health (NIH) for the opportunity to provide information regarding postdoctoral research training and career progression.

Various pathways can be taken to successfully conclude a doctorate program, for newly minted Doctor of Philosophy or Medicine graduates that aspire to become independent investigators in biomedical research, it has become necessary for them to continue their training as postdoctoral researchers.

Postdoctoral researchers often plan and conduct projects from start to finish, train junior graduate students, work as teaching assistants, grade assignments, apply for grants, publish manuscripts, and balance the laboratory budget. However, they do this without job security, salary, or benefits that is comparable to their peers outside of academia. Within the cancer research and care workforce, early-career researchers are instrumental in making advances against cancers as they bring innovative ideas and highly original perspectives to their research projects. Graduate students and postdoctoral fellows are the largest share of the academic research workforce. However, published survey results from the National Science Foundation suggest that there has been a decline in the number of postdoctoral researchers, which could have dire consequences on the overall biomedical research enterprise and halt progress toward curing cancers. Postdoctoral researchers play an invaluable role and should be supported to grow the field of cancer science.

Fundamental issues and challenges

NIH defines postdoctoral researchers as individuals with a doctoral degree (PhD, MD, DDS, or equivalent) who are engaged in temporary, mentored research for the purpose of acquiring professional skills to pursue a career that they choose. Intramural postdoctoral researchers conduct their research in the laboratories of investigators at NIH. As such, intramural postdoctoral researchers typically have greater financial stability and access to the wealth of resource available through the NIH Office of Intramural Training & Education.

Conversely, extramural postdoctoral researchers are trained in laboratories of independent investigators that receive funding from NIH and is carried out at universities, research institutions, or corporate

laboratories. Recently published survey data from the US National Postdoctoral Association support what has been discussed anecdotally for years. Extramural postdoctoral researchers that completed the survey overwhelmingly stated that: professional and personal lives are negatively impacted by their low salaries; training for their next position is unclear; the amount of time they should spend as a postdoctoral researcher is uncertain; job security is not guaranteed; decreased funding to support their position; uncertain expectations from their mentor; toxic workplace culture; and vulnerabilities due to citizenship status. The message was clear in that low compensation, diminishing funding sources, and uncertain career trajectories were key drivers of dissatisfaction in extramural postdoctoral research training.

Existing NIH policies, programs, or resources

As described in the AACR Cancer Progress Report 2022 and the AACR Cancer Disparities Progress Report 2022, a robust ecosystem of flexible, inclusive, and individualized support is needed to foster retention of talented researchers within the STEMM pipeline. Currently, extramural postdoctoral researchers can be supported under their advisors' grants, competitive institutional "T" awards, or individual "F" and "K" awards, as well as competitive philanthropic awards. These awards cover stipend and research costs of postdoctoral scientists, which enables them to take on more ambitious research. The National Cancer Institute (NCI) and NIH have created several funding mechanisms to directly support the transition of postdoctoral researchers into becoming independent researchers such as K01, K99/R00, and R21 grants.

The NCI Center to Reduce Cancer Health Disparities (CRCHD) Continuing Umbrella of Research Experiences (CURE) program is an excellent example of how NIH supports development of scientists from middle school through the junior tenure-track faculty positions. CURE invests in trainees and scientists from groups typically underrepresented in biomedical research by employing a holistic approach that promotes mentoring, professional support, and career skills building, all surrounding the centerpiece of individually mentored research experience. In addition, the Intramural Continuing Umbrella of Research Experiences (iCURE) brings undergraduate students, postbaccalaureate and post-masters degree individuals, graduate students, and postdoctoral fellows into the NCI research community and supports mentored research experiences. These holistic approaches could be expanded to include research institutions that receive funding from NIH. When coupled with structured mentor training, clear employment standards and expectations, and a positive career outlook, postdoctoral training could be greatly reinvigorated.

Proven or promising external resources or approaches

[redacted for anonymity] is committed to the development of the next generation of cancer researchers. We work together with our funding partners to provide research training and fellowship grants, which support postdoctoral and clinical researchers as they progress through mentored training. We continue to support the cancer workforce by funding early-career investigators with active career development awards. These awards serve as a way for researchers to leverage our support to secure additional funding that will allow them to move the cancer research field forward.

Detailed in the AACR Cancer Progress Report 2022, NIH and NCI play important roles in fostering development of young researchers into becoming productive scientific and clinical leaders. With the support of its Equity Council in December 2021, NCI launched the Early Investigator Advancement Program (EIAP) to facilitate the advancement of scientists from diverse backgrounds to become independent investigators.

The cancer research enterprise needs a continuous flow of talent through the research career pipeline. A critical juncture is the transition from junior investigator to independent investigator. EIAP aims to enhance professional skills, guide preparation of an R01 grant application, provide access to a mentoring and peer network, and grow a community of emerging independent investigators from diverse backgrounds.

Furthermore, additional training in mentorship for successful senior scientists helps support the professional development of their trainees. Formal training programs, incentives, and compensation for excellence in mentorship have been shown to increase retention of underrepresented minority trainees and scientists. The success of these programs could be implemented across other NIH institutes and centers as well as research programs that receive NIH funding.

Response 2915

Perspectives on the postdoc roles and responsibilities

To grow closer to being an independent scientist while making meaningful contributions to your field of interest with the guidance of your mentor. Collaboration on other projects of interest to you and your mentor are also expected to utilize skills gained during your PhD or to learn new skills which benefits both you and your mentor's research goals.

Fundamental issues and challenges

The pay for persons with large financial debt, a desire to make significant changes in their lives (e.g. marriage, kids, house), or to gain stability following grad school could find it impossible on the smaller salaries offered during postdoctoral positions. This would be very helpful to recruit and retain more diverse students. Retention is challenging since this position is not meant to be permanent, but leaving prematurely could be prevented by fostering positive relationships between mentors and their mentees, and increased pay and benefits such as good insurance and better retirement benefits. Mandatory networking time or NIH supported networking events would also be very helpful to make sure postdoctoral trainees are getting that necessary experience beyond their contributions to in their field of interest.

Existing NIH policies, programs, or resources

Expanded loan repayment grants would be a great incentive for recruitment, retention, and overall quality of life. For perspective, I was fortunate enough to be funded through school and not need loan repayment grants, others I know are not so lucky and academia is not as viable an option for them.

Proven or promising external resources or approaches

No response

Response 2916

Perspectives on the postdoc roles and responsibilities

Although I think the postdoc is a training stage, I think that after obtaining a Ph.D., postdocs are highly qualified and skillful personnel that drives Science.

Postdocs (especially senior postdocs) have multiple roles that go beyond doing science. They serve as mentors, co-review papers, greatly contribute to lab function and culture, etc.

I don't think that postdoc should be merely see as trainees. Junior PIs (which in their first year are basically senior postdocs) also need support, guidance, training and even committees. However, they are not considered trainees. I think the line is blur and, as such, postdocs should not be considered merely trainees but also staff.

Fundamental issues and challenges

1. low salary (not only the initial salary but also the increase per years of experience).
2. inadequate benefits (i.e. not being considered an employee and thus not having access to retirement plans, etc.)
3. no prospect of future career paths and stability: the most common academic path is becoming a PI, which nowadays it is harder and not guaranteed even if having a good CV and publications (because there are few open positions for the proportion of current postdocs). Moreover, many talented and skilled postdocs that would not want to become PIs and would stay as staff scientists, barely have this option; or even if they do have the option, the salary and benefits are not worth it or the position is not stable because it depends on one specific PI and their funding, instead of being an employee of the institution. Finally, as the postdoc training is considered a transition phase, for the next position, postdocs have to consider moving almost anywhere in the country or abroad even if they don't want to (i.e. personal or family issues). Many postdocs have families and children at this stage of their career so not offering stable, clear and even local future career paths within institutions creates a distress that deviates the attention of their scientific work.

Existing NIH policies, programs, or resources

As described above, I think that if postdocs were considered staff rather than merely trainees, a lot of the policies could change favorably in many institutions (salary, benefits, work conditions, stability, etc.).

Postdocs have been considered trainees because it is a transient phase. But so is being a PI where many move to different institutions, roles or even leave academia and go to industry and other alternative jobs. Thus, I think that having postdocs under the trainee category is hurting them and science in general more than it helps. Nowadays, the duration of a postdoc is very long (it typically ranges from 5-7 years). So with all the experience, contribution and length of this stage it is not reasonable that they are not considered staff and thus do not have an appropriate salary and benefits.

Also, postdocs that are awarded NIH fellowships should not lose benefits in the institutions where they are, nor should have a limit on their salary amount if the fellowship allows it. Many institutions lower the salary of the postdocs even if the fellowships they get (from NIH or other sources) do not have a salary limit.

Proven or promising external resources or approaches

Biotech and pharma Industry have many of the approaches that I mentioned above like Salary adjustments, employee benefits and being considered staff.

In the last couple of years there has been progressively less postdoc candidates in the academic market, more postdocs prematurely quitting and an increase of graduate students that decide not to peruse a postdoc in the first place. I think the main reasons are the ones so outlines above, and implementing some of the changes that I also mentioned would retain more postdocs and improve their working conditions.

Response 2917

Perspectives on the postdoc roles and responsibilities

Postdoctoral research is an opportunity to both refine and expand your skills as a scientist. In many cases it is a requirement for advancement into a preferred career path. Postdocs are largely independent and support more challenging goals of PIs. There may be opportunities to advance their own interest as well as that of their chosen lab. Even though postdocs are both independent and highly qualified and receive little to no individual training, however the NIH still considers it to be a training position. It’s not only laughable but a slap in the face to the accomplishments of postdocs. The nature of the postdoc position is transient. The purpose of the postdoc is to no longer be a postdoc.

Fundamental issues and challenges

Many of my peers chose not to pursue a postdoctoral fellowship. As more and more students chose not to the other options become more apparent. Students close to graduation talk to their peers and find that the ones that chose not to do a postdoc are make twice that of the ones that did. After struggling to make ends meet through graduate school for years the salary is more than convincing. There are still a group of people that will always do a postdoc: the ones that want to be a professor. The issue there is that those professor positions are few and far between. Even if you get that PI position funding and advancement will still be a challenge. These challenges are all apparent to students who see the struggles of their PIs in graduate school and want to avoid the same fate. For me the biggest issue is my family. Currently, after I pay for health insurance, contribute to an HSA and day for daycare through my institution I don’t have any money left. I am dependent on my wife to provide salary for rent, food and vehicle expenses. She really wants to have another child and we can’t do that if I stay. This will ultimately force me out of the postdoc position. Another issue is that industry positions largely want 2-3 years of experience. There is a pressure if you want to switch to industry that you should do so sooner rather than later.

Existing NIH policies, programs, or resources

The biggest thing to do would be to increase the minimum salary. Next would be to limit the length of the postdoctoral training program to 2 years—after 2 years you should be considered trained and move to a higher salary/position. Other government employees enjoy great benefits like low deductible insurance and retirement programs—include postdocs in these. Another option would be to provide more positions to bridge the postdoc position and the PI position (i.e. NIH funded research faculty, academic scientist position, or government lab junior PI).

Proven or promising external resources or approaches

No response

Response 2918

Perspectives on the postdoc roles and responsibilities

To me, being a postdoc means that a highly skilled PhD-level worker is soliciting a 4-6 year position in someone's laboratory to leverage on the skills they have and use them to answer a fundamental question in science. These skills enrich the environment of the laboratory they join, likely by postdocs developing and adding new technology to the host laboratory, as well as the postdoc getting exposed to additional skills and ideas that will continue to develop new avenues of research for the postdoctoral fellow. In addition to developing their independent line of research, a postdoc trains young trainees, including high school, undergraduate, post-baccalaureate, and graduate students. Training includes not only input or trouble shooting on experiments, but importantly it also involves providing feedback on written and presentation materials. Most of the time, postdocs review the initial drafts of younger trainees for later presentation to the laboratory PI. Postdocs also work alongside PIs to draft, write, and review grants to secure funding for the host laboratory.

Fundamental issues and challenges

The low pay lines when starting and maintained throughout postdoc tenure are a major factor preventing the retention of talented scientist in the academic pipeline. As a woman, I am consciously postponing starting a family since in doing so with a second-year postdoc salary will be highly insufficient. I have migrated from South America, so my support system in this country is limited and I do not believe I have the necessary system in place to have a successful academic career and a family right now. I cannot afford childcare fees of more than 30% my salary. However, there is only a few years more for me to keep postponing motherhood. Why do I have to choose between my career and my personal goals? This aspect prevents retention of women as postdocs in academia.

Existing NIH policies, programs, or resources

The policy that NIH postdoc fellowship guidelines impides the postdoc to be an employee at the host university should be immediately changed since it prevents fellows to access benefits. This policy impacts every postdoc on a fellowship, not just the ones on NIH funding and it creates inequality between postdocs on fellowships and the ones hired through the university.

I have had fellowships from 3 different private funding agents and, in all cases, I am not considered an employee from the university where I work, which prevents me to access benefits.

1. I cannot start a 401K to save for my retirement, which has critical repercussions for my life.
2. I cannot designate a portion of my salary to be protected from taxes since I cannot allocate it as a cost for healthcare-related expenses or dependent-expenses. I cannot make any pre-tax deduction since the fellowship income is considered "unearned income"
3. The worst one is that the money that the university subsidizes to pay for my health insurance is considered income when I do taxes. As a result, I end up paying taxes on more than 10K dollars that I never see as income and this additional money increases the amount of dollars that are taxed in the highest bracket. Why am I paying the most costly taxes on money that is not my income??

Proven or promising external resources or approaches

One aspect that was key for me was the establishment of a postdoc advisory committee. Graduate students get one, assistant professors get one, why not postdocs? My host department started such program and getting feedback from 3 other PIs was very valuable to my project and to my success rate securing additional funding.

Response 2919

Perspectives on the postdoc roles and responsibilities

I believe my roles as a postdoc include:

- doing research on the project(s) I am expected to investigate for a PI's lab
- training and mentoring other students in the relevant research areas
- maintaining certain instruments (when clearly communicated)
- following safety procedures and improving them when necessary
- taking a leadership role to guide certain projects
- manage researchers in a project (when clearly communicated)
- prepare and submit manuscripts
- prepare and submit grant proposals / reports

Fundamental issues and challenges

Salary is significantly lower for the same job in most industry starting positions. Health insurance and benefits are also not as comprehensive as most industry starting positions. A one year postdoc contract is quite hard for recruitment and retention and should be 2-3 year contracts. Unclear expectations can also take advantage of postdoc labor and worsens quality of life (work-life balance) and makes it hard for retention. Also, many academic communities do not properly value postdocs as part of the community and it makes it hard for quality of life if you don't feel like you are part of a community or valued in that community. There are programs and events and onboarding / orientation to promote graduate students to meet each other and form community, but there is nothing like that for postdocs in many departments / universities. High turnover every year also makes creating a sense of community harder.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Clear expectations and guidance, and having regular reports to see if the postdoc is meeting those expectations helps with job satisfaction.

If DEI work is expected of the postdoc, then explicitly compensate them for that labor as part of their job description. Otherwise, this is invisible work and that often falls on women and BIPOC scientists and if science values this work, it should be written into the job description.

Having clear mentoring plans also improves postdoc training. For example, one PI I know of has alternating meetings with a postdoc on research updates and professional development advancement as that postdoc wants to be a professor and the postdoc learns from the PI how to write grants, budget a lab, or other professional development skills. Having more formal mentor structures for postdocs help postdocs get more out of the training experience and helps PIs learn ways to do that more easily.

Response 2920

Perspectives on the postdoc roles and responsibilities

Critical for the health of research in ethics US.

Fundamental issues and challenges

While postdoc are in training, their compensation is not on parr with other professions. Moreover, compensation in academia is notably lower than in the private sector. We most bridge this gap by providing real benefits and by increasing compensation. In the US the model is to keep the same salary across the country. This is a problem as the cost of living in some cities (e.g. NY) is more expensive than in others (Iowa).

Existing NIH policies, programs, or resources

The stipend needs to be increased to at least 70K, or even 80K for cities like New York, Palo Alto and San Francisco. Perhaps, the NIH could put in place a system where the host institutions would be required to put some skin in the game--NIH provide 50K + benefits and the host institution provides the other 25K.

Proven or promising external resources or approaches

No response

Response 2921

Perspectives on the postdoc roles and responsibilities

As a current postdoc, this opportunity allows me to receive greater mentorship, broaden my connections, conduct research in a field I am passionate about. I have practiced grantsmanship and taking the lead on various research projects. Some researchers may not need this extra step after their doctoral studies, but I did. I consider the postdoc an opportunity to learn and a step toward becoming a leader in my field of research.

Fundamental issues and challenges

My pay is less than I was paid as a legal secretary with a bachelor's degree over a decade ago. If I was a single parent, after paying monthly rent, bills and student debt I would not be able to put food on the table for my child (and I would not qualify for reduced-price school meals). Thankfully, I have a husband whose income can supplement and a mentor that has allowed me to work remotely and not uproot my family for a temporary position in an expensive area of the US. However, this is not the case for many post docs. I also can't receive a mortgage because my debt to income ratio is high. Ultimately, it is not a livable wage anymore and is insulting for adults who have dedicated their time during their doctoral studies to becoming strong researchers. I would not have done the postdoc if there was a better-paying alternative entry into research and academia.

Existing NIH policies, programs, or resources

The NIH Loan Repayment Program (LRP), though with around a 50% success rate, should increase the likelihood of success. Reviewers should not take into account the stage of investigator when grading the application. In my opinion, it would be very helpful for post docs who apply for the LRP to be automatically be accepted into the program. This will provide us some initial debt relief and a financial leg-up as we enter the professional world. Make the competition greater among assistant and associate professors instead of us at the bottom. Additionally, we should be able to negotiate our salaries based on the cost of living where we are located.

Proven or promising external resources or approaches

I recommend looking at The Ford Foundation's staff policies. Minimum raise from year to year for post docs should be 3%. Rates for benefits should be proportional to earnings.

Response 2922

Perspectives on the postdoc roles and responsibilities

The postdoctoral position in my view is meant to provide an opportunity to deploy one's scientific mastery (which should have been acquired during the PhD) in a semi-independent manner. It's a chance to start being seen in the community as a colleague rather than a student, where training should be focused on non-scientific elements (how to network, which journal to submit to, how to "sell" yourself, how to teach, etc). Importantly, it should exist as a bridge between a PhD and an independent position and should last no less than 3 years; and no more than 6. It should be reserved for those aiming for independent academic positions, meaning hiring and funding stakeholders should ensure, if not enough, then more positions for postdocs. Short postdocs en route to professorial positions are not, in my opinion, good, as an inexperienced professor will often pass the buck on to their unwitting students. Long postdocs are soul crushing.

Fundamental issues and challenges

There is no horizon for the postdoc. It is poor pay for temporary work. The timing interferes with other life milestones (romantic partnerships, having and raising children). We push to the limits of human knowledge but are devalued. We are exploited and forced to perfect areas that were not in the job description: selling ourselves, being bullied, staying quiet in the face of ugliness, accepting a brutal reviewer system where everyone complains and nobody acts.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2923

Perspectives on the postdoc roles and responsibilities

Being a postdoc is this fantastic bridge between learning how to be a researcher in graduate school to going straight into a project and showing that you know how to conduct it. It is still a learning experience because there are new techniques being learned and new biological systems to master, but life is a continuous learning experience. It is beautiful in its idea and has been a really fun and exciting experience.

I have lucked out because my boss is incredibly smart and helpful in my research. We are well funded which gives me the ability to do really cool experiments. I am very fortunate and I will never forget that.

Fundamental issues and challenges

Unfortunately, due to the language in the laws, as a Postdoctoral Fellow with a T32 fellowship, I am not considered an employee of either the NIH or my institution. This leads to me being classified as self employed. I get a 1099-MISC instead of a W2. This has consequences when it comes to pay which ultimately leads to be being paid less after taxes compared to when I was a postdoctoral associate. Because of the language, my benefits, are paid to me as subsidy or a supplement, for which I am taxed on as income. Since it is not employer benefits, I have to pay taxes on this as it is income. This was not the case as a postdoctoral associate. Due to this, the federal government thinks I make $12,000-$13,000 a year more than what my contracts gives me for my stipend. These are the same benefits I had when I was a postdoctoral associate that I did not have to pay taxes on because they were from my employer. It seems from this single thing, my taxes have increased to a point where I am now making less money after taxes.

From talking to different departments at my university, such as the business office and postdoctoral affairs, in addition to multiple colleagues who have or have had fellowships, it seems that this is a well known issue that seem status quo. In a time where inflation is skyrocketing and pay is not following the same trajectory, it is disappointing to know that I am getting paid less for a prestigious position as compared to my fellow postdoctoral associates. I'm doing the same things as they are, spending the same time on experiments and data processing, going to the same conferences, and putting the same effort in.

Existing NIH policies, programs, or resources

From the previous section it can be seen that this is quite frustrating. It has made me think about what policies could be changed. The main one is to be considered an employee of my university. I do not see any benefit to considering me self-employed contractor. If this training grant is supposed to be training me to be a professor, then why am I not considered an employee of the university just like a professor is? This would solve the issue of me paying taxes on employer paid benefits. Currently the government thinks I am paid $12-13,000 more a year than what my contractual stipend is for because the NIH is giving money for my benefits. But neither the NIH or my university is my employer, so I pay taxes on them as income.

I can't honestly tell future postdoctoral fellows that this was worth it. There is no prestige in being taken advantage of without representation. My university is not unionized and the business staff openly agree that the mechanisms to deal with these issues are not user friendly. So I do not know who to turn to. Sure this may seem like only a little amount of money, but to me, a grossly underpaid for my education level, this little money is the difference between going on a a vacation or not. I work just as hard as anyone else, and just want to be fiscally compensated. I know I'm not here to make money, and to be honest, I'm ok with that. I love my work and I love doing experiments, but I have self worth. And it is frustrating to feel that I'm being taken advantage and have no representation for it and no employer to make sure that I'm taken care of.

Proven or promising external resources or approaches

To be honest, I do the same things as I did as a postdoctoral associate as a postdoctoral fellow. From what I have observed and collected from my colleagues, these fellowships are one of prestige and to help alleviate funding from their advisors. So far I haven't had to use any resources of the NIH or have had to approach the NIH (other than now). I will be going to a conference for my fellowship in a couple months, so I'll have to see how that goes and if it was useful for me and my research and for pursuing my career. Mainly, all I want is to be compensated, meaning after taxes, as my postdoctoral associate colleagues. So whatever has to be done, increase the pay in the form of a gross-up or for any other justification, to get me back at the same level, would give having a fellowship an edge compared to not having a fellowship.

Response 2924

Perspectives on the postdoc roles and responsibilities

In one perspective it is a training opportunity for an individual, having research and mentoring support for future scientific career. In another perspective postdoc is also an employee who needs a salary support for. Some postdocs also have families this further highlights the importance of having sufficient financial support for the work they do.

Fundamental issues and challenges

It is a two phase problem. In the first phase, postdocs in the hub cities (e.g., Boston, New York, LA) suffering from high cost of living in these cities. These cities are not affordable where renting a house takes more than half of your monthly paycheck.

In the second phase of the problem, postdocs do not want to move other affordable cities. As a PI in Richmond/VA, currently I am offering 60K/year salary full benefit and retirement for first year postdoc candidate. In Richmond a house can be rented around 1250$/month and city is very affordable. However, although my intense advertising the position I am not getting any application. So postdocs do not prefer other cities even though they are more affordable. This brings that it is not only the salary problem for postdocs but also they have city/institute preferences. Even though they have offers from other cities with better conditions, they are not moving.

Considering these, NIH should not mandate a single matric for postdoc salary. 75K/year salary could be good for Boston but considering affordability this salary is more than enough for postdoc in Midwest cities. So salary should be arrange based on the district/city considering affordability.

For a current postdoc mentality, I see that having a postdoctoral training in prestigious institutes are preferred this cause an equal distribution of postdocs across different institutes.

Existing NIH policies, programs, or resources

Postdoc should be kept maximum 5/year per institute per trainee. There should be more fellowship opportunities not only for US citizens but also for international postdocs that they can be supported with these fellowships (e.g. salary support).

NIH should implement a policy that postdocs are equally distributed across the states not only enriched in the hub cities. This a big problem for academic institutions/PIs located outside of these hub districts. For example a type of grant can be implemented for postdoc who is currently a trainee in Midwest cities or cities outside of the hub districts. This will encourage postdocs to consider moving other institutes.

NIH should design a matric for postdoc salary this should also consider city affordability so that in each institute , base don the affordability salary can be adjusted.

Proven or promising external resources or approaches

Implementing more fellowship opportunities for postdocs not only for US citizens/residents but also for international postdocs. Although putting up a new mechanism that initiate postdoc recruitment easy for early stage investigators would be benefitted.

Response 2925

Perspectives on the postdoc roles and responsibilities

Postdocs drive most of biomedical research. It is increasingly common for phds to take several (2+) postdoc positions while applying for tenure-track and other long-term employment in the field. Postdoc positions are badly needed for both the individuals who take them and the institutions/labs that supply them.

Fundamental issues and challenges

Low salary & lack of job security. It is increasingly difficult to attract the talented, highly trained candidates required for postdoctoral research because they are barely (and in many cases not!) paid cost of living. They are instead seeking employment in industry and/or abroad which means

1. we are on the cusp of a brain-drain and
2. basic/foundational research (which applied research absolutely relies on) is increasingly under threat of stalling out. This is an untenable situation.

Existing NIH policies, programs, or resources

Increase minimum pay for postdocs to 70k. Increase budget maxima to accommodate. This will enable institutions that have already made the switch to fund their students.

Proven or promising external resources or approaches

No response

Response 2926

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity] views the academic postdoctoral position as one that is designed to be a short-term mentored appointment that prepares postdocs for an independent academic faculty position, or for a managerial role in the private, non-profit or government sectors. Beyond carrying out independent research projects, postdocs should have opportunities to work on developing other competencies such as laboratory management and grant writing. Overall, postdocs are immensely important to the success of the laboratory because of their expertise, their full dedication to research and because they drive innovation in the lab. Ideally, in the Principal Investigator (PI) to postdoc relationship, there is a mutual understanding of helping each other move toward their professional goals while advancing scientific discovery.

Fundamental issues and challenges

On the Fundamental issues and challenges inhibiting recruitment, retention, and overall quality of life of postdoctoral trainees in academic research, [redacted for anonymity] identifies low salary and lack of benefits (for example parental leave, childcare, retirement contributions) as top factors for postdocs to not pursue a career in academic research. Furthermore, academic institutions generally do not provide additional funding to support postdocs through temporary difficulties or less productive times (either due to scientific setbacks or personal reasons such as illness or family obligations). These issues are exacerbated in areas with a high cost of living, and disproportionately affect women and people from disadvantaged backgrounds. In addition, the shortage of academic positions and uncertain research funding levels makes an academic career a challenging one to pursue, and [redacted for anonymity] has seen a trend of more and more graduating PhD students opting not to pursue a postdoc and moving to non-academic positions soon after completing their degree.

Existing NIH policies, programs, or resources

There are opportunities where existing NIH policies, programs or resources could be leveraged to enhance postdoctoral training and academic research pathways. One suggestion would be for NIH to formalize guidance on how researchers can support their salary at each step of their academic career. This could take the form of a longitudinal pathway of award mechanisms (consistent across NIH institutions) that support researchers from trainee to independence. Another idea would be an NIH-wide expansion of the model of the NCI R50 mechanism for staff scientists, which would also retain additional talent in the

academic workforce. Additional mechanisms to fund laboratory managers or expert technicians would release postdocs from excessive maintenance duties. Additionally, increased pay lines and budget caps would allow investigators to fund postdocs at a higher pay grade and with increased travel funds to allow them to build robust scientific networks, generate collaborations, and move toward independence. Finally, expanding funding opportunities available to foreign postdocs would likely increase the retention of talent in the biomedical workforce regardless of nationality.

Mentors need mentoring as well. [redacted for anonymity] recommends NIH develop leadership training resources for Principal Investigators to improve the quality of training for their postdocs and graduate students, especially by providing guidance on the appropriate number of personnel that they should commit to mentoring. NIH funded institutions should have clear guidelines on the expectations of mentors and how they can formalize their interactions with postdocs to improve quality of training, maximize workforce potential, resource utilization, and improve scientific rigor.

Proven or promising external resources or approaches

There are promising and proven approaches and resources to improve postdoctoral training ecosystem. [redacted for anonymity] recommends that NIH formally and regularly interface with existing universities' offices of postdoctoral affairs, and with medical and professional societies to share best practices in improving the quality of training of the PhD workforce. For instance, [redacted for anonymity] has a very active task force focused on advancing the careers of PhD scientists involved in hematology research (https://www.hematology.org/about/careers/resources-for-phds) and also funds a Translational Research Training in Hematology Program (https://www.hematology.org/awards/career-enhancement-and-training/translational-research-training-in-hematology/about-trth) that is open to postdoctoral fellows and junior faculty. [redacted for anonymity] would welcome the opportunity to share with NIH the successes of our programs launched in support of this constituency.

Response 2927

Perspectives on the postdoc roles and responsibilities

Postdoctoral training is an extension to graduate training with the distinction that a postdoc has more independence in their research. A postdoc is also a valuable member of the lab to to other trainees.

Fundamental issues and challenges

Postdoc positions are not rewarding enough. The individuals are choosing a pay cut compared to industry jobs to continue their training. Those choosing to do a postdoc should do it without having to think about the financial constraints. If postdoc compensation was increased and competitive to that of alternate positions then postdoc appointments would be more competitive. Postdoc positions commonly fall into a non-compensatory, non-benefit eligible appointment. this should change.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Increase postdoc pay and employee benefits.

Response 2928

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows bring unique perspectives and expertise to any research environment. Since they are already highly trained and largely autonomous, they can assist with in-lab training as well as steering research directions within the lab. Furthermore, the opinions of postdocs provide an additional counterpoint to that of the advisor or PI. Having multiple informed individuals weighing in on experimental decisions, research directions, and lab priorities always enhances the environment of the lab.

Fundamental issues and challenges

More and more postdocs see the incredible bureaucratic burden placed on PIs and are steering clear. This, coupled with low wages, lack of perceived job prospects, prolonged postdoctoral periods due to the

market, have made it difficult for existing postdocs to remain upbeat. Regarding recruitment, graduate students are increasing seeking non-academic positions. Furthermore, there has previously been a healthy exchange of postdoctoral fellows between the USA and other countries. This is changing significantly. More and more, individuals are staying in-country, or within Europe or seeking other regional opportunities. It is no longer viewed as favorable to have an international experience (likely due to COVID).

Existing NIH policies, programs, or resources

There is no doubt that increasing salaries will be appealing to any/all postdoctoral fellows. However, I don't think this will largely alter the recruitment issue. That being said, fewer quality postdocs that are better compensated could prove to be the best model moving forward.

Proven or promising external resources or approaches

One thing that has always been critical to me for recruiting the best postdocs has been to provide the opportunity for serious candidates to interview in person and visit our institution and laboratory. This is a very effective recruiting tool and has led to very successful recruitment in my team. It is important for incoming postdocs to feel good about the new laboratory they are about to spend 2-4+ years in and to know that the environment is favorable to them personally and professionally.

Response 2929

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as primarily a stepping stone to other opportunities and that it's ultimately a trainee level position. It allows for people to gain additional skills while conducting science at a high level, but is ultimately not meant to be a terminal position given its nature.

Fundamental issues and challenges

Most forces acting a postdoc push them away from conducting interesting and innovative science at a level commensurate with their experience. Alternative careers often available to postdoctoral scientists are more lucrative, offer better work-life balance, and provide additional skillsets beyond traditional benchtop skills (in the case of the majority of biomedical science positions). While many academic postdocs chose to take the position as a stepping stone to becoming an independent laboratory investigator, the overwhelming majority of time and effort spent during postdoctoral work does not assist in developing the skillsets necessary to be an effective principal investigator. It is no surprise that these factors, coupled with the incredibly low success rate of ultimately achieving independence, lead to the absurd attrition rate of existing postdocs, and the difficulty with recruiting new ones.

Existing NIH policies, programs, or resources

Ultimately, all of the issues affecting postdocs in this way stem from issues surrounding achieving independence as an investigator. Academic science rewards behavior that is not reflective of a postdoc's ability to ultimately become an independent laboratory investigator and direct the effort of future trainees. Postdocs achieve independence almost entirely based off of their ability to secure grant funding and publish their research in high-impact journals, both of which are almost entirely exclusive to postdocs working in resource rich environments, and rarely correlate with scientific excellence.

The postdoctoral position should become less of a "repeat of graduate school" as it is in its current state, and transition more to a mentorship training period, where they become heavily involved in the mentorship process and are primarily rewarded by their ability to mentor and advance the careers and training of other junior scientists. By providing pathway to independence primarily to postdocs that have published in high impact journals, the system actively discourages trainees from developing the skills necessary to be a successful PI.

Proven or promising external resources or approaches

Distributing funding more equitably to postdoctoral trainees will allow more individuals to achieve independence, and make postdoctoral work more attractive as a result. When adjudicating a postdoc's career as a part of the grant review process, resources available to that postdoc that allowed them to conduct their work should be comprehensively evaluated in order to reward individuals who conduct science with minimal resources (and potentially actively penalize those for whom their work was possible

only because of large scale collaborations or expensive experiments conducted by contract research organizations or core facilities).

Response 2930

Perspectives on the postdoc roles and responsibilities

The shared NIH and NSF postdoc definition is "an individual who has received a doctoral degree (or equivalent) and is engaged in a temporary and defined period of mentored training to advance and enhance the professional skills and research independence needed to pursue his or her chosen career path."

[redacted for anonymity] believes that an academic postdoc position should be an established and temporary period that has defined goals for the advancement and enhancement of professional skills needed to pursue his or her chosen path whether it is in academia, industry, government, or another area.

The referencing of postdocs as "trainees" could have undermining values. Particularly, referencing postdocs and graduate students as "trainees" may devalue and fail to demarcate the training and expertise that a PhD scientist has earned through his or her graduate training years. The terminology "trainee" is also detrimental for international postdocs obtaining visas dedicated to a career that advances PhD-level scientists. Further, referencing postdocs as trainees could muddle the power dynamic in a professional environment, which may pose challenges for postdocs to exercise and reinforce supervisory and mentorship roles that are sometimes expected of postdocs.

Per the NIH, if postdoctoral training is intended to be a "defined period to enhance professional skills" , then professional development should be mandated and incorporated into the stipulated postdoctoral period and be valued equally to the conduct of research. Currently, professional development is left to the postdoc to initiate of their own accord, time, and at their own expense outside of the lab, provided their supervisor approves of their external professional developments.

The entirety of the postdoc role is to provide for the individual to "pursue his or her chosen career path," not just those careers paths in academia. NIH should strongly encourage the exploration of careers outside of academia.

Fundamental issues and challenges

The current system needs close oversight that will assist in mitigating some of the concerns outlined below. Along with oversight, better surveying on the following areas will allow NIH to observe trends and take proactive measures before any pertaining issues escalate.

Inequities in postdoc pay create significant financial barriers that can lead to physical and mental health difficulties. Currently, accurate guidance on how postdocs can be paid is lacking from the NIH, which enables institutions to treat postdocs not as employees but independent contractors depriving them of standardized pay, benefits, and employment protection. This creates a barrier, such that only those that have the means to become a postdoc without suffering financial hardships pursue that career path.

Without clear guidance from the NIH on standardized benefits for postdocs, inequities in benefits have emerged within institutions and across institutions that create discrepancies in terms of quality of life. To sustain and enhance quality of life, more and more early career scientists are looking at careers outside of academia for a healthier work/life balance and a better paycheck that they believe they are worthy of.

The treatment as a "trainee" is degrading and disingenuous as much of the workforce looks at new PhDs as top candidates and employees and far from a "trainee." These issues in a work environment manifest as prolonged work hours impacting work/life balance, strained mentee-mentor relationships, with bullying and harassment that can deter and drive postdocs to careers outside of academia. New PhDs would need to be recognized for their professional strengths and skills, rewarded with competitive salaries, enabling work/life balance.

Existing NIH policies, programs, or resources

[redacted for anonymity] believes that NIH can and should create positive change. While NIH cannot step in to oversee every employer relationship, NIH can make the programs it has oversight over more structured and standardized, inclusive, and supportive of postdocs across institutions.

Scholars feel compelled to move institutions to advance their careers (and these types of biases are reinforced by reviewers and the NIH FAQs for F32 applications), but the NIH could change review criteria to allow for this type of continued training at the same institution. This would be useful for the development of postdocs into faculty, which NIH could help to incentivize this transition. Thus, for those postdocs who want to stay in academia, this could be a mechanism to move from a temporary training period to full-time employment.

In addition to supporting increased diversity at the stage of postdoctoral transition to early career scientist through efforts like its "MOSAIC" awards, NIH should re-evaluate its F32 grant to increase diversity offerings. Only having 1 NIH IC with a diversity award under the F32 grant does not increase diversity. However, the F31 has a standard application and a diversity application. The NIH should look to expand the number or fields where these diversity opportunities are offered and that they should be expanded to other NIH ICs.

NIH should clarify language used for T32 training grants so that any postdoc who is listed as a trainee on a T32 grant is eligible for full benefits like their postdoc peers.

NIH should allow and promote the use of grant funds to help postdocs with relocation costs. Graduate students are financially disadvantaged to save up thousands of dollars to relocate for a postdoc position. Not providing relocation assistance creates inequities in the STEM ecosystem.

Proven or promising external resources or approaches

[redacted for anonymity] recognizes that many of the challenges rest within institutions, yet many of the solutions also are present there. NIH should work closer with institutions and keep institutions in mind when it is releasing guidance and directions.

[redacted for anonymity] recommends NIH:

- Work with external organizations that are focused on postdoc issues such as the National Postdoctoral Association and the National Black Postdoctoral Association and use them as resources to improve the postdoctoral experience.
- Strengthen its relationships with scientific associations that promote mentorship to foster a better mentorship education and relationship building between PIs and postdocs.
- Create a yearly mechanism, whether it is a survey or another reportable item within the funding grant, that will create a baseline for NIH and the public to view the postdoc experience especially regarding postdoc pay and benefits.
- Look to other fields that have similar training structures, such as the medical field, and incorporate best practices, such as limiting the number of hours qualitative worked, into the scientific training enterprise.
- Begin to treat the postdoc ecosystem not as a siloed institution, but cooperation with private industry and other areas, which will in turn strengthen recruitment and retention.

Response 2931

Perspectives on the postdoc roles and responsibilities

Conduct research from the beginning to the end. Purchase needed tools and reagents, design and perform experiments, analyze data, write papers/reviews for publication. In addition, mentor grad and undergrad students in the laboratory.

Fundamental issues and challenges

Very low stipend for so qualified job. Lack of a real position, sometimes we are treated as staff, sometimes as students, trainees, etc. The responsibilities and expectations are big but the stipend and rights are not befitting.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2932

Perspectives on the postdoc roles and responsibilities

I've been a professional science communicator for more than a decade and witness the importance postdocs have for bringing fresh and current perspectives to the scientific dialog. They are not naive nor set in their ways.

Fundamental issues and challenges

Postdocs often feel they're headed down a path with only on direction, they need to see science involved not just research but also leadership, administration, and paths to other roles and futures.

Existing NIH policies, programs, or resources

Communication is a core competency for all scientists and should be formally taught during early stages of their careers.

Proven or promising external resources or approaches

Formally add more soft skills to postdoctoral training, including communication and teamwork.

Response 2933

Perspectives on the postdoc roles and responsibilities

This is the most exploited position in academia. We are paid poorly, we are not given opportunities to prepare for PI positions. I, personally, had a horrific time in the grant process. My intelligence and ability to craft a research plan was ridiculed. I questioned why would anyone be allowed to write some heinous things for a TRAINEE GRANT.

This experience has been horrific. I hate the postdoc. I know so many smart creative people who left academia because of how terrible this life is. You have failed us. I don't believe you will change anything.

Fundamental issues and challenges

Money. This is such a stupid question. You know the answer to this. MONEY! Why should I waste my time answering such a stupid question.

Why are you sending out surveys when you KNOW WHAT YOU NEED TO DO.

Existing NIH policies, programs, or resources

Time limits and pressures. The whole system is completed messed up. The amount of work it takes to land a high profile paper that are going to most likely not be reproducible takes SO LONG but that's all you care about.

I can't get a grant bc I have not published. I can't get a job because I didn't get a grant. It's all a joke. Perpetuated by you!

Proven or promising external resources or approaches

Cluster hires, people do better together. Instead of putting us all against each other. Create hubs for new sets of postdocs to work together. To succeed together, to build skills that would build towards collaborative future.

Response 2934

Perspectives on the postdoc roles and responsibilities

The Postdoc position is the last step for becoming an individual scientist. With the help of this position, I can gain experience in how to lead a team. As a foreign researcher in the USA, I can reach last technologies in the field and communicate with the most prolific researchers in the world.

Fundamental issues and challenges

After the COVID-19 pandemic, Job numbers have decreased, and finding jobs has become harder. The second thing is visa application and receiving visa documents. I think financial issues have a big part in inhibiting factors of the quality of postdoc especially postdoc who has a family (and child). For example, supporting their child's educational needs is challenging.

Existing NIH policies, programs, or resources

Most researchers worldwide want to be a researcher in the USA because most US organizations offer the latest methodologies. However, people nowadays are more careful about their living standards than ever before. For that reason, improving financial and healthcare benefits will help postdoc researchers in the USA. In addition to this, no matter where you come from most private organization offers more flexible position than academic institutions around the world and graduate students want to have industrial jobs more than academic institutions. For example, in industry, some of the milestones are not related to publishing, and workers of this company can achieve these milestones without publishing, or presenting. In academic positions gaining a promotion is taking more time than usual jobs and these paths have huge standards to achieve it. In some of the J visa cases, postdocs are bound with their mentors and they can abuse by their mentors because their status depends on their mentor.

Proven or promising external resources or approaches

Recent studies showed that postdocs are vulnerable to mental disorders and some academic institutions are started to help their postdocs for reaching mental helps easily. Giving mental health training will help postdocs survive and pursue their jobs. Cultural differences are another topic that might give courses to the foreign postdoc about the US culture will help them to understand the meaning of the working environment in the USA.

Giving more financial benefits or giving milestones that are not related to just publishing article will also increase job satisfaction.

Response 2935

Perspectives on the postdoc roles and responsibilities

At [redacted for anonymity], we acknowledge that postdocs provide tremendous value to our institution in the form of their research and scholarship but also in a variety of other important areas. These include bringing new intellectual ideas and perspectives to our community, mentoring of graduate and undergraduate students, and driving forward technology commercialization and start-up company creation.

In our view, the intention of a postdoctoral associate position is to provide a continued opportunity for training in a specialty area for a limited amount of time. We believe a postdoc should receive active mentoring from a more senior scholar and ideally have a team of formal and informal mentors available to support them in their career and professional development.

In terms of responsibilities of a postdoc, we believe while their time will mainly be spent focused on research and scholarship, obtaining teaching, mentoring, and other professional development experiences can be crucial for them to transition to careers of their choosing. Importantly, we support the OMB's uniform guidance of the "dual role" of postdocs as both trainees and employees: "[those] in postdoctoral positions engaged in research are expected to be actively engaged in their training and career development under their research appointments" .

At [redacted for anonymity], we categorize our postdoctoral associates as research faculty in our human resources systems. This provides them access to near-equivalent employment benefits, including health care and retirement benefits, as other faculty at the institution. Fundamentally, we believe all postdocs should receive access to reasonable employee benefits and resources while recognizing that they are also in a time-limited, temporary training position.

We are agnostic as to what careers postdoctoral training prepares one for and believe the skills and abilities obtained through a postdoc can allow one to succeed in a variety of fields post-postdoc.

Fundamental issues and challenges

Visa & Immigration Challenges

A major challenge in postdoctoral recruitment is the current inefficiencies in the visa process in the United States. Processing times and bureaucratic hurdles make it difficult to onboard international scholars in a timely manner.

Budgetary Practices that Acknowledge Increased Personnel Costs for Postdocs & Staff Researchers that Lead to a More Effective Research Enterprise

The research skills and talents postdocs both bring to the university and develop during their training make them critical components of the US's research and innovation ecosystem. Many would like to continue working in academic researcher roles after their postdoc. Given their advanced training and skills, an individual transitioning from a postdoc to a more senior researcher role is (rightly) more highly compensated. At [redacted for anonymity], the increase in compensation from postdoc to a more senior researcher role is 30-50%. Even if faculty wanted to retain research talent through promotion within our research faculty ranks at [redacted for anonymity], current NIH Research Project Grant (RPG) budgets make this difficult. Furthermore, inflation and other costs have risen substantially since the NIH modular budget "cap" was put in place in 1998. The issue of higher personnel costs being necessary to address in NIH RPG budgets equally applies if faculty and institutions seek to better compensate postdoctoral associates to ensure a living and stable financial arrangement for the postdoctoral population.

NIH must strongly consider the message it sends in its RPG budget guidance as it relates to more adequately supporting the scientific workforce. Higher personnel costs should not be seen as a negative in the RPG review process but rather leading to a more stable, robust, and effective research enterprise.

Existing NIH policies, programs, or resources

Equitable Access to Benefits for Postdoc Fellows and Employees

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. This can prevent postdocs from losing employee benefits when accepting an NIH fellowship, making the acceptance of these prestigious awards more feasible. NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.

Proven or promising external resources or approaches

Collaborate with NSF Programs, Including INCLUDES and AGEP to Identify Best Practices in Supporting Scientific Workforce

NSF's programs focused on increasing diversity in both the science and engineering workforce and professoriate could be excellent partners for NIH as we seek to support Ph.D.s and postdocs from historically underrepresented groups in their pursuit of employment at US colleges and universities and beyond.

Curation and Sharing of Resources and Best Practices in Postdoc Training and Development

The NIH should work to consolidate professional development resources and make them more accessible and available to postdocs, faculty, and postdoc offices.

The NIH Broadening Experiences in Scientific Training (BEST) awards provided significant resources to a select group of institutions to develop and share best practices with the broader community and, indeed, some data from this program have been presented and published. However, resources to ensure dissemination could continue after these awards' funding ended seems to not have been addressed. One specific example is the website that used to host publications and resources from the consortia of BEST institutions (NIHbest.org) is now defunct.

Building off this point, NIH's OITE provides amazing resources and workshops to aid postdocs in their career and professional development and other organizations such as the National Postdoctoral Association, Graduate Career Consortium, iBiology, and others have developed tools and resources that can benefit postdocs in their career exploration and planning process.

A well-maintained comprehensive data bank should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. In an increasingly virtual environment, the current and

future wealth of resources for postdocs should be curated, sorted and readily-available. This would complement federal commitments to open science by increasing not only the availability and access of federally-funded research but also its community resources.

Response 2936

Perspectives on the postdoc roles and responsibilities

My perspective is that the job of a postdoc as currently organized is to help a PI carry out the aims of a grant, while simultaneously developing their own plan to generate independence. In theory, a postdoc job could have intrinsic value as an additional layer of job training, but it is not typically viewed as such (and would require significant buy in from the PI supporting the postdoc).

As an assistant professor struggling to find people to work in my lab as a postdoctoral fellow, my perspective has changed to a degree. It seems like a postdoctoral fellowship is becoming more of a possible pathway to citizenship. Over the course of 3 searches, fewer than 10% of my applications were U.S. citizens (1). It seems likely that this experience reflects in part the location of where I work (rural area), but I think it also is worth stating bluntly as such. Either U.S. citizens are not interested in pursuing this line of work, or there are not many of them and they are taken in by prestige institutions.

I did a 5 year postdoc before being promoted to "research scientist". The starting salary my first year was $39k, which was raised to something more reasonable after a few years. By the time I left for an assistant professor position (at an R1 institution) my salary was 70k. I loved that job as it allowed me to be a full time scientist, and I would have been glad to work in that position for a long time if I had felt the role was safe and had some reasonable room to grow (in terms of salary). The nature of the job felt unsafe and tied uncomfortably to the random nature of funding.

Fundamental issues and challenges

Speaking to many Ph.D. students at my university —I'm only aware of 1 (out of ~10 that have graduated since I arrived) that have done a postdoc. Many of the students seem upset and bitter about the career prospects and want to leave for industry.

I don't know if this is fair —the starting salary for an NIH postdoc is much fairer than it was. I'm worried that maybe students are getting distorted analyses of what is really available in industry. However, this is a separate issue of LONG-term career prospects. Why would someone go into a career of being a scientist if it is only safe for a few years before there is only a VERY SMALL possibility of becoming a manager (i.e., lab PI).

Existing NIH policies, programs, or resources

The challenge of creating a sustainable job for scientists is that the math seems impossible. Take the following example. I hired a research faculty (i.e., a postdoc no longer allowed to be called a postdoc by NIH standards) who made ~58k per year. However, with fringe and (family) health benefits, the actual cost was $95k. Effectively the same person / salary but defined as a postdoc is costing closer to $70k. I don't know how a lab can manage this salary difference without the size of awards increasing substantially.

Proven or promising external resources or approaches

I think there are too many value-added extracurriculars that distract from science already. If people felt confident that their position would lead to a sustainable job in the future (whether academic or not) they will be happy to take the job. MD residents for example —are WILLING to deal with a challenging situation because they know there is a 99% likelihood of a better future.

Response 2937

Perspectives on the postdoc roles and responsibilities

I think a postdoc should be an opportunity to design and implement projects with some input from a PI. It should be a time when you are learning and applying new skills to expertise that you already have toward common scientific goals.

Fundamental issues and challenges

Being underpaid, being treated as a trainee after many years of scientific experience, and not being able to be a PI on grants prohibits postdocs from moving forward. Many postdocs are treated as technicians and micromanaged (I witnessed a lot of this while at the NIH), and fail to develop into independent scientists as a result. Other postdocs are left on their own with little or no input or feedback from their supervisor (this was my experience). There should be some way to provide feedback throughout the process rather than at the end or after someone has decided academic science is no longer for them. Many postdocs are also responsible for many administrative tasks, such as ordering supplies and reagents, which detracts from their time to do science.

In my own experience, being bullied as a woman has been extremely difficult and my work, which I was leading myself, has been frequently minimized by others because I was "only a postdoc"

Existing NIH policies, programs, or resources

K99 and other awards should not be restricted to postdocs with fewer than 4 years of experience, this discriminates against those who don't know about these opportunities as well as those doing multiple postdocs and not being able to get an academic faculty position. If these limits are kept in place, how about an award specific to helping those who have done 5+ years of work as postdocs succeed in the academic market? The expectations for experimental design and scientific vision could be higher for these more experienced folks.

One way that the NIH could improve the lives of postdocs across the board is mandating that postdocs funded through NIH grants be paid on the NIH scale at a minimum. I have 6 years of postdoctoral experience and 4 years as a staff scientist, I am now a postdoc again and being paid the same as someone with 2 years of postdoctoral experience. Leaving pay scales to institutions enables them to exploit postdocs with extensive research experience who are certainly no longer "trainees". There should be a different classification for postdocs and scientists with more than 5 years of experience—even something like "senior postdoc" or "research fellow" as this situation is increasingly common since so few faculty positions are available.

Proven or promising external resources or approaches

I think having more academic career opportunities aside from being a PI after doing a postdoc would retain a lot of people in science. Staff scientist positions particularly would suit a lot of people, help scientific labs succeed and providing a more stable work opportunity for people with expertise who do not necessarily want to lead their own lab. These types of positions are relatively rare outside of large research institutes.

Response 2938

Perspectives on the postdoc roles and responsibilities

A postdoc is expanding his knowledge gained during his thesis work. Its like a residency after medical school (or fellowship after residency) with in depth work on a particular topic. This can expand the prior knowledge or add new dimensions when moving into another filed aopolying expertise and skills learned during the thesis work.

Fundamental issues and challenges

1. Academic salaries are beaten by industry. We have difficulties finding good people that want to come, even to a top notch institution.
2. Life style compared to industry, less long nights etc.
3. Generational change, with people more emphasizing work-life -balance and to not be othered. I came to the US 20 yrs ago with two suitcases and left everything behind, now it seems there is no drive or will to do that anymore
4. Overall political uncertainties where the US isn;'t seen as attractive any more with daily shootings, racism and antisemitism out in the open and a fragile democracy on the brink of disaster.

Existing NIH policies, programs, or resources

You have to increase the R01 budget. This hasn't be adapted for 20+ years. Not even for inflation. We cannot even offer competitive salaries for postdocs on a single R01any more, certainly not on a modular budget but even more difficult on a cut detailed budget. At the same time institutions are executing mandatory postdoc salary increases for which the PIs have to find the money which ends up in having to write even more grants and making the PIs life even more miserable than it is—which in turn attracts even LESS people to science. This is an enormous problem and a downwards spiral. I recommend my kids to not go into academia any more. I changed my mind in the last few years.

Proven or promising external resources or approaches

Honestly—It all is hinged on the salary. If the salary is too low for a decent living in expensive cities (NY, Boston, SF etc.) they will go elsewhere (industry, consulting) to have a better quality of life. While 20 years ago we just clenched teeth and went through it this is not the case any more.

Subsidized housing, wellness plans are other things that might help

Response 2939

Perspectives on the postdoc roles and responsibilities

I think it can be a useful step in the training process

Fundamental issues and challenges

I will not be doing a postdoc due to the sub living wages I will make in this role. It is not worth it.

Existing NIH policies, programs, or resources

Increase postdoc pay

Proven or promising external resources or approaches

No response

Response 2940

Perspectives on the postdoc roles and responsibilities

At the first I thought it is really a way to get independent in research, but it is not. You are a well trained person in any lab doing a lot but gaining the less. You can't even thinking of applying for grant individually, there are always a stablished PI who can gain benefits from your efforts.

Fundamental issues and challenges

Imagine your project doesn't go the way it should be, I mean full of negative results specially the ones against previous findings in the stablished PI's of the lab would direct you to the hell. The quality of life is too low in comparison to the effort/time you spend in the lab. During the postdoc training duration you never learn how to manage the budget, which I feel would be a trouble for starting a new lab in your future career.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2941

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Salaries are too low and do not match a postdoctoral trainee's skillset. Academic labs are powerless to increase their salaries to levels commensurate with their training because THE NIH HAS KEPT R01 BUDGET LEVELS at a ridiculously low level. We cannot pay people what they are worth if we do not have purchasing power from our grant funding.

Existing NIH policies, programs, or resources

DOUBLE THE MODULAR R01 BUDGET

Proven or promising external resources or approaches

No response

Response 2942

Perspectives on the postdoc roles and responsibilities

A high level training opportunity, with service and mentorship responsibilities. The only difference from a PI is the lack of responsibility for total lab funding. Many postdocs are expected to be self funded by year 2 or 3.

Fundamental issues and challenges

Pay is way too low. Pay should scale with cost of living. Institutions that allow NIH funded postdocs should be required to give equivalent benefits to funded postdocs as those who are directly funded by the institution.

Existing NIH policies, programs, or resources

Require professional development. Require benefits from host institution. Add child care supplements. Provide funding for PIs to give relocation expenses.

Proven or promising external resources or approaches

HHMI has made great progress. Check out St Jude's postdoctoral fellowship stipends as well

Response 2943

Perspectives on the postdoc roles and responsibilities

I see it as a period for additional training and a career stepping stone. In my NIH R01 funded postdoc, I also have specific responsibilities to the grant, in terms of tasks I need to accomplish to support it. Aside from that, i see the primary goal of my postdoc as being obtaining a career-level position.

Fundamental issues and challenges

The primary issue is the availability of research-focused career positions. The rate of pay is a secondary issue. In my field, the number of PhD graduates that aim to pursue academic research careers greatly exceeds the number of available positions. This makes the environment very competitive and may increase the number of years on postdoc. Traditionally, postdoc was optional in my field and usually a 1 year experience. Now, it is essentially necessary and often is 2-4 years. My research area has a somewhat longer PhD length, 6-7 years, and the problem with the emergence of an unexpectedly long postdoc is that it disrupts life plans. This includes marriage, family planning, buying a house, retirement savings, and more. Given the current circumstances, many of us will not be reaching a career-level position until 32-35! This is not sustainable and is driving many academics industry positions. The secondary issue ties in here, in that all of the aforementioned problems are worsened by low salaries relative to our degrees and expertise. Although increasing our salaries from ~52k to 70k would not eliminate all of these problems, it would ease them greatly. For instance, it would make buying a house more feasible or having a child less stressful.

Existing NIH policies, programs, or resources

Pay us more or increase funding for career level research positions

Proven or promising external resources or approaches

Pay us more or increase funding for career level research positions. Although this would make the postdoc market more competitive, I think it would still be an improvement.

Response 2944

Perspectives on the postdoc roles and responsibilities

On behalf of the [redacted for anonymity], thank you for considering our comments on re-envisioning US postdoctoral research training and career progression. In addition to our comments, we also support and endorse the comments submitted separately by [redacted for anonymity].

We believe the postdoc definition or period should:

- Serve as a bridge to the desired career by providing "specialization" to prepare for a career transition, which should not be assumed to be an academic tenure-track position.
- Specifically state the individual has obtained a PhD.
- Have an expectation of maintaining a healthy work-life balance by providing sufficient salary and benefits, along with a professional culture that respects and values this balance.
- Incorporate policies that are equitable for all populations, including caregiver, international, neurodivergent, and other groups.

The postdoc definition or period should not:

- Use the word "trainee" ; this term has historically been used as justification to withhold benefits from postdocs, does not recognize the extensive training they have already completed, and fails to recognize professional expertise and experience already acquired. We note that a newly minted PhD beginning their career outside of academia is not generally considered a "trainee" . Alternative terms that would elevate this position include postgraduate scientist/investigator, early career investigator, or resident (akin to post-medical school specialization).
- Have a specific timeframe; a "temporary" position could imply that the individual should not be invested in by the mentor or institution. However, this should not be considered a permanent position either; using a "bridge to a desired career" in the definition could prevent this potential issue.
- Solely replicate training received during the PhD. The postdoc should include professional skills such as mentorship, grant writing, or others that are transferrable to their desired career.

Fundamental issues and challenges

Lack of adequate benefits are a major issue; benefits and salaries are variable between, and even within, institutions. For example, obtaining external funding can prevent a postdoc from access to institutional benefits, including health insurance. This can depend on the details of the institution's employment classification of postdocs, which may not be clear to the individual during the postdoc search.

- Furthermore, many postdocs choose to start families during this time, and variable access to benefits such as affordable on-site childcare creates substantial barriers.
- The current NIH salary scale is not sufficient to cover cost-of-living in most locations. We request that NIH provide transparency about how they determine the salary scale and critically evaluate how this scale is provided nation-wide.

Postdoc positions, when defined as "temporary" , can prevent access to employer-matched retirement accounts, with long-term negative impacts on financial outlook.

- The temporary status can also create unnecessary hurdles for international postdocs that are on temporary visas.

The expectation to move to a different location for the postdoc can create barriers that negatively impact careers, such as financial burdens associated with relocation and other disruptions that disproportionately affect postdocs with caregiving responsibilities or individuals with other attachments to their current community. Furthermore, moving away from existing support networks may contribute to feelings of isolation often reported by postdocs.

Existing NIH policies, programs, or resources

While many barriers to postdoc quality of life come from their direct employer/institution, NIH is still a powerful institution that can lead the way to generate change. We suggest that NIH:

- Explore including the treatment of postdocs, i.e. the benefits they are provided, in the assessment of "institutional environment" during the peer review process of grant applications. This would incentivize institutions to provide appropriate benefits to postdocs in order to continue receiving federal funding from NIH, which is the primary funder of biological and biomedical sciences. This could also lead to benefits for postdocs more broadly at the institution for those that may be funded through agencies outside of NIH.
- NIH adjust the Grants Policy Statement (GPS) to expand allowable costs for benefits beyond health insurance and allow funding from multiple federal sources.
- Clarify GPS language to allow fellows to maintain an employer-employee relationship with their institution, which would allow them to continue receiving benefits despite being on a fellowship.
- Create additional funding opportunities for international postdocs.
- Use Institutional Research and Academic Career Development Awards (IRACDA) as a model for postdoc transition into a desired career. While IRACDA is designed for teaching-focused careers, similar programs could be generated to prepare postdocs for careers in lab management, science policy, science writing, industry, etc.
- Invest in funding mechanisms that do not tie postdocs directly to an individual advisor; this could combat substantial power dynamics that link the future "success" of the postdoc to the relationship with their advisor. A model for this type of mechanism is the Katz ESI award, which supports innovative projects and does not require preliminary data.

Proven or promising external resources or approaches

The majority of resources currently available to postdocs are at the institutional level: salary, benefits, term limits, etc. Many of the dissatisfactions that exist for postdocs are beyond the policy level and extend to the human one: lack of emotional support networks, affordable childcare support, and sufficient mental health care, all can contribute to a distressed quality of life. We encourage the NIH to support:

- Childcare cost reimbursements through federal grants. Postdocs funded through some private grants have access to this benefit, which makes an enormous difference.
- Equitable methods for senior PhDs to search for and obtain postdocs that don't rely solely on the network of their mentor.
- Strengthening relationships with extramural organizations dedicated to improving postdocs' quality of life, such as the National Postdoctoral Association, and partnering to encourage widespread adoption of already identified recommended policies and practices.
- Work closely with institutions to communicate updates to the Grants Policy Statement, including the intended spirit and outcomes of the updated policies. NIH must keep in mind that universities typically interpret these policies to save as much money as possible, usually at the expense of postdoc benefits and programs.
- Working with external organizations to classify or rank institutions based on the level of support they provide to postdocs. This could increase pressure on institutions to improve in this area, as well as provide criteria for senior PhDs to choose an institution with a supportive environment.
- Apply existing methods to track postdoc conversion to tenure track faculty. NIH could assess these data and support institutional programs that use these methods for tracking careers after the postdoc in academia and other fields.

Response 2945

Perspectives on the postdoc roles and responsibilities

Typically, the goal of entrepreneurship is commercialization of a product or idea; but in our proposed context, providing training in intrapreneurship-the application of an entrepreneurial mindset and skills within an organization-would offer significant value to the postdoctoral training ecosystem. Our pilot

training program “Advancing Innovation through Mentorship” (AIM) looks to expand the ways academic postdocs think about their role in the biomedical ecosystem. By incorporating intrapreneurial skills and perspectives as a complement to research training, postdocs will develop the capacity to disrupt conventional ways of thinking and engage in creative problem-solving-thereby advancing scientific research goals within their labs.

AIM workshops focus on two major areas of skill development: project management and interviewing. This is a prime example of the transferability of entrepreneurial skills. In the commercial realm, inventors and entrepreneurs interview stakeholders to evaluate consumer needs, test out the marketability of concepts, and explore possible trajectories from idea to implementation. In the academic realm, postdocs may not see interviewing or working with focus groups as having relevance to their work-but, in fact, it is an invaluable skill. Formulating questions and probing the answers is at the heart of hypothesis-driven biomedical research. A core concept of the Lean Startup Methodology is customer discovery, which is taught through AIM training, and encourages creating hypotheses and testing those hypotheses with customer segments in the marketplace. In biomedical research, these customers are financial and regulatory agencies, government or otherwise. The customer discovery process allows entrepreneurs and innovators to quickly learn and iterate, and then learn some more, in order to get a product or service out in the market. Similarly, this mindset for translational researchers can be a critical lens to inform and add impact to their efforts in the laboratory and shape the impact postdoctoral researchers make in the scientific enterprise.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Hypothesis-driven research is fueled by the ability of researchers to ask the right questions, much like entrepreneurs must ask the right questions when iterating the creation of a product or service. Postdoctoral researchers often do their work within very specialized spheres. The benefits of specialization are clear; at the same time, there is a cost to not having a perspective on the broader ecosystem in which biomedical research occurs. By building intrapreneurship into the NIH postdoctoral training milieu, researchers will develop the ability to:

1. Look beyond immediate research outcomes to consider the longer-range implications and potential applications of their postdoctoral work,
2. Identify a full range of potential stakeholders and network with potential collaborators, and
3. apply entrepreneurial language and concepts to their role as NIH postdocs, and understand the relevance of the business model canvas to their work as part of the larger biomedical research enterprise. From the pilot study, we learned that NCATS intends to use the course to inform and train junior investigators on ways to disrupt the standard practices of problem solving versus programs such as I-Corps that are used as a means to validate the technology.

Proven or promising external resources or approaches

It is well documented the best entrepreneurial training experiences involve mentorship, hands-on skills development, and project-based practice. The same is true for optimal postdoctoral training. The idea of advancing scientific innovation through mentorship has already been piloted within NIH (both the National Center for Advancing Translational Sciences and the National Cancer Institute), resulting in valuable lessons for an intrapreneurship-focused AIM program for postdocs. Based on findings from the pilots, a full-scale AIM program model would include

1. an 8-week curriculum of intrapreneurial training to 15 cohorts of postdoctoral trainees each year,
2. cohorts with 3-4 postdocs working in the same scientific concentration, and
3. one mentor who is a senior scientist in the same field. Ideally, each cohort has members located at different postdoctoral placement sites to facilitate collaboration and cross-fertilization of ideas.

This structure would allow 3 training sequences over the course of the year, with 5 cohorts in each sequence and a potential impact of 60 to 75 postdocs and 15 mentors trained in intrapreneurship each year. Each cohort develops interview questions germane to the research project, identifies potential information sources, and conducts 30 interviews. Participants would attend required small group office

hours, where multiple teams ask questions and discuss areas of interest. This component is critical to build a nurturing postdoctoral environment, build camaraderie among participants, and build relationships with mentors.

Response 2946

Perspectives on the postdoc roles and responsibilities

I believe that being a postdoc means i have the opportunity to sharpen previously gained skills, pick up new skills, and receive the mentorship I need for future career prospects. I think this is an excellent opportunity for me to explore mentoring, teaching, and scientific experiment design as a semi-independent thinker.

Fundamental issues and challenges

PI/Mentors are not trained to be mentors. There should be some sort of guidelines, minimal requirements, etc to have PI/Mentors funded or even working in their lab. Most postdocs are not allowed to do independent work (even if they have their own funding mechanism), are not allowed to learn new skills, and are expected to be cheap skilled labor. Institutions are not paying livable wages, not providing good benefits/health insurance, don't host or match 401k, etc to postdocs. We are adults, starting families and thinking about our future prospects, but academia continues to topple our goals/desires. If institutions are known to abuse postdocs then NIH should step in. How can we trust that we have support when every level of research from department to federal institution won't be our champions.

Existing NIH policies, programs, or resources

There should be more IRACDA grants and even some focused on getting individuals the training to be better mentors and scientists. Currently, we focus on teaching at PUIs but need more expertise on mentoring at R1, R2, specialized research focused institutions.

Also, alternate K99/R00 programs—the cut off at 3 years, especially coming from pandemic, is difficult to meet unless you are in a supportive environment. The only postdocs that can get K99 are those that have a support system. There should be postdoc grants that focuses on the postdoc and their research ideas rather than the PI who will mentor them. This is a barrier that many postdocs in difficult labs or financial situations can't cross.

Proven or promising external resources or approaches

Fix the top down abuse. Mentors should be better trained, should understand the CURRENT plights of postdocs. PI/Mentors continue to think that a 4 year postdoc doing nothing novel will get you a faculty job—it won't! There is a bottle neck and they should learn how to help us navigate it.

INCOME! We need higher income for postdocs. We aren't children, we are HAVING children. We need fiscal and mentoring support during this career stage.

Response 2947

Perspectives on the postdoc roles and responsibilities

Academic postdocs are critical in moving science forward expeditiously in academic settings. The emphasis on training new individuals for the sciences is poorly balanced with retention efforts. What positions are we training people for when academic positions are rare and we are not rewarded for training people to move into industry.

Fundamental issues and challenges

A lack of long-term career stability or opportunities for permanent positions coupled with low pay, few benefits (minimal family leave, no retirement savings), and limited options for remaining in a geographic area (where one might find support from friends and family for childcare or advancing two careers for married people) are the primary reasons that people opt out of postdoctoral positions in favor of leaving research or moving to industry.

Existing NIH policies, programs, or resources

More options for permanent or long-term research positions, higher pay, improved family leave benefits, and retirement benefits.

Proven or promising external resources or approaches

Marie Curie fellowships that are specific for supporting people who have had a child in coming back to research. Staff scientist positions in the intramural program should be prioritized in academic settings to improve retention and speed up academic research (including training).

Response 2948

Perspectives on the postdoc roles and responsibilities

We view the academic postdoc as a highly skilled and knowledgeable scientist who brings state-of-the-art expertise in specific scientific disciplines (including the latest research and techniques in the field) and is typically one of the lab's greatest drivers of data generation and analysis. Postdocs play central roles in mentoring junior lab members, often providing hands-on guidance in designing and performing successful experiments/ensuring rigor in interpretation, which PIs have diminishing bandwidth to take on. Similarly, postdocs often help write grants for the PI, yet mechanisms to acknowledge these key contributions are lacking. As the postdoc fellowship is the final academic step before becoming a PI, mentorship focused on a path to independence is a critical part of this stage. Postdocs thus play invaluable yet widely underappreciated roles in the success of academic labs, and they should be recognized and compensated proportionately for their contributions—i.e. a lab can have unlimited funding, but if smart, creative, hard-working and experienced scientists are not treated fairly and compensated adequately, then the system is not sustainable.

Fundamental issues and challenges

Low salaries: one of the most significant factors preventing retention of postdocs in academia, as postdocs generally receive the lowest salaries of all PhD-educated scientists. This problem is exacerbated in very expensive cities that house major academic centers like New York, and for postdocs with families to support, especially if they are the primary caretakers. Biotech companies are increasingly seizing this opportunity by offering highly lucrative salaries to bring postdoc-level expertise into their R&D teams. Low salaries are thus leading to diminished diversity in the academic workforce. NIH has an opportunity to increase retention of postdocs by significantly increasing the postdoc salary cap, which would spur these changes across the field.

Inconsistent benefits: the access of postdocs to career-stabilizing benefits like retirement is highly uneven across institutions, which is increasingly problematic as scientists are stalled in the postdoc stage for larger stretches of their careers.

Lack of growth opportunities and mentorship/training: While the postdoc position is seen as a training position, the level of mentorship and training is also very uneven across institutions and PIs, especially in the area of career advancement, and particularly in building skills required for careers beyond academia like industry that are still widely seen as failure options or less worthy pursuits.

Toxic environments: Many postdocs are treated as workhorses rather than recognized as vital contributors to a lab, being expected to work around the clock, and frequently subjected to bullying/harassment/discrimination that institutions are slow or unwilling to address. Foreign postdocs are especially susceptible to these types of exploitation given their dependence on a visa, which makes them feel justifiably powerless to report mistreatment or attempt to switch labs/institutions. All of these factors take a major toll on the mental health of postdocs and diminish the appeal of academic career paths.

Existing NIH policies, programs, or resources

Curbing harassment: It is laudable that NIH is enforcing the policy of pulling funding from PIs whose institutions confirm findings of harassment. Yet by the time findings are confirmed, countless careers have likely been derailed. Enforcing greater accountability for PIs to detoxify their lab environments, including rewarding those who advance diversity, equity, inclusion, and belonging in the workforce, will be critical for enhancing postdoc retention.

Postdoctoral grant support for non-U.S. citizens/permanent residents: Many of our nation's most talented and productive postdocs come from other countries, and those in minoritized groups face disproportionate barriers that hinder their success. Granting these postdocs eligibility for NIH fellowships, just as non-citizen PIs are eligible for other NIH grants, would help level the playing field and advancing equity in the postdoc community. Training for foreign postdocs in NIH-funded labs on daunting tasks like visa applications would also be welcome.

Preparing postdocs for non-academic careers: Although the postdoc position was initially envisioned as unique to academia, postdocs have gone on to contribute to the biomedical research ecosystem across biotech, pharma, nonprofits, government, and more. The NIH Career Symposium helps expose postdocs to these opportunities; convening these in person (in tandem with major NIH-supported conferences?) and other mechanisms to maintain contacts would help postdocs build networks; NIH could also consider providing additional courses and resources to help postdocs prepare for non-academic career opportunities, including mandating these under institutional training grants.

Normalizing well-paying, stable staff scientist positions: many excellent postdocs leave academia because they cannot find tenure-track positions. Universities currently have few incentives to create more stable jobs for PhDs because postdocs provide disproportionately high value for enhancing research output relative to their cheap salaries. NIH is in an ideal position to incentivize universities to create staff scientist jobs for PhDs and battle administrative bloat.

Proven or promising external resources or approaches

Enhanced mentorship networks and committees: Mentorship systems like CIMER/Entering Mentoring and platforms like Chronus could be helpful for building mentor networks to help career advancement. Scientific mentorship could benefit from independent postdoc committees (like thesis committees) to ensure postdocs are assigned realistic projects, are working in decent conditions, and are not exposed to toxic environments.

Changing reward structures to acknowledge frequently overlooked postdoc contributions: Expanding the types of content that are permissible in the biosketch (perhaps Contributions to Science) to include things like (successful) grants written and unofficial lab leadership/mentorship roles in supporting junior scientists.

Rewarding scientists who advance diversity, equity, inclusion, and belonging by evaluating these contributions as a mandatory application component alongside scientific merit during the grant selection process. This is being done by many funders like NYSCF, HHMI, and more; the Health Research Alliance's Inclusive Grantmaking Initiative continues to produce resources and best practices in achieving this.

Response 2949

Perspectives on the postdoc roles and responsibilities

Conceive and develop a research project together with PI. Independently conduct research project. Mentor graduate students. Write manuscript draft.

Fundamental issues and challenges

SALARY TOO LOW. Needs to be competitive with equivalent industry position otherwise you will loose quality basic research.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2950

Perspectives on the postdoc roles and responsibilities

I hire post docs in my laboratory and train them in the field of mass spectrometry and proteomics. I view post docs as the "adolescents" of science. They are begging for independence but still need some guidance

and mentoring. They are there to broaden their horizons and to gain skills in science management, maybe some supervision, maybe some teaching, but also to start thinking more broadly about their science.

Fundamental issues and challenges

Salaries. If a new PhD graduate student can get a highly paid position in industry most will take it. The opportunity cost of post doctoral research is not what it used to be because of the salary differential and because faculty positions are much more difficult to get. Some institutions will only hire someone with a K award. And of course, limits on post doctoral salaries are tied to limits on grant budgets. The $500K cap on R01s has been in place for decades while inflation has been steady. The modular budget cap of 250K is meaningless now.

Existing NIH policies, programs, or resources

Expand the K award program to get the paylines up. Raise limits on R01 budgets so salaries can go up. Allow foreign students to be hired on training grants. Some of our best scientists come from away and we should encourage them to come and stay.

Proven or promising external resources or approaches

Allow money on grants to be used for recruitment expenses like moving expenses etc. Provide travel money awards so postdocs can compete for money (in a short time frame, e.g. not a 6 month turnaround) to attend conferences to network and expand their knowledge in a field. NIH conference grants are available but programs are very limited and it takes a lot of time and effort on the part of already too busy faculty to write one.

Response 2951

Perspectives on the postdoc roles and responsibilities

A postdoctoral position for me is a way to gain more experience and knowledge before going to the next step, in my case being a professor

Fundamental issues and challenges

The salary and working conditions are I think the main issue with the majority of postdocs. Also, a highly toxic environment where mentors don’t know how to manage people and sometimes end up in bullying and abusive situations with their trainees is another major problem. Funding is another problem, especially for international postdocs like me. There is very few opportunities for immigrants, this leads to a dependency on the funding from your lab mentor and can increase the power dynamics in the toxic situations mentioned before.

Existing NIH policies, programs, or resources

There could be more fellowships for non-citizens or permanent residents. The base salary should be increased too.

Proven or promising external resources or approaches

No response

Response 2952

Perspectives on the postdoc roles and responsibilities

Postdoctoral position should be a transition towards faculty positions and therefore should train postdoc for their endeavours in the academic world, including:

- leadership training
- mentorship training
- independent research
- work with students/staff to be exposed to management
- grant application training

Etc.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

- More funding support for international students
- More funding opportunities to support postdocs' independent research
- More accessible and maybe mandatory grant application trainings

Proven or promising external resources or approaches

There are none existing, but ideally there should be a platform where postdocs/PhD can grade their PI, the work environment, etc. to help newcomers pick the best options. And maybe NIH should also refer to such platform when identifying labs to fund, ideally encouraging PI with positive reviews from postdocs and PhDs.

Response 2953

Perspectives on the postdoc roles and responsibilities

I believe that postdocs are, by and large, essentially exploited as cheap labor. This problem is exacerbated by the over-emphasis on publication in leading journals such as Cell, Neuron, and Nature, and by "citation factor" in general. These journals play an unwarranted role in dictating the nature of research and distort the functions of academic and biomedical research. Many postdocs thus become involved in secondary roles in large-scale projects with little hope of later academic positions. This also results in competition rather than cooperation.

Fundamental issues and challenges

There is no simple solution. The creation of PLoS One was, at first, a step in the right direction but in the long run PLoS One became just another journal. Several things could help. Granting agencies could require career plans to be developed for each postdoc. A de-emphasis, or outright ban, on publication in journals that make value judgements about the prospects for future citation is a possibility.

Existing NIH policies, programs, or resources

Over the past 30-40 years there has been an emphasis on publication in so-called leading journals and on publication of larger projects, as compared to the former ridicule of "least publishable unit". Publication in journals such as Nature, Cell, etc. has become the basis for everything; hiring, tenure, evaluation etc. There have been scientific directors who expect at least one publication per year in a journal with a citation factor of at least 12 for each tenured or tenure track scientist, for example. This kind of thing leads to exploitation of postdocs.

Proven or promising external resources or approaches

No response

Response 2954

Perspectives on the postdoc roles and responsibilities

It is additional training in different or complementary skillsets to help find or further bolster one's research career. This is the stage where you learn to move from thinking like a trainee to more independently.

Fundamental issues and challenges

Paltry base pay for someone with an advanced degree. Increasing NIH base salary is necessary, especially if you take into account that most competitive postdocs are in high cost of living areas. Instead of a flat base maybe having a multiplier against the poverty line for the area. Look at the salaries offered by industry positions for the same level of experience and education. Why should pursuing an academic career negatively impact standard of living? After living on a meagre stipend for 5-7 years during doctoral training, a postdoc salary of ~50k simply won't do and is rather insulting and demoralizing. Most postdoc

positions require a move to a different state or city. Include moving expenses in the joining package. Advisors can't pay for moving even if they want to because the NIH doesn't allow it. Better maternity/parental leave. Postdoc is the stage when most choose to have children. Again, do not make us choose between pursuing a career in academia and living a normal life. Bottom line, increase pay, increase support for parents/maternity, include moving expenses. Basically respect us and treat as like humans who deserve more than the bare minimum living wage.

Existing NIH policies, programs, or resources

- Make postdoc appointments for 3 years instead of 1 year at a time. The uncertainty and job insecurity is used by advisors to bully postdocs into working long hours so that their contract is renewed. Its exploitation at its finest. Give postdocs security for 2-3 years with the option to truncate or increase that period by 1 year increments.
- Increasing NRSA stipend support for maternity leave to be literally anything longer than 8 weeks. Include parental leave for men.
- Removing ineligibility of K award if you've received an R21 and/or offering some sort of funding that isn't solely an F series for earlier PDs. Potentially something a bit shorter duration like a 1 year fund for getting that preliminary data (like a mini R21).

Proven or promising external resources or approaches

There's plenty of articles published in nature highlighting what is wrong with the current archaic postdoc system. Make academia lucrative because passion is just no longer enough to make this path enticing even if we wanted to choose it.

1. https://www.nature.com/articles/d41586-020-03235-y
2. https://www.nature.com/articles/d41586-020-03191-7
3. https://www.nature.com/articles/d41586-020-03109-3
4. https://www.nature.com/articles/520144a
5. https://www.nature.com/articles/d41586-020-03106-6

Response 2955

Perspectives on the postdoc roles and responsibilities

I view the academic postdoctoral position as an asset to the lab. I am bringing in a specific set of skills that the lab may not already have, I provide training to graduate and undergraduate students and contribute to the overall mission of the lab. In my opinion, the postdoctoral position should be a shorter term position than the Ph.D., designed to provide the additional training that the trainee might not have received during graduate school to help them secure a position when they go on the job market.

Fundamental issues and challenges

One of the main issues that I believe is contributing to the postdoc shortage in academic research is the lack of financial compensation. I understand that academic institutes cannot compete with industry salaries, but it is extremely discouraging to be making 2-4 times less than my colleagues that chose to leave academia. While a postdoc position makes significantly more than a grad student, it seems predatory and academic institutions are taking advantage of this pay increase to keep postdoc salaries low. I applied to graduate school understanding that I was taking a temporary pay cut to get an education, and I had hoped that I would be able to make up the financial loss in my subsequent position. In the current economic climate and with the NIH post-doc salary scales not increasing it has been extremely difficult to catch up with my peers. I rely heavily on a partner to support me financially, I have had to delay family planning due to a lack of finances and resources available to me, and I have not been able to start saving for retirement as aggressively as I would have hoped because of the limitations of my position. As much as I love my job, it is demoralizing to have dedicated so many years of my life to a career that does not seem to value my contributions, and I am tempted daily to exit academia in favor of a higher-paying position, that would alleviate much of the stresses I currently experience.

Existing NIH policies, programs, or resources

If the NIH was able to significantly increase the salary pay scale for postdocs (as well as adjusting for cost of living in specific locations) it would significantly improve my current outlook on the academic research career. I understand that the NIH pay scale was intended to be supplemented by academic institutes or investigators, but based on what I have heard from my institute, that is not and will not be happening so some form of oversight to make sure that postdocs are compensated more fairly would be helpful.

At my institute postdocs are not considered permanent employees so we are not offered many of the same benefits. I also understand that if we secure NIH funding through fellowships, we will lose our university-provided healthcare.

Proven or promising external resources or approaches

The HHMI has already increased postdoc salaries and I think the NIH needs to match this. There could be additional oversight to make sure that mentors are providing the resources and training that were promised in their NIH funded applications as I feel that many of these plans that are promised are not followed through upon.

Additionally based on the average age of postdoctoral trainees, I believe the NIH should also consider requiring institutes to provide some minimal amount of paid family leave.

Response 2956

Perspectives on the postdoc roles and responsibilities

Postdoctoral Researchers are professional scientists. They help a push a lab towards new research directions and collaborations. They help secure and manage new types of funding. And most importantly they help train and mentor students in how to do research. For the postdoc, as with other professional jobs, they build their experience in carrying out the above responsibilities.

Fundamental issues and challenges

Cannot pay postdocs enough to compete with industry roles where the responsibilities and career progression options are equivalent. Not enough institutional support and recognition of the postdoc role as a professional scientist prevents retention and reduces quality of life. Specifically, there is an issue with different health insurance and benefits (retirement accounts) for external vs internally funded postdocs, with benefits being better for internally funded ("employed") postdocs. This incentivizes postdocs to not seek external fellowships, which is at odds with the career incentive and recognition of receiving outside fellowships. This makes the postdoc experience confusing, and contributes to a sentiment of job insecurity compared with an industry role.

Existing NIH policies, programs, or resources

Increase the postdoc minimum salary.

Redefine the postdoc as a professional scientist in title (postdoctoral scientist rather than fellow).

Require that institutions receiving federal funds for postdocs must make job benefits (health, retirement etc) equivalent across all researchers and employees with postdoc in their title, regardless of source of funding.

Proven or promising external resources or approaches

Provide funding for the use of professional head hunting services to formalize recruitment, improve applicant pools and match make. This is standard in industry. This type of formalized recruitment is beyond the capacity of the individual research labs and so leads to simplest path recruitment through peer networks which exacerbates structural bias across all stages of the postdoc experience.

Provide professional legal and financial support services, particularly for non-citizen postdocs, to simplify navigation through the now complicated tax, retirement and collaboration experience.

Response 2957

Perspectives on the postdoc roles and responsibilities

Ideally, the postdoctoral position is a semi-independent research position that gives scientists an opportunity to develop a project of their own interest, to demonstrate its feasibility, and ultimately grow a wider research program around similar questions. This training period also should include opportunities to obtain new expertise, either from mentors, or through independent study. Though I see nothing wrong with this being a jumping-off point for careers in industry, I am also not convinced this is the best training to do that.

Fundamental issues and challenges

Postdoc training is too long and has too uncertain an outcome to recruit our brightest talent currently. Even the successful attainment of an independent research position no longer seems appealing to many postdocs, who witness at close range the high stress, increased administrative burden, and greater challenges of obtaining funding inherent in being a PI currently. Funding international students and postdocs is challenging, limiting our talent pool.

Existing NIH policies, programs, or resources

We must create a legitimate alternative to running a lab, that still includes fundamental biomedical discovery. These would be positions for building one's career in a stepwise way as an alternative to "running a lab". These positions need to be legitimized.

Funding for international scholars is crucial. Allowing international students/postdocs to apply for F awards while they train in U.S. labs would make a huge impact, even if a buyback clause were attached for trainees that leave the U.S.

Proven or promising external resources or approaches

Far too much attention is made on "mentoring" and "job satisfaction" as a solution to our broken pipeline and the dramatic reduction in postdoctoral scholars. These efforts are valuable, but they do not address the true problem: trainees view the current training system as a pyramid scheme, and in many ways they are right. We need to restructure things so that more scientists working through this training path can expect to achieve a career that is rewarding and enables quality of life while great discoveries are made.

Response 2958

Perspectives on the postdoc roles and responsibilities

A postdoc position to me was essentially the only job I felt equipped to apply for after finishing graduate school; I chose it not because I want further training

Fundamental issues and challenges

The most basic issue is that salary and benefits are extremely low relative to educational and research experience. This is more semantic, but I also fundamentally don't feel like I am getting "trained" in any meaningful way (or at least any different than any other new employee is when they start a job), but am denied other benefits as a "trainee"—ex commuter benefits, access to the same health care plans,—that I would be granted if I were a full employee at the same university.

Existing NIH policies, programs, or resources

There are few resources to help new postdocs get started in their research, but I and many postdoc I know felt like they were totally lost as they started in a new lab after grad school. Unlike in grad school, where there were clear resources provided by my university to help guide me in my new city, new lab, and new research, postdocs basically have to figure things out fully on their own. I can only imagine that is far more challenging for international postdocs who may have fewer personal connections.

Further, F32s should be available to non-American citizens; if these postdocs are going on to be training for faculty positions and are will later be eligible for other NIH-funded grants such as R01s, they should be eligible for similar grants as postdocs.

Proven or promising external resources or approaches

IRACDA provides a valuable resource to help postdocs connect to teaching positions, but should be dramatically expanded to more institutions. Similar programs could also be designed to connect postdocs to other career opportunities that span public/private research opportunities or science communication/science policy careers.

Response 2959

Perspectives on the postdoc roles and responsibilities

I view the postdoctoral position as a means to establish a research platform that will ultimately lead to an independent career in academia. Training environments can largely differ between institutions, but the postdoc is a pivotal step in establishing oneself as an independent research scientist.

There are several layers I expect to achieve from this stage of my career:

1. Expand upon the toolsets, knowledge, and critical thinking skills gained as a graduate level trainee.
2. Acquire new skills outside of my original training comfort zone.
3. Continue to develop and gain administrative experience, including grantsmanship and mentorship.
4. Establish a research platform that separates oneself from ones postdoctoral mentor

Fundamental issues and challenges

300 words is not enough to get every point across.

From my personal experience, one major source of stress that impedes recruitment, retention, or maintaining a high quality of life are largely due to financial factors.

Graduate students and (especially) postdoctoral researchers are inadequately compensated for the level of skill and experience gained throughout years of training. The simple matter that an associate level scientists within industry/pharma makes nearly twice the yearly salary a postdoc makes with 2-3 times less research experience makes it difficult for many postdocs to rationalize remaining in a high stress environment with poor recompense. To shift the weight away from lab funds, many trainees seek their own fellowships to fund a few years of their time in academic labs. However, these too if ten match the NIH set stipend. Furthermore, in the odd chance that a private institution offers an increase in stipend over NIH set stipends, the institution often will step in and decrease the postdoc's salary to maintain "parity" within the postdoctoral workforce. All of these situations amount to a highly competitive work environment in which compensation fails to match the level of dedication and time required of a postdoctoral research fellow.

Added to these stresses are the probability that postdocs are within a stage of their lives where starting a family is a high likelihood. Many postdocs delay starting families because of the time requirement needed within the lab but the exorbitant cost of childcare. Moreover, woman are disproportionately affected, as this era of their lives matches the time frame many women begin to have children. I know from personal experience that many woman have had to sacrifice their bright career in academic research in order to start a family.

Existing NIH policies, programs, or resources

Several private funding institutions have begun to set the starting postdoctoral salary at significantly higher amounts to offset the increased cost of living. However, these are on a case by case basis and many institutions remain fixed on NIH guidelines. Interestingly, postdoctoral fellows working directly within the NIH have a higher stipend than postdocs performing research at other academic institutions.

HHMI has recently increased their starting postdoctoral salaries to $70k-91k depending on the localized cost of living of that institution. However, there is an issue of parity here. Many institutions will not accept this pay increase with fear that a two caste system will be installed. One in which HHMI investigators are able to recruit postdocs because they have the resources and funding to afford postdocs at a higher wage category, while non-HHMI funded labs would struggle to compete.

Proven or promising external resources or approaches

No response

Response 2960

Perspectives on the postdoc roles and responsibilities

I view the postdoc period as a chance to shift from a trainee to an independent scientist. The nature of this change will vary across individuals, but can include increases in publications and grant applications, development of new skills critical to the postdoc's future work, and further theoretical development and specification, among others. The role of a postdoc should be to function as an affiliated but independent scientist, developing their own work according to self-identified goals and having research responsibilities that are more advanced and supervisory than graduate students.

Fundamental issues and challenges

The largest challenge to recruitment, retention, and quality of life is the financial limitations imposed through national salary recommendations (e.g., NIH training and stipend levels). These salaries are not only insufficient to reflect the cost of living in the majority of cities in the US (and postdocs have limited choice in where they live as training opportunities are not equally distributed across the country), but they represent significant underpayment relative to the training and skills possessed by researchers with highly specialized PhD-level education. The effect of this underpayment is amplified when seeking independent post-postdoc positions, which often take into account an applicant's most recent salary in generating job offers.

Existing NIH policies, programs, or resources

I think clarifying grant and fellowship calls, eligibility, timeline, and consideration factors would be of particular import for postdocs, who often come to the grant application system with no prior knowledge of or experience with NIH. Additionally, expanding opportunities that apply to trainees (often defined as graduate students) and early career scholars to postdocs, who exist in a time-limited and unclearly defined position would be helpful.

Proven or promising external resources or approaches

Although this would require adaptation for the diversity of positions postdocs hold, applying standards and training goals that required reporting back by postdoctoral supervisors would provide metrics of training and mentoring that the NIH and institutions could use to improve postdoc training. For example, many institutions utilize Individual Development Plans, but no formal tracking (akin to what is done for PhD-level trainees by professional organizations) by NIH is performed, rendering these of limited utility.

Response 2961

Perspectives on the postdoc roles and responsibilities

Postdocs are in the final stages of their training prior to becoming independent researchers with labs of their own. They are typically hired to contribute to research within an established lab, and in turn receive mentorship that prepares them to have a lab of their own in the very near future. Starting a lab of one's own requires a novel research program. Postdocs should be given protected time to design their novel research program, apply for funding, and apply for faculty positions. Postdocs that do not want to have a lab of their own should receive mentorship that helps them identify a suitable career path and make steps toward being competitive in that career sector.

Fundamental issues and challenges

Low salaries, challenges with benefits and employment status, and instability associated with the postdoc role make doing a postdoc an unattractive option for those without generational wealth, who are supporting families, or who want to start a family. Postdocs that are not classified as employees often have issues getting approved for loans, since they cannot provide the types of income verification that an employee is able to provide. Scholars who want to pursue a postdoc are put in a sometimes difficult place where they have to decide between their personal and professional priorities in ways that other career paths do not require.

In addition to low salaries, the greatest challenge to recruitment, retention, and overall quality of life of postdoctoral trainees in academic research that the NIH has definitive power to correct is the lack of money provided to cover the costs of employment for postdocs on training grants and fellowships. At the majority of US institutions the lack of money to cover "fringe" results in postdocs funded through training

grants and fellowships being classified as non-employees. This has direct implications for a fellow's taxes, benefits, and workplace protections. This also adds an administrative burden that many departmental administrative staff have trouble managing, resulting in delays that negatively impact the experience of the fellow. If all NIH postdoc funding mechanisms included money to cover the costs of employment then all postdocs, regardless of NIH funding mechanism, could and would be classified as employees. Furthermore, when there is a change to a postdoc's NIH funding mechanism, they would not be subject to changes to their employment status, tax withholding, benefits, and the personal and professional frustrations that come with these changes.

Existing NIH policies, programs, or resources

NIH Grants Policy Statement, section 11.2.9.8 on Employee Benefits, which states that ".institutions may not seek funds, or charge individual fellowship awards, for costs that normally would be associated with employee benefits" results in most postdocs on fellowships and training grants to be classified as non-employees. Researchers that are not classified as employees do not receive access to employee benefits or even workers compensation. In contrast, faculty may budget for postdoc salary and the institutional fringe rate when submitting an R01 proposal.

Employee health, dental, and vision insurance are far more cost effective and accessible than what fellows and trainees must find on their own through the national healthcare marketplace as non-employees. Funding for the costs associated with employment should be included with training grants and postdoctoral fellowships and the policy should be revised to make it clear to all institutions that postdocs must be treated the same regardless of NIH funding mechanism.

Proven or promising external resources or approaches

The National Postdoctoral Association provides guidance on best practices, which are informed by the postdoctoral community, and the faculty and staff that support the postdoctoral community.

Response 2962

Perspectives on the postdoc roles and responsibilities

Training—gaining new skills—getting better understanding of how the academic works

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Salaries, better contracts, better benefits

Proven or promising external resources or approaches

Easier access for non-citizens

Response 2963

Perspectives on the postdoc roles and responsibilities

I see it as a transitional role to faculty or whatever next career move.

Fundamental issues and challenges

Too much to do not enough time. Insufficient pay and few faculty positions.

Existing NIH policies, programs, or resources

Additional funding, more opportunities for being successful

Proven or promising external resources or approaches

No response

Response 2964

Perspectives on the postdoc roles and responsibilities

To me, the postdoctoral position is a temporary job to help with the transition from become a graduate student to an independent PI. Here, postdocs should be able to develop independent projects that they can take with them when they start their own lab (while likely also working on some projects in the lab that they won't take with them) and also get training on how to run a lab.

Fundamental issues and challenges

The major challenge is money. Postdocs are severely underpaid. As a PhD student, you can make the argument that we shouldn't get paid much because we need so much training. But for postdocs—they already have a PhD! They're working independently, training and mentoring others, doing the bulk of the work in the lab—also often writing the grants and such. It's insane to me that postdocs get paid so little, and that there aren't guidelines for cost of living adjustments. I'm based in a US city with a high cost of living, and my institution has been pretty good at increasing the PhD students' pay based on cost of living and inflation—but not for postdocs, since labs just follows NIH guidelines for postdocs. It's at the point where PhD students are making almost as much as postdocs now! I'm grateful that my institution does a good job taking care of PhD students, but I feel so bad for these postdocs. They're living in poverty. They're miserable, always worrying about money and not having enough. They love the science and are passionate about it, but if you're constantly having to worry about money, it drains the life out of you. That's why so many postdocs are leaving for industry—they might not be as passionate about the work they're doing there, but at least they don't have to worry about their or their family's survival.

Existing NIH policies, programs, or resources

At the minimum the NIH has to change their guidelines for postdoc salaries. First of all salaries should be increased all around. Second, there should be different NIH salary guidelines based on cost of living. Maybe offer more programs or grants focusing on supplementing salaries, or something like that. Institutions use the NIH minimum postdoc salary guidelines as their maximum postdoc pay—they say, well, NIH says $XX amount is enough, so that's all what you're getting! If the NIH raises this, they institutions will follow.

If salaries won't be changed, then I don't know what else the NIH could do to help retain and recruit postdocs, other than like literally kidnapping PhD grads and chaining them to their lab bench.

Proven or promising external resources or approaches

It's all about money. Raise postdoc salaries.

Response 2965

Perspectives on the postdoc roles and responsibilities

A postdoctoral scholar is a highly trained scientist who is not yet ready to be an independent researcher. They are able to develop complex protocols, propose and develop research ideas, and supervise more junior lab members fairly independently. The time as a post doc may be used to learn a new lab skill but the scholar should also formally be taught about how to manage a lab -best practices for interviewing students and staff, determining staffing needs, peer reviewing journal articles, and creating and managing budgets. It should also be a time for the scholar to refine (and be productive with) science writing, develop a strategic sense of grant writing, and to prepare for next career steps by networking and optimizing their CV.

Fundamental issues and challenges

Pay is far too low for someone with a PhD. Currently NIH pay for a postdoc is equivalent to an administrative assistant with a high school degree and a few years of experience. However, now it is so hard to get into PhD programs that most PhD students already have several years of research experience plus a paper or two. By the time someone finishes their PhD, they are more like a mid-level manager and are often in their 30s, sometimes with a family to support. They are not like a young trainee just starting out as they might have been years ago. It is hard to recruit or keep postdocs because so many are going into industry where the pay is much better. Increasing pay on post doc training grants and increasing the

modular budget for R01s would go a long way toward helping academics to retain excellent, highly trained scientists in their labs.

Existing NIH policies, programs, or resources

In terms of training, I see that there are some formal online training seminars about the details of lab management—like making a budget and determining staffing needs, but they cost hundreds to thousands of dollars. Having some of these be included with post doc training grants would be useful.

Proven or promising external resources or approaches

It would be helpful for the post doc pay on training grants to be increased. In California, the post doc minimum pay is higher than the NIH pay, so faculty can't accept a post doc on a training grant unless they have unrestricted funds to make up the difference. It would also help if the modular budget for R01s increased to allow faculty to budget more for post docs while still having enough money to include the number of research participants needed to ensure sufficient statistical power.

Response 2966

Perspectives on the postdoc roles and responsibilities

Given the financial sacrifice, low chance of getting a good faculty position, and the emerging data that postdoctoral experience is not financially valued by industry when transitioning out of academia, the position as currently designed must be treated like a bit of a lottery ticket. It's an opportunity to change fields, push an independent research program as far as it can go, and hope that someone out their values your contributions and shares your vision for where your research can lead. But the fact that the chances of successfully landing a well-supported research faculty position (with start-up, tenure track, at an R1 institution, etc.) being so low, create the need for a year-to-year reevaluation of the pros and cons of being in this position. Is the financial sacrifice still worth the shot at landing that faculty position? How much has that opaque possibility of landing your dream job improved or regressed based on the progress and findings of your research? How can I decide whether I still have an open window at that dream opportunity or whether it's time to change my goals, publish to demonstrate my clear productivity, but drop the fantasy of "making it" where I want to go? It's a role where you often feel stuck in limbo--there's little to no clarity on your chances of getting where you want to go and that leaves one constantly questioning their motivation and validity in this system.

Fundamental issues and challenges

I think that the vast majority of these issues are $ related. I love so much of this job (other than what's described above): the creative thinking, the challenge of forging into unknown territory and excitement of discovery, the opportunity to mentor future scientists and train them how to become independent researchers, the flexibility to set my own schedule, design my own goals, plan my experiments independently, etc. But it's difficult to avoid thinking (almost daily) about the fact that my income is approximately half of what it could be if I transitioned into any of a multitude of industry roles. And while the benefits and ease of that transition I think are often oversold that income disparity is a constant buzz in the background, which makes folks feel like their time and talent are severely undervalued. And that income gap is often the difference that prevents folks from being able to purchase a home, have a retirement savings, invest, have children, etc. The academic environment depends on postdocs for research productivity; we are an essential component of this system. But the lack of "professionalization" for this position, the treatment of it as another "trainee" role, the lack of structured raises (we're so far behind the inflation rate that it's a joke), etc. These problems are not unique to post docs (it's the same for graduate students and fairly similar for early career faculty), but that income disparity is the driving force behind folks not being interested in sticking with their academic post doctoral positions.

Existing NIH policies, programs, or resources

From my perspective, the inability to retain post doctoral researchers comes from two things:

1. income disparity compared to industry roles and
2. increasing pessimism around the ability to obtain academic faculty positions. I think these issues could be significantly impacted by a raise structure that helps post docs feel like their progressing from "trainee" to "valued professional researcher".

While academia offers unique advantages over industry positions, the NIH F32 minimums and raise structure (which many universities and PIs use as a guide when deciding post doctoral salaries) fall short of the financial value of those advantages and account for cost of living variance across institutions. The extramural minimums need to be increased to

a) account for the rapid increase in inflation over the past few years,
b) better compete with industry opportunities, and
c) account for disparities in housing costs across the country.

A recent study published in Nature Biotechnology (https://www.nature.com/articles/s41587-023-01656-4) highlights these issues much better than I can in 300 words. I can confidently say that my wavering enthusiasm would significantly increase if my income suddenly matched those recommendations (after adjusting for years of experience [4] and cost of living differences between Boston and my current residence, my current salary of ~$55k would jump to the neighborhood of $75k. That difference would make me feel well valued, more financially stable, and 100% comfortable with continuing in my current role for years while I focus on my research and career development). With regards to the pessimism around the faculty job market, I would strongly encourage the NIH to look at promoting the development of more professional roles within the academic environment. Given the dearth of faculty positions, alternative careers need to exist that properly value the contributions of experienced, talented individuals like myself.

Proven or promising external resources or approaches

See the Nature Biotechnology publication again: https://www.nature.com/articles/s41587-023-01656-4. I'd also encourage the NIH to invest in additional support systems for extramural post docs that will help them accommodate the financial disparity between their role and industry positions. This could include resources like professional financial planning, family planning and free or subsidized childcare, retirement savings programs (a federal contribution matching program should exist!), improved healthcare benefits, expanded leave policies (more PTO and improved parental leave (there are so many sources that clearly show the benefits of 16 week paid leave policies, but here's one example: https://www.apa.org/monitor/2022/04/feature-parental-leave). The NIH has the power to make such resources a requirement for post docs paid on NIH grants--doing so would improve the quality of life for extramural post docs and help retain those individuals. I'll also take this opportunity to point out that these kinds of benefits are more frequently available in industry roles as well, which highlights another disparity between academic and industry positions! The NIH needs to SHOW extramural institutions how to become more competitive with industry to improve post doc retention. Otherwise, academic institutions will continue to underpay and under-support their postdoctoral staff, then cry foul when they can't retain those individuals. The current excuse is that PIs only have so much grant $ and so they will pay the NIH minimum as long as possible. While PIs could request higher funds for postdoc salaries on NIH grant applications, they will not do so because of concerns that it will compromise their application. They will only begin requesting higher salaries if they feel those requests are justified and in line with the NIH standard (which will only happen if there is a formal policy from the NIH!).

Response 2967

Perspectives on the postdoc roles and responsibilities

Conduct research with an increasing level of independence and less oversight. Assist in overseeing/training technicians. Possibly oversee training of graduate students (if they have an interest in continuing in academia, this is a good opportunity, but this should be optional)

Fundamental issues and challenges

Pay is low for someone with a PhD, especially relative to industry, and most PDs do not get retirement plans. Coupled with the uncertainty of being able to obtain a permanent position (whether as a staff scientist, non-TT faculty, or TT faculty), it is getting much harder to convince people to do academic postdocs.

Existing NIH policies, programs, or resources

Increasing the base NRSA stipend, which many institutions use to set PD salaries.

Proven or promising external resources or approaches

Providing supplemental funds to defray childcare costs; it is very difficult to start a family on a PD salary. Requiring eligibility for PDs to institutional retirement plans. This would require moving away from the notion that PDs are "trainees" rather than employees. Increasing R01 amounts. If increases to PD pay/benefits are an unfunded mandate not accompanied by an increase in R01 caps, this will just reduce the number of available positions.

Response 2968

Perspectives on the postdoc roles and responsibilities

Postdoc for me means transition from trainee to independent position. I see it more as a way to become better PI, better mentor, plus gain more scientific knowledge and expertise in the meantime. It is not a trainee as graduate student and doesn't have so much "freedom" as a PI.

Fundamental issues and challenges

Postdoc recruitment: it is mostly done independently by postdocs who are looking for job. Centralized database with postdoc job offerings at least within US would be an amazing help.

Postdoc retention: as a mother and postdoc, I find that combining those two is very hard. I need to be productive at the same level as others or usually even more, just to prove I can do science and handle parenthood at the same time. Lack of parental support especially with mobility requirements, is making things even worse.

Postdoc overall quality of life: the postdoctoral salary is too low, but allows to survive. The support for postdoctoral community is much lower than for other groups.

Existing NIH policies, programs, or resources

Grant eligibility periods: it is wonderful that extensions are offered, but maybe the cut offs are too short for current economy? Each discipline has its own flavor, in one postdoc will take 2 years, in the other 6 years is minimum. If we add family burden, supporting spouses in the development of their own independent career, it may take up to 10 years. There should be funding mechanisms allowing for further career development for such individuals above 8 years as for K22.

Parental support: each grant should come with a funding opportunity allowing for additional financial support for parents as well as (ideally) funds to hire part-time technician during maternity leave.

Proven or promising external resources or approaches

Postdoc bootcamps in Bethesda to allow networking, learning about job search, establishing new collaborations.

Response 2969

Perspectives on the postdoc roles and responsibilities

all junior scientists need to receive formal science communication training as part of their NIH award

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2970

Perspectives on the postdoc roles and responsibilities

A postdoc was initially explained to me as a brief transient career stage between a PhD and faculty. Now, however, I believe it has changed drastically. A postdoc is a critical element of the lab hierarchy and culture. Postdocs serve as mentors to every other member of the lab. Postdocs drive change and growth in a lab by bringing in expertise and training from their PhD, as well as fostering collaboration and connection across institutes. Postdocs can no longer be seen as a transitory career phase, but an integral part of the lab.

Fundamental issues and challenges

Pay and benefits, alongside feeling respected enough to earn these basic forms of compensation, given our skills, experience, and value to the lab. Postdocs come in with unique expertise and skills that help grow the lab as well as several years of experience in science and mentoring. The positions are no longer brief extensions of graduate school, but instead often last between 5-7 years. This time is often co-occuring as scientists are in their 30s and 40s, struggling to start families and build their lives. However, because pay and benefits are so minimal, postdocs are struggling personally to fulfill these parts of their lives. Despite the experience and skills that comes from our PhD, we find we are treated no better than we were in graduate school, and that lack of compensation only becomes harder as the years progress. At the same time, private companies are offering us vastly bigger salaries/benefits for the same job. Thus, even if one has a significant passion for their job within academic research, we feel as if we have no choice but to make the "smart choice" and move to private industry, where we will receive the pay, benefits, and respect we have earned.

Existing NIH policies, programs, or resources

Increase the amount of money that goes to labs so that they are able to increase salaries for postdocs more easily. Increase the minimum pay-scale to match a livable salary and, importantly, actually enforce this minimum for any NIH lab. Close the loopholes that currently allow PIs to pay less than the minimum postdoc salary. Further, the minimum pay-scale should be customized to a geographic region to account for cost-of-living and adjusted yearly. Include equity in pay-scale: Require additional salary and benefits for those with medical disabilities, dependents, or other aspects of their personal life that make it harder for an individual to live on the same salary as someone more privileged. Create an easy way for postdocs to report to the NIH when their PI, lab, or institution is denying them these benefits or their minimum salary and enforce consequences for those laboratories.

Proven or promising external resources or approaches

Unlike any other working company, academia has no "HR" where trainees can report incidents of abuse of misconduct. Often, they are required to report to their PI or institution, which may be the ones causing the problem. NIH has the capacity to act as a third party "HR" for all NIH-funded academic labs and make space for trainees to report when they are being mistreated. Adopting this type of approach could be extraordinarily helpful for postdocs and trainees as well as identifying people/institutions that are most problematic.

Response 2971

Perspectives on the postdoc roles and responsibilities

To me, being a postdoc is being in a position where you can learn new skills while building on your previous ones. Where you get to think about what you want to do as a future PI while also having time to mentor and train students/technicians. As a postdoc, we write, mentor, train, do experiments, present our research and we often get other more administrative roles.

Fundamental issues and challenges

The salary is too low. I am a postdoc in Boston and the NIH minimum salary is not enough to live a life where you're not stressed and barely living. Unfortunately, as a postdoc I live with a roomate as otherwise I would not be able to afford rent. In addition, postdocs are treated like cheap labor and exploited. we are being payed for ~40hrs/week but made to work >65hrs without further compensation. We are also not

considered employees so we don't have the same benefits like for example having a 401K. Overall, if we want to stay in academia, our retirement plan will not have any money until we begin faculty positions.

Existing NIH policies, programs, or resources

NIH should raise the postdoc salary NIH minimum. However, is not sufficient to only raise the postdoc salary, NIH needs to also increase the faculty funding. Because if only the first one is done, then faculty will no longer hire postdocs (as they won't be able to afford them). Institutions like StJUDES and HHMI have beginning to change their postdocs salaries. In addition, NIH could also supplement current postdocs grants like F32 and F99 where it could be used for childcare, insurance, or research.

Proven or promising external resources or approaches

St Jude's and HHMI have several resources to support postdocs and encourage recruitment and retention

Response 2972

Perspectives on the postdoc roles and responsibilities

I see it as a training period to acquire new skills and learn new areas of science prior to launching my own independent group.

Fundamental issues and challenges

The cost of living most places postdocs want to train is too high for the postdoc salary to be liveable and comfortable. This makes it overly stressful to stay in the postdoc in those areas. Additionally, it selects for only individuals who have outside support to complete the postdoc.

Existing NIH policies, programs, or resources

Expanding options beyond just PIship. Things like Senior Scientists, or Staff Scientists should be viable roles with appropriate wages attached to them.

Proven or promising external resources or approaches

No response

Response 2973

Perspectives on the postdoc roles and responsibilities

To me, an academic postdoctoral position is a temporary position where someone is conducts research. This should involve training in several aspects of research, including scientific approach and communication. A mentorship plan should be individually tailored for each postdoctoral research.

Fundamental issues and challenges

Postdoctoral researchers need to be provided a salary that is in accordance with the cost of living in the research location.

Clear and transparent expectations should be provided.

Comparisons to other positions outside of academia should be fully disclosed. For example, the deliverables in academia (i.e., training, advancement of knowledge) are different than the deliverables in industry (i.e., a drug that is sold).

Existing NIH policies, programs, or resources

Salary support in accordance with the cost of living in the research location.

Proven or promising external resources or approaches

Investigators with citations of abuse should be banned from receiving NIH funding.

Response 2974

Perspectives on the postdoc roles and responsibilities

Postdocs are the main drivers of scientific discovery. Generally speaking, post docs have the experience and skill required to ask and answer the toughest questions in any field. They are the ones in the trenches exposing themselves to chemicals, overseeing animal work, writing grants and manuscripts, physically demonstrating techniques to trainees, and so much more

Fundamental issues and challenges

As a postdoctoral researcher i received a T32 training grant after working at my "prestigious" university position for several months. I was grateful and excited to receive the grant and was hopeful it would boost my prospects for someday leading my own group. I was also happy to please my advisor by essentially becoming free labor for them.

However, to be as brief as possible, i quickly found out i had to "resign" from my university position in order to accept the grant. This meant i lost my 401k retirement plan and all the unvested balance, my health insurance plan, and also had my salary reduced. Moreover, to add insult to injury, i had to sign a document known as a "payback agreement" stating that if i did not stay in an appropriate job for a long enough time i would then owe the meager 48k salary i was receiving back to the NIH. I find it perplexing we live in a society where senators dont even need to show up to vote and they can collect full salary and health benefits while i exposed myself to chemicals and gave medical grand rounds lectures to doctors who i couldnt even afford to go to for medical treatments.

It was incredibly demoralizing and i did the best i could.

Please find a way to do better for the next generation and if nothing else do away with payback agreements for PhDs. These agreements were not conceived to torture aspiring scientists but were meant to prevent mds that accept fellowship grants from walking away after accepting. Thank you

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2975

Perspectives on the postdoc roles and responsibilities

In my experience, postdoctoral researchers are instrumental for the research in the lab. Responsibilities involve lead multiple research project by conducting experiments and analyze/interpretate results; write scientific papers; train, supervise, and mentor students and lab techs; etc etc

Fundamental issues and challenges

At this point, the most urgent fundamental issue is the dire cost of living situation for postdocs in Boston and other regions. For me and many of my colleagues the NIH minimums are insufficient to account for regional cost of living and adjustment of postdoc salaries to regional cost of living on short term is absolutely critical to recruit and retain postdocs in academic research.

Existing NIH policies, programs, or resources

Adjustment of postdoc salaries to regional cost of living on short term is absolutely critical to recruit and retain postdocs in academic research.

Proven or promising external resources or approaches

Adjustment of postdoc salaries to regional cost of living on short term is absolutely critical to recruit and retain postdocs in academic research.

Response 2976

Perspectives on the postdoc roles and responsibilities

Postdocs should be applying the scientific process and subject expertise gained in a PhD to delve into a related but slightly different area. They should be able to focus on expanding their skills to make them unique from their PhD advisor and working toward establishing a clear research direction. I also believe Postdocs should take a role in mentorship of graduate students and attempt to seek out additional opportunities for growth (i.e. teaching opportunities if they are interested in future faculty roles or filing patents/expanding upon industry knowledge if they are interested in industry). They should have more research autonomy than a graduate student and seek out opportunities for funding based on their research interests.

Fundamental issues and challenges

Postdocs are highly trained scientists and are not paid as such. They are also (more often than students) working to support their family with their stipend. The way that the NIH and institutions decide to funnel funding to postdocs often puts basic benefits (health insurance, life insurance, etc) into question depending on funding start/stop dates. This is unacceptable when that health insurance also affects my children. In general, the stipend is too low and too rigid to economic changes including inflation, and benefits need to be more intentionally constant and seamless with the university. In short, recruitment and retention would improve with improvements to postdoctoral quality of life.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2977

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a fundamental step to grow in independence and skills in the academic setting, while still under supervision of a more experienced mentor. It is important that the postdoc acquires and strengthen knowledges that will allow them to work independently. And possibly, to publish relevant research that demonstrates advancements as well as learning how to securing funding.

It is also an opportunity to further explore whether the academic career is a possibility or not or what path in the academic career one can be more successful in.

Fundamental issues and challenges

For international postdocs, visa are still a challenge to recruit and retains students. I had one postdoc leaving a previous job to move to my lab and then discovering the visa was denied two times on no relevant basis (indeed, a different visa worked out the third time). As an immigrant in the country, I found this extremely painful to navigate.

For national postdocs, salary is a big challenge and criticalities varies immensely whether one lives in the coasts or in the midwest.

Existing NIH policies, programs, or resources

Include quotas or allow in general applications from non-American citizens—many postdocs (and Phd students) cannot apply to fellowships that are fundamental in building a CV, creating a discrimination in the career progression that is sort of odd since the same postdocs are anyway paid on federal grants (from NIH or NSF).

There should be some sort of grant also for figures that are not PI but are exploring a scientific career in academia, such as staff scientists and research instructors. The reason is that we currently conceive the sustainment to academic research only through supporting the research programs (which is great) and thinking about how to create new PIs (Independence path awards). All of this is great. But we need to help retaining talent in academia that is also not going to be a PI, but a highly qualified scientific workforce. I think that not all postdocs aim to become a PI and making more attractive the position of

postdocs without offering them a future it is one of the reasons postdocs prefer industry to academia. Offering support and recognizing the importance of the role played by people at intermediate levels between postdocs and PIs is a way to provide visibility to those that are in these positions and highlight a possible pathway in the academic life.

Proven or promising external resources or approaches

It would be great if the NIH would provide indications of salary adjustments for life and if this would be something that is computed or evaluated as part of the overhead cost of a grant. Paying more the postdocs will not solve the problem since there are very different living costs (more will help though). However, if any difference between region should be introduced, it should not fall on the PI research program (would make very difficult to compare budgets), but being wired into other type of negotiations.

One important note about salaries. I am totally in favor of increasing postdoc salaries, but please consider making guidelines and funding for more senior positions. I am not begging for PIs, which may have a decent salary, but what I start to see are postdocs with limited experience getting paid more than people with 10-15 years of proven experience because of regulation. There is no instrument often to correct for that or to provide the adequate payment to these other people, since there is no push from federal funding to help them. Staff scientists and research instructors on non-tenure track are sort of invisible to the system and often "abused" in the current academic system for what concerns salary and work.

Response 2978

Perspectives on the postdoc roles and responsibilities

The NPA and NIH jointly developed the definition of a postdoc. NIH should adhere to a consistent universal definition of a "postdoc" regardless of funding mechanism. "Trainee" is seen as diminutive by many, and should be avoided, while "scholar" or "fellow" is more appropriate.

- Gain independence and skills
- NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.
- Postdocs should work in an environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth.
- Postdocs should have protected time and funds to attend at least one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network.
- Better role definition
- Postdocs are usually intent on entering different positions after a defined period of time unlike permanent staff. Establishing clear expectations at the offer of appointment for both postdocs and their PI's regarding their role and how it differs from staff scientists will alleviate misunderstandings.
- Requiring postdoc and PI participation in formal performance reviews as part of an NIH award will better define, formalize, and evaluate factors of role, mentorship, and professional development, while differentiating postdocs from staff scientists.
- The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs are negatively affected by a lack of professional development opportunities (81.7%) and intellectual freedom (71%). NIH should establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities. This will assist postdocs, PI's, mentors, and postdoc office (PDO) leaders in creating a climate for success. Additionally, the NIH should provide tools to assist academic institutions in adhering to these requirements and incentivize compliance.

Fundamental issues and challenges

- The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas with defined cost-of-living levels.
- Per the NPA's 2023 Postdoctoral Barriers to Success report, more than 90% of postdocs are negatively affected by the lack of clarity in transitioning to next positions. More than ever, postdocs are paying a significant opportunity cost for limited faculty positions and 86.6% are impacted by job security concerns.
- Additionally, 'disenchantment with academia' is trickling down from overburdened faculty, making these positions less desirable to early career researchers. Career outcomes and tangible benefits of pursuing a postdoc are often misunderstood. NIH should provide early career scientists with actionable information and transparent data to make informed career choices before and during their postdoc periods, including increased awareness of career options (e.g., academia, industry, government).
- The NPA's 2023 Postdoctoral Barriers to Success report shows a majority of postdocs are negatively impacted by a lack of healthy workplace culture (70.8%) and harassment/abuse (54.9%). Postdocs also often cite high instances of isolation and poor mental health. NIH should hold institutions accountable for fostering inclusive and supportive training environments, including expanding the current requirement for institutional commitment to preventing discrimination and harassment
- NIH should require a percentage of indirects on all NIH grants supporting postdocs to provide postdoctoral offices (or offices with similar oversight) with increased resources to foster stronger postdoctoral communities with healthier, sustainable cultures.

Existing NIH policies, programs, or resources

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible.

- NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.
- NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. The NIH should expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.
- Many PIs lack formal training in mentoring and personnel management. Likewise, many postdocs lack understanding of how to succeed as mentees. To address this gap, NIH should institute substantial, reportable grant requirements for mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding, similar to those provided under NIH mentored training programs. Such training should be offered to non-PI's acting as postdoc mentors.
- Postdocs' difficulties to remain in academia due to limited faculty positions contributes to dissatisfaction. To retain top research talent, NIH should create or expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining continuity of lab knowledge, providing additional career options for postdocs, while providing clear differentiation between these positions and postdocs.
- Collecting metrics on postdoc satisfaction will not only provide key insights that will determine if new policy changes are effective, but will allow postdocs to provide honest, anonymous feedback without retaliation.

Proven or promising external resources or approaches

- NPA Resources
- The NPA has a wealth of resources developed by committees consisting of postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library. (85 words)
- Consolidate professional development resources
- Currently, institutions and NIH IC's each develop their own professional development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In a increasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources. (89 words)
- Engage with key stakeholders
- We encourage NIH to work closely with institutions that host postdocs and NPA on an ongoing basis to consult on institutional policy adjustments and tool development that are needed to complement public policy change. (34 words)
- Thanks to NIH
- We sincerely thank NIH for the platform to share our vision for postdoctoral training in the biomedical sciences. We applaud NIH's policies and programs that have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps. (62 words)

Response 2979

Perspectives on the postdoc roles and responsibilities

I am a professional research scientist not a "trainee" the idea that we're still somehow not fully qualified is insulting.

Fundamental issues and challenges

Us postdocs on J visas are not wanted by the NIH. You're happy to take our cheap labour and not allow us to progress our careers. More than 50% of postdocs in the USA are on J visas.

Existing NIH policies, programs, or resources

Open all postdoctoral fellowships to J visa holders.

Proven or promising external resources or approaches

Better pay. Equal career changes.

The current system doesn't mean the best scientists rise to the top and increase the productivity and quality of research in the USA. It means many average US passport holders make it into faculty positions at the cost of better qualified and skilled international researchers.

Admit we do not have a meritocracy.

Response 2980

Perspectives on the postdoc roles and responsibilities

NIH should adhere to a consistent universal definition of a "postdoc" regardless of the funding

mechanism. Labeling a postdoc as a "Trainee" is seen as diminutive by many, and should be avoided, while "scholar" or "fellow" is more appropriate.

Professional development training outside the laboratory should be mandatory. Protected time should be given for postdocs to learn key skills in areas such as general administration, budget management, communication (written and verbal) and other transferrable skills. Training topics should also include career exploration, new experimental techniques, and other matters related to expanding the postdoc's skill set to further their scientific endeavors.

Postdocs should be guaranteed to attend a minimum of one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network.

PI and postdoc expectations must be continuously assessed and documented. Specifically, it should be clear that postdocs have their own projects and receive the mentorship and resources to pursue independent careers. That is the difference between a "postdoc" and a staff scientist.

Fundamental issues and challenges

The most fundamental issues facing postdoctoral workers that we experience are

1. the unsustainable salary of postdocs
2. the imitations surrounding international postdocs
3. poor working conditions through ineffective mentorship, and
4. lack of punitive measures for investigators who fail to create a positive work environment for their postdocs.

We propose to address these issues as follows:

1. Grants should require that postdocs are paid according to the GS-10 federal pay schedule relative to their years of experience and should increase annually.
2. Visa lengths should be tied to the duration of funding. For example, if the funding is for three years, the duration of the visa should also be three years.
3. NIH grants must require structured and reportable mentoring training for PIs and postdocs, similar to those provided under NIH mentored training programs. Such training should be offered to non-PI's acting as postdoc mentors as well.
4. Annual reviews should be compulsory for funding continuation. Supporting the workforce and creating a positive environment should be incentivized, and aspects such as poor publishing opportunities, lack of upward mobility, toxic work environments, and the like should be penalized through reduced funding and opportunities as an investigator.

Existing NIH policies, programs, or resources

The most useful action the NIH can take at this junction is to expand training grants and individual (F32) fellowships to include internationals. Internationals overwhelmingly make up the postdoctoral community and should be afforded equitable opportunities for conducing science in the United States.

NIH should mandate that all NIH-funded postdocs develop an IDP and that PIs support and submit

documentation of progress.

NIH should require grant funded postdocs to receive employee-level benefits regardless of the source of funding. i.e. Postdoc individual fellowship vs. R01 funding. NIH should require grant-funded postdocs to receive paid parental leave and childcare subsidies.

NIH grants supporting postdocs should permit moving allowances to ensure postdocs from all socioeconomic backgrounds can pursue careers in research. Postdocs coming from abroad should be extended a one-time payment to offset the expenses of moving to the U.S. to perform NIH-funded research.

Proven or promising external resources or approaches

Implement an accreditation system of institutions and/or investigators according to various metrics incorporating the postdoctoral experience (e.g. suitability for internationals, recorded evidence of workers

moving onto better opportunities, gender/disability parity) similar to the Athena Swan system used by the UK to measure gender parity in STEM fields. A similar system may be used to open a greater tranche of funding opportunities at the institutional level and at the investigator level, incentivizing good performance within this accreditation system.

The NIH should align with the wealth of resources offered by National Postdoctoral Association wealth their Recommended Postdoctoral Policies and Practices.

The [redacted for anonymity], the Postdoc Association and all of our stakeholders sincerely thank the NIH for the opportunity to share our ideas regarding the critical need to reshape postdoctoral training. We draw from our experiences of over 17 years of a formal postdoctoral office and training program. We wish the working group all the support and insight they can muster to keep the postdoc tradition of scientific training, including mentoring and career exploration, a vital ecosystem to the future of science and human advancement in the United States of America.

Response 2981

Perspectives on the postdoc roles and responsibilities

On behalf of [redacted for anonymity], we appreciate the opportunity to respond to the request for input on re-envisioning the U.S. Postdoctoral Research Training and Career Progression within the Biomedical Research Enterprise. [redacted for anonymity] is a nonprofit national association representing more than 2,500 individual members and more than 800 master's and baccalaureate programs of professional social work education. [redacted for anonymity], also a nonprofit organization, is dedicated to the advancement of social work research, representing more than 1800 members internationally and more than 200 universities and institutions. [redacted for anonymity] and [redacted for anonymity] are committed to supporting early career researchers in social work. Our organizations desire to see more support for social work researchers interested in pursuing careers as faculty at research institutions.

The academic postdoc provides an opportunity to advance prospective and early career faculty as independent social work researchers. This position can provide key professional development opportunities, the opportunity to build a strong publication record, and a competitive edge, particularly for gifted social work researchers who graduate with a PhD from programs with less access to resources and opportunities. The academic postdoc is a crucial stepping stone to a career as an independent researcher committed to justice, equity, inclusion, and diversity in communities. As such, the NIH must ensure that there are support systems in place to transition postdocs out of the position and into a permanent faculty position. This may include but is not limited to, career development services, mentoring support, funds to accelerate research independent of their mentor's research, and more.

Fundamental issues and challenges

Compensation continues to be a challenge for supporting and sustaining postdoctoral trainees. Salaries remain a hurdle for the recruitment, retention, and overall quality of life for postdoctoral trainees in academic research. Those in this position must often find additional sources of compensation which may include grants or fellowships from private foundations that offer more compensation than the NIH fellowship and training stipends. Likewise, some postdocs, specifically those in a clinical discipline, engage in work opportunities outside of their research to make up for the funds needed to live and support themselves and/or their families. Moreover, the limit imposed on time that a postdoc can spend on non-research activities (10 hours) is often a barrier for researchers who are interested in NIH postdoc supported positions.

Additionally, the length of time for the average postdoctoral training opportunity can be a disincentive for individuals with aspirations to reach a level of compensation that provides a good quality of life. The pathway to independence for researchers must be accelerated to attract gifted researchers to academic postdoc positions.

The challenges listed above create unintended barriers to reaching academic success and independence for those particularly from underserved or disadvantaged backgrounds who aspire for a career as an academic researcher. After years of education, without additional support, many individuals are not able to afford another 5 to 6 years earning reduced wages.

Existing NIH policies, programs, or resources

NIH policies must be expanded to support increased compensation for postdoctoral fellows which includes but is not limited to increased funds for stipends, benefits, and travel. Currently, the post-doctoral training-related expenses are capped at $12,200 per year at non-federal and non-profit institutions. This cap penalizes the postdoc fellow for any out-of-pocket fees that accompany selecting health insurance that supports family members. The NIH must move towards supporting all health insurance costs for trainees to remove the burden of any remaining balance on the individual or the research institution. We commend the NIH for moving towards supporting childcare costs for postdoc trainees, however, $2,500 is currently insufficient. According to Care.com, the average cost for childcare is about $226 a week per child, which varies depending on location. The current $2,500 per budget period is a misalignment with the development stage of many postdocs where growing their families is critical.

NIH must also consider expanding programs that can leverage the talents of non-US citizens. Currently, many foreign postdocs are limited to the K99/R00 mechanism for supporting their transition from an academic postdoc to an independent researcher. Independent and training fellowships should also be open to foreign postdocs. NIH must work with HHS and Congress to move forward with a legislative strategy to address this issue. In the meantime, NIH must consider developing an administrative supplement for foreign postdocs to be supported by a T32 program at a research institution. Moreover, NIH must consider expanding the career development award opportunities to provide more opportunities for foreign postdocs. The career development programs at many ICs are underutilized and largely only used by clinical researchers. Mechanisms such as the K01 or the K22 must be expanded and used across all ICs and topic areas like the F32 and T32 mechanisms.

Proven or promising external resources or approaches

NIH must consider methods that will dramatically improve the working environment for postdocs. Postdocs are highly skilled scientists who should be treated as such. Academic institutions should have HR support in place to support postdocs. Specifically, there should be clear policies, procedures, and reporting structures to ensure postdocs feel safe and protected in their working environments.

NIH should also work on formalizing mentorship and career development opportunities for postdocs. The National Institute of General Medical Sciences recently designed the Maximizing Opportunities for Scientific Academic Independent Careers (MOSAIC) K99/R00 program for postdocs to transition into their independent careers. The MOSAIC program builds in mentorship, career development, and professional networking to support career advancement. Lessons should be taken from this program to inform all programs with NIH supported postdocs. It should be a requirement in NIH grants for NIH training programs and fellowships to include educational activities that will support the transition from postdoc to independent researcher. Unfortunately, these important programs remain limited in numbers and funding, but NIH can change that scenario.

Lastly, following the COVID-19 pandemic, we witnessed the positive impact of remote and hybrid work on the work experience of many individuals. We have the technology to work remotely and collaborate across the globe. More flexibility in our approach to work and productivity is needed in research institutions to support postdocs who can remote and/or hybrid work without hindering progress in their research. In disciplines where onsite laboratory work is not required, hybrid/remote work for researchers can contribute positively to productivity and quality of life.

Response 2982

Perspectives on the postdoc roles and responsibilities

I think the main role of a postdoc is to learn to be a project manager, which is applicable to many careers. This involves many facets, such as managing/mentoring, learning new skills, time management, and taking formal professional development training.

Fundamental issues and challenges

For perspective, I am a first-generation woman from a rural, disadvantaged background outlined in NIH notice on diversity.

Recruitment: cost of living, moving expenses, representation, support for visas!

Retention: pay, lack of 401k/benefits, the culture, and lack of childcare subsidies or options drives women out. support for visas!

Quality of life: cost of living, clear expectations on time off, defined training and roles

Existing NIH policies, programs, or resources

Increase F32 stipends and provide some tangible benefits. When I was a PhD student, a postdoc in my lab was awarded an F32. She found out that it was essentially a pay cut due to moving from a W2 employee through the university to a stipend. She lost all of her benefits. This postdoc had 2 children and struggled to cover childcare and make the K99 deadline. She was pushed out of the pipeline.

The K99 4-year timeline is pushing people out. I am a postdoc who started in July 2019, so there is no automatic COVID extension for me, and NIH program officers act like COVID never happened or affected my career. I submitted my K99 application but only have one opportunity for review due to this. I will leave academia if it's not funded as I am geographically restricted, so I know it will be needed for being hired in my area. Another postdoc in the lab is developing a truly cutting-edge research program, but his big papers were not ready for the 4 year timeline. He cannot apply for the K99 now.

Postdocs are tired of NIH telling us we do not need a K99 and citing old data. Every person I know who was hired since 2020 had a K99. The market is getting ultra-competitive, so even using 3-year-old data predating the pandemic is not fair. Increase funding of K99's and increase the timeline if you want to see any meaningful change.The 'first R01 before age 40' statistic is ruining potential careers.

Create infrastructure for staff scientists or Co-PI ran labs in extramural, even for small labs! Many people would love to be staff scientists or co-PI. Increase modular budget on R01. Science is too big and requires so much expertise for one person to run a lab now!

Proven or promising external resources or approaches

Lobby for more NIH funding. OITE resources/training for intramural should be the gold standard for extramural.

Greater flexibility on timelines, did I mention the K99 4-year eligibility is ruining lives?

Response 2983

Perspectives on the postdoc roles and responsibilities

I love what I do and I love academia. I feel that I'm making a difference in people's lives. That's why I chose this career path. However, I feel that my work life balance is terrible and my salary does not justify the amount of time I put in. Postdocs have extremely important roles. We run labs, mentor the next generation of researchers, write grants, and produce most of the manuscripts that come out of our labs. We're also increasingly tasked with reviewing manuscripts and being part of academic committees. I do not view postdocs as trainees, I view us and early career faculty without the title.

Fundamental issues and challenges

Overall quality of life as a postdoc in clinical psychology is very low. The main issue is salary. The NIH starting postdoc salary is way below what the value of a postdoc is. It is below the starting salary of most bachelor degrees and this is unacceptable. It is even worse for those of us with families. We are expected to do high level research while applying to grants and helping run labs. This takes at least 60 hours a week. However, I don't have enough time to also take care of my kids and clean my house. And I'm not paid enough to afford any help. So the only options are to not sleep or to not spend any family time. This means low quality of life. This in turn will be a fundamental issue for recruitment and retention moving forward. I have always wanted to become a faculty member. I am now strongly reconsidering that. Especially with tenure under attack in certain states. I do not recommend that people pursue my career path and this will mean that talented scientists will choose other career paths. This will become even more true for candidates coming from underserved background who cannot afford to live their whole lives underpaid in the name of science.

Existing NIH policies, programs, or resources

I would revise the grant programs offered. Specifically, F grants are almost pointless. They are great for putting on your C.V., but for the amount of effort that goes into them, they barely provide you with any

funding. Especially F32s. It's not hard to find a research postdoc position so why spend all that time applying for a grant that doesn't give you money to run a study.

There are a number of issues with the K mechanism. First, the K99 traps you into staying at the postdoc level for such a long time that it feeds into the low quality of life and poor salary issues I discussed above. The other K mechanisms trap you at an institution for such a long time that it becomes hard to leave. I wish there were more legitimate postdoc level R01/R21 type grants that we could get that wouldn't impact our early investigator status. It feels like we're not being treated as real researchers, only trainees, so there aren't any grants for us.

The other issue with the K mechanism is that the balance between doing something novel and gaining training is very hard to navigate. On the one hand, we're being asked to put forward a novel research study that is of the quality of an R01. And at the same time, it has to be something new to us in order to fit a "training grant". I wish it were clearer that the K mechanism provides an avenue for training so there could be some leeway regarding the innovation of the research project. Part of this issue would be alleviated if the F grants was improved to be a more viable option.

Proven or promising external resources or approaches

All of these things are going to vary by institution and are ultimately out of the NIH's control. The main way to increase recruitment and job satisfaction is to be paid according to qualifications and job expectations. I think a $70,000 minimum would be far more in line with a postdoc's value.

Response 2984

Perspectives on the postdoc roles and responsibilities

The postdoctoral role has changed significantly in the past decade or so. While originally a temporary step in the path towards a professor job, it is now taking longer and can lead to various career types. Postdocs are also taking more responsibilities in the lab and in mentoring students, and many are even teaching classes for experience. Changes need to be made to allow postdocs to have the time and resources to be successful. These include more formal training to lead their own lab in the future and being more inclusive of alternate career paths.

Fundamental issues and challenges

Some major challenges in recruitment and retention of postdocs are stability and income. A new PhD can apply for jobs in industry that will pay double or more the current postdoc salary and have a track for growth in the company. Whereas a postdoc salary is barely enough to live on depending on the city, and the future is uncertain. Postdocs are seen as temporary, but there are not enough academic jobs for all postdocs. Also many postdocs are at the age where they have or want to start families, and on top of the salary not being anywhere near sufficient, there are no benefits or required leave for postdocs to be able to do so. In addition, international postdocs have the added stress of having their contracts renewed and applying for visas because postdocs are classified as temporary jobs.

Existing NIH policies, programs, or resources

The policies need to include relocation costs and salaries that are proportional to the cost of living in the area and raises need to keep up with inflation. Protections against harassment and overworking are necessary or else postdocs will leave for jobs that offer better environments. Programs need to stop considering postdocs to be temporary and on yearly contracts because the job market is no longer in line with that. Postdocs need better training and resources to set them up for success throughout their career.

Proven or promising external resources or approaches

Research into the need for salaries to be in line with the cost of living and the worth of postdocs: https://www.nature.com/articles/s41587-023-01656-4

The importance of science advocacy for postdocs: https://www.nationalpostdoc.org/page/ResourceLibrary#Advocacy

In general, scientists agree that having people with different perspectives is the best approach to solving problems, yet postdoctoral policies are highly limiting the type of people who can and want to pursue postdocs.

Response 2985

Perspectives on the postdoc roles and responsibilities

I believe an academic postdoc is a non-tenured researcher. We preform tasks within a lab, that is not our own.

Fundamental issues and challenges

I think there are a couple of things. Most importantly the pay. Individuals with PhDs are extremely high skilled labor yet we are not as paid as such. What confounds this is the concept that we are "trainees" . In most cases postdocs operate as a workforce/labor and are not given either formal or informal training.

Existing NIH policies, programs, or resources

I believe the pay scale is one of the biggest things that should be changed. Also creatong better protections against toxic lab cultures and bad PIs.

Proven or promising external resources or approaches

No response

Response 2986

Perspectives on the postdoc roles and responsibilities

Postdocs are essential members of the modern scientific laboratory. The postdoctoral position is a time where a highly skilled employee works to advance a PIs research agenda. The roles and responsibilities of the postdoc are dependent on where the PI and potential postdoc employee find common ground in their professional needs. For example, where the postdoc is interested in a career in academia their roles will include to further develop their grant writing and experimental skillsets while constructing the footprint for an independent academic career. These roles are best accomplished when the employing PI is interested in maintaining their academic laboratory through publication of manuscripts via data generated and interpreted by the postdoc, acquisition of NIH funding via preliminary data and grant writing by the postdoc, and through increased likelihood of supporting future employees by external fellowships via demonstration of their trainees to obtain academic positions. Alternatively, a postdoc may be interested in learning a new technique or area for a career in industry and their roles and responsibilities will focus on generating data for the PI to be used in publication and grant proposals.

Fundamental issues and challenges

1. Lack of true commitment by the NIH to support postdocs and grad students—The Fundamental issues and challenges have been known and the NIH to wait so long to address the issues is inherently a problem and a failure of the organization.
2. Pay is too low.
3. NIH permits institutions to revoke benefits upon earning an external fellowship. Postdocs need to earn fellowships to demonstrate ability to earn funding but do so at the expense of losing health insurance.
4. NIH permits institutions to cap budgets requested for K award winners based on whims of administrators.
5. It is a fundamental issue that the only time issues with the postdoctoral position are thought to be addressed are when PIs complain that they can't recruit them.

Existing NIH policies, programs, or resources

Just bump the stipend on F and K grants and increase the size of the R01. There isn't some magic workshop or eBook that will fix this problem in any other way. Spending time and money to evaluate interventions that don't address root issues is time and money that could be sent on something that would improve postdoc experience.

Proven or promising external resources or approaches

St Judes postdoc salary increase.

HHMI postdoc salary increase.

Response 2987

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a job that allows you to work with scientists outside your graduate mentor, branch out to other areas, and develop and refine your research program.

Fundamental issues and challenges

A major issue is the low pay. NIH minima (on which many salaries are set) may allow for reasonable standards of living in cheaper cities but can fall very short in certain areas (Boston, NYC, SF, etc.). This can go as far as to exclude people without means to accommodate an extra 3-6 years of low pay. This is probably an even bigger issue for postdocs with families and all the costs associated with that.

A huge issue is the precarity of the position. It used to be easier for PhDs to land tenure-track positions; now it can be uncertain even after a postdoc. This obviously affects retention.

Existing NIH policies, programs, or resources

It may sound easy to say, but more money needs to go to research and paying for researchers. Grants with hard limits (like modular grants) can be adjusted for inflation.

Eligibility for pathway to independence grants (K99) may need to be extended beyond 4 years.

Also as a note—I don't have a recommendation for that issue—a few hiring committees, either effectively but in some cases explicitly (as, in the job posting) have made a K99 a requirement for hiring—effectively outsourcing the burden of selecting candidates to the NIH.

Proven or promising external resources or approaches

Each school having somebody who can act like an ombudsperson for postdocs may be helpful, some institutions have been doing this.

Response 2988

Perspectives on the postdoc roles and responsibilities

To advance the current knowledge pool by the performing cutting edge science. This aids the PI who is funded by the NIH and at the same time advancing his/her own career by gain valuable expertise

Fundamental issues and challenges

Low salary that doesn't increase with inflation.

Existing NIH policies, programs, or resources

International post docs are not eligible for majority of funds like their native counterparts.

This severely impacts future careers of the international as they are viewed as unproductive and not competitive

Proven or promising external resources or approaches

No response

Response 2989

Perspectives on the postdoc roles and responsibilities

research and learn

Fundamental issues and challenges

very low salary, visa restrictions, no future guarantee

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 2990

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity], the nation's largest professional association of research scientists and physicians who are dedicated to understanding the immune system through basic, translational, and clinical research, appreciates this opportunity to comment on postdoctoral research training and career progression within the U.S. biomedical research enterprise. We begin by endorsing the thoughtful comments submitted by the Federation of American Societies for Experimental Biology on April 6, 2023. In addition, [redacted for anonymity] wishes to emphasize the following points.

[redacted for anonymity] views postdoctoral scholars ("postdocs") as skilled scientists who have significant expertise in a particular field and a multitude of capabilities, and who should be valued as such. The "trainee" label does not reflect their expertise and skill, and [redacted for anonymity] urges NIH to reevaluate its use. The postdoc position should be a period of advanced training, designed to foster independence, that serves as a steppingstone to a desired career. It should have a defined timeframe appropriate for the postdoc's ultimate career goals and enable the postdoc to make contributions to their scientific field.

[redacted for anonymity] believes that principal investigators (PIs) and institutions should invest in the postdoc's research and career development, whether in academia or other sectors (e.g., industry, policy, law, etc.). This could include meaningful training in obtaining funding, mentoring, leadership, running a lab, budget management, data management, study section service, and pursuing careers outside of academia, etc. While a postdoc's responsibilities include a level of dedication to the research and a respect for their PI's goals, time, and resources, a postdoc should not be treated as a laboratory "workhorse," and the expectation should not be that the postdoc position is a period of unreasonable personal sacrifice. It is essential that the position accommodate family responsibilities, provide sufficient financial stability, and offer health and emotional wellness benefits.

Fundamental issues and challenges

One major issue that inhibits recruitment, retention, and overall quality of life for academic postdocs is insufficient compensation. [redacted for anonymity] believes that postdoc compensation should reflect their level of education, expertise, and knowledge; they should be paid as professionals and should not have to live "student" lifestyles. Current stipend levels do not always reflect regional cost of living, representing a barrier to recruiting and retaining postdocs in high cost of living science hubs (e.g., New York, Boston).

Another major barrier is the lack of available and adequate benefits, including parental/family leave, accessible and affordable childcare (a barrier that disproportionately affects women), and retirement benefits like employer-matched contributions. Scientists often enter their late 20s—mid 30s without having significant retirement savings or financial stability and may never catch up to their peers in other sectors. Low pay and inadequate benefits select for well-resourced individuals, as compensation is often inadequate without other external support.

The academic postdoc position, intended to be a temporary and transitional career stage, is often ill-defined in terms of length, expectations, next steps, etc., creating a period of instability that may be looked upon unfavorably compared to other opportunities. A fundamental issue affecting recruitment, retention, and quality of life is uncertainty about future career prospects during the postdoc period. Many graduate students are unwilling or unable to make the financial and personal sacrifices required of an academic postdoc, and many postdocs choose not to pursue tenure track faculty positions in academia, in part because of the difficulty of attaining such a position and of securing and maintaining funding as a PI. These and other challenges may make other career paths more attractive.

Existing NIH policies, programs, or resources

To improve the postdoctoral training ecosystem, NIH should consider allowing NRSA fellows and trainees to maintain "employee" status at their institutions so that they may receive institutional benefits (health insurance, retirement benefits, etc.). In addition, developing and enhancing mentoring opportunities that

allow postdocs to depend less on their PI and their PI's networks will improve the academic research career pathway, as will making new and/or expanding funding mechanisms that bridge postdocs to academic careers, like the K99/R00 award. Furthermore, NIH should consider addressing the imbalance in the number of awards given to Ph.D. students and postdocs. For more than two decades, the number of awards for Ph.D. students has been increasing while the number of awards for postdocs has steadily declined. Addressing the reasons behind this imbalance, and reevaluating relevant funding mechanisms (for example, the limited timeline to apply for the K99/R00), may help to optimize the academic biomedical research pipeline.

NIH should consider ways to enable postdocs to obtain and thrive in stable academic scientific positions (other than as a PI), such as staff scientists. Providing grant support or other funding mechanisms for such positions would enable more postdocs to maintain careers in the academic research workforce. The National Cancer Institute's Research Specialist Award is an example of a funding mechanism for a stable research position that is not an "independent investigator." [redacted for anonymity] suggests NIH evaluate this award to determine whether it might be a useful model for similar funding mechanisms outside of NCI.

Proven or promising external resources or approaches

Many institutions provide higher pay, benefits, defined postdoc policies, etc., that the NIH should consider adopting for the postdocs they support. NIH should also create and model "best practices" for academic institutions to emulate and provide a meaningful incentive for them to do so. Finally, NIH should encourage institutions and universities to track and report postdoc career outcomes and statistics (e.g., salary/stipend, average length of postdoc).

NIH should work with other federal agencies to facilitate the recruitment and retention of qualified international scientists who may wish to receive their doctoral degree or pursue postdoctoral training in the U.S. NIH should also provide needed support to international scientists currently studying or working the U.S.; this could include assisting with the visa process and increasing the funding opportunities for which they are eligible.

NIH should also consider partnering with the National Postdoctoral Association (NPA), which is dedicated to advancing the best interests of postdocs and the biomedical workforce. The NPA has knowledge of the current postdoc landscape and ideas on how to enrich the postdoc experience and help early career scientists embark on fulfilling careers.

[redacted for anonymity] applauds NIH for their past and current efforts to improve postdoc training, thanks NIH for seeking stakeholder input on ways to improve the postdoc experience, and appreciates the opportunity to provide feedback now and in the future.

Response 2991

Perspectives on the postdoc roles and responsibilities

Postdocs are the most productive researchers in our system. Their primary role is to perform research with a secondary role in helping train more junior lab members. As a student your primary goal is to learn as a Professor your primary role is to support the member of the lab in various ways and teach, as a postdoc your primary role is to get research done. Therefore, postdocs are essential to research progress and competitiveness.

Fundamental issues and challenges

The main challenge is competing with high salaries currently being offered in industry. The academic research program of the United States will suffer if we are unable to compete with industry. The cost of living continues to increase and the NIH needs to provide the funding to pay postdoc's a competitive wage or our global research competitiveness will suffer.

Existing NIH policies, programs, or resources

As an early career researcher the limitation on the amount of resources that can be requested from an R35 MIRA either at the initial application or more importantly during renewal is a major deterrent to research progress. Established researchers can get MIRA awards with significantly larger budgets while early career researchers are limited to only specific budgets even at renewal. This makes it difficult to recruit postdocs and compete as an early career researcher. The existing NIH policy that could be modified

to enhance the postdoctoral training ecosystem would be to allow early career MIRA holders request more than at 10% increase in funding when renewing their award.

Proven or promising external resources or approaches

No response

Response 2992

Perspectives on the postdoc roles and responsibilities

I view the postdoc as a critical step in my career toward becoming an independent investigator. It is a position that requires substantial experience and independence, but in the end, it is still a job, and my contributions should be reasonably compensated.

Fundamental issues and challenges

The biggest single problem with recruitment, retention, and quality of life for postdoctoral trainees is the wholly inadequate salary/stipend that postdocs receive. Especially in high-cost-of-living areas, the salary for postdocs unlivable. And because the NIH has barely increased postdoc salaries, nor do they provide geographic cost-of-living adjustments, PIs are unable to pay postdocs what they deserve. The excruciatingly low salary for postdocs makes it much more likely that graduate students will go straight to industry, where their skills and contributions will be more fairly valued. This is especially true for people from marginalized and under-represented backgrounds who do not have the family financial support needed to survive on an unlivable wage.

Existing NIH policies, programs, or resources

The NIH needs to pay postdocs more and incentivize NIH-funded institutions to pay postdocs more.

Proven or promising external resources or approaches

Salary.

Response 2993

Perspectives on the postdoc roles and responsibilities

I am currently in my second postdoctoral fellowship. For context, my first postdoc mentor left my prior institution early in my tenure there. My exposure to two postdoctoral training environments (including different mentors, institutions, and funding mechanisms) has taught me that the expectations of a postdoc are inconsistent. More specifically, it seems that some may view postdoctoral fellowships as a mechanism for cheap labor with no accountability on the part of the institution or research mentor as regards training and mentoring. Furthermore, postdoctoral support through a training grant looks very different from that of a project grant. For example, it seems that there are no expectations for training/ mentoring (or at least no accountability) if a postdoc is employed through a project grant.

In my experience as a postdoc and in my observations of and discussions with other postdocs, the academic postdoc is a jack-of-all-trades. Job responsibilities include any and all of the following: scheduling and conducting data collection sessions; mentoring undergraduate and graduate students; processing and analyzing data; writing manuscripts; presenting at conferences; managing lab equipment; procuring hardware/ software; cleaning lab and office space; submitting grant applications; functioning as a teaching assistant; and engaging in various training opportunities. In many ways, exposure to a wide variety of tasks serves to provide exposure to the diversity of tasks required of a faculty member. Yet, this can be in conflict with the notion of "protected research time", detracting from the more visible—and, thus, critical—productivity that is desired during a postdoctoral fellowship (i.e., publications, presentations, grants).

Fundamental issues and challenges

The pay and expectations of a postdoctoral trainee are at odds with the priorities one should have at this stage of life. Expectations that each training experience be completed at a different institution and acceptance of low postdoctoral salaries preclude fiscally responsible choices (e.g., owning a home, maintaining an emergency fund, saving for retirement). These also place added strain on romantic

relationships and family. The sacrifices required of a postdoctoral trainee are becoming increasingly difficult to justify, and they can discourage a researcher from seeking additional training. But they can also be interpreted as exclusionary; for some trainees, such sacrifices preclude their participation in postdoctoral training. For those pursuing postdoc training, it can mean postponing personal goals (family, financial) and uprooting one's life. These decisions also affect partners/ significant others: at minimum, they must agree to the financial sacrifice, be open to a geographical move, and accept possible changes in stability (e.g., moving away from family or support systems, disruptions in their own career stability). Importantly, despite sacrifices on the part of the trainee, there is rarely a commitment on the part of the institution. If your postdoctoral advisor leaves, you must either follow them (if they are staying in research), hope that someone nearby has the funding and expertise to support you, or make another geographical move. Finally, the NIH-recommended stipend levels are insultingly low, particularly considering that a qualification for postdoctoral fellowships is conferral of a doctoral degree. Of course scientists are opting for industry: they receive salaries that reward their hard work, recognize their expertise, and provide financial security; they get paid time off; they have affordable health insurance options; they get paid paternal leave; and they have job stability.

Existing NIH policies, programs, or resources

1. changes to the salary structure. Postdocs sacrifice substantial time and effort to get where they are. A request that they continue to sacrifice pay will surely continue to steer promising researchers away from this path.
2. a more nuanced understanding of training location. Training in a similar location should not be seen as a lack of rigorous and diverse training. Rather, the training opportunities offered, funding opportunities and successes, and products of research should speak to the value of the training. The expectation that a CV or Biosketch contain varied locales for Masters/PhD/Postdoc/Faculty positions was perhaps more important in prior decades, when cross-country collaborations, training, and presentations were not yet the norm.
3. job security. Barring no changes to the above, at minimum there needs to be some sort of commitment from the institution. If we are to uproot our lives and accept a barely living wage in high cost-of-living cities, don't allow the institution to accept zero responsibility when circumstances change.

Proven or promising external resources or approaches

Training programs, such as TL1 and T32, provide "redundancies" in mentorship (in a very good way). They offer varied training opportunities and a "safety net", of sorts, should a mentor leave or a project's funding mechanism end. They include structured training opportunities, so that "training" isn't synonymous with functioning as a glorified assistant to a faculty member, who dumps work rather than taking the time to groom future researchers. In training programs such as TL1 and T32s, there is accountability. Collaborative efforts on the parts of administrative teams overseeing the programs, faculty who organize them, and personnel participating within them all contribute to a more enriching experience.

Response 2994

Perspectives on the postdoc roles and responsibilities

It should be a time to either get additional training and mentorship while having protected time to do research to launch your own lab. However, I feel like it is more commonly used to get skilled workers to advance a PIs projects for a short time.

Fundamental issues and challenges

Stipends are typically too low. Particularly when a high volume of top institutions are located in high cost of living areas (Boston, NYC, San Francisco, Chicago). This not only makes doing a postdoc hard because you are scraping by, it also disenfranchises postdocs who can not make those ends meet (Those with children, overall lower economic status, those with health factors). Often postdocs are used as skilled labor as well but not paid accordingly.

Existing NIH policies, programs, or resources

Alternative pathways. Hiring more permanent scientists and less postdocs. Postdocs should be used for A. gaining additional training to aid in future career or B. establishing independent research directions for

future PIs. When postdocs are used as skilled labor for two years with no real direction for future careers it makes people become trapped in an endless postdoc cycle. Alternative longterm positions for scientists should be made.

Proven or promising external resources or approaches

No response

Response 2995

Perspectives on the postdoc roles and responsibilities

A postdoc position is a temporary position. In this role, you gain more knowledge and training to prepare you for your next step in your career.

Fundamental issues and challenges

I have 3 more degrees than my husband and he is making much more than I am with better benefits. It is not all about the money, but for the amount of work we do, it feels like we are not accurately compensated. Due to the high demands of the job and the low benefits, this can lead to burn out and poor mental health.

I am on a training grant which does not come with health insurance, which is one problem. Another problem is that no one explained that taxes aren't taken out automatically so we have to figure that out ourselves.

At times, there is no separation from your job and your home life. You are often on someone else's timeline and you have to be ready to complete work when they need you. There is a pressure to publish, give talks locally and nationally, provide service (score fellowships and symposia, do science communication, serve on committees), and writing fellowships. This is on top of actually running the experiments for your project. Postdocs also see what academia is like and on as a professor, your responsibilities grow to include teaching, mentoring, and managing a lab. There is not enough time in the day to do all these things so postdocs are constantly drowning in work, not producing quality work that they are proud of, and repeating this over and over. At times we wonder if we want to do this work for the rest of our career and many people don't want that. While we want to be passionate about our career, we don't want that to be the only important thing in our lives. We want to be able to disconnect and have time for ourselves.

Existing NIH policies, programs, or resources

In the "Resources" link, when I click on any of the tabs under "career guidance> Science career planning and opportunities", none of the links are working.

Proven or promising external resources or approaches

Your time as a postdoc is definitely influenced by the quality of your mentorship. When you are a PhD student, many people tell you to do your postdoc work with the top PI in your field. These people often turn out to be the worst mentors. This is a disconnect in the field, too. Scientists are usually praised for their research only where so many other things go into being a PI. You also have to think of how these PIs are able to generate so much data. Are they exploiting the people in their lab? There should be some accountability for these PIs and consequences for if they do not treat their trainees well. Many trainees are scared to say something because there think they will not be protected if they do.

Response 2996

Perspectives on the postdoc roles and responsibilities

A postdoc is a great training opportunity. However, this is a training experience we take on after getting a PhD, a time where most of us sacrifice a lot already. The fact that when I started my postdoc, which requires college + graduate degree, I could have made the same salary managing a gas station, which only required some college experience, was truly shocking and demoralizing. In this day and age you need to do a postdoc to get a faculty position at an R1 university which is fine, but that doesn't mean you should just be cheap labor for someone else before you "pay your dues" so to speak. As someone soon to

transition to an independent position, I will searhc for every avenue I can to better compensate my postdocs becasue they will be valuable members of my team and they deserve to be fairly paid.

Fundamental issues and challenges

Salary and support are the biggest issues in recruitment and retention. The academic postdoc will be extinct soon if the NIH does not increase budgets to allow for more salary support. We don't do this for the money per se, but if we suffer the stress of this life and aren't fairly compensated, we're insane not to leave for industry. Especially in cities like Boston, NYC, SF, etc, its ridiculous to expect people to live in these places on salaries that effectively put them at the relative poverty line.

Existing NIH policies, programs, or resources

F32s should be open to international postdocs. Also, once a trainee gets their own funding, PIs should be able to use some of those now freed up funds to increase the salary of the trainee. Reward them for their success!

Proven or promising external resources or approaches

No response

Response 2997

Perspectives on the postdoc roles and responsibilities

The postdoc role is important for training and gaining experience in your field, mostly to prepare a future faculty position. They are also the data generating engines of labs, and are responsible for advising students

Fundamental issues and challenges

Low salary. Poor and inconsistent benefits. Often overworked leading to poor work life balance. Industry jobs often don't require postdoc experience, and comparable private jobs can pay 2-3x more with better work/life separation

Existing NIH policies, programs, or resources

Increase stipends, expand funding programs, work with postdoc and mentor to ensure work expectations are reasonable

Proven or promising external resources or approaches

No response

Response 2998

Perspectives on the postdoc roles and responsibilities

I was a postdoc in an academic lab before my current position. I view the postdoc position as an early career scientific job. I was expected to have significant expertise to apply to my project and be able to conduct experiments independently. In addition, I authored manuscripts and gave presentations all work minimal input from my PI. For these reasons, I think it's patronizing and belittling to call postdocs "trainees" when they're expected to contribute at such a high level. Industry does not do this, the equivalent title is simply "research scientist".

Fundamental issues and challenges

The primary challenge is low pay. Related to this is the abysmal amount allowed for relocation reimbursement.

Existing NIH policies, programs, or resources

As only a small percentage of postdocs continue on to academic positions, I think having so much of the focus be on academic career paths is a missed opportunity. Programs to help postdocs transition to industry would be very valuable. There's some programs that exist for government careers, but these are also pretty limited.

Proven or promising external resources or approaches

Industry salaries start at around $75k, I think pay is the best place to start.

Response 2999

Perspectives on the postdoc roles and responsibilities

A postdoc is a senior trainee that is either developing their independent research program and gaining additional skills in mentoring and project management or they may be developing additional skills for transitions to other career paths than academia, all while conducting research in line with their mentors' goals. Unfortunately, they are not considered real employees by many universities and exist somewhere between student and technician—a lack of clarity that adds to the feeling you are in between—in a waiting room for a real job.

Fundamental issues and challenges

A postdoc feels like a turning point—you either get beaten down emotionally, physically, and cognitively and decide you don't want to do this anymore or you somehow persist, which still doesn't mean you'll have a career. There are massive limitations to your "viability" as a future scientist which makes any small speed bumps in work culture/support feel like mountains. You have limited time to secure funding, but are also supposed to round out your skillset by doing something new, which takes more time. Many factors are outside of your control—due more to luck than competence and skill. These factors determine whether you are able to make a name for yourself and research and ultimately make a career out of all of your hard work. It's a pressure-cooker, making the environment ripe with emotional distress, financial insecurity, and intellectual burnout. If you had a good chance of landing the job you are training for or make decent money while you make an attempt, that would help. Certainly being a faculty member is a continuation of these pressures, but there is little to no training on how to develop skills that let you persist in such an environment. It is harder for anyone with any sort of disadvantage—financial, health, not feeling like you belong, mental health struggles which are aggravated by the environment and scientific endeavor, lack of social support. Only those with the most privileged position in society could ever hope to survive a post-doctoral experience for what it is primarily meant to be—a training environment for a faculty position or other scientist roles. As a person who loves solving scientific mysteries and being challenged, if this position doesn't set me up for success and professional fulfillment, who is this position for?

Existing NIH policies, programs, or resources

Please, I do not understand the reason for the K99/R00 eligibility cap of 4 years post graduation. Post-docs are supposed to gain new skills to enhance their scientific toolkit and this policy directly prohibits that kind of professional development, instead reinforcing being single-minded and minimizing growth in many areas of professional development. There need to be more pathways to independence, not a one-size fits all mechanism. Especially when we, as academics have structured our work teams to be heavily biased toward graduate students—who are taken advantage of to get the needed work done—we need to support and encourage postdocs and staff scientist positions. These highly trained scientists help support earlier trainees, provide continuity of intellectual capital within labs, and serve as important coaches and mediators between PIs and graduate trainees and technicians. But instead, postdocs are expected to perform at the highest level or choose another career. Transitions to staff scientist positions can sometimes be viewed as a death sentence on the endeavor to become an independent scientist. Reducing pressure on this highly valuable population by providing fair compensation, recognition of value, and support/pathways to continue to contribute to PI research or move toward independence would go a LONG way toward making the postdoctoral position an attractive and viable option for doctoral awardees.

Proven or promising external resources or approaches

Turn toward organizational psychology and leadership practices. Companies and scientists have done a lot of work and invested a lot of time trying to figure out how to empower employees and get high performance from them. None of the research supports the notion that people in mental and emotional distress—perhaps those that just push through and work hard in the narrowest definition of the phrase—are the highest performers. Getting high quality, sustainable productivity and creating environments people WANT to work in requires treating them like whole people. Psychological safety and trust between team members and institutions are vital.

Response 3000

Perspectives on the postdoc roles and responsibilities

A postdoctoral scholar or postdoctoral fellow is a position that should enable the postdoc to reach independence and and gain technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.

Postdoctoral fellows should have the opportunity to develop new skills as well as explore career fields in which they may be interested in pursuing following their postdoctoral position.

Postdoctoral fellows should be given the opportunity to attend scientific conferences and professional and career development workshops or seminars to ready themselves for the next stage of their career.

Responsibilities and expectations of postdoctoral fellows should be discussed with their faculty mentors upon hire of the postdoc and may include mentorship agreements and individual development plans. A postdoc is a temporary position and does not carry the same responsibilities as a full-time staff or faculty position. Postdocs should have the opportunity to build their mentoring skills while also being mentored by their faculty/PI.

Fundamental issues and challenges

The biggest issue facing postdoctoral fellows is the compensation policies both at the NIH level based on stipend guidelines and inconsistencies across institutional policies. NIH stipend levels do not match other federal pay rates that are based on cost-of-living levels. Annual increases should also be aligned with annual inflation, location, and experience.

International postdocs have additional challenges with navigating visa paperwork as well as cultural changes moving into the U.S. academic setting. International postdocs may face challenges with their visa sponsorship based on relationships with their sponsoring faculty/PI. Considerations should be given to sponsorship that do not allow postdocs to be exploited by faculty. Partners/spouses additionally have difficulty in gaining work authorization which prohibits long term commitments by the postdocs if they are a single income family.

International postdocs also have less funding available due to citizenship restrictions for fellowships and training grants. This creates inequitable opportunities for postdoc positions for international postdocs.

Postdocs working in hostile work environments created by faculty unwilling to compromise the way they communicate or renegotiate expectations has led to postdocs leaving their assignment early. Additionally, postdocs that came to the university with the understanding that they would have the opportunity to work on specific research and then being given projects unrelated to their area of interest has led postdocs looking for other roles where they can focus on their specialty.

Existing NIH policies, programs, or resources

Postdoctoral fellow classifications continue to be a barrier of equitable training landscapes across the institution. Postdoctoral fellows on NIH training grants or fellowships are not provided with the same benefits as their peer postdocs on other NIH research grants, contracts, or institutional funding. If a postdoc is awarded this funding, they must give up benefits such as retirement. NIH should clearly provide support and state that postdocs on these funding mechanisms can be classified similarly to their peers allowing for equitable benefits. Many postdocs do not have the option of not going onto a training grant if they want to continue their position, although these awards do not provide the same benefits. Additionally, encouragement to supplement these awards should be communicated clearly and flexibility of the type supplement dollars should be available.

The NIH should expand family-friendly policies to allow for paid-parental leave and childcare subsidies similar to intramural postdocs. This allows postdocs who may put family planning on hold to continue to build their future.

The NIH should state clear practices of career and professional development to allow for postdoc fellows on NIH funding to have time set aside for development. By including it on grant-requirements, faculty/PIs must allow postdocs time away from research to continue to develop their skills.

The NIH should encourage mentor committees, similar to those of Ph.D. students to encourage intellectual growth of postdocs with faculty that they do not directly report to. This will allow additional career and professional development opportunities, training opportunities, and networking opportunities. This also provides additional mentorship to help navigate relationships between postdocs and their faculty/PI.

Proven or promising external resources or approaches

The National Postdoc Association (NPA) is a key advocate for the postdoctoral population. It provides institutions with resources to develop key programming for postdocs. It also provides guidance on setting postdoc policy.

Additional services provided by the NIH such as OITE has provided training, such as facilitation of resiliency training, that is helpful to postdoc offices to provide programming to our populations.

Open dialogues between institution postdoc offices, the NPA, and NIH will be invaluable in the future as we continue to encourage growth of postdoc populations and a diverse faculty landscape.

Response 3001

Perspectives on the postdoc roles and responsibilities

A postdoctoral research fellow is a trainee in residence pursuing advanced study beyond a doctorate or medical degree that contributes to the development of medical knowledge and other health sciences. The research fellow position is considered a short-term training position intended to lead to an independent research career in academia, industry, or government. A time-limited appointment offers the research fellow the opportunity to further training under the direction of a faculty mentor while at the same time protecting the fellow from indefinite tenure in a training position. The term of service should provide adequate time for a research fellow to transition into a full-time position with the appropriate salary and benefits commensurate with their education and research experience.

Fundamental issues and challenges

One of the biggest challenges impeding the recruitment, retention, and impacting the overall quality of life of postdoctoral research fellows at [redacted for anonymity] is the fact that NRSA postdoctoral salaries are not nearly sufficient to afford them a decent quality of life in the greater Boston area.

Uniform NIH stipends for postdoctoral trainees across the US do not consider the highly variable cost of living across the country. In the Northeast and the Boston area in particular, the minimum NRSA salaries are insufficient for a fellow to maintain a reasonable standard of living. The lack of flexibility on salary restricts [redacted for anonymity] ability to retain and attract postdoctoral fellows, all the more so given that the significant biotech and pharmaceutical presence in Boston makes the local market especially competitive.

Existing NIH policies, programs, or resources

The NIH should either substantially increase current NRSA stipends or adjust the stipends based on the geographic cost of living. While NRSA PGY stipends have increased, they have not adequately matched cost of living increases.

In addition to raising the NRSA stipend levels, NIH must simultaneously increase the size of each NIH award to accommodate the stipend increases. Moreover, the NIH should mandate that all NIH institutes accept non-modular budgets or significantly increase the award amount of the modular budget, which has stagnated for decades.

For [redacted for anonymity] to pay postdoctoral fellows at the local market rate, stipends at each PGY level must increase by 20% from the current NRSA levels. The NIH should therefore allow for at least a 20% increase to all R-grant budgets at the time of competing renewal for all institutes.

The NIH should liberalize the policy that restricts using alternative Federal funds to supplement trainees' salaries on any NIH training awards. The duration allowed on a training award should be lengthened to reflect the true time needed to be competitive in the current job market.

The NIH should decrease the administrative burden on new and especially competing renewals for training grants.

The time allowed on a training award should be lengthened to reflect the true time needed to be competitive in the current job market. The creation of transition awards (T to R and K to R) would help retain fellows in academia.

Given the impact of mentorship on the postdoctoral training experience, the NIH should mandate, on any federal grant envisioning postdoc training, an institutional document outlining the institutional support for postdocs. Additionally, the NIH should consider mandating secondary mentors for all postdoctoral fellows and creating an ombudsperson for postdoctoral fellows at NIH.

Lastly, to help track career progression, it would be useful if all fellows were given unique identifiers.

Proven or promising external resources or approaches

The [redacted for anonymity] serves as a center of excellence on career development of our diverse clinical and research faculty and trainees by sharing best practices on mentorship, well-being, and promotion. Among the several offices within the center, the Postdoctoral Division supports our trainees and the advancement of their careers through one-on-one meetings, CV reviews, mentorship, skill-building seminars, mentorship programs, and transition to independence.

Given the lack of uniformity around career mentoring for postdocs, which relies almost exclusively on the individual PI, the Postdoctoral Division at [redacted for anonymity] is an alternate resource for trainees to get advice on career development, academic promotion, and conflict resolution. The Director of the Postdoctoral Division reviews all requests that extend beyond 5 years of postdoctoral training.

We also mandated a secondary mentor requirement for postdocs to identify a secondary mentor and are encouraged to establish a mentoring network to obtain guidance on career development and engage in discussions of future professional goals.

The Postdoctoral Division and other CFD offices offer many programs and resources to support our research fellows during their training. Examples from the past year include:

- Two-day Postdoc Retreat for over 200 postdocs, centered around well-being and career development.
- Leadership Development Program for Researchers, to prepare postdocs and junior faculty for the challenges inherent in creating a successful research program.
- "Anne Klibanski Visiting Scholars Awards" to present as a "virtual" Visiting Professor at a national/international institution and receive focused mentorship and professional coaching.

CFD Writing Support:

- English for Speakers of Other Languages (twice/year)
- Writing/editing services for [redacted for anonymity] faculty and trainees by [redacted for anonymity] science writers (5 hours /year
- Stress Resiliency Program for Postdocs addresses the pressures of work-life balance

Response 3002

Perspectives on the postdoc roles and responsibilities

Essential to the scientific workforce and for faculty pipeline in academia

Fundamental issues and challenges

Poor funding prospects in academia is turning away the best and brightest. Even if we do increase postdoc pay, they see the abysmally low pay lines at NIH and choose to leave academia. NIH budget must be increased and the modular grant must be increased to keep up with inflation.

Existing NIH policies, programs, or resources

Increase postdoctoral award number and amounts so the best postdocs can get independent funding during their training period. Provide more postdoc to faculty transition awards. Increase the size of the modular R01. Increase paylines for funding. It's all about funding!

Proven or promising external resources or approaches

Listen to faculty who have been training and mentoring postdocs when we say that funding for research is the problem.

Response 3003

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3004

Perspectives on the postdoc roles and responsibilities

Postdocs are the drivers of biomedical bench science. With their youth, drive and willingness to forge new paths, I really think they are the source of new innovation; certainly they are responsible for putting the vast majority of ideas into tangible results. As the field of positions postdocs move into widens, we need to also think about how we can best support these different outcomes: Postdocs are able to do rigorous evidence-based work and how could this expertise be better integrated into public health and healthcare decisions? Others really want to continue to do great technical work and we lose out on this by having so few staff scientist positions in academic settings. We need to be flexible in postdoc timing: 2, 4, 6 year tracks might have different goals.

Fundamental issues and challenges

Chronic underfunding of public Universities has left many students in debt before they can begin a PhD, and PhD stipends are not keeping pace with coastal costs of living. At this pace, only the rich will be able to afford to be postdocs, and this is exactly the opposite of our goals to have a scientific community that is representative of the demographics of the US.

Existing NIH policies, programs, or resources

NIH stipends could be adjusted for regional cost of living, and include options for childcare expenses so that postdocs can live on the salary they earn.

Proven or promising external resources or approaches

I think people are looking to be part of things that are meaningful and advance the goals of society and community. If postdocs don’t see the next step after this period of training, I don’t think we’ll be able to recruit them based on the details of the job itself. Long hours and low-ish pay are only going to tolerated if there is a sense that this (short) period of deprivation will lead to something sustainable and meaningful.

Response 3005

Perspectives on the postdoc roles and responsibilities

they are a critical part in accomplishing academic science, they help to train PhD students, and are developing skills to eventually lead their own research laboratories. without them academic science would not work.

Fundamental issues and challenges

overwhelmingly the issue i see is that salaries are too low, thus un-competitive with other jobs like industry positions; even if the individual looking for a postdoctoral position is MORE interested in staying in and contributing to academic science.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3006

Perspectives on the postdoc roles and responsibilities

The academic postdoc should be a time for growth and independence in scientific thinking. The postdoc should take ownership of their project and lead the direction toward publication as well as getting funding for the project.

Fundamental issues and challenges

Financial reasons as well as the number of hours postdocs are expected to work inhibit recruitment and retention. Support such as childcare and flexible hours would improve the quality of life.

Existing NIH policies, programs, or resources

NIH programs that provide childcare and housing for postdocs would significantly aid postdoc retention.

Proven or promising external resources or approaches

No response

Response 3007

Perspectives on the postdoc roles and responsibilities

To me, the post doc is not a training position any more. Graduate students come in to grad school with the expertise post docs used to have 20-30 years ago. Yes, training happens during the post doc phase, but as a scientist, you have to always be learning.

The post doc to me is an arm of the PI. They do the hardest science the lab needs to do to get their desired funding and help train grad students. Post docs are experts and the role and pay should reflect that.

Fundamental issues and challenges

The pay is abysmal. That is it. I can make double if I just go to industry after grad school. The salary floor for post docs in the cheapest areas of the country should be 75,000 with regular increases with inflation year over year. That is the bare minimum. The pay is completely unacceptable for the level of expertise and the labor post docs contribute. I will have 11 pubs when I finish grad school and I'm going to leave academia because the pay for post docs is an absolute embarrasment. I could probably do well in academia and I enjoy many aspects of it, but why would I stay? I have to think about my family's future, not just how I love working in the lab. This economy doesn't allow for "chasing your passion" when you're going to make 50,000 with a PhD, it is crazy. I can't find a good reason to stay, it feels financially irresponsible. If we want to stay at the cutting edge of science in this country it has to change.

Existing NIH policies, programs, or resources

More money for post docs. Also some sort of pipeline system that guarantees a tenure track position at the end of an award. Like a K award that guarantees TT position depending on perfomance. We would keep way more good people in the academic space.

Proven or promising external resources or approaches

Unsure. Just get more funding and pay them more. Everything else is pretty much fine.

Response 3008

Perspectives on the postdoc roles and responsibilities

A postdoc is a critical period of advanced training when one can explore a new area or take real scientific risks in an area, to explore and develop as a scientist.

Fundamental issues and challenges

My postdocs spend a large amount of their time dealing with being forced to live on sub-living wages for this area. That dramatically affects both their ability to focus on research and to take the scientific risks required to develop to their true potential. This would be solved by higher salaries if the NIH funding existed for that. As it stands with current modular R01 and ESI MIRA/R35 amounts, the NIH is forcing postdocs into sub-par training.

Existing NIH policies, programs, or resources

NIH needs to up the modular budget and the 500k R01 budget without pre-approval. Particularly as most postdoc applicants are international, this is the primary way to pay them and we increasingly cannot.

Proven or promising external resources or approaches

A living wage is a proven approach to improve working environment, recruitment, and job satisfaction. Please enable us, your investigators, to pay it!

Response 3009

Perspectives on the postdoc roles and responsibilities

I viewed a postdoctoral fellowship as a chance to change my field of study (I went from microbiology/biochemistry to immunology). I felt I could benefit from additional time in a different research laboratory to learn new skills and get exposure to a different environment, as well as see and learn how a new lab/institution approaches scientific research. I also took a postdoc as time to help me determine the best career path for myself, as I left my PhD program unsure of what I'd like to do once I completed my graduate training. Postdocs in academic institutions are well positioned to receive guidance on how to best continue in academia, but after being in an academic postdoc for 3.5 years, I do not view these positions as being as helpful to those with non-academic aspirations.

I have heard from senior faculty members within academia, that if a postdoc takes longer than 3 years to complete their work they are a failure, and that any postdoc that takes longer is somebody who has no aspirations, drive, etc. Before going into my postdoc, I was informed by other postdocs that, compared to graduate school, postdocs can be lonely and isolating (see below, Quality of Life).

Fundamental issues and challenges

Issues impacting recruitment:

- While networking is ideal and usually the norm, it is hard to find out about available positions in labs or on T32s, there is no online tool or resource where this information is advertised and consolidated.
- There is no uniform application process to be a postdoc, it varies between lab or institution (e.g. some advertised positions ask for detailed cover letters).
- Not all graduate programs offer a chance to interact or talk to postdocs about their experiences.

Issues impacting retention:

- Poor pay compared to industry or other careers.
- Little resources to assist those that wish to start families (e.g. additional credits for dependents, time off can vary from lab to lab, etc.).
- Poor health insurance or no access to benefits provided within the institution (e.g. while I was on a T32, I was on a separate heath insurance plan that had higher deductibles and less coverage, was not eligible to invest in any retirement plans, and I had to do extra work to determine how much I owed in taxes).
- Postdocs are not viewed as employees or students by either the institution or local/federal government and thus often miss out on benefits provided. This creates issues both formally (taxes, pay, etc.) and informally (identity crisis within postdocs).

Issues with quality of life:

- See points above as major impacting factors.
- No required or supported mental health care for postdocs, this varies across institutions.
- Postdocs are lonely, as there are no shared required classes or activities that create the bonds graduate students can build, and postdocs are usually older and have families or outside responsibilities that make it hard to create connections outside of their immediate labs.

Existing NIH policies, programs, or resources

Ideas to improve recruitment/retention:

- Increase grant support on T32s, R01s, etc. so institutions can offer a competitive salary.
- Create a national database (similar mold as NIH Reporter) where interested graduate students can find postdoctoral positions in either labs and/or on T32 grants.
- Expand policies on T32s that require time for graduate students to meet current postdocs.
- Expand Loan Forgiveness Programs to accept PhD students from more backgrounds/research study areas.
- Clearly define the roles or position title postdocs are within an institution
- Streamline and simplify government websites to make it easier for postdocs to find materials for fellowships/K awards, or other support resources.

Proven or promising external resources or approaches

Offer support for institutions to create programs that enable postdocs to get exposure to alternative career paths (invited speaker series, salary-support internships, etc.)

Response 3010

Perspectives on the postdoc roles and responsibilities

I view my roles and responsibilities as a postdoc as being a focused researcher whose primarily directive is to make progress on the project my position is funded through. However, this role also includes other important tasks including but not limited to mentorship, grant writing and community service. This role comes with tremendous pressure as it feels that my ability to be competitive for a more secure position such as a faculty position is directly tied to my productivity as a postdoc. The transient and short term nature of the role as well as the limited financial security which come with being a postdoc make it difficult to fully focus on conducting good and innovative research. Compounding this issue, I only take on projects which I know will result in publications as I cannot afford to spend months working on high-risk projects which if unsuccessful will threaten my future opportunities for career progression. While I am passionate about research, the costs of delaying life milestones such as marriage and starting a family because of issues related to financial stress and instability are real and for me personally a significant source of despair.

Fundamental issues and challenges

There a two fundamental issues I am experiencing during my time as a postdoc, which center around issues of financial security and uncertain job prospects. Both my fiancÃ© and I postdocs in an NIH funded lab and while the pay is sufficient for our ability to afford rent and food we cannot see a path forward in

academia for being able to afford a permanent house and have children. Both of these issues severely reduce our quality and life and thus likewise hamper our ability to conduct quality research. The uncertainty of being able to secure a faculty position compounds this issue, leading us to seriously consider leaving academia for industry roles. These issues are severe enough that even though I am personal supported by a post-doctoral fellowship I am seriously considering leaving my fellowship early to take a role in industry. I would much prefer to stay in academia as else being equal, but science doesn't occur in a vacuum and I struggle to see a path forward within academia. The combined pressure created by the hyper competitive nature of the biomedical field and the volume of work hours required be to competitive coupled with the pressure of struggling to afford basic essentials for quailing of life are truly crushing.

Existing NIH policies, programs, or resources

In my view their are two policy modifications that the NIH could take which would improve the situation. These two modifications include expanding the pay and duration of training programs such as fellowships and pressuring Universities which receive significant NIH funding to better support postdocs. For expanded training opportunities the level of support is far too low, particularly in high-cost of living areas. While historically viewing postdocs as trainees would support the current level of funding, the reality is that outside of academia a researcher can easily double the salary that would come with an F32. While I acknowledge that the NIH is not responsible for industry wages the reality is that many postdocs including myself are finding it harder and harder to continue and that until there is better pay parity it's hard to see retention improving. For putting pressure on Universities to better support postdocs I believe that arrangements such as removing personal costs from overhead or other arrangements which would prioritize more competitive compensation would be a huge step forward to improving the situation. As an example I recently worked with my PI to put together a grant and overhead and salary plus benefits for one postdoc encompassed nearly half of the yearly budget. I believe that pressuring Universities to implement cost-sharing (or similar measures) of research personnel like postdocs would significantly improve the ability to recruit and retain postdocs. Ideally this would be done in partnership with Universities in a way that does not penalize PIs.

Proven or promising external resources or approaches

For approaches to improve the training ecosystem of postdocs my suggestion is implementing system of accountability that have some teeth. The power dynamics between trainees and PI is significant. Its been my observations that while most PI are kind and dedicated to supporting the development of their trainees abusive mentors are disturbingly common and are often well-funded and well-connected enough to be insulated from consequences. Specifically at the postdoc level you are entirely dependent on your PI for financial support (excluding fellowship support) and so many postdocs are highly exposed to abusive practices often without the recourse and protections which grad students have access to (committees and switching labs). As most postdocs have very little (if any) saving they cannot afford being out of work for long and thus can easily become trapped in abusive situations. This accountability gap is an important role that funding agencies can fill both by having mechanism of oversight which discourage abuse and when abuse does occur have the ability to hold individuals accountable. Ideally, this would include mechanisms to support trainees and insulate them from retaliation or job loss. In summary, the common thread that underlies the most pressing problems faced by postdocs center around the instability of the position. Academic trainees in general are highly exposed to the quality of life and security issues which face the US right now. As a postdoc myself believe that the only way to retain promising scientists is a significant overhaul of the systems which support trainees.

Response 3011

Perspectives on the postdoc roles and responsibilities

The role of postdoc is to provide training to become a professor or run a lab.

Fundamental issues and challenges

Postdocs are often treated more like scientists, but recruited with the lower pay and benefits of a postdoc.

Existing NIH policies, programs, or resources

More funding for scientists and differentiation of the two pathways.

Proven or promising external resources or approaches

No response

Response 3012

Perspectives on the postdoc roles and responsibilities

I view a post-doc as a researcher position that includes independently carrying out research projects as determined by the lab head, mentoring graduate students or other post-docs in the lab, communicating research in peer-reviewed publications and scientific conferences, and building new skills relevant to their research by attending workshops and classes.

Fundamental issues and challenges

The fundamental issue is pay and short term appointments. Postdocs should be paid commensurate with their experience, which only a few institutions require, and does not include the NIH. For example: https://www.hhmi.org/sites/default/files/hhmi-postdoctoral-associate-scale.pdf

Existing NIH policies, programs, or resources

Increase minimum pay.

Proven or promising external resources or approaches

https://www.hhmi.org/sites/default/files/hhmi-postdoctoral-associate-scale.pdf

Response 3013

Perspectives on the postdoc roles and responsibilities

A period of training after a successful graduate school training to learn and expand scientific skill set during a period of focused scientific investigation. May include development of professional networks, mentoring junior scientists/trainees, teaching, grant and financial management. Includes time to develop and apply for a faculty position.

Fundamental issues and challenges

Cost and competing salaries for similar levels of positions.

Existing NIH policies, programs, or resources

Cap the number of postdoctoral fellows an individual PI can train at the same time while receiving NIH funding for either party.

Proven or promising external resources or approaches

Create a postdoc to staff scientist grant in the same capacity as the F99/K00 and K99/R00.

Response 3014

Perspectives on the postdoc roles and responsibilities

The goal of the postdoc is to build and refine your skillset for the next career stage.

Fundamental issues and challenges

1. Benefits—The most significant issue with the salary and benefits of the postdoc is that postdocs are not offered anything in terms of a retirement benefit, even though they are in many cases considered employees of a university system. In my case, I did not start putting money into a retirement account until I was 32 because I had no access to an employer sponsored retirement program—not as a graduate student, and not as a postdoc. Assuming the average postdoc takes 5-6 years and a postdoc of 4 years, this is conservatively 9 years of lost potential. This needs to change.
2. Salary and work-life balance—There's no locality pay and it can't compete with private sector jobs. A typical postdoc conservatively works 50 hours a week. For a salary of $56k, this is about $22 an hour. This does not leave enough money to build retirement and savings, purchase a home, or start a family.

This is too low for many major metropolitan areas. Basic scientists are often expected to go in every weekend to run animals, conduct experiments with specific time points, feed cell cultures, etc. There is no work-life balance. Solutions: increase the modular budget for RPGs, as salaries are already diminishing the returns on RPGs to PIs. Indirect costs to universities can be upwards of 90%. These costs should be used to cover salary and full benefits (inc. retirement) of trainees. Certain percentages of indirects should be required to facilitate and/or subsidize the costs associated with trainees participating in certificate/degree programs in order to meet the needs of the biomedical research enterprise and enhance career opportunities for postdocs. Certificate programs that could be developed with partnerships include: lab management, non-profit management, regulatory affairs, project management, bioinformatics, qualitative/quantitative research, teaching, or programming.

Existing NIH policies, programs, or resources

1. The LRP—NIH created the L32 for individuals from disadvantaged backgrounds, but limited it to only those conducting clinical research. Why? I check 5/7 boxes for disadvantaged and my research as a postdoc would not have been eligible. As a result, I started my government career with almost $100k in student loan debt that had I been eligible for an LRP would have been wiped away when I was a postdoc. The L32 should be for any student from a disadvantaged background regardless of area of research.
2. K99/R00, F99/K00, T32s—All these programs only create positive bias and the rich get richer. These awards are not realistic opportunities for students from non-Tier 1 institutions. Students from R15 eligible schools stand virtually no chance. Most of these awards go to Tier 1 schools to trainees that didn't need them to succeed. Eliminating these golden tickets or using the programs to only allow non-Tier 1 trainees to get into Tier 1 programs are more meaningful solutions. Alternatively, the academic research enterprise could stop offering PhD slots to institutions that are not designated as Tier 1 or having a certain degree of funding in order to eliminate false hope and truly capture the best of the best from the best schools. Students and universities who get these awards come from heavily resourced personal and academic research environments. Students from R15 institutions proposing to do western blots or surveys can't compete with Tier 1 applicants proposing to do single cell transcriptomics via core facilities and complete a course in bioinformatics. So then what happens to all of the postdocs who went to non Tier 1 institutions? These students, who likely didn't come from privileged families to begin with, are stuck with too few options left at the end of training.

Proven or promising external resources or approaches

It is important that any LRP continue to pay the associated taxes as is currently the case. Many postdocs are not going to have an extra $5k-10k sitting around to pay the taxes. Further, if the focus is really on disadvantaged backgrounds, then these trainees are not going to have family resources to beg and borrow from in order to cover the taxes associated with lump sum payments.

Response 3015

Perspectives on the postdoc roles and responsibilities

Lead complex and ambitious projects, mentor students, help get data for grants

Fundamental issues and challenges

Salaries are too low. Paying a fair wage ($70k + benefits) takes up a huge fraction of an R01. Impossible to run a lab with postdocs and students with a single modular budget R01/R35.

Existing NIH policies, programs, or resources

Modular budgets (R35) should be 400k. Increased funding for postdoc fellowships, including immigrant/international postdocs.

Proven or promising external resources or approaches

Recent HHMI increase in postdoc stipends.

Response 3016

Perspectives on the postdoc roles and responsibilities

I view the role of the postdoc to be a bridge between graduate (mentored) research and independent (non-mentored) training. To develop the skills necessary to establish one's own line of research worth pursuing, skills that include grant writing, mentorship, teaching, networking, and research.

Fundamental issues and challenges

I am a graduate student a month away from finishing my PhD. I wanted more than anything to do a postdoc and remain in academia when coming into my PhD program. However, the barriers present within the current system make it impossible to pursue, which are two-fold: salary and abuse. Postdoc salaries simply are not enough and there is no way to justify the current standards. If academia wants to keep up, they must offer the same (if not better) compensation and benefits available to individuals who would leave for industry or outside jobs. It is unethical to continue to exploit the labor of graduate students and postdocs as has been the standard, often forcing them into poverty for the sake of "passion". The system itself is also horrendously abusive, even if the pay was higher. There is no accountability within the current system as it stands, with all of your career riding on the impression of a single (often) man. This simply cannot survive. As much as we'd like to think that one's papers and scientific output is the merit upon which one's worth should be measured, we know that that is simply not how the current system functions. Too many abusive, willfully negligent people are in positions of power who have no intentions of fostering the next generation of talent.

Existing NIH policies, programs, or resources

Minimum salaries must be $100,000+ for postdoctoral researchers. Full stop.

NIH should set up independent funding mechanisms in place at institutions such that no individual PI is responsible for individual postdocs--rather, they're jointly mentored when necessary or warranted (fostering collaboration) but sufficiently independent and responsible to one's self and the university.

Proven or promising external resources or approaches

https://cdn.ymaws.com/www.nationalpostdoc.org/resource/resmgr/docs/2023_postdoctoral_barriers_t.pdf

https://www.nature.com/articles/d41586-021-03041-0

https://www.nature.com/articles/d41586-021-03043-y

https://www.nature.com/articles/d41586-023-00332-6

Response 3017

Perspectives on the postdoc roles and responsibilities

As a postdoc, I drive projects forward on my own with very little input from my PI. I am expected to balance these multiple projects, mentor junior students, and write both papers and grants effectively. I do not view this as a trainee role in any way, shape, or form, nor do my expectations reflect a trainee status. However, I am frequently treated as "just a trainee." There are no differences in my program (or in my previous doctoral program) between the requirements for seminar presentations and attendance among graduate students and postdocs. There are also no training programs designed to enhance our job prospects in this increasingly competitive environment. I found myself thinking recently that I am essentially just starting graduate school over again, as I will have 4-5 years of driving a project with the expectation of forming and meeting with a committee and attending seminars, with nothing to help me reach the next level.

Fundamental issues and challenges

Chief among my issues is pay. We as postdocs have the highest degree attainable and are paid a fraction of what we are worth in industry. Benefits are another issue; since we are "trainees" in most environments, we are not given any sort of retirement benefits. My program offers a retirement account, but no employer matching which would be expected outside of academia. Going through graduate school and a postdoc sets us back a full decade on retirement savings, which helps explain why professors stay

on so long, preventing the next generation from obtaining a tenure track position. Increasing our pay and expanding the required benefits (or at least requiring institutions to compensate us commensurate with other employees) would go a long way to retaining postdocs.

Existing NIH policies, programs, or resources

Institutions rely on the NIH F32 minimum salary as a maximum in most places. NIH should provide annual cost of living adjustments that actually keep pace with inflation given how underpaid we are, and allow (or rather, require) scaling with cost of living for an area commensurate with other readily available cost of living adjustments such as through the military (DFAS; https://www.travel.dod.mil/Allowances/CONUS-Cost-of-Living-Allowance/CONUS-COLA-Rate-Lookup/). NIH should also ensure that institutions are working to minimize time spent as a postdoc. Some institutions like my current one only allow you to hold the title "postdoc" for up to 5 years, but after that you can retain your same position just as a "research associate" with no difference in pay or responsibilities. This is just a way of gaming the system to make their numbers look better than they actually are.

Proven or promising external resources or approaches

NIH should work on a set of required professional development topics, similar to currently required RCR training, that institutions must provide postdoctoral fellows focusing on job interviewing skills and the job search, negotiations, budgets, etc. to prepare us and actually train us to become PIs. If this is truly meant as a training phase, then provide us real, tangible skills to support our transition to tenure track faculty. Simply requiring us to present in annual seminars and journal clubs is not helping us and is lazy on the part of the institutions.

Response 3018

Perspectives on the postdoc roles and responsibilities

As a postdoctoral research fellow, I have been completely responsible for all aspects of my training. I have learned to fully advocate for my success and ensured that I have access to tools to assure the next phase of my career. Although this has been a mentoring role, there is minimal training or guidance that I have received. This leads me to believe that, at least in my case, postdoctoral researchers are already independent scientists but are paid A LOT less.

Fundamental issues and challenges

1. Low pay
2. requirement to consistently move
3. Toxic environments
4. no respect from peers.

Existing NIH policies, programs, or resources

1. PAY
2. Anonymous audits of NIH funded mentors

Proven or promising external resources or approaches

No response

Response 3019

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are crucial for academic research as they provide opportunities for recent PhD graduates to gain additional training, acquire new skills, and conduct independent research under the supervision of a senior mentor. The postdoctoral experience is considered a transitional period between graduate school and a permanent research position or academic faculty position.

Fundamental issues and challenges

Many postdoctoral trainees are paid low salaries, which do not reflect the level of education and expertise required for their position. This can make it difficult for them to afford living expenses, pay off student loans, and save for their future. Limited career advancement opportunities: The lack of clear career paths and job security can make it difficult for postdoctoral trainees to plan for their future and achieve their career goals. This can lead to frustration and burnout, and may contribute to high attrition rates.Limited mentorship and support: Many postdoctoral trainees lack adequate mentorship and support, which can make it difficult for them to navigate the complex academic research environment. This can lead to feelings of isolation and lack of direction, which can impact their productivity and overall well-being.

Lack of work-life balance: The demanding nature of academic research can make it difficult for postdoctoral trainees to maintain a healthy work-life balance. This can lead to stress, burnout, and mental health issues

Existing NIH policies, programs, or resources

Many postdoctoral trainees are paid low salaries, so salaries should be increased.

Proven or promising external resources or approaches

No response

Response 3020

Perspectives on the postdoc roles and responsibilities

I believe there are two types of people who look to do post-docs. Primarily, it is people who look to move to research-intensive academic jobs. I also see a second group of people who do a post-doc either because they are unsure of their future path, or they are looking to gain a specific skill before switching careers (particularly to gain experience with teaching or to gain experience in a specific technique relevant to industry). Depending on which category a person falls into, the roles of the post-doc are different. In the first category, the role of the post-doc is to establish their own project which can be taken with them while applying to faculty positions. For the second group, they are expected to stay for a shorter period of time, and their main goal is to acquire a specific skill set (while contributing to the research in the lab, much like a senior scientist, or technician would do).

Fundamental issues and challenges

I believe the biggest factor is the lack of benefits and low salary expected in most post-doc positions. The salary and benefits of these post-doc positions are vastly different than if alternative careers were pursued. I have noticed that many graduate students feel like post-doc are viewed as people who should crank out research and publications for a lab and are not necessarily seen as a trainee who is there to learn. At that point, it seems much more attractive to be a paid employee in industry for much more money and with better benefits.

Existing NIH policies, programs, or resources

I think the salary, benefits, and paid leave should be standardized.

Proven or promising external resources or approaches

Washington (the state), for example, is increasing its post-doc salary to be more competitive with alternative career options. I believe this would increase the recruitment and retention of post-docs.

Response 3021

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are important for most scientists interested in leading an academic lab in the future. It helps develop/refine independent ideas and provide the training necessary for running an independent lab.

Fundamental issues and challenges

Low salary

Poor future job prospects post training

Existing NIH policies, programs, or resources

Training grants for postdocs from foreign countries.

Proven or promising external resources or approaches

Postdoc salary should be comparable to salaries offered by industry. Increasing R01 grants for PIs will have a trickle down effect on postdoc salaries.

Response 3022

Perspectives on the postdoc roles and responsibilities

I am a first-generation Latino college graduate. In my experience, what an academic postdoctoral position was supposed to be did not match the reality of my situation. I was treated like a laboratory technician, constantly pushed to produce large amounts of data. At the same time, I was not mentored for non-academic careers (my main interest) and actively discouraged from non-academic opportunities. I did not receive very good mentoring in general, as I was not allowed to learn new techniques or skills. If I wanted to pursue interests that did not immediately produce data for established projects in the laboratory, I was told to do it outside of work hours or on weekends. My experience is why I no longer recommend academic postdocs to anyone. I view it extremely negatively, and given that my postdoctoral advisor refused to help me find a job in industry, I feel that my academic postdoc has ruined my chances at a career in science.

Fundamental issues and challenges

Pay is the biggest issue precluding recruitment, retention, and lowering overall quality of life. My mentor was very abusive and regularly threatened postdocs and staff scientists alike. However, she is very powerful and ingratiated in NIH circles, so there is nothing we could have done to stop her abusive ways.

Existing NIH policies, programs, or resources

Is there a way to report abusive PIs at the NIH? She would threaten to fire staff scientists because she didn't like their personal opinions, and bullies her lab into doing what she wants. Academia doesn't have a great track record of preventing or even disciplining PIs for sexual abuse, so I doubt there will be improvements in this regard.

Proven or promising external resources or approaches

I am legitimately traumatized from my experience. Near the end of my postdoctoral appointment, I was ready to hurt myself, so I sought counseling from my institution's postdoc services office. I survived my postdoctoral training, but that's all I can say. I have been unemployed for the past 9 months, and honestly believe it's because of the poor training I received as a postdoc. I don't know how much longer I can live with the shame of having chosen to do a postdoc just to ruin my career. More seminars on how postdocs can be their own mentors doesn't seem like a great fix. It is possible that I am an outlier, but who would be willing to admit all of this publicly?

Response 3023

Perspectives on the postdoc roles and responsibilities

Postdocs are everything in academia. I am the first line of support for graduate students and trainees. I read first drafts of everything the students write. I run my own studies while supporting all others. And while we hold such valuable roles we are neglected, underpaid and undervalued.

Fundamental issues and challenges

Pay is a major issue for PDs. It would be very impactful if NIH required faculty with NIH-funding to pay PDs the NIH minimums (if they write a PD salary into their R01 for example). Currently, that is only afforded to PDs that are privileged enough to obtain their own NIH funding. It should be an NIH-led initiative that helps support faculty in properly budgeting PD salaries across multi-year grants including likely cost of living increases which may be challenging to predict 5 years into the future. Secondly, the NIH PD minimums are being used at the university level as a MAXIMUM pay level. Universities do not

allow PIs to pay postdocs above the minimum. Perhaps a range for each year of experience would be more successful in practice.

There should be more support for DACA recipient scientists-they are currently ineligible for all NIH funding and that seems like a major failing in terms of diversity and equity.

Requiring PDs to move for faculty positions as can occur with K99 fellows is a problematic practice.

Existing NIH policies, programs, or resources

The LRP program is incredible. And is a huge reason for my retention in academia.

Proven or promising external resources or approaches

Most universities have a postdoc-led postdoc association which works at the local level to advocate for postdocs and create community within the university. It would be amazing if NIH supported these association by providing support to the postdoc leadership. I can imagine a training program where PD leadership could travel to NIH to learn about all the valuable resources available to PDs, to learn best practices for success, inclusion and advocacy while being connected to similar individuals across the country. I think it would be profoundly successful as those in the program would return to their university to disseminate all that info on the local level. I would love to share more about this vision. I can be reached [redacted for anonymity]

Response 3024

Perspectives on the postdoc roles and responsibilities

Performing high-quality and impactful science. Contributing to the laboratory environment, including informal or day-to-day mentoring.

Fundamental issues and challenges

Low salaries, limited parental leave, low status

Existing NIH policies, programs, or resources

Many universities are now setting minimum postdoc salaries that substantially exceed the NIH NRSA salary levels. This is necessary to provide an adequate salary for these highly-skilled individuals, especially in cities with high costs of living. However, it creates substantial funding challenges since NIH funds can often not be used to support the full cost of these individuals, resulting in a requirement for private or discretionary funds to support at least part of a postdoc's salary. This is not sustainable. The NIH should consider more flexibility funding for postdoc salaries and benefits.

Proven or promising external resources or approaches

HHMI policies, Singapore A*STAR program

Response 3025

Perspectives on the postdoc roles and responsibilities

In my view, a postdoctoral position should provide a training opportunity to facilitate a transition from graduate student to either independent investigator, an industry position, or other position that requires continued training in science. This means that there should be an OVERALL time limit. Postdocs should be limited to six years total, over all positions, with 1-2 year extensions granted on a case-by-case basis. The NIH should no longer be party to facilitating endless serial postdocs, as people go from one institution to the next. These postdoctoral fellows, usually foreign, are being exploited as cheap labor. The NIH should count total postdoctoral years, irrespective of institution or funding source. The NIH should also mandate career development opportunities.

Fundamental issues and challenges

Low salaries and poor benefits, combined with diminishing prospects for independent PI positions, have made postdoctoral fellowships increasingly unattractive. This must change if we are to encourage the best and the brightest to pursue careers in science. This is particularly an issues for postdocs from lower-

income and underrepresented backgrounds. Childcare benefits would also help. Please raise postdoc salaries and provide the necessary grant funds to support these raises.

Existing NIH policies, programs, or resources

1. Increase postdoc salaries and cover health insurance.
2. Place a 6-year limit on total postdoc years, with option to apply for 1-2 year extension. Stop the exploitation of foreign postdocs as cheap labor.
3. Expand the F32 program to increase number of fellowships.
4. Mandate career development for all postdocs supported by NIH grants.
5. Promote career scientist positions funded by NIH grants (in lieu of using postdocs as labor).

Proven or promising external resources or approaches

No response

Response 3026

Perspectives on the postdoc roles and responsibilities

Postdoctoral Research Fellows (postdocs) are integral to the overall success of academic institutions. They perform critical roles beyond their scientific research, including applying to funding sources and mentoring junior researchers. These activities are similar to the work done by established principal investigators (PIs). Therefore, postdocs should be considered early-career colleagues rather than 'trainees.' Postdocs are a major driving force for the scientific advancements of PIs and academic institutions through publishing papers, securing funding, and representing PIs' mentorship ability. Still, postdocs are a vulnerable group, prone to exploitation by PIs and institutions due to their historical positions in the academic hierarchy. The responsibilities of postdocs should not be solely limited to producing data and publications, but should also include holistic career development opportunities to develop the skills necessary for a successful future career in any field or opportunity. Successful mentorship of postdocs will reflect favorably on PIs and institutions, and garner additional interest from future, qualified postdocs. The immediate need for adequate mentoring and teaching opportunities to practice and hone relevant skills are equally important, as research scientists are also mentors and teachers. However, a glaring disparity exists between university-based postdocs and postdocs at other institutions, such as hospitals or governmental agencies, that place the latter group at a disadvantage when trying to secure mentoring and teaching opportunities. In summary, academic institutions need to update their entrenched view of postdocs as trainees of 'cheap labor'. They must recognize postdocs for bringing unique value to the academic community by contributing intellectual and technical knowledge, as well as critical thinking and oral and written communication skills. As early career researchers, postdocs should be financially and professionally supported. PIs and institutions must value postdocs' contribution and seek to foster their postdocs' continued intellectual and professional growth.

Fundamental issues and challenges

1. Low salaries compared to market value—NRSA guidelines for minimum pay do not consider the difference in cost of living (COL) between different cities, making financial stress worse for postdocs in high COL areas. Further, the annual PG-year increases ignore current inflation rates. Inadequate monetary compensation puts postdocs behind their industrial peers in financial and personal goals, thus adding more stress to postdocs' lives. Our institution recently conducted a postdoc survey, and, unsurprisingly, inadequate salaries were the predominant concern.
2. Postdocs being paid below the NIH PG-year scale—We found that many PIs disregard prior years of relevant, international postdoc experience. Due to vulnerable visa status, lack of institutional immigration support, **and challenges** of cultural integration and language fluency, international postdocs face difficulty self-advocating for the correct salary. Compounding this, international postdocs on external funding don't always receive the same benefits as national postdocs supported by NIH funds.
3. Limited employee benefits, including but not limited to, childcare, parental leave, matched retirement benefits, housing subsidies, and paid time off, further exacerbate the above issues.
4. Unclear guidelines for promotion—Career opportunities in academia are increasingly difficult to obtain due to the limited availability and high standards of prerequisite funding, previous peer-reviewed scholarship, and multiple mentoring and teaching experiences. This further limits the retention of highly skilled postdocs in academia, with many choosing to pursue alternative careers in the industry.
5. Power imbalance between PIs and postdocs—Lack of institutional and NIH oversight for postdocs' financial, emotional, mental, and physical well-being is problematic if left unchecked. Postdocs often take on administrative and managerial tasks that keep labs running smoothly but are unappreciated for these contributions. Continued dismissal of this unseen labor burdens postdocs' mental and physical well-being and can decrease their overall quality of life.

Existing NIH policies, programs, or resources

Firstly, the most significant change that NIH can make is adjusting its recommended NRSA scale to factor in adjustments based on location-specific costs of living (COL) (general schedule federal law for salary structure) and inflation. This is an extremely pressing issue due to the state of our current economy as well as considering that cities with the greatest concentration of NIH funding also tend to have higher COL. Also, as these scales are based on years of postdoctoral experience, the NIH should provide improved guidelines on how to correctly calculate previous postdoc experience when setting new starting salaries to include postdoc experience in other countries, industry, or other academic disciplines.

Secondly, the NIH should expand its guidelines to include a universal mentoring plan for postdocs focused on equipping them with the skills necessary to move ahead in the career of their choice, whether in academia or otherwise. This mentoring plan, along with its annual review, should be an explicit funding criterion for all grant applications that include postdoc salary support.

Thirdly, the NIH should address the limited eligibility of international postdocs who wish to obtain funding through the NIH Career Development (K) Awards or other NIH schemes. As the academic job market has become more competitive, the ability to demonstrate prior funding has become more critical for securing faculty positions. This puts highly-skilled, international scholars at a significant disadvantage when entering the academic job market, both in the US and abroad. Expanding the eligibility criteria for funding would also be beneficial to reduce salary disparities between intramural and extramural postdocs. Additionally, and considering the increasing time frame of postdoctoral experiences, expanding the K99 time limit beyond 4 years to 5 years would assist many postdocs in achieving equal opportunities to pursue funding that would benefit their career goals.

Proven or promising external resources or approaches

1. The Institute for Clinical and Translational Research at the University of Wisconsin-Madison offers "five different frameworks [of contracts] to help each mentor customize [their] own compact" with postdocs (https://ictr.wisc.edu/mentoring/mentoring-compactscontracts-examples/). They encourage using the documents "to structure regular conversations and help ensure follow-through." The NIH could use these as examples to establish a national standard for mentor-mentee contracts that would be more accessible to PIs and postdocs. This would align with the suggestion that mentoring plans, along with their annual review, should be an explicit funding criterion for all grant applications that include postdoc salary support. Pairing with this requirement, the NIH could provide guidelines and frameworks for such mentoring plans, like UW. Additionally, some PIs put mentoring statements on their websites regarding 'what you can expect from me and what I expect from you.' These web pages sometimes also include names and contact info of current and former lab members, explicitly encouraging future applicants to contact them to learn about the lab environment. The NIH could collect examples of best practices and promulgate them in its own mentoring guidelines.
2. PIs are struggling to recruit postdocs and it is expensive to advertise in journals or professional societies' websites. We recently learned of jobRxiv (https://jobrxiv.org/), which is a recruitment site for scientific jobs that aims to save labs and funders money. Their mission is "to make recruitment fairer: with jobRxiv, every candidate has access to every job, and all labs can find the best candidates, whatever their budget." This seems like an invaluable tool for recruiters and potential postdocs alike that would be deserving of financial support from or promotion by the NIH. As advertising options are currently very fragmented, all parties would benefit from an efficient, low-cost, and centralized online system for advertising and finding positions.

Response 3027

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions enable candidates to learn and acquire capabilities for becoming a mentor/faculty in academia. It is a period where our future careers are determined and directed.

Fundamental issues and challenges

International postdocs are recruited as J-1 visa holders, which makes postdocs' life complicated in many aspects like renewing their visa every year and especially applying for some of the grants that require the candidates to be a citizen of the US. So resolving either one of those issues would be much helpful. In addition, postdocs can be considered to be paid more given the amount of work **and responsibilities**.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Enhancing promotions from the position of postdoctoral fellow after three years of postdoc would definitely be an encouraging factor in our career pathways.

Response 3028

Perspectives on the postdoc roles and responsibilities

Postdocs are a critical source of scientific skills and knowledge for my lab. I view the postdoc training period as a valuable time for postdocs to acquire new scientific skills, gain experience in training and mentoring younger students, and develop their own research ideas. My group would not function without our amazing postdocs.

Fundamental issues and challenges

Low salaries and the limited spending power of current NIH budgets. Talented PhD scientists do not want to do a postdoc in part because they can make more in industry and are concerned about cost of housing, childcare, and general cost of living.

Existing NIH policies, programs, or resources

The NIH modular budget, and NIH budgets generally, should be increased to reflect inflation over the last almost 30 years. This would allow us to provide more financial support for postdocs. The NIH postdoc salary minimum should also be increased.

Proven or promising external resources or approaches

Efforts to help faculty attract more diverse postdoc cohorts would be particularly valuable (see Stanford PRISM program).

Response 3029

Perspectives on the postdoc roles and responsibilities

Academic postdoc positions are designed to train researchers to become an independent researcher and learn about careers they may be interested in. Academic postdocs are meant to be a temporary transitional position. Since it is a training position, time needs to be allotted for postdocs to participate in career and professional development which is not being allowed by many PIs.

Fundamental issues and challenges

Pay is a very limiting factor in recruitment and retention, especially when most academic postdocs eventually go into industry. While it would not be feasible to be competitive with industry salaries the way funding currently sits, academic salaries need to be much better to attract talented brilliant minds to academia. Additionally, there needs to be systems to prevent toxic work environments from happening that typically negatively affect the postdoc's career and the PI gets to keep repeating their actions over and over. As the system stands, PIs can create horrible toxic environments for postdocs to work in and postdocs are the ones who carry the brunt of the toxicity. Toxic examples can include unrealistic expectations (like working nonstop with no breaks in the week or vacation time ever), verbal abuse, gaslighting, threats to remove authorship, firing postdocs for having children, among so many others. These are all examples I have experienced or know postdocs who have experienced similar situations. This tends to go doubly so for postdocs on a Visa who feel even more trapped in their positions. Postdocs then have to find another position and the PI faces little to no consequences. Why should postdocs deal with these environments when they can be paid twice as much in industry and not have to deal with toxic systems that have no consequences for the leaders? It is getting the point that they know this is something they do not have to put up with so NIH needs to address these toxic systems and give consequences to the actions of toxic PIs.

Existing NIH policies, programs, or resources

Fellowship language is a big one here. The fellowships (ie T32, F32, etc) are worded in a way that is open for interpretation from the university or institution. This creates an equity issue with postdocs paid from PI's grants getting certain benefits (as employees) while postdocs that are on fellowships unable to get those benefits due to how the fellowships are written. Changing the language to state that they are employees (because they absolutely are), will allow many things to improve for them such as benefits and taxes taken out of their paychecks. Another thing that also needs to be made clear and supported is time for career and professional development for postdocs. Since it is classified as a training position, this is part of training and many PIs still do not support time away from research to do this. Most PhDs do not stay in academia and we need to support time training for and finding these positions to help the postdocs be successful. Making an allotment for postdocs to take so many hours a month to do career development outside of their research lab would help improve this support. Additionally, require the PIs to learn about careers outside of academic research so they can help and mentor their postdocs if or when they choose to go down different paths. So many PIs are shocked that their postdocs don't stay in academic research when the default is alternative pathways and not the other way around. Increased training in mentorship for PIs is needed as there is often little to none and it is usually done only by PIs who want to change for the better. Additionally, there needs to be non-postdoc positions created for postdocs who want to stay in academia but don't want to be PIs.

Proven or promising external resources or approaches

The National Postdoctoral Association has developed a number of fantastic resources created by committees of postdocs, postdoc office leaders, and other contributors. Communication with postdocs and

people who help postdocs on a regular basis would allow issues to be addressed in a timelier fashion and help prevent recruitment gaps in the future. That being said, the RFI about postdocs is greatly appreciated as there needs to be a shift to improve academic research environments especially those that include postdocs.

Response 3030

Perspectives on the postdoc roles and responsibilities

The roles of an academic postdoc is to perform academic research at an advanced pace with a focus on training fellow students and developing independent projects. A postdoc should also be given the opportunity to pursue professional development for future careers in academia including development in teaching and mentoring. Additionally, post-docs should be developing skills to develop independent scientific programs for future academic positions.

Fundamental issues and challenges

The most fundamental issue inhibiting recruitment and retention of postdoctoral trainees is salary. Postdoctoral trainees are highly trained and skilled in their fields, but they are currently paid extremely poorly in academic settings. Many universities use the NIH fellowship and training stipend levels as the guideposts, and these stipend levels are extremely low, especially for researchers living in HCOL areas. Therefore, many people who would be interested in pursuing postdoctoral training and subsequent academic careers simply leave the field due to the low pay. Postdoctoral trainees who do stay often sacrifice starting families, buying homes, and saving for retirement. This results in poor retention of top doctoral students in academia as postdocs. As of now, there is little to no incentive to stay as a postdoc due to the poor salary, poor training objectives, and poor outcomes for academic positions. In the long term, this also results in a less diverse faculty, as many faculty positions request postdoc training that many doctoral students cannot afford. Doctoral students who are part of non-traditional, first generation, disabled, and minority communities often cannot afford 2-3 more years of low pay as a postdoc, which takes them out of the academic track.

Existing NIH policies, programs, or resources

The resources online for writing grants are generally very helpful. However, the best resources I've encountered were in-person workshops put on by NIH staff at training meetings. If more of these were available perhaps on-site at large institutions or virtually, that would be very helpful. Often students and their mentors may not be fully aware of the different grant types open to postdocs or how to apply to these grants, so some more personal guidance could be helpful.

Proven or promising external resources or approaches

No response

Response 3031

Perspectives on the postdoc roles and responsibilities

While this role does include mentorship from an established PI where projects align with the PI's overarching research goals, Postdoctoral scientists largely work independently on their projects and are responsible for project management and any training they may require to conduct the research successfully. Additional responsibilities that I have personally undertaken include mentoring of more junior research staff and students, applying for and obtaining my own funding from government and private sources, presenting findings at international meetings and participating in conversations with the larger scientific community in my field, and preparing manuscripts for publication of my research. Each of these roles could be broken down further into a more detailed list of responsibilities.

Fundamental issues and challenges

Low pay, lack of benefits, and short term contracts heavily limit recruitment and retention initially. These caveats make the postdoc unattractive to PhDs who require stability, are caretakers, are starting families, or for other reasons cannot live with low pay and precarity. As postdocs, we recognize that the position does not compensate us at the level a professional with our qualifications and job expectations (see roles) should be compensated. We realize that the postdoc is generally viewed as a training position, yet more

and more we are relied upon to deliver high quality results independently at a low wage. This wage is generally determined by the NIH minimum salary scale, and does not compete with salaries for equivalent experience and responsibilities in industry. Additionally, toxic or abusive work environments are commonplace in academia and are often systemically enabled by academic institutions. When postdocs are empowered by the availability of other options, they will not stay in environments that preclude their success. Finally, a postdoc experience is generally viewed as only required for an academic faculty position. If faculty positions are scarce, accepting low pay and the high potential for toxic work environments makes working as a postdoc an incredibly risky choice. In short, the only things currently drawing PhDs to postdoc work are the freedoms of academic research, that positions are currently highly abundant (due to low retention) and the chance, even if incredibly small, to compete for a research faculty position.

Existing NIH policies, programs, or resources

NIH minimum salaries should be increased to be competitive with industry salaries for positions with similar responsibilities (e.g. "Scientist I" titled employees), and ideally should be modulated depending on cost of living indexes.

Programs that assist with family expenses should be created or expanded (e.g. grant programs that include stipends for subsidizing childcare expenses).

Proven or promising external resources or approaches

Look to what industry/non-academic positions provide and adjust policies in order to compete. This is where non-retained or "would be" postdocs are going.

Response 3032

Perspectives on the postdoc roles and responsibilities

As postdocs, we generate most of the data for projects. We maintain labs, we train junior researchers, we write papers.

Fundamental issues and challenges

How to maintain a life with $50k at ~30s year old while not even knowing how future looks like.

Existing NIH policies, programs, or resources

I wish postdocs were not hired as cheap labor. Maybe make postdocs program more organized. I have no solution.

Proven or promising external resources or approaches

Postdoc recruitment should be supervised by the department, not purely determined by the PI who has the funding. After all the funding is from governmental funding to the PI, supported by the institutions. So the institution should also have a organized system oversee the postdoc training.

Response 3033

Perspectives on the postdoc roles and responsibilities

Has a responsibility to communicate research & expertise to the public in an accessible way (ie in layman's terms and in a public, non-paywalled forum)

Fundamental issues and challenges

A perceived disconnect between academia and the "real world" ; lack of funding that supports cost of living ; lack of perceived efficacy of the work beyond closed academic circles; feeling disillusioned with academic siloes

Existing NIH policies, programs, or resources

Communication training should be a requirement of all NIH fellowships, training, and career development awards.

Proven or promising external resources or approaches

A proven science communication training that increases postdocs' motivation and skills is Wikipedia editing trainings through Wiki Education. The National Science Policy Network, which supports early career scientists, has invested in the trainings and seen effective results: https://wikiedu.org/blog/2022/01/03/wikipedia-as-a-vehicle-for-science-communication/

Such science communication work has also been recognized by The National Institute for Occupational Safety and Health (https://blogs.cdc.gov/niosh-science-blog/2019/01/24/wiki4/, the Harvard School of Public Health (https://www.hsph.harvard.edu/news/features/wikipedia-students-occupational-health/), Boston University School of Public Health (https://www.bu.edu/sph/?post_type=bu-article&p=196762), MedEdPublish (https://mededpublish.org/articles/9-109), the Journal of the Association of American Medical Colleges (journals.lww.com/academicmedicine/Citation/2017/02000/Why_Medical_Schools_Should_Embrace_Wikipedia__.22.aspx), and others.

Students gain proven communication and digital literacy skills, and feel an increased sense of motivation in their work and field (https://wikiedu.org/blog/2017/06/19/what-students-learn-from-contributing-to-wikipedia/), which can strengthen retention in their field. They also make a measurable difference for public knowledge (https://wikiedu.org/blog/2019/05/29/my-experience-editing-wikipedias-vaccination-page-during-medical-school/).

Wiki Education has open source curriculum and infrastructure that supports this work. And could be a valuable partner if NIH determines this kind of science communication training aligns with its goals.

Response 3034

Perspectives on the postdoc roles and responsibilities

Post-docs inhibit an essential space in the research enterprise at a critical career training period. I am/have trained 14 post-docs—4 have gone on to starting independent laboratory research programs, and all are pursuing science-related careers. Post-docs realize the research program in my group and contribute substantially to conceptual, technical, and educational responsibilities. They shape the rich intellectual environment in my group. I try to design projects collaboratively so that post-docs can use these to launch an independent career and become R01-funded investigators.

Fundamental issues and challenges

Low pay. General disillusionment with academic career ladder.

Existing NIH policies, programs, or resources

Increase NIH payscale for post-docs in conjunction with an increase in NIH modular budgets.

Proven or promising external resources or approaches

I think the emphasis should be on smaller groups with higher-paid postdocs (HHMI just instituted a 70K starting salary). I think that institutions and the NIH need to evaluate about the resulting pay gap. Re-thinking institutional indirect costs may be a way to accomplish this.

Response 3035

Perspectives on the postdoc roles and responsibilities

Post-doctoral trainees are central to progress in biomedical research which is tightly linked to the United States national interest in leading scientific investigation and innovation. Post-doctoral trainees are key engines of scientific discovery, whose work directly advances our knowledge of human biology and improves human health. We have observed shifts in the post-doctoral workforce prior to the beginning of the pandemic, and we have concerns that current funding structures have contributed to inequities that have made post-doctoral training less desirable for a rising generation of promising scientists.

As highlighted by the NIH Physician-Scientist Working Group Report, there has been a decline in the percentage of physician-scientists engaged in research from 4.5% in the 1980's to 1.5% by 2014 (PMID: 24297696). The transition from medical residency or fellowship training to post-doctoral research is often supported by a T32 award associated with reduced salary and benefits, including loss of employer

contributions to retirement accounts and dependent care support, as well as changes to health insurance and reduced parental leave. These decreases in benefits and salary occurs just as trainees begin to start and/or grow their families and peers are transitioning to roles with higher salary. Multiple trainees at our institution have chosen to forego research training for these reasons. In addition, medical school debt has risen, and individuals supported on T32s do not receive credits for years of service for the Public Service Loan Forgiveness Federal Student Aid Program, while their student loan interest continues to accumulate. This is a disincentive for physicians with high student loan debt to consider careers in research. T32s need to offer comparable benefits to what physician scientists have been receiving during their residency or fellowship training to decrease the disincentive in pursuing research training.

Fundamental issues and challenges

Accepting a prestigious NIH training fellowship (T32/F32) results in the loss of an employer-employee relationship. As a result, recipients must relinquish their status as benefits-eligible employees, which can include loss of access to health, dental, vision, disability and life insurance, and ineligibility for retirement plans and childcare support. Institutional policies and employment laws to support and protect postdoc employees may also not be applicable to postdoctoral fellows, further leaving them vulnerable. This current NIH policy therefore represents a major source of inequity, as it penalizes postdoctoral NIH trainees who contribute to the biomedical research workforce just as their postdoctoral associate peers do, but with fewer benefits and protections. In some cases, postdocs face the difficult decision to turn down their prestigious fellowship to avoid jeopardizing their family's wellbeing and financial security. Not all universities do have the unrestricted funds or the ability to manage a solution that navigates federal grants policy and employment regulations. The NIH should address this by enabling host institutions to maintain an employer-employee relationship with holders of NIH training fellowships.

When universities attempt to increase postdoctoral salaries to compete for talent, the NIH grant policy limits the financial sources that can be used to supplement stipends. This also makes it difficult for early-stage investigators to compete with more well-funded senior investigators and institutions, thus exacerbating the inequities both in the NIH-funded postdoctoral population, the faculty ranks, and amongst institutions. Programs that are able to offer higher salaries and more benefits are able to recruit highly competitive postdocs who would not be able to afford to take a position at the NIH stipend level but this also increases the inequities among postdoctoral trainees. Increasing the stipend levels offered by the NIH and providing cost of living adjustments will reduce the financial disadvantage that postdoc trainees face.

Existing NIH policies, programs, or resources

The majority of Yale postdocs (~65%) are not US citizens or permanent residents and thus represent the majority of the non-faculty biomedical workforce and the pipeline to future careers in biomedical research in the U.S. International postdocs are not eligible for most NIH training fellowships and career development awards, which places them at a disadvantage to their eligible peers. This compounds existing barriers to career development that visa holders face. These restrictions, coupled with other challenges academic immigrants must face, can represent disincentives to pursuing a postdoc in the US. Postdocs joining a new university in a new city/country often feel isolated. They are most often supported by NIH R01 grants and are therefore very dependent on a productive relationship with their primary faculty mentor for compensation, visa status, work authorization, and a letter of recommendation. The NIH should expand access for training fellowships and career development awards to visa holders to mitigate these issues and power imbalances.

NOT-OD-17-095 states that Postdoc Fellows supported by these mechanisms may spend up to 25% of their time on other employment, so long as those activities do not interfere with, or lengthen, the duration their NRSA training. However, Postdocs supported by research project grants or other NIH mechanisms, do not have the same opportunity to enhance their training experience. Postdocs, must certify 100% of their effort is on the grant that provides their compensation. This prevents postdoctoral associates from engaging in career and professional development activities. One solution is for the NIH to revise the policy on research effort certification for postdocs on RPGs to match the NRSA policy. The working group should review NIH grants policy on supplementing salaries for postdocs on research grants to allow flexibility to engage in other training experiences while they are still contributing to research projects.

Proven or promising external resources or approaches

For people seeking research careers in academia, government, or industry, postdoc years can be an opportunity to build independence, improve technical skills, and focus research interests. NIH fellowship opportunities, while promoting and supporting postdocs seeking an academic tenure track, don't offer opportunities for postdocs with non-academic pursuits.

The competitiveness of NIH fellowships, combined with their minimal benefits and below average salaries for doctorates, have disincentivized postdocs to submit applications. For example, data from Kirschstein-NRSA Post-Doctoral Fellowships (F32s) shows that the number of applications has decreased by 37% in the past 10 years, but the average success rate has remained at the same level of 27%. (https://report.nih.gov/nihdatabook/report/62).

The below average salary that postdocs receive, coupled with high cost of living in many major centers of postdoctoral training, culminates in financial stress, especially for postdocs who are not economically privileged. Postdocs from low socioeconomic and other underrepresented backgrounds are often more severely affected by these financial challenges, and those without a safety net can be forced to leave academia for alternative positions that offer a salary and benefits more commensurate with their expertise. This exacerbates issues of diversity and inclusion in academia.

Donna Ginther's work shows that completing an academic postdoc has a negative economic impact in biomedicine through loss of salary in the 15 years post-PhD (PMID:28072769.). The uncertainty, comparably low salary, and less robust benefits packages relative to other career paths disincentivize the biomedical research workforce from pursuing academic postdoctoral training. The increasing competition for faculty positions, and relative stagnation of NIH modular budgets, is further decreasing early career researchers from pursuing NIH-funded postdoctoral training. In an effort to decrease the disincentives that postdoctoral trainees face the NIH must address the below average salary, limited benefits and limited career opportunities for those not pursuing academic tenure.

Response 3036

Perspectives on the postdoc roles and responsibilities

As a crucial building block of academic research, postdocs drive new discoveries and inventions in our scientific field without which, research as we know will suffer unimaginable setbacks

Fundamental issues and challenges

Funding opportunities

Salary and benefits

Transition into next stages

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3037

Perspectives on the postdoc roles and responsibilities

Postdocs are one of the primary workforces of academic research and play a fundamental role in the functioning of research centers and institutions. The postdoc role is one that should position the individual for their professional goals which could be tenure track faculty or industry.

Postdocs share their expertise with colleagues and graduate students and overall contribute in various ways to the scholarly community. Under the mentorship of their PI, they are able to explore and implement new techniques, strategies, and methodologies in their labs and campuses. Importantly, postdocs represent their department or lab at conferences, talks and visits abroad. Postdocs also collaborate in writing grants and papers, designing research projects, presenting papers at conferences and keeping up with the literature. We are like junior PIs.

Postdocs have a higher degree of expertise and independence and we work with minimal supervision from PIs. The research groups have a hierarchical structure, where the PI is a type of CEO who designs the work strategies, lines of research and seeks funding, while postdocs and grad students carry out the research work. The grad students need a lot of supervision, which the PIs may not always have time for, and so in order for the research groups to grow the PIs need to delegate responsibilities and that's where the postdocs come in.

Fundamental issues and challenges

Firstly, postdoctoral fellow salaries have undergone minimal increases over the preceding years despite sharp increases in the average cost of living and national inflation rate. Postdoc stipends need to be significantly increased to accommodate the current cost of living, childcare and healthcare needs, and staunch the flow of postdocs exiting academia for higher salaries in the private sector.

Secondly, postdocs face an unclear path toward career stability and require more information and transparent data regarding their career options post-postdoc. The NIH can play an instrumental role by providing this information and providing platforms for postdocs to explore career options both in and out of academia. There should be a process of structural and institutional checks and balances in place to actively position postdocs to get jobs after the postdoc ends.

Thirdly, structural biases that prevent the career progression of URM and international postdocs should be examined and corrected to create more equitable academic spaces. It would be helpful to expand on initiatives related to diversity and inclusion.

Finally, numerous surveys have reported that high work stress environments contribute significantly to the poor mental health reported by many postdocs. The NIH should hold institutions accountable for fostering healthy and balanced work environments that are nurturing to early career scientists. This may include obtaining access to institutional climate surveys.

Existing NIH policies, programs, or resources

- Provide additional funding to institutions to support postdoc salaries and benefits, ensuring that postdocs receive adequate, employee-level compensation for their work, similar to other agencies' funding schemes. These should include relocation reimbursement, loan repayment programs, and paid parental leave and childcare subsidies.
- Establish a centralized system to provide postdocs with access to career development resources, such as workshops, seminars, research, and mentorship opportunities. Further, institutions that receive NIH funding should be required to provide postdocs with access to professional development opportunities, such as training in grant writing, public speaking, and leadership. NIH should provide additional support for postdocs who are transitioning to non-academic careers, such as offering workshops on job searching and networking. There should be a process of structural and institutional checks and balances in place to treat postdocs fairly and actively position postdocs to get jobs after the postdoc ends.
- NIH should mandate that all NIH-funded postdocs in the US develop an IDP and that PIs support and submit documentation of progress.
- Integrate into reportable grant requirements mentorship training programs for PIs and postdocs, providing them with the skills and knowledge needed to be effective mentors and mentees. Establish mentoring committees for postdocs at all institutions receiving NIH funding.
- NIH could establish a centralized database to track postdoc feedback, the experiences of BIPOC and LBGTQ+ postdocs, work place satisfaction, and career outcomes, enabling policymakers to better understand the effectiveness of postdoc training programs and the experiences of diverse postdoc communities.

By modifying, expanding, or improving existing NIH policies, programs, and resources, NIH can better support postdocs and promote diversity, equity, and inclusion in the research community. This can ultimately enhance the postdoctoral training ecosystem and provide postdocs with the resources they need to succeed in their careers, both within and outside of academia.

Proven or promising external resources or approaches

No response

Response 3038

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

From my perspective, an academic post doc is an impossible standard without enough compensation. Post docs are expected to do a full PhD worth of research in 1/3 the time with 10% more salary while simultaneously expecting them to become PIs. It is not physically possible and not mentally worth it.

Existing NIH policies, programs, or resources

Post docs need a decent salary and a better work life balance.

Proven or promising external resources or approaches

No response

Response 3039

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Wikipedia is the 5th most visited website in the world, and its content has large, measurable effects on behavior. Research shows that Wikipedia content affects tourism, scientific literature, and even judges' legal rulings. That's why Wiki Education runs a program to help subject-matter experts take part in updating and correcting Wikipedia's content.

Participants in Wiki Education's virtual training courses report a strong feeling of pride in bringing high-quality medical or other scientific content to the public in a digestible, accessible way. Through the program, Wiki Education has supported graduate students, postdoctoral fellows, university faculty, and others.

The postdocs who have participated have expressed enthusiasm for outcomes like "supporting the science literacy and understanding in the general population." Wiki Education has the systems and Wikipedia expertise in place to help NIH give postdocs an outlet for developing their science communication skills while informing the general public about their area of expertise. Wikipedia can help researchers amplify research results to the world, and Wiki Education is set up to help them do this work.

Response 3040

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The salary is low and there is no competition compared to the industry. It is very difficult to support a family on a postdoc's salary.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Perspectives on the postdoc roles and responsibilities

The academic postdoc should be a term limited position that where a researcher with a doctoral degree can obtain additional training and mentorship before continuing into an independent role. Optimally, this role should be two years, with a possible third year extension for extenuating circumstances. Continuation in the same laboratory environment under the same supervision should only be allowable as a staff scientist or faculty position.

Currently, the academic postdoc is often extended beyond two years as a means of extracting inexpensive but highly skilled labor in the research enterprise. Frankly, the academic postdoc should simply cease to exist as a position distinct from a staff scientist or a non-tenured faculty position from an administrative perspective.

Fundamental issues and challenges

Postdoctoral reseachers, regardless of the source of funding, should be treated as regular employees by their institutions including all benefits rather than quasi-trainees or students. NIH awards, particularly the Ruth L. Kirschstein Institutional National Research Service Award T32 and F32 funding mechanisms, often result in the loss of pay and benefits.

Existing NIH policies, programs, or resources

Ruth L. Kirschstein Institutional National Research Service Award T32 and F32 should be restructured into a research grant from which the individual postdoctoral researcher could choose to draw part of their salary or commit towards independent research expenses. The NRSA should not be used as a mechanism to provide total compensation for a postdoctoral researcher nor should it be used as an effective upper bound for compensating postdoctoral reseachers.

Proven or promising external resources or approaches

No response

Response 3041

Perspectives on the postdoc roles and responsibilities

Both NIH and NSF define the postdoc position as ".a temporary and defined period of mentored advanced training to enhance the professional skills and research independence needed to pursue his or her chosen career path."

We point out however, that postdocs have undergone extensive graduate training and been awarded their doctorate. They are, by definition, experts in their field. While SOME postdocs may receive evidence-based career development training and mentoring to leverage towards independence in their chosen career, most do not. The postdoc in practice currently is cheap labor, with "training" used as an excuse for low wages and varied access to benefits.

IF the NIH is committed to the postdoc as an evidence-based quality training transition from the PhD to more independent careers it must:

1. Exclusively make the postdoc a training position by increasing the number of NRSA awards and making them available to foreign postdocs
2. Ban graduate student and postdocs (NIH's funded "TRAINEE" pool) from being staffed on research grants
3. More clearly define the career development, mentoring, and management programming and interventions required by institutions to receive said updated NRSA awards

IF the NIH is committed to recognizing a postdoc's expertise and their rightful classification as an entry-level staff position, then it must:

1. Accurately define postdocs as workers and NOT trainees
2. Increase the salary, benefit, and childcare requirements on research grants that are funding postdoc labor
3. By extension, transition away from NRSA awards for people who have received their graduate training already (postdocs) and move towards funneling that money to higher starting postdoc and other staff scientist salaries

Either way, the NIH MUST be prepared to recognize that an increase in the quality of the postdoc position from its current state means a decrease in quantity and eventual transition away from postdocs in cheap and transient positions.

Fundamental issues and challenges

Postdocs often find themselves at the point of starting a family and may have accumulated a certain amount of debt due to student loans. Several key issues prevent a postdoc from staying and pursuing a career in academia:

Pay: The minimum pay for postdocs paid from NIH grants is $54,840. While this is above the MIT calculated living wage for a single person with no dependents, it is far less than the almost $80,000 living wage for a person with one dependent. Additionally, many postdocs are living and starting families in some of the regions that have the highest cost of living in the country, including major research hubs such as Boston, where the calculated living wage for a person with one dependent is almost $100,000. Accounting for the current rampant inflation rates and the ever-rising housing costs, the minimum pay for postdocs is exclusionary to individuals who have dependents, come from low-income backgrounds, or have a significant amount of accumulated student debt.

Benefits: Affording health insurance for a single person is a significant cost. Providing health insurance for dependents as a postdoc can be unmanageable, especially when wages are already low finances stretched thin.

Non-Economic Issues: Transient positions of one to two years, which depend on having to relocate possibly more than one person with little options for career advancement make the postdoc fundamentally broken. Additionally, the meritocracy that governs academia and the notion that every postdoc wants to be an academic scientist creates an environment that does not support a healthy work/life balance. The rampant bullying, harassment, and lack of commitment to equity in academic training centers compounds these issues.

Existing NIH policies, programs, or resources

NIH must acknowledge the role that it has played in the continued decline of the postdoc position as a feasible—or desirable—career step. Outdated funding mechanisms that do not allow for salaries that are competitive with those for similar positions in industry have and will continue to deter promising scientists from pursuing a postdoc. The classification of postdocs as trainees—which has been facilitated by the NIH—has allowed extramural entities to take at times extreme liberties with the pay and benefits they provide for postdoc positions. While not solely to blame, the NIH has both the power and influence to vastly improve working conditions for postdocs across the country.

It is clear that many of the issues that make the postdoc position unappealing revolve around pay and benefits. To the question "where will the money come from?" we point NIH to past initiatives that have since been abandoned that were intended to fix the many issues with how NIH awards grants. NASEM reports like Breaking Through, unpublished NIH working group reports, such as the NGRI working group, and other reports on the postdoc going as far back as the late 60's are also incredible resources that have gone largely unheeded. We suggest NIH do its research of the literature and gather information on which policies, recommended time and time again, have yet to be implemented. The NIH as an institution has a history of capitulating to the demands of well-funded institutions and its 'friends' in Congress as opposed to the needs of its constituents. The GSI, which would have significantly redistributed funds, diversified the pool of funded ECRs, AND benefited trainees, is one such example of a policy scrapped due to pressure from well-funded institutions with direct lines to those in power at NIH.

Proven or promising external resources or approaches

Across higher education the labor movement is growing. Through unionization, workers at every level of the academy from graduate students to postdocs to faculty have been able to win contracts that have

guaranteed them increased pay, better benefits (e.g. improved health insurance), and access to the holistic resources (e.g. childcare) that are needed to support the modern day academic workforce. We recommend that the NIH embrace and support this movement and look to it for guidance on what postdocs need to not just survive, but thrive in academia. For example, the recent contract ratified by UAW Local [redacted for anonymity], the union representing the postdocs and academic researchers of the [redacted for anonymity], guarantees that as of October 1st 2023, entry level postdocs (0-11 months of experience) will be paid $64,480 (almost $10,000 more than the NIH minimum) and will get a 3.5% raise each year. This contract also guarantees reimbursement for childcare costs and added protections for non-U.S. citizens working as postdocs.

In addition to unions, the NIH should work with the National Postdoctoral Association and other external organizations that have similar missions to improve the experience of early career researchers. HHMI has recently committed to pay postdoc a minimum salary of $70,000. Since the majority of postdocs are working in extramural settings, the NIH must work more closely with these employers to ensure that NIH policies around postdocs are being implemented as intended by NIH and not the employer's legal counsel. In this same vein, the NIH should work with extramural employers to develop programs like the one recently introduced at the Yale School of Medicine that facilitate the conversion of postdocs to tenure faculty.

Response 3042

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3043

Perspectives on the postdoc roles and responsibilities

A postdoc position is a "training" position typically and one that is designed to the help individuals become an independent researcher. Roles and responsibilities can vary due to the nature of the lab environment. Postdocs are learning to effectively operate a lab and perform cutting edge research in their field or area of interest. They are also learning how best to chart their career path and pursue funding and support. The lack of tenure-track faculty positions can make is seem like there are fewer opportunities available in academia.

Fundamental issues and challenges

Please see list below:

- Salary ranges: NIH stipend rates are too low. The NIH payscale is an average of cost of living across the entire country but in cities like NYC, San Francisco etc., the cost of living is significantly higher
- Pay scales are a major point of concern. Academic institutions are competing with industry which pays well above what a postdoc can make at most academic institutions.
- Stipends and tax issues favor potential recruits from privileged backgrounds, further discouraging applicants.
- Lack of subsidized child-care services and subsidized housing
- Postdocs have non-employee status
- Inconsistent recruitment methods, disregard or ignorance of effective inclusive recruitment methods

Existing NIH policies, programs, or resources

Please see list below:

- NIH should consider grant mechanisms to support postdocs who are more than 5 years in training.
- Allow employee status for F32 and T32 recipients.
- Increase NRSA pay scales stipends & align with regional cost of living
- Strengthen reporting requirements (including IDPs)
- Mandate mentor training
- Align funding dates with academic years
- Clarify and standardize career and training taxonomy so results can be tracked with greater accuracy.

Proven or promising external resources or approaches

Please see list below:

- Liaise with the NPA
- NIH should survey postdocs during training.
- Have focused communications with postdocs who are currently appointed to training grants.
- NIH institutes could share or support better (or national) recruitment to centralize efforts and bring more attention to smaller programs while diversifying larger/older programs
- Mentoring best practices need to be mandated and reported on

Response 3044

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Loan repayment options need to be greatly expanded for PhD scientists at the postdoc stage. This is both an issue that affects postdocs in general but especially women postdocs, postdoctoral women of color, and postdocs coming from underprivileged economic backgrounds. If we are to increase our efforts in recruiting and retaining a diverse population of scientists within the biomedical workforce, we need to work toward alleviating the pressures that disproportionately lead to the loss of these postdoc populations.

The American Association of University Women released a study showing 2/3 of all outstanding federal student loan debt is held by women. This gender divide is compounded over time with reduced ability to pay back outstanding loans due to family and childcare financial pressures disproportionately held by women, as well as the gender wage gap that women encounter during their careers. These issues are even worse for women of color.

The leaky pipeline is especially significant at the postdoc to faculty transition phase. If we are to retain postdocs through this especially weak point in the pipeline, we need to focus efforts on when financial pressures are the greatest on postdocs. Loan repayment options need to be available before scientists reach the faculty or staff scientist phase. Otherwise, many postdocs have already chosen to pursue other career paths to pursue as a result of financial pressures.

Additionally, time served in postdoctoral positions within academic universities and government institutions needs to count toward Loan Forgiveness Programs. This often does not count in cases where a postdoc is (again) not considered an employee, usually due to having received a fellowship.

Existing NIH policies, programs, or resources

Currently within the intramural environment, IRTA or CRTA postdoctoral fellows are considered completely ineligible for the Intramural Loan Repayment program due to their non-employee status. Only those postdocs who are classified as employees via Research Fellow status or Clinical Fellow Status are eligible. This is in contrast to the Extramural Loan Repayment Program, in which employee status is not required for program eligibility. This is because the Extramural Loan Repayment Program cites the intent to retain

scientists within the U.S. Biomedical workforce whereas the Intramural Loan Repayment Program cites the intent to retain scientists specifically within NIH. This is an issue where postdocs training at the NIH under CRTA or IRTA fellowships are at a specific disadvantage compared to those getting their postdoctoral training extramurally.

Proven or promising external resources or approaches

No response

Response 3045

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Please pay postdocs more. They do labor. They mentor. They lead. If we want to continue to be a leader in academics in the world, we NEED TO PAY POST DOCS MORE.

The only way I was able to consider post doc is support from my parents. Not paying post doc more is causing the brain drain in academia. Please please please pay post docs more.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3046

Perspectives on the postdoc roles and responsibilities

Postdoc is a post-graduate period where you obtain further skills that prepare you for the field of your choice.

Fundamental issues and challenges

The one hundred percent answer is pay and lack of benefits in comparison to industry. Though I have selected to be within a post doctoral position, family dynamic changes (i.e. I will soon have two children in daycare) will require me to obtain a job in industry, as my monthly salary will no longer cover the cost of child care. Though I am ultimately okay with this change in field, this is extremely limiting for people who desire to stay within academia while also starting a family. On this note, the lack of paid family leave (I feel fortunate to be able to obtain six-weeks family leave) and benefit limitations such as retirement is also not appealing for Postdoc positions.

Existing NIH policies, programs, or resources

I believe most Universities and institutions base many of their policies off of NIH standards. If the NIH set guidelines for appropriate pay levels, maternity and paternity leave, and other benefits (such as retirement) I feel that many universities would follow its example.

Proven or promising external resources or approaches

No response

Response 3047

Perspectives on the postdoc roles and responsibilities

I came to the US for a postdoc at [redacted for anonymity] on an international visa status. My intention was to gain professional experience, learn more skills and broaden my network to pursue a career in science. Postdoctoral training is an important part of training to ensure high quality of science—research and teaching—and to become a responsible part of our society.

Fundamental issues and challenges

I had a very bad experience with an abusive PI who used the visa status for putting on pressure on every international in the lab (almost everyone). He expected long working hours and results that meet his expectation. There was no room for scientific discussions or questions, no growth or collaborations. NIH funds were misused, grants were written by himself without any way of participation as a postdoc.

Existing NIH policies, programs, or resources

NIH should make sure that quality of research meets their standards. In our lab, results were interpreted using different statistical methods that were only applied after the experiments were conducted. Experiments should be planned ahead and statistical interpretation should be part of the grant application to prevent polishing results afterwards. There was no standard good practice, also animal well-being was not respected and therefore outcomes of animal experiments are questionable.

Proven or promising external resources or approaches

Labs that are not respecting work ethics or animal ethics produce questionable scientific outcome. NIH should communicate with IACUC to monitor reports. (In my bad experience with the lab I was discouraged to reach out to NIH since several lab members have reached out to both NIH and IACUC before and they said that nothing ever happened. This is not surprising to me if there is one report, but after several independent reports and over the course of several years, this is very surprising to me.)

Response 3048

Perspectives on the postdoc roles and responsibilities

To refine/optimize my personal research training program—techniques, grantsmanship, mentorship, research focus.

Fundamental issues and challenges

Funding/Salary as well as benefits within the university is the primary limitation. I have succeeded in winning two NIH T32 fellowships, an NIH F31 fellowship, and an NSF proposal all by the end of my PhD. I would love to continue pursuing research and become an independent researcher in academia. However, it is not financially feasible for me any more. I have spent 3 years of post-bacc training and 6 years in graduate school. In total, I have received over 13 years of education without a living wage. As a female scientist, delaying a family can only go on for so long. My current post-doctoral salary barely covers the cost of childcare and I am struggling tremendously to provide for my family. I cannot wait another 2-4 years to get a higher faculty position to earn a livable wage with a family and provide food for my children. Beyond the salary, the university treats post-doctoral staff lower than research assistants. We do not have access to the same benefits (worse insurance options) and no options to contribute to a 401K. The biggest hurdle is that even after 13 years of experience, and delaying earning potential and saving potential, I am still treated lower than an temporary research assistant. Despite my tremendous publishing record and success in receiving grants, it is not financially feasible to continue as a post-doc.

Existing NIH policies, programs, or resources

More money for salaries, maternity leave, childcare. Better insurance benefits, retirement packages. More secure job pathway. In most other professions, you can get promoted and have salary increases. As a post-doc it is very hard to be promoted and secure an academic job. While extended training is certainly as an aspect of doctoral training, many labs put post-docs in manager roles. As a a manager, I should be payed accordingly for my expertise and knowledge.

Proven or promising external resources or approaches

Feedback on mentorship-trainee relationship should be directional, with trainees being able to evaluate PIs and universities.

Response 3049

Perspectives on the postdoc roles and responsibilities

The postdoc is a time to gain additional expertise in a new research area and/or technique. The postdoc should also be a time where scientists are learning the necessary skills/training to launch an independent research career.

Fundamental issues and challenges

The combination of low salary relative to other possible career options for PhD scientists and unclear prospects for available future permanent academic jobs

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3050

Perspectives on the postdoc roles and responsibilities

The ASBMB strongly recommends that the roles **and responsibilities** of an academic postdoc emphasize the purpose of gaining additional research skills and mentorship to progress in the career pathway of an individual's choosing. As they are in mentored positions, postdocs should have protected time and equitable access to resources that advance their professional development in research and related careers, such as management (time, project, personnel, budget, administrative, etc.), grant writing, peer review, teaching, leadership, outreach, career exploration, and diversity, equity and inclusion training.

To ensure scholars and their advisers have a shared understanding of expectations for the postdoc's responsibilities, progression and goals, the NIH should require postdoctoral training plans that detail anticipated timelines for publications, grant submissions and other milestones, and agreed upon percent effort between professional development, mentored research, and independent research. The NIH should mandate updates be reported during annual progress reports to measure growth and make adjustments to accommodate new goals.

In addition, referring to postdocs as "trainees" can be weaponized to diminish their contributions and expertise to the research enterprise. The ASBMB strongly suggests that postdocs instead be called "scholars" or "fellows."

Lastly, postdoctoral positions are temporary positions for Ph.D. holders to obtain careers in academia, industry and other sectors. However, the value of pursuing a postdoc for nonacademic careers is not well quantified. Data should be collected and disseminated detailing the career outcomes of graduate students and postdocs (salary and position level) across all sectors, reporting the degree to which postdoc positions contribute to career progression in nonacademic sectors. This data would help recruit and retain postdocs who seek nonacademic careers.

Fundamental issues and challenges

Postdocs experience significant challenges in today's academic environment, including salaries below the living wage, unclear expectations and timelines for postdoctoral research, and inequitable support from institutions. Mitigating a few of these challenges would go a long way in increasing recruitment, retention and quality of life for postdoctoral researchers.

First, the inherent temporality of their positions often means postdocs are underpaid and lack necessary benefits, such as health insurance, childcare access and funds, retirement plans, etc., which are essential for long-term financial health. To recruit and, more importantly, retain postdocs, these barriers must be removed. It's vital for postdocs to have access to employee-level benefits that support and build financial stability.

Second, a systemic issue inhibiting postdoctoral recruitment and retention is the "trickle down" effect caused by the stifling competition and lack work-life balance in academic environments. Graduate students and postdocs observe their advisers and peers struggling and become increasingly unwilling to pay the

opportunity cost required to secure faculty positions that are outrageously competitive and have few perks in comparison to the challenges.

Third, postdocs often feel isolated. They are neither students, staffers nor faculty members and lack visibility in institutions and society. Additionally, postdocs often leave behind their support systems when relocating for positions, worsening mental health and work-life balance and limiting the participation of historically marginalized groups. The NIH should require postdoctoral offices at institutions and consider strategies to fund them.

Lastly, postdoc recruitment should become more comprehensive and transparent to increase the overall quality of the research enterprise and ensure inclusion. Recruiting postdocs is a challenging effort for many investigators; it relies heavily on networking, often disadvantaging students at lower resourced institutions. The NIH should incentivize and provide tools to conduct large postdoc recruitment events that are equitable and accessible to all.

Existing NIH policies, programs, or resources

While the NIH offers multiple resources that enhance postdoctoral training, the ASBMB recommends NIH play a more active role in setting policies that benefit postdocs, encourage institutions to cultivate positive work environments, and expand programs that retain postdocs in academia.

The NIH must lead institutions in encouraging policies that benefit postdocs, which in turn cultivates a positive work environment. First, the NIH must explicitly state that NIH-supported postdocs and fellows can be classified as employees. Otherwise, postdocs are at risk of losing employee benefits upon accepting an NIH fellowship. Second, postdoctoral support varies between institutions, departments and labs, enabling inequities. The NIH should be the arbiter of policies and resources that give all postdocs a sufficient level of support for success.

Family-friendly policies are key to building a positive work environment and retaining postdocs within the field. The NIH should expand paid family leave and intramural childcare subsidies program to all NIH-supported postdocs. Moreover, the NIH should increase the value the current childcare supplement for National Research Service Award fellows and expand it to allow use for caregiving expenses for eldercare, care for disabled spouses and/or dependent family members.

While mentoring is essential to postdoc professional and career development, principal investigators are not formally trained in mentoring. The NIH should require investigators to undergo mentorship training to be eligible to receive NIH funding, and require mentorship plans in research project grant applications.

Lastly, many postdocs want careers in academia but, due to the scarcity of faculty positions, are forced to choose other positions. To retain talent in academia, the NIH should expand programs such as the National Cancer Institute's R50 Research Specialist Award to all institutes to support more staff scientist positions for postdocs seeking to remain in academia without the responsibility of running an independent lab.

Proven or promising external resources or approaches

The ASBMB recommends the NIH expand requirements for mentoring across training programs, work collaboratively with institutional postdoctoral offices and encourage postdocs to obtain teaching or other certificates that help launch their careers. There are significant resources for postdoctoral training, but, given the demanding schedules to which postdocs must adhere, it can be difficult to find and fully utilize these resources. The NIH should make a concerted effort to communicate what external resources exist for postdocs, and the NIH should consider including some components of postdoctoral training programs such as IRACDA, MOSAIC and K99/R00 pathway programs that have demonstrated successes. The ASBMB also recommends the NIH consider expanding these programs so more people can benefit from them.

Additionally, the NIH should support postdoc development and success by providing the infrastructure to consolidate training, workshops, career exploration panels, etc. into a collective repository. The NIH should collect and maintain recorded programming, toolkits, and resources useful for postdocs from across the scientific community into a single accessible and searchable Web location. Currently, all institutes and centers do their own programming, which is costly and ineffective.

Lastly, the National Postdoctoral Association has a wealth of tools, knowledge and advice to help postdocs succeed. The ASBMB recommends the NIH support and disseminate these resources to the broader scientific community when appropriate.

Response 3051

Perspectives on the postdoc roles and responsibilities

I view the post doc position as additional training and mentoring in both scientific and career pursuits. However, it feels like post docs are used as skilled labor. We are underpaid and frequently overworked.

Fundamental issues and challenges

Post docs do not make enough money for the skills we bring to a lab. Grants are acquired using the hard work of post docs. Having a doctorate degree and over a decade of experience but being unable to buy a house is ridiculous. Not being able to start a retirement portfolio until I'm in my late 30s, also unnecessary.

Existing NIH policies, programs, or resources

Please change the budgets allocations and allow PIs to pay post docs more. We won't flee to industry if we know we can support ourselves and families with our salaries. Post docs need pod maternity and paternity leave. We need guaranteed moving costs to support the transition from under paid grad student with no savings to post doc in another city. We need to start hiking respectable retirement portfolios during our post doc tenure.

Proven or promising external resources or approaches

All components will be improved if pay and benefits go up.

Response 3052

Perspectives on the postdoc roles and responsibilities

An opportunity to lead a research project and develop the professional and personal skills needed to lead and manage a research group.

Fundamental issues and challenges

Money. My perspective is biased as a 1st generation immigrant/college student. I am working towards obtaining a PhD because of my interest and passion for science and always dreamed of leading a research group in an R01 institution. However, the thought of working 60-hour weeks for 4-8 years to compete for a few assistant professor positions while getting paid 40-60k/year, which I am supposed to use to live in one of the expensive cities where top research universities reside and stretch that money to support a family and my aging parents, is repulsive. Burdened by thousands in students loans, I am leaving academia, and research altogether, for a well-paying job in the finance sector as soon as my committee allows me to graduate. Whichever job I end up landing will probably not be as fulfilling as research, but I will sleep much better knowing my debts and bills are paid.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3053

Perspectives on the postdoc roles and responsibilities

To get training in biomedical research or teaching aimed at getting independent position within academia or industry. To conduct research, write papers and grants and to develope an independent research interest or expertise compared to expertise of PI.

Fundamental issues and challenges

Generally speaking postdoc is a cheap labor brought in to solve a specific problem for the PI and nothing else. Very few PIs have strategic training plan for their post docs, it's mostly focused on getting a publication or a grant and easily a staff or PhD student can fulfil these requirements for the PI. Postdoc

training should be well defined in advance with expectations and expected outcomes for trainee. Dedicated learning / milestone based approach and multi PI training format may help.

Existing NIH policies, programs, or resources

K99 eligibility for foreign nationals is the only funding source to independence. Other additional function opportunities should be opened to international trainees that are NIH based and more committing to their interest in continuing academic research.

Proven or promising external resources or approaches

American diabetes and American heart associations have more independent early inv funding.

Postdoc training shoud consist of industrial internships without visa restrictions

Response 3054

Perspectives on the postdoc roles and responsibilities

Postdocs are a massive workforce in biomedical sciences, however they are underrepresented in the media, in recognition for science, and for the training of undergraduate students, graduate researchers, and research technicians.

Fundamental issues and challenges

- Salary: too low for the expertise and reliance on this workforce, especially with the cost of living today.
- lack of future academic positions: with the increased competition for academic faculty positions, there are not enough spots for the current amount of grad students and postdocs. There needs to be additional outlets besides becoming a PI or going into industry. Scientist positions (with PhD and postdoc experience) should increase in demand to aid in this. (With a supportive salary and benefits). Less independent PIs who can mismanage funds/ projects/ students and more collaborative environments where scientists work together, through Research Scientist Positions rather than competitive PIs. Resources and data should be shared.
- the expectations of postdocs to succeed in academia these days is outrageous. The timeline to obtain a professorship is extending, the salary and time commitment (daily and career wise) have gone beyond what the limits should have been.
- there are tremendous differences between rich academic institutions and even high performing (top 20 NIH funded) public universities, this is not fair, doesn’t promote good science, and leads to waste in resources.
- poor environmental support, resources, especially for first-gen, women, and diversity postdocs. Abusive mentors should not be rewarded with more grant funding,
- administrators should not make 5x more than the scientists doing the actual work
- we need to change the rhetoric in which we address “trainees” with, these are adults, who are trying to have families and homes while working in labs.
- promote permanent positions at universities, instead of early career researchers having to move constantly to build a career in the sciences.

Existing NIH policies, programs, or resources

- salary such as HHMI announced increases, while its still low, this increase is necessary
- retention programs
- alternative career opportunities (non-PI based, Research Scientists, Educators, etc) for postdocs and graduate students, with less of an emphasis of administrators without any scientific knowledge.
- diversity programs but with more emphasis on sharing the wealth of popular prominent labs and institutions, that promote permanent positions
- relocation assistance, childcare, housing and healthcare benefits
- aim for less # of incoming PhD students and instead focus on the quality of students training to promote a better workforce of postdocs and researchers

Proven or promising external resources or approaches

More concrete universal training,

Better job satisfaction,

Less temporary positions and solutions,

Response 3055

Perspectives on the postdoc roles and responsibilities

Post-doctoral positions are a time in which a researcher should develop their own scientific identity. They should be treated with respect and collaborate with others on projects that are of mutual interest. A post-doc should work on projects for the PI, but should also have their own projects that they control. This would better prepare post-docs for their future careers, regardless of where they will be employed (e.g., academia, government, industry).

Fundamental issues and challenges

The main issue for quality of life for post-docs, from my point of view, is the low-pay and job insecurity. After going through graduate school (those stipends are too low as well), post-docs are not able to properly save money and plan for their future, while taking care of themselves and their families in daily life.

Existing NIH policies, programs, or resources

NIH policy should require institutions to have more support for post-docs. There should be a minimum set of requirements that institutions must meet to be able to have an NIH grant that supports post-docs. These include such things as paid parental leave and some type of retirement contribution.

Proven or promising external resources or approaches

NIH should refer to how the DOE's National Laboratories treat their post-docs. It is a better quality of life and provides post-docs with more freedom, thus leading to more scientific advances.

Response 3056

Perspectives on the postdoc roles and responsibilities

As a former postdoc, the position meant excelling in research so that it will provide you opportunities to get a faculty position in one of the leading academic institutes

Fundamental issues and challenges

I have tried in the past to get a postdoc by publishing it on our university website and through Indeed few years ago. Received very few responses, most were entirely irrelevant (e.g., different domains). The only one that would have been considered had his Visa ending soon. This meant high risk for an early-stage investigator, including investing money in their visa application, which may or may not go through in a reasonable time frame and it was eventually dropped.

Nowadays, the recruitment is not possible by the lack of funding. I can totally understand why someone would not want to be a postdoc if they happen to see an assistant professor fails to obtain funding from the NIH for ~25 proposals over ~6 years, with significant portion of the critique directed not at the proposal but at the single fact that the early stage faculty is, well, early stage.

Existing NIH policies, programs, or resources

Postdocs already receive relatively low salary (which is hard to increase because the faculty have limited funding). In my opinion, that would have been less critical if the postdoc have better certainty that they could go on to lead a successful academic career. Unfortunately, the combination of low income now + murky future is the rate limiting factor in continuing.

What the NIH needs to do is improve the entire funding cycle. If early career investigators would be more successful in securing funding, they will be able to hire postdocs, especially in this stage when their are full of enthusiasm, which in turn will go on to be faculty. From my perspective, it's not the program

officers but the panels who are hesitant to support early investigators (some express that explicitly, some implicitly) and until that is changed, I am afraid the direction will remain downward.

As a side note—the promotion NIH gives to ESI status is insufficient as long as the review panel scrutinizes this status too much (As one reviewer wrote: why is the investigator proposing an R01 before securing a smaller grant?).

Proven or promising external resources or approaches

No response

Response 3057

Perspectives on the postdoc roles and responsibilities

I believe the role of a postdoc is outlined by 3 temporally categorized phases:

1. an early-phase (0-2 years of experience),
2. an intermediate phase (3-5 years of experience), and 3) a transition phase (>5 years of experience).

The early phase is marked by learning new techniques and/or new systems, networking/ presenting data, and publishing a first article or two (most likely as co-author through collaboration). Therefore, scientists in the early phase are responsible for 'hitting the ground running' and do what they can to contribute to projects in the lab while they develop their skills, develop novel/fundable questions, and lay the groundwork for their near-future first-author publications and grant applications. The intermediate phase is marked by focused work on producing one or two major first-author research articles, managing new lab staff and students, and initiating independent funding plans made during the early phase. Finally, the transition phase is comprised of the same roles **and responsibilities** of the intermediate phase postdoc, however, they are actively pursuing a faculty position to start their independent research group. While these phases are not numerically delineated by the NIH, the guidelines presented here are adapted from those published by the NIH in the 'Postdocs' Guide to Gaining Independence.

Fundamental issues and challenges

Financial Burden

In the state of Maine (where I am a postdoctoral scientist), the average cost of living is currently $45,272/year (https://www.sofi.com/cost-of-living-in-maine/), which is the lowest in comparison to all other states in New England. After taxes, the estimated "take-home pay" for one who makes the base NIH postdoctoral salary ($54,835/year) is $43,500 (https://smartasset.com/taxes/maine-tax-calculator#drcFnqJiMv). This suggests that one who lives to the average Maine standard will lose $1772/year just to manage basic needs. Additionally, one who lives in Massachusetts, the northeastern hub of biomedical research, is likely to have an even larger deficit. Therefore, a significant bump in NIH standard salary is likely the most important change to make to improve the quality of life for this essential workforce of biomedical researchers.

Existing NIH policies, programs, or resources

One way to reduce the burden of student loan repayment is to develop a policy with the Department of Education (which receives student loan payments post-consolidation) that reduces payment amounts for academic trainees and/or provides accelerated access to the Public Service Loan Forgiveness program (https://studentaid.gov/manage-loans/forgiveness-cancellation/public-service)—reduce the number of payments from 120 to 60 (10 years to 5 years respectively).

Require that NIH-funded PIs provide annual training mechanisms at no charge for postdocs to maintain appropriate ethics training requirements, workshops for postdoctoral grant writing, project development, time management, mentorship—ideally from both sides, and publishing/reviewing. Additionally, funded postdoctoral fellows could also participate like the "Leading Edge Symposium" group that recently published in Cell (Bayin et al. 2023). Here, more senior postdocs could host development workshops as part of their training.

The variability in grant type eligibility for the same funding mechanism between different ICs should be removed. All ICs should enforce the same eligibility requirements across a singular funding mechanism.

Availability of postdoctoral funding is critical to academic postdoctoral development. Additionally, when postdoctoral fellows are funded by the NIH they may lose critical support, including access to health insurance and other employee benefits at their institutions. Thus the "prestige" of acquiring funding is overshadowed by the potential loss of compensation that is already at a significant low. One solution to combat financial burden is to provide the appropriate funding within the fellowship or to require that institutions maintain employee status and thus the postdoctoral fellow remains eligible for health insurance.

Proven or promising external resources or approaches

- Leading Edge Symposium: https://www.leadingedgesymposium.org/about/
- Public Service Loan Forgiveness Program: https://studentaid.gov/manage-loans/forgiveness-cancellation/public-service
- ASCB COMPASS: https://www.ascb.org/member-news/compass-who-are-we/

Response 3058

Perspectives on the postdoc roles and responsibilities

I view my pos-doc position as a next step. Long term I would like to become a PI and this is necessary for that. That being said, I am not optimistic about the future of academia, so I am increasingly open to transitioning to industry. However, since academia does not really let industry people back into academia (which is a problem) I felt that staying in an academia position at this point left my options open.

Fundamental issues and challenges

While evaluating my options and talking with others who were making similar decisions, I noticed two major areas that have changed in recent years. Insufficient compensation is pushing people away from academia, and new research options in industry are pulling people there.

The most obvious difference between academic and industry is compensation. When comparing options, my pay (including bonuses, stock, etc.) was easily twice as high in industry than academia. This is obviously a big factor. Relatedly, work-life balance appeared much better in in industry (I can't compare based on personal experience since I have not worked an industry job). Industry did not have the expectation of working weekends or outside of 8-5 hours. My academic job did not officially require extra hours either but they used phrases like "what it takes to get the experiments done" that imply that extra hours will be part of an academic post-doc. This is fine for me, however, it is an important difference and a major consideration for others (especially those with families).

Differences in compensation and work-life balance are not a new difference between academia and industry. However, in the post-covid era these aspects of jobs have become a more important consideration. Academia needs to adjust to the post-covid era or it will continue to lose people.

In my opinion, insufficient compensation in academia has been balanced out by more exciting research. Historically industry has focused on late-stage drug refinement research; this research is boring for driven researchers who enjoy basic and discovery-based projects. However, industry is clearly investing a lot of money in this type of early-stage research that has historically been done by academia.

These two factors make industry incredibly appealing. Basically, you can do fun and cool science while getting paid more and maintaining a healthy work-life balance.

Existing NIH policies, programs, or resources

In my opinion, academia cannot directly compete with industry. Industry has more money, faster timelines, and fully trained people. Therefore, academia should focus on areas where it has a competitive advantage. First, academia should increase its focus on training. NIH could easily encourage this by adjusting the weight of its funding vehicles. NIH should move money out of Research (R-family) grants and more money to Training (T-family) grants and Fellowship (F-family) grants. This would maintain the same total amount of money spent on research but would put increased emphasis on training. Critically, I believe that this would help drive a cultural shift in academia. PIs who wanted money would have to actively recruit trainees (and the F-grants that they bring), this would force PIs to create a culture that was more attractive to work in (such as better work-life balance). This cultural shift would help keep people in academia.

Academia should also focus on early and high-risk projects which industry may be unwilling to invest in. This may be tricky for NIH to implement, however I adjusting jhow the grant process works may improve things. Smaller grants with a fast turn-around (instead of large R01s or R21s) will make it easier to start and fund high-risk projects especially in new labs where there is not extra money.

Another issue is that academia tends to exclude industry people from returning to academia (largely due to hiring practices requiring publications). This is a huge loss for academia since we lose out on the skills that people learn in industry. NIH should create/fund a grant designed for transitions back into academia (like a K award). This would allow universities to hire and fund these type of people.

Proven or promising external resources or approaches

In general, I think academia faces a significant crisis. Without a deep and major cultural shift, academia will continue to lose talented people to industry because those people can do exciting research with better pay and a healthier culture. NIH cannot change academic culture alone, however, changing how it funds research to encourage a healthier and training-centric culture will help make academia an acceptable place to work. Basically, NIH needs to force some painful cultural shifts.

Response 3059

Perspectives on the postdoc roles and responsibilities

I held an academic postdoc position from August 2017—December 2022, and started my independent faculty position about 3 months ago. The postdoc was a key stage for me to develop independent projects, obtain independent funding, and establish myself in multiple fields of study for my future independent career. I applied for 9 grants over the years and was lucky to secure NRSA F32 support (which was then extended 3 extra months due to the COVID-19 pandemic). My 3 first-author publications show a reasonable rate of productivity that was slightly hindered by pandemic-related disruptions to lab work during a majority of 2020. The largest effect of the pandemic on my time as a postdoc was conference and networking disruptions, which essentially ceased entirely for the key mid-late stage where I would have liked to present our work in-person at multiple different meetings for career development. I independently reviewed 10 manuscripts over the years, and this was largely due to my postdoc mentors or junior faculty colleague connections suggesting my name in place of theirs, which is a very informal but essential training process. In summary, the postdoc position is an apprenticeship for independence as junior faculty in research, service, and grantsmanship.

Fundamental issues and challenges

Unfortunately, the number one challenge here is financial. The ONLY reason I was able to persist in the academic pipeline as a woman in science and to search for a tenure track job is that my partner is very successful in a tech job and provides nearly all financial support for our family. In a 5 year + 5 month postdoc, the ENTIRETY of retirement savings contributed by my institution was a meager $4,173 USD due to the F32 fellowship support. To be approaching your mid-30’s with only $4k in retirement savings is unsustainable for the academic labor market. My fellowship salary of $48.8k—$56.7k was reasonably okay for a mid-cost-of-living region in the US but would not have contributed enough to support us in a city and/or if we had decided to start a family during the postdoc stage. Most importantly, the financial constraints of being a postdoc will lead to continued biases in race, gender, and socio-economic status at the junior faculty level. Extreme uncertainties about geographic location at the tenure track job search stage together with poor financial savings has made the academic path less and less appealing for the current and next generation. Hearing concerns and gripes from mid—and late-career scientists at conferences about the funding landscape and administrative burdens of being a PI is further discouraging to aspiring academic postdocs.

A second concern for postdoc scholars is lack of funding opportunities and long-term citizenship options for excellent international senior graduate students and postdocs. I fear that the US will lose its place as a top tier research country if we cannot create effective programs to recruit and retain international talent.

Lastly, in terms of service, formal organization is lacking around training postdocs to be effective and constructive manuscript reviewers (and future grant proposal reviewers).

Existing NIH policies, programs, or resources

A pay raise would help retain postdocs in academia and maintain (somewhat) a competition with industry positions. However, this would require NIH grant budgets to increase so that the same sized lab can be supported. If there is any legal way to allow fellows to continue to get retirement savings matches from their institutions while receiving stipend support , this would also help the financial security of the academic career path option.

Proven or promising external resources or approaches

No response

Response 3060

Perspectives on the postdoc roles and responsibilities

Transitional training position. A stepping stone to gain more independence in science.

Fundamental issues and challenges

Postdoc pay is one big obstacle. Expectations in terms of working ours and productivity are variable and can be overwhelming. Quality of life is compromised having to work many weekends. The temporary nature of postdoc position and the fact they're treated as trainees and not employees.

Visiting Fellows have their own set of challenges including special visa implications resulting from working in government that affect their ability to obtain industry jobs in the future.

Existing NIH policies, programs, or resources

Improve pay. Better work life balance, which would be more effective if there are policies and training to guarantee its implementation

Proven or promising external resources or approaches

No response

Response 3061

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellowships remain one of the most important interventions to provide further training and to retain early investigators in a research field. Postdoctoral fellowships allow an early investigator to conduct research with the mentorship of an established investigator. Often, postdoctoral fellows are the critical workforce needed to initiate and develop new research ideas. For the field of nephrology, research still lags other specialties and most of the care delivered for kidney diseases is not supported by level 1 evidence. Preclinical science is needed to determine how the kidney functions and how disease develops. Declines in research in kidney diseases holds strong and negative impact on healthcare expenditures for the future, most significantly for Medicare. By 2030, over 1 million individuals in the U.S. may have kidney failure and healthcare expenditures for an expanding population requiring dialysis is not sustainable. Research is needed to determine more efficient methods of identifying kidney disease early and develop personalized interventions that account for genetic background and its interaction with environmental factors.

Fundamental issues and challenges

Adequate funding remains a major impediment for recruitment and retention of postdoctoral fellows in kidney diseases research. Kidney health research requires diversity among investigators because kidney failure disproportionately affects persons with non-White race and with Hispanic ethnicity and with low income. The investigators studying kidney health and diseases should better reflect the population at risk for kidney diseases. Salary for postdoctoral fellows is inadequate, especially for individuals with large student loans and/or living in areas with higher-than-average housing costs. Postdoctoral fellows also need mentors with established research funding. To ensure that we have an adequate pool of nephrology researchers in the future, funding is needed to ensure the opportunity for investigators to develop and sustain research in the field of kidney health and diseases.

When postdoctoral fellows apply for a fellowship, the reviews they receive are often not instructive for a successful resubmission of their application. If NIH cannot provide more granularity on the committee's evaluation, then NIH should consider additional assistance for grant writing. Specific for postdoctoral fellowships, a critical step for a research career, NIH could develop a partnership whereby fellowship applications could be reviewed by a committee prior to submission. Currently, early researchers benefit from working with professional grant writers, but most early investigators cannot afford such services. The use of professional grant writers then exacerbates disparities in research funding.

Existing NIH policies, programs, or resources

The current structure of pooling resources from multiple institutions within a geographic area to create interdisciplinary training programs for pre-and postdoctoral Kidney, Urology and Hematology trainees helps to recruit and retain early investigators from a larger number of institutions. However, without adequate support at each involved institution, recruitment will lag. NIH should ensure that such collaborative agreements between institutions provide adequate support for faculty leadership at all participating institutions. Collaborations should include the freedom to design training that fits the existing strengths of the institutions and not be forced into a specific structure. For example, collaborations that include kidney, urologic and hematologic researchers within a given geographic area mitigates incentives for kidney, urologic or hematologic researchers to work with or learn from other researchers within their own field that are outside a geographic area. The collaborative agreements may work better if researchers could have workshops and professional development with other nephrology researchers instead of being forced to work with the entire KUH research group within a geographic region. For example, a postdoctoral fellow in polycystic kidney disease could have a fellowship whereby he/she has journal clubs and meetings with a large group of researchers in cystic kidney disease in the U.S., Canada and even outside North America. The way the collaboration is currently set, fellows are participating in journal club and professional development with other investigators who may be at same level of training, but they are in a completely different area of research.

Proven or promising external resources or approaches

Only a small fraction of postdoctoral fellowships in KUH are successfully funded. NIH should do more to work with applicants and their mentors to improve their applications for a resubmission. NIH, especially NIDDK, could develop quarterly grant writing workshops or committees that review applications prior to submission. NIH should also help develop more programs that focus on undergraduates and graduate students to promote research.

Response 3062

Perspectives on the postdoc roles and responsibilities

Post-docs are the life-blood of my mid-size lab. We have been highly productive and extremely "cost-effective" publishing in impactful journals being funded by 1-2 R01 grants over the last several years. Post-docs steer the science, they bring in new perspectives and together with me, train graduate and undergraduate students in the lab. My lab would not function without them.

Fundamental issues and challenges

The low pay, the lack of retirement benefits and poor health quality benefits at a time when these highly skilled professionals are starting families.

Existing NIH policies, programs, or resources

Increase the NIH modular budget so that we can pay post-docs a living wage and be competitive with private foundations (HHMI) in keeping our labs and science afloat.

Proven or promising external resources or approaches

No response

Response 3063

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are among the most valuable members of the scientific enterprise. They train students and technicians, and in most cases are able to carry their own independent projects.

Fundamental issues and challenges

It is difficult to recruit and retain them because with limited NIH funding, one cannot offer a competitive salary. Small Labs, like mine, struggle to to have more than one Postdoc because the budget can barely cover their salaries and benefits.

Existing NIH policies, programs, or resources

Increase the minimum salarie and increase the budget.

Proven or promising external resources or approaches

No response

Response 3064

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

SALARY. The NIH guidelines for minimum salary are taken as the only salary that institutions can offer. I was in "negotiations" with 2 academic institutions for postdoc positions, neither would negotiate because they "follow the NIH/NRSA guidelines for postdoc salaries". The intent of setting a minimum is good, but institutions will not/do not want to pay more than the minimum. I turned down one of my offers because they wanted me to relocate but with student loan payments, housing costs, health insurance, etc I wasn't going to be able to afford basic necessities like groceries. I am only able to afford the postdoc I accepted because

1. my institution allowed me to work remote
2. I can live with my parents.

These are luxuries/privilege's that many potential postdocs are not afforded. As far as retention, again SALARY. There is a $500 difference between year 0 and year 1 on the minimum postdoc salary guidelines. Do you really think that $500 BEFORE TAX is a fair valuation of the additional skills that a postdoc has received with an additional year of training? On a personal level, choosing to stay in a low salary postdoc means delaying starting families, buying homes, and financial stability for additional years. There is no incentive to stay in these positions when working for industry or even for the government that sets the minimums means tens of thousands of dollars more per year. I'm not doing research for the money but I would like to be able to support myself somewhat comfortably after years of instability that I've already endured thanks to extremely low PhD student salaries. It's a slap in the face to be told that I can't even negotiate my salary when I have 8 years of graduate level research training.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3065

Perspectives on the postdoc roles and responsibilities

Postdoctoral positions are semi-independent research roles often involving self-directed projects and direct supervision of PhD and/or undergraduate students. They are also opportunities for researchers to continue to hone research skills and learn new methodologies. It is therefore important to provide adequate

training and infrastructure in the research methodologies and subject matter that interest postdocs and that align with the NIH mission to advance understanding of human health and disease.

We have heard directly from PhD students interested in using nonanimal, human-specific approaches that they have found many barriers to training. Trainees have expressed difficulty in accessing and employing these methodologies in their research due to existing bias towards animal-based methods. We attribute this, in part, to the NIH's overall reliance on animal-based research approaches, which has created a workforce heavily biased in its expertise. Despite the relevance of nonanimal approaches to human disease pathology and to PIs' research goals, the lack of expertise with nonanimal methods of lab leadership may result in little-to-no support for trainees (e.g., when accessing human data and samples, setting up clinical collaborations, or establishing protocols for methods that are not widely used). By comparison, the ease of ordering animals and obtaining approvals for widely used protocols can become more appealing and career trajectories can change entirely.

The NIH should work to reduce these barriers for students, postdocs, and early-career researchers interested in using nonanimal, human-specific approaches. Indeed, there is a separate and timely ACD Working Group currently charged with identifying how and where to invest in the development and use of novel alternative methods to advance biomedical research; but the Working Group on Re-envisioning NIH-Supported Postdoctoral Training has an overlapping goal: identifying how to support the next generation of scientists to advance ethical, effective, human-centered biomedical research.

Fundamental issues and challenges

The decline in postdoctoral researchers is fundamentally tied to the NIH's continued investment in training, infrastructure, and funding for outdated methodology and research approaches. Determinants of health expand well beyond biological, yet NIH priorities remain locked onto this narrow understanding of health, to the detriment of patients and researchers. A shift toward a more innovative, human-centered research ecosystem that can address our most pressing health needs is gravely needed.

The [redacted for anonymity] aims to partly address the gap in nonanimal research training through our Early-Career Researchers Advancing 21st Century Science (ERA21) program. ERA21 engages students, postdocs, and early-career researchers interested in nonanimal, human-specific methods, providing hands-on training via our biennial Summer School on Innovative Approaches in Science as well as a monthly newsletter with relevant publications, events, and funding and employment opportunities. In our experience, the next generation of researchers is eager for training and funding for nonanimal approaches and, similar to younger generations among the general public, are more likely to oppose animal use for scientific research than more senior researchers.

The misalignment of postdocs' personal values and aspirations for independent research, coupled with other pressures like insufficient pay, obligations to perform lagging experiments that are needed for PIs' grant renewals, and the struggle to conform to using methodology that they find ethically questionable, scientifically inadequate, and limited in translatability, creates an enormous emotional and mental toll and results in reduced quality of life and training satisfaction. The NIH should therefore offer and fund more concentrated training opportunities like summer schools and determine other ways of centrally disseminating and supporting skills training in nonanimal methods (see below). The shift toward human-specific approaches is already taking place in industry. Without such opportunities and support in the form of competitive pay, the academic decline will only worsen.

Existing NIH policies, programs, or resources

Biomedical PhD students, postdocs, and early-career researchers need training, funding, and infrastructure for nonanimal, human-specific research approaches. They should be able to explore clinical data, access human biospecimens, and operate experimental systems like tissue chips or organoids with competence. The National Center for Advancing Translational Sciences (NCATS) Clinical and Translational Science Awards program's Institutional Career Development Awards (KL2) could be expanded to provide broader support for senior postdocs and early-career researchers. The NCATS Tissue Chip program and the Interagency Center for the Evaluation of Alternative Toxicological Methods are examples where the NIH could add or expand opportunities for students, postdocs, and early-career researchers interested in human-specific approaches, especially T32 institutional training mechanisms. NIMHD could also expand opportunities for students, postdocs, and early-career researchers, especially in areas assessed as future priorities upon mapping the research portfolio on the NIMHD research framework

(doi.org/10.2105/AJPH.2018.304883) such as environmental, community, and societal-level determinants of health.

Biomedical PhD students and postdocs must also be well-versed in the ethical, social, and legal implications of their research—not as an afterthought, but as a central component of study design, analysis, and reporting. We recommend that

1. at least one full year (two semesters or three quarters) of rigorous ethics coursework and
2. at least one full course covering health disparities, social determinants of health, and social science methods should be required in doctoral and postdoctoral training programs.

Lastly, biomedical PhD students and postdocs must be competitively compensated (comparable to nonacademic peers) and afforded the right to collectively bargain without intervention or fear of repercussions from faculty. The NIH should therefore require grantees to remain neutral when student and postdoc workers are forming unions or collectively bargaining. Because unions protect workers, these measures would help ensure that the future of biomedical research is more inclusive of presently and historically social disadvantaged groups.

Proven or promising external resources or approaches

Several foreign and domestic government agencies have programs dedicated to training scientists and students on human-specific, nonanimal approaches that the NIH could use as frameworks for its own training programs.

The US Environmental Protection Agency is committed to working on the development and application of New Approach Methodologies (NAMs) to avoid the use of vertebrate animals in testing. As part of the agency's commitment, it offers numerous NAMs trainings and makes these trainings publicly available in the agency's catalog of training materials and resources. The agency also hosts the Computational Toxicology Communities of Practice, which is composed of hundreds of stakeholders from public and private sector organizations with a common interest who meet monthly. A similar training program and opportunity to engage the public at the NIH could improve the training ecosystem and foster interest among students and early-career scientists, especially those from outside of the NIH's typical network.

The European Commission's Joint Research Centre and its European Union Reference Laboratory for Alternatives to Animal Testing host a biennial Summer School on Non-animal Approaches in Science. In May 2023, the fourth iteration of the program will take place at the Joint Research Centre in Ispra, Italy. The program is geared towards students and early-career scientists a strong interest in nonanimal approaches working in relevant fields of research and application. The NIH could offer a similar program or partner with organizations like the Physicians Committee to jointly host a training program to engage early-career researchers.

Response 3066

Perspectives on the postdoc roles and responsibilities

Postdoctoral research is key to training to become an independent and professional scientist in the academic world. The US is renowned for its high-quality postdoctoral training, hence, as an international scholar, I agreed to move my family and I to the US to pursue a career in academia. Postdoctoral researchers are adults who studied substantially to become highly specialized individuals and their role is both to learn from the PI and the environment as well as to train the future generation of scientists. Their responsibility is to deliver high-quality of science—both in research and teaching/mentoring—and contribute to the progression of science in the scientific community as well as in the general public community.

Fundamental issues and challenges

There are many issues that come along with being an immigrant postdoctoral researcher in the US.

1. VISA is given for only 1 year by year which makes it impossible to make family plans.
2. Family members like spouses are not allowed to work and they need to spend $500 every time to request permission from the US government to work and wait many months before receiving a "yes, you are legally allowed to work in the US". This is extremely painful if you consider you have to repeat this procedure every time you renew your visa, hence every year. What job is okay with the spouse

working only a few months per year while you wait for your paperwork to come back to work and contribute to society in a legal manner?

3. There are many abusive PIs in academia who take advantage of this broken system to threaten and blackmail postdocs to work insane hours or to provide them with fake results or to perform scientific misconduct in an exchange for contract renewal. If the contract is not renewed, the postdoc and her/his family get deported in 30 days, which is an insane big amount of stress. We should save our energy for science, not basic human rights. We are not kids coming to study in the US, we are adults with families who aspire to become professors and expect equal human rights that do not depend on the passport of birth. I'm speaking out of a personal experience where I landed in an abusive lab, where the PI was threatening us to do experiments on animals without analgesics pending contract renewal. I had the luck to be rescued from another lab. All my colleagues instead left for an industry career because no lab rescued them.

Existing NIH policies, programs, or resources

NIH should not fund the abusive lab or the abusive PIs. It should remove their grant money. NIH should talk to individual universities and assess their grievances, and complains and make sure these labs do not have access to animal work anymore and do not have access to funding. So many papers funded by the NIH are performed in abusive environments, doing animal cruelty, and the science is not reproducible. Science that is not reproducible is not science and shouldn't be funded in the first place. I would also increase the years of VISA for international postdocs so they have time to look for another lab if things do not work out, exactly as US citizens can. All my US postdoctoral colleagues could change labs at no cost, with no consequences, while all international postdocs were stuck in abusive labs with no way out. The university protects the abusive PIs because they bring money from the NIH. If NIH do not fund in the first place abusive labs, then there would be a change for the better in academia.

Proven or promising external resources or approaches

Provide postdocs with two mentors, increase their salary and VISA, and protect them against an abusive environment. Please give them a way to report issues without retaliation.

Response 3067

Perspectives on the postdoc roles and responsibilities

The academic postdoc has become an unending holding pattern for scientists and creates a revolving population of insecure and poorly compensated professional workforce. Support for postdocs should be phased out of research grants and only provided as individual fellowships. Grants should support permanent research staff who are full employees, with all the benefits and appropriate salary compensation.

Fundamental issues and challenges

Postdoctoral trainees need a non-PI academic career ladder, i.e. research scientist position.

Existing NIH policies, programs, or resources

Support for postdocs should be phased out of research grants and only provided as individual fellowships. Grants should support permanent research staff who are full employees, with all the benefits and appropriate salary compensation. In order to support permanent research scientists, the R01 module should be increased to at least $350k/year direct, and tied to inflation.

Proven or promising external resources or approaches

No response

Response 3068

Perspectives on the postdoc roles and responsibilities

It's a nice opportunity to receive additional training (or new training) on items that I didn't receive any/enough training on during my doctoral program, such as writing a K grant, mentoring students, leading a research team, and applying for and interviewing for faculty jobs.

Fundamental issues and challenges

The pay is not enough. I receive the annual NIH stipend as of Sept 2022, which was $53,760. This comes out to $25.85 per hour. This is literally what I made as a data collector DURING MY PHD PROGRAM! This is honestly insulting. We should be making AT LEAST $75,000.

Additionally, the NIH should encourage institutions to allow remote work for postdocs. It's totally unrealistic and toxic to expect that we should uproot our families just to take a temporary 2-3 year job, and then have to uproot them again whenever we finish. (Especially for a job that pays $25.85 an hour!)

Existing NIH policies, programs, or resources

Our salaries need to be adjusted for inflation and cost of living throughout the year. All faculty and staff at my institution received a 2% cost of living increase in January 2023. However, I was told that I could not receive a cost of living adjustment to my salary because NIH does not allow for raises outside their pay scale. So everyone got cost of living pay increases except for the postdocs, who probably need it the most!

Proven or promising external resources or approaches

Please pay us more. We cannot support ourselves and our families on the current postdoc stipends.

Response 3069

Perspectives on the postdoc roles and responsibilities

It gives me a great opportunity to use my research and academic skills and pursue my research interests in biomedical science for better diagnostics and therapeutics. It also acts as a bridge to establishing myself as an individual scientist

Fundamental issues and challenges

The apparent issue that I noticed is that Postdocs have been used as research slaves with very much underpaid salaries. They are not getting the right recognition as they should get. For some of them, it acts like a dead end, and makes very hard for them to either continue in academia or change into an industry.

Existing NIH policies, programs, or resources

Current NIH Postdoc payscales are very much underpaid, and it has to be significantly increased. It is very inappropriate to have different payscales for a Postdoc at different research institutes, and there should be the same payscales throughout the country based on his/her experience. An average postdoc is married with a child at this stage of their career and it is highly unfortunate and humiliating for them to hardly survive with these salaries.

Proven or promising external resources or approaches

The person at the level of Postdoc in his/her career has the right momentum and maturity to design and drive the research. They are the people behind most of the discoveries around the world. Their work should be valued and appreciated accordingly. I believe having a national pay scale with consideration to HRA (House Rent Allowance) based on the cities they live is a promising approach.

Response 3070

Perspectives on the postdoc roles and responsibilities

We are writing these responses as a postdoctoral association at a large state-sponsored research-intensive institution. We are a postdoc-led organization responding on behalf of the postdoctoral scientists (including postdoctoral research associates, fellows, and analogous titles) at our institution. We have incorporated their perspectives here to ensure they are shared as part of our organizational response. We have also encouraged individual responses. Overall, the roles **and responsibilities** of the academic postdoc are unclear and poorly understood by those around us. Often, we find that administrators do not know what a postdoc is and therefore what they do. For example, we are often confused for students since not all of us receive benefits from the university (such as in the case of fellows, referred to here as designated campus colleagues). Many postdocs often find it difficult to balance their own research and career interests (requiring professional development), while managing their supervisor/PI's expectations. This leads to a

disconnect and unrealistic expectations, which negatively impacts both the postdoc and the academic research enterprise as a whole. Ideally, there would be a mechanism in place for ensuring that a mentor does not take advantage of the postdoc and instead mentors that trainee towards their long-term career goals. Additionally, we have heard from mentors that they face institutional barriers to supporting postdocs under their supervision (e.g., university or state policies on employment and benefits) and must go above and beyond to "make their postdocs whole" and retain talent. Overall, we have heard recommendations that roles **and responsibilities** should be clearly defined in offer letters and contract language and that postdoc supervision and mentorship should include additional checks and balances (for example, a mentorship committee).

Fundamental issues and challenges

Quality of life and recruitment is highly dependent on a mentor's reputation and the benefits provided (or not) by the institution. We often hear from our fellow postdocs that a competitive salary, moving expense assistance, health insurance, immigration assistance, and retirement benefits would make their lives a lot easier. For recipients of prestigious fellowships, some are left shocked and disappointed by the reality that these awards will negatively impact the financial and physical well-being of their family due to loss of regular salary (instead dispersed as a lump sum, with no withholding, leading to a "tax bomb" and complicated filing) and loss of employee benefits. Even for postdocs that are employees, the benefits are not adequate and do not include matching retirement at our institution. As it stands, becoming an academic postdoc is often an unsound financial decision, and for some an impossible choice that limits us from recruiting and retaining the best possible scientists and future leaders. Some postdocs have had to really consider whether their family could financially support themselves in this position, compared to going into a non-academic position (such as industry or government). This perpetuates the current inequalities in academia. Additional challenges include unclear career progression and timelines.

Existing NIH policies, programs, or resources

The most important thing that the NIH could do today would be to change the wording in the agreement of the F32 award. As it stands, as per the administration at our institution, they are NOT allowed to hire postdoc fellows as "employees" and instead are considered "Designated Campus Colleges" . DCC's do not have access to basic benefits such as health insurance, dental insurance, qualified tuition reduction, etc. This negatively impacts the quality of life of postdocs and likely negatively impacts their work and therefore NIH's end-goal of helping facilitate an adequate training program for postdocs and ensuring a successful pipeline of highly qualified personnel to keep the academic research enterprise thriving. We recommend that the NIH must mandate (as NIH does for other sponsoring requirements) that institutions provide a minimum salary (with built-in increases per inflation and cost of living adjustment), comprehensive benefits, and matching retirement plans. Some postdocs feel that they do not have any leverage, therefore they are hopeful that the NIH can require minimums. The NIH should permit postdocs to be employees or otherwise require institutions to support their postdocs to be eligible for federal funding, the same way they require institutions to have policies and structures in place for ethical human and animal research. Otherwise, as a former postdoc has stated: "not requiring a minimum salary and benefits for postdocs, supplied by the institution, is admitting that postdocs are effectively slaves to the system" . We also heard that "the university will only do the bare minimum required to fulfill requirements" , so we recommend that reasonable minimums be established for organizations with leverage. International postdocs, which make up >50% of the postdoc community, are especially vulnerable to being taken advantage of and accepting poor compensation and lack of benefits due to stringent visa requirements.

Proven or promising external resources or approaches

Currently, at our institution, we find that training options specific to the uniqueness of the postdocs role work best. For example, the Center for the Integration of Research, Teaching and Learning (CIRTL) network created a specific teaching training program that accommodates the need for postdocs to work on their research projects, while also getting experience through a co-teaching partnership. We also have found that a productive working relationship between our postdoc-led association and the Postdoctoral Affairs office, including cooperatively planned events and orientations, has been beneficial to connecting postdocs, enriching their professional development, and advocating for change. To help international postdocs, some organizations like the American Cancer Society have expanded the eligibility of their postdoctoral fellowships to non-citizens, and it would be beneficial for the NIH to consider expanding their F and K award opportunities to non-citizens (beyond the K99/R00). Given that the majority of academic

postdocs in the USA are non-citizens it seems prudent to support their training. We have also heard recommendations to include more small grant awards ($25,000 to $50,000) that would be specific to postdocs to help generate preliminary data toward a K99/R00 or transitioning toward independence. Additionally, expanding alternate career path options for postdocs, such as staff scientist supplement support has been recommended, although some postdocs fear that making these tied to a pre-existing R01 "only makes the rich richer" rather than supporting the full breadth of scientific creativity and potential that exists in our community.

Response 3071

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity], representing more than 7,500 U.S and international basic and biomedical researchers, appreciates the opportunity to comment on the current challenges facing postdoctoral candidates and their positions within the academic system. The national focus on this issue has illustrated that there is a need for open dialogue and careful consideration on whether the current postdoctoral training system needs to undergo some degree of reform for future generations of researchers given the substantial impact of the scientific enterprise on the U.S. economy. Through the [redacted for anonymity] a panel session was organized at the 67th Annual Meeting in February of 2023 and included members at various career stages and a representative from the National Institutes of Health (NIH). The following responses to the RFI questions reflect the input we received from participants in that session alongside the collective expertise of the members of the PAC. We appreciate the opportunity to participate in this discussion and share our recommendations for the future of postdoctoral training.

Fundamental issues and challenges

Principal Investigators (PIs) have cited a shortage of qualified candidates for postdoctoral positions as a significant challenge currently facing research labs in the past few years. Simultaneously, postdoctoral candidates have identified a number of issues with the current training system deterring them from pursuing a career in academic research. Specifically, they cited inadequate salaries (especially in large/expensive cities), uncertain future job prospects, and insufficiently supported leave policies (including maternity/paternity leave).

The U.S. has always been a draw for international students and scientists interested in learning and participating in cutting edge research initiatives. To date, more than half of the postdoctoral workforce is made of up international researchers who choose to study here and lend their expertise to the U.S. research enterprise. International students contributed nearly $33.8 billion and supported more than 335,423 jobs in the U.S. economy during the 2021-202 academic year, not including the scientific research that their academic work supports and the economic and research discoveries they contribute to during their time in the U.S. Significant concerns have been raised about the ongoing delays in obtaining and renewing visas for students and researchers who have earned a place at an academic institution or been previously approved for entry. These continued delays in turn cause research initiatives to operate at less than their full capacity while they await graduate and postdoctoral researchers to arrive in the country.

Existing NIH policies, programs, or resources

One proposed solution to address the issue of compensation would be to increase the National Research Service Award (NRSA) postdoctoral stipend levels. While some private academic institutions simply use the NRSA recommendation as a baseline and can offer more competitive pay to recruit top candidates, the majority of academic institutions set their biomedical research postdoctoral pay scales based on the NRSA recommendation. Increasing the stipend to levels more commensurate to cost-of-living in large cities will ensure adequate financial support for postdoctoral candidates pursuing a career in academia. We recognize that increasing postdoctoral salaries will require increased funding for individual NIH grants, and indeed to NIH overall, in order to compensate for an adjusted NRSA baseline and prevent a decrease in the number of grants supported by NIH.

If a reduction of postdoctoral researchers in academia becomes normalized, measures will need to be implemented to prevent a loss in extramural research productivity. Currently, trainees that include postdoctoral and graduate students, are the primary workforce for NIH-supported research. One solution to this possible problem is to encourage and support consistent NIH funding for staff scientists in academic research. While these positions will also require more funding support, staff scientists provide a high level

of productivity and increased consistency due to the position being career-based, rather than just a temporary training position. We should also consider setting stricter time limits to the length a trainee can be funded as a postdoc (e.g. 4 years) through the NIH. Shorter postdoctoral training times would also serve to discourage the current system of using postdocs as long-term workers which has contributed to the above-noted issues.

Proven or promising external resources or approaches

[redacted for anonymity] supports the creation of new pathways for international postdoctoral training candidates coming to the US by streamlining the visa process. In order for the U.S. to remain the global leader in scientific research, we must be able to recruit the best and brightest from around the world. While not directly under the purview of NIH, policy changes to make it easier for biomedical researchers to study, train and conduct research funded through NIH grants to receive and renew work visas would most greatly improve the number of international candidates for postdoctoral positions.

The ongoing national and Society dialogue on how we look at and support postdoctoral training shows that there is a significant need for change in our academic training system. There are many options for systemic policy change to improve the postdoctoral training ecosystem at the academic research institution level. It should be noted that in addition to the efforts of the NIH, there would need to be corresponding buy-in by the various academic research institutions given their diversity. For example, institutions with the financial capabilities should be encouraged to supplement postdoctoral salaries using institutional funds wherever possible. Furthermore, universities can decrease the challenge of securing faculty positions for accomplished and motivated postdoctoral candidates by developing postdoctoral-to-faculty bridge programs, as exemplified by the the University of California's President's Postdoctoral Fellowship Program. Thirdly, improving international scholar offices to provide more resources and support for international trainees will further increase international postdoc retention and recruitment.

Response 3072

Perspectives on the postdoc roles and responsibilities

Ideally, academic postdoctoral research is meant to be a transitional period for early-career scientists to develop new technical and professional skills under the guidance of a mentor or mentoring team for the purpose of gaining independence in their chosen career paths. Postdocs are highly-qualified scientists pursuing intentional, time-limited training to bridge their graduate training and career independence. Strong mentoring support, coupled with career development training, is key for success during the postdoctoral scholarship period.

However, in reality, many postdocs find themselves in precarious positions in which they are treated as cheap staff scientists because they are highly qualified (more advanced than a "trainee"), while also stuck in ill-defined training environments that are lacking in support, mentorship, clear expectations, and freedom to grow and gain skills to prepare them for independence. A lack of standardized hiring practices, titling, appointments, and agreement on what postdoctoral training actually is causes confusion about who is serving as a postdoc, leading to a lack of targeted resources for postdocs and their faculty mentors, and exacerbating the isolation, and possibly exploitation, that postdocs may experience.

In addition, it is important to recognize that the workforce has changed and that most postdocs will not continue in an academic tenure-track career path but will pursue any of a number of career paths in a variety of competitive sectors. Better education and preparation about postdoctoral training is required at the graduate level, in order to divert people away from taking unnecessary postdoctoral positions. However, simultaneously due to a current shortage of doctoral-trained scientists pursuing postdoctoral positions, the workload is becoming overwhelming for those who do choose postdoc paths, leading to work-life balance issues coupled with low pay compared to expectations.

Fundamental issues and challenges

A fundamental issue challenging postdocs in academic research is a lack of standardized compensation and benefits. All postdocs deserve equitable, standardized benefits and adequate pay at an institution regardless of their source of funding. While paid on the NRSA scale, postdocs with F32 and T32 fellowships are unable to access employee benefits, such as subsidized employee health insurance and retirement benefits, afforded to postdocs who are funded by other NIH mechanisms. On the other hand, currently, there is no requirement for NIH RPG budgets to adhere to any standardized salary scale for postdocs. NIH

should consider revising the policy that disallows F32—and T32-funded postdocs to be appointed as employees, while also adopting a revised NRSA salary scale for all NIH-funded postdocs, coupled with a cost-of-living adjustment for high-cost areas, and annual increases.

More accountability is needed for NIH-funded PIs who train postdocs. All PIs should undergo formalized mentor training before being allowed to train postdocs, and mechanisms for reporting bullying and abuse should be strengthened by NIH and also be required at the institutional level. All NIH grants that will fund a postdoc should include a detailed mentorship and training plan, similar to NSF, along with a requirement for IDPs and yearly evaluations. NIH should consider issuing an update to NOT-OD-15-008, clarifying the amount of time that is allowable to be spent in professional development training for all NIH-funded postdocs, to discourage PIs from disallowing their postdocs to take time to participate in professional and career development activities. Finally, yearly progress reporting should include feedback reports of PIs from postdocs, and successful (or not successful) mentoring needs to be reflected in these evaluations of the PI.

Existing NIH policies, programs, or resources

If NIH is unable to solve the postdoc employment and benefit issue that comes hand-in-hand with T32 and F32 postdoctoral fellowships as described in point 2, I recommend transitioning away from these mechanisms for postdoctoral training and moving toward expanded K mechanisms for both institutional and individual postdoctoral training, especially expanding mechanisms like the K99/R00, in which international postdocs are eligible. I would also like to highlight the excellence of the IRACDA K12 institutional training program in preparing postdocs for teaching and research careers and recommend that NIH expand the IRACDA program as well as replicate it for the purpose of training postdocs for other career sectors. I also recognize the utility of the NCI R50 program for Research Scientists and recommend expansion of this mechanism, as many postdocs, especially international postdocs, wish to stay in academia and transition to advanced staff scientist or research assistant professor positions. Finally, I recommend that NIH allocate more individual funding for early-career tenure-track faculty, including via the R01 mechanism. Increased funding for junior faculty will increase the attractiveness of an academic career path and encourage more postdocs to enter academic tenure-track faculty positions while improving retention of new faculty.

As a postdoctoral office director, I would like to recognize the excellence of the NIH Office of Intramural Training and Education for its outstanding opportunities for training for intramurally-funded postdocs, and extend my appreciation to OITE for their outreach to and inclusion of extramural institutions in their virtual programming. I recommend that NIH create a center for extramural workforce development, which includes expanded career and professional training opportunities for extramural postdocs, as well as a centralized place to track outcomes of extramurally-funded postdocs.

Proven or promising external resources or approaches

To enhance the postdoctoral training ecosystem, there are several external resources and approaches that NIH could explore. First, NIH should adopt the recommendations from the AAMC Appropriate Treatment of Research Trainees (AToRT) and CIMER mentor training curriculum for PIs who will be supervising NIH-funded postdocs. Next, NIH should continue to invest in postdoctoral cohort training programs, such as IRACDA and MOSAIC. A number of institutions have developed successful postdoc to faculty transition cohort programs, including my own institution, with the purpose of retaining outstanding scholars in academe while diversifying faculty ranks. NIH should consider developing an institutional postdoc to faculty transition training grant funding mechanism.

Finally, individual institutions and organizations are left to develop their own training and resources for postdocs, which is inefficient. NIH should develop a centralized hub linking resources that are available from NPA, PDHub, Postdoc Academy, professional societies, and individual institutions that have developed outstanding resources for postdocs, such as UC San Francisco. In addition, there is need for funding for institutions to develop training programs for postdocs, which could be organized and disseminated via the centralized hub. For example, I would like to recognize the excellence of the Burroughs Wellcome Fund Career Guidance for Trainees Grant, a small-grant mechanism through which innovative programs, like the Leadership and Management in Action Program (L-MAP) developed at Washington University in St. Louis, have been successfully developed, disseminated, and implemented at other institutions, including my own. I would also like to recognize the NSF Alliances for Graduate Education and the Professoriate (AGEP) program focusing on funding for multi-institutional collaborations. Finally, I would recommend reimagining and reinvesting in NIH BEST to fund model training programs at the institutional-level, which could then

be shared with other institutions. Resources developed with NIH funding could organized and disseminated in the centralized hub.

Response 3073

Perspectives on the postdoc roles and responsibilities

Postdoctoral researchers are the lifeblood of the biomedical research enterprise. This rings true at [redacted for anonymity] where our postdoctoral scholars conduct cutting edge research, develop innovative technologies and methods, and actively participate in many of the institute's large-scale collaborative projects and initiatives, all to enable breakthrough discoveries and enhance our understanding of human disease. In addition, postdocs are fostering the next generation of scientists, mentoring junior researchers at the beginning of their scientific careers, whether through teaching undergraduates, mentoring graduate students in their labs, or overseeing research technicians assigned to their projects. Postdocs play a crucial role in the nation's biomedical research ecosystem and their contribution is unmatched. They are not just another component of the system but an essential element that cannot be substituted.

This is why we are grateful that the National Institutes of Health is taking a look at re-envisioning the experience of postdoctoral researchers and that we have been given the opportunity to provide comments and thoughts on the role and how we can best support it.

Postdoctoral training is intended to be a temporary period of advanced scientific training to prepare young scientists for independence, and as such, postdocs should have freedom to explore various career pathways and professional development opportunities while receiving guidance and encouragement from their mentors as they begin to pursue their own research questions. At [redacted for anonymity] we offer many opportunities beyond the bench including public engagement, communication, and science policy skills development. We view the NIH to be the standard bearer for setting the accepted practices and policies to enhance the training of biomedical postdoctoral researchers. In this capacity, the NIH is well-positioned to establish guidelines and mandates that encourage activities to foster a culture of inclusivity, mentorship, and professional development, as the role is intended.

Fundamental issues and challenges

We acknowledge that this stage of a researcher's career is meant for acquiring advanced scientific training in preparation of an independent career. To succeed in this endeavor, postdocs need the freedom and flexibility to explore their curiosities and devote their energy to their science. Often, external pressures get in the way. Postdocs frequently must relocate to high-cost-of-living areas for their positions and the moves can be expensive, sometimes putting postdoctoral research beyond the reach of many without secondary support, usually young families, those from lower socioeconomic backgrounds, and international scholars. At [redacted for anonymity], we have traditionally used the NIH's National Research Service Award salary levels to benchmark postdoctoral salaries. Beginning in 2022, we added 10% to each NRSA level to set our minimums to account for Greater Boston's higher cost of living.

Postdoctoral training frequently coincides with significant life events such as marriage and starting a family. In addition, the cost of childcare can be prohibitive to many young families. We've tried to thoughtfully address this at [redacted for anonymity] by instituting programs such as the Childcare Financial Assistance program which can reimburse various childcare expenses. NIH has made strides with the creation of the childcare subsidy for NRSA-supported fellows and we advocate that this type of program be expanded to postdocs supported by other PI sponsored grants.

Existing NIH policies, programs, or resources

[Redacted for anonymity] is also home to a robust community of professional scientists who are deeply involved in leading and executing a range of core scientific projects across the Institute. These staff scientists are not faculty but are long-tenured researchers who may lead project teams and initiatives. Many of these researchers began their careers as postdocs at [redacted for anonymity], providing a viable and rewarding professional pathway for young scientists. The NIH should explore expanding programs for staff scientists in academic labs to encourage postdocs to remain in academia while also providing clear guidance on the differences between the two roles. Expanding funding mechanisms like the K01 and K02 Research Scientist Development Award provide postdocs with a stepping stone pathway as tenure-track faculty position opportunities remain limited.

Proven or promising external resources or approaches

No response

Response 3074

Perspectives on the postdoc roles and responsibilities

As a postdoc, and an active member (former President) of [redacted for anonymity] postdoc association, I see the postdoc primarily as the first post-graduate job for those wishing to continue on the academic track. However, it is important to remember that some postdocs (especially international postdocs who often face visa limits to getting jobs in industry) are aiming to gain additional experience before applying to industry or other jobs.

While the postdoc position is often thought of as a training position, and postdocs are referred to as "trainees" , in my experience, postdocs do not receive any more (or less) training than anyone in a new job: if I had pursued an industry job instead of a postdoc, I expect I would need as much, if not more, training. My graduate school classmates took positions in fields as diverse as science journalism, consulting, and venture capital. These peers were not hired as "trainees" , despite the fact that, in comparison, our graduate training provided less direct training these positions than it does for the postdoc position. The postdoc should thus be no different than any other job: it is merely the first post-PhD step on the academic job path, not a special training position.

It is also important to note that the postdoc is often thought of as a temporary position, contributing to its classification as "training" . However, many postdocs, especially biomedical postdocs, remain in their jobs for 4-6 years, which is longer than most people in a similar age group stay in their jobs. Thus, this postdoc position is a job like any other job and should be treated as such.

Fundamental issues and challenges

1. Compensation and benefits. The main issue with the postdoc position is that it is treated as a short-term training position rather than a job (see above), which is used as an excuse for poor compensation and benefits. If we want to have a diverse postdoc population—and, more generally, a diverse biomedical field—we must make the compensation and benefits of the postdoc position high enough such that no graduating PhD feels that, given their option of career paths, they are unable to afford to choose the postdoc position. A few of the specific downsides of choosing a postdoc position over other positions that are treated more like a regular job:
    a) Salary: The NIH-NRSA salary scale, which is adopted by many universities as a minimum salary policy, is inadequate to support postdocs in high cost of living areas. Furthermore, salary source and benefits can change multiple times over the course of a postdoc as fellowship funding source changes.
    b) Child care: many postdocs, especially women, leave the postdoc position due to lack of affordable childcare.
    c) Retirement: Postdocs are, more often than not, not offered employer-matched retirement contributions (despite the fact that they're often in their 30s, at an age where they should be saving for retirement).
    d) Health insurance: Some postdocs are not guaranteed employer-sponsored health insurance and must pay for it out of pocket.
2. Harassment, bullying and discrimination. Most postdocs are in a unique position where they are hired directly by a faculty member who has almost complete control over both their job and their career future. This system creates an environment in which it is very difficult for postdocs to get any recourse against bullying, harassment, or discrimination—especially in the case where their faculty mentor is involved—without completely overturning their professional lives.

Existing NIH policies, programs, or resources

In place of the current NIH NRSA scale, the NIH should adopt the General Schedule (specifically level 11—the minimum salary level offered to new PhDs) system for setting postdoc salaries. This scale is already used by the federal government to set salaries paid by tax-payer money, which in theory should be similar to postdoc salaries paid directly or indirectly by the NIH. Importantly, this scale is adjusted for cost of

living and includes a yearly increase for years of experience. The NIH should also require that any postdoc paid by NIH funds is paid at least the minimum salary on that scale. The NIH should also require that any postdoc in a lab that receives NIH funding has employer-sponsored health insurance and employer-matched retirement contributions regardless of the postdoc's fellowship status (i.e., require that NIH-funded PIs cover these things). The modular R01 budget should be increased to account for these expansions in pay.

Furthermore, funding mechanisms for postdocs should enable more independence from their faculty mentors. (e.g., some grants such as the R34 allow postdocs to be the PI, but as it's not the norm, they often still need extensive faculty and university support). There are currently few NIH funding mechanisms that are open to postdocs that enable them to receive substantial research support (i.e., support beyond just stipend funding and small research allowances). This contributes to postdocs heavy reliance on their faculty mentors both practically and intellectually. The K99 and F32 mechanisms could also be altered to have less emphasis on "training" in a specific lab, more funding for research, and thus less reliance on faculty mentors.

Proven or promising external resources or approaches

The Harvard FAS postdoc association conducts an annual survey of our postdocs. We collect and analyze data about our postdoc population and provide suggestions for improvements to the postdoc experience. I hope you will check out our survey reports here: https://postdoc.fas.harvard.edu/PDA/reports

Response 3075

Perspectives on the postdoc roles and responsibilities

To me, the postdoc position is a temporary advanced training period. It is a helpful time in the apprenticeship model of science and I value the protected time to gain independence and skills.

- NIH postdoc positions should facilitate research independence and promote development of technical and non-technical skills. All postdocs should have access to professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills.
- Postdocs should work in an environment that fosters new skills and expertise, encourages creativity, and allows flexibility to explore new research areas to maximize personal and professional growth.
- Postdocs should have protected time and funds to attend at least one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network.

Fundamental issues and challenges

- Compensation
- The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areaswith defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step. Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit.
- Insufficient DEIA
- Academia contains remnants of structural biases and institutional barriers that hinder the success of scholars from historically-marginalized groups still today. Postdocs from historically-marginalized groups and international postdocs face increased structural and implicit barriers including: lack of inclusion, reduced resources, implicit bias, and loss of community, while often managing increased familial commitments and additional financial responsibilities. Examining and acting on these power imbalances is key to creating a more inclusive and safe environment.
- Environment
- Postdocs often cite high instances of isolation and poor mental health. NIH should hold institutions accountable for fostering inclusive and supportive training environments, including expanding the current requirement for institutional commitment to preventing discrimination and harassment to include provisions for mental health and wellbeing support.
- NIH should require a percentage of indirects on all NIH grants supporting postdocs to provide postdoctoral offices with increased resources to foster stronger postdoctoral communities with healthier, sustainable cultures.

Existing NIH policies, programs, or resources

The most significant improvement that is required, based on my personal experiences as a postdoc at a large, public, R1 university and as the recipient of an NIH F32 grant, is better coordination between NIH and universities to handle the HR side of fellowships. I had to go on "educational leave" to be funded through my F32, and be treated as a contractor by the university to receive health benefits, but still lost access to retirement benefits during my fellowship. This kind of disincentive to receiving extramural funding is a glaring sign of a broken system.

- Postdocs need equitable benefits
- Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. (Other implications, such as tax, do not stem from NIH.) Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible.
- NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds.
- NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. The NIH should expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.
- To increase equity, NIH should provide NIH-funded postdocs with moving allowances. Moving costs can be especially cost-prohibitive for researchers from low socioeconomic backgrounds, those with increased familial commitments and internationals.

Proven or promising external resources or approaches

- NPA Resources
- The NPA has a wealth of resources developed by committees consisting of

postdocs, PDO leaders, and other contributors. By combining the lived experiences of postdoc training from multiple perspectives, NPA resources provide well-balanced and comprehensive tools, knowledge and advice. The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library.

- Consolidate professional development resources
- Currently, institutions and NIH IC's each develop their own professional

development resources, leading to inequity while inefficient in time and money. NIH should provide a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. In anincreasingly virtual environment, a well-maintained comprehensive hub should be searchable and accessible to enhance a postdoc's personal, scientific, and professional development. This would complement federal commitments toward open science by increasing not only the availability and access of federally-funded research but also its community resources.

- Engage with key stakeholders
- We encourage NIH to work closely with institutions that host postdocs and NPA

on an ongoing basis to consult on institutional policy adjustments and tool development that are needed to complement public policy change.

I sincerely thank NIH for the platform to share my feedback and experiences as an NIH funded postdoc. I applaud the many efforts NIH has already undertaken to improve the scientific training culture and urge NIH to continue and improve these efforts. I am particularly pleased that the IRACDA program exists to facilitate teacher-scientist training.

Response 3076

Perspectives on the postdoc roles and responsibilities

As a postdoctoral fellow (as part of a T32 training program), my time was devoted to a combination of professional development and career building research leadership opportunities. Postdoctoral fellow time should be protected for these activities. I have tried to facilitate the same for any postdoctoral fellows that I supervise or work with. Unfortunately, there has been quite a practice—in some academic spaces—of treating postdoctoral fellows more like research assistants and without as much attention to their career growth and without cultivating their agency in their research and career development. Additionally, particularly for those underrepresented in research, many postdocs begin to receive a lot of teaching and service requests. While some level of experience in these areas is helpful and may give a sense of the types of commitments and time management required in next career stages, these should not comprise a large part of the postdoctoral fellow role (unless the role was created for that purpose and that was explicitly and transparently communicated upfront). In my field, postdoctoral fellowships are typically 2 years to sometimes 3 years in duration. The postdoctoral fellowship also tends to serve as a bridge between doctoral (PhD, DrPH, or equivalent) training and a more independent position (Assistant Professor or equivalent role). The postdoctoral fellowship is also typically a mentored role. Historically, this may have involved a single mentor, but I've seen greater expectation for postdoctoral fellows to have multiple mentors, and seen this reflected in actual practice. In some cases there is continuity between doctoral program mentors and postdoctoral fellowship mentors—especially if there is new opportunity for growth, learning and increasing independence/leadership. However, many postdoctoral fellows benefit from a change in environment, or at least projects and teams.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

- allowing variation in the postdoc timeframe for the K99/R00. This option isn't as attractive as it could be given that it can extends postdoctoral fellowships quite significantly by the time a trainee is well poised to apply
- providing PI or MPI status to awardees of NIH diversity supplement funding (so that they are seen as independent or increasingly so)
- expectation that mentors of NIH training awards be only NIH superstars (received a whole lot of NIH funding)—this is particularly limiting to the diversity of trainees and mentors (and may facilitate/reinforce some mentorship malpractice)

Proven or promising external resources or approaches

RWJF Health Policy Research Scholars program

Society of Family Planning Changemaker and Emerging Scholar programs

Response 3077

Perspectives on the postdoc roles and responsibilities

As clinical neuropsychologists, we view the role of an academic postdoc in our field as a position that provides advanced training for individuals who are interested in pursuing the study of brain-behavior relationships with an emphasis on research and academic productivity. This typically refers to positions on training grants (e.g., NRSA and T32 grants), but it also includes positions funded by faculty on non-training grants.

Fundamental issues and challenges

- Lack of flexibility in time allocation: Many trainees in our field are interested in balancing advanced research training with clinical training that is consistent with requirements for board certification in clinical neuropsychology (i.e., "at least 50% of postdoctoral training must be in the provision of clinical neuropsychological services that are supervised by a clinical neuropsychologist" during a two year fellowship). Clinical research activities can count, but the time-allocation guidelines for NIH-funded fellowships make meeting this requirement difficult and deters individuals interested in board certification from pursuing academic postdocs.
- Visa restrictions are limiting: J1 visa applications are common for international trainees. However, many grantees are subject to the two-year home country residence requirement. This stipulation effectively places a "hold" on postdoctoral fellow experiences.
- Payback requirement: The NRSA payback requirement, unique to academic fellowships, is a significant potential burden/deterrent for many individuals. Trainees cannot guarantee that a position that meets their professional goals will be available, and a position that meets this requirement is hard to obtain in academic medical centers immediately post-fellowship without grant funding. It is recommended that this requirement be re-evaluated.
- Low stipend: The NIH postdoctoral stipend is below the cost of living in many metropolitan areas, leading many trainees to forego postdoctoral training in pursuit of more financial stability.
- Potential lack of continuity in funding: The T32 funding cycle means that trainees who enter a postdoc during a renewal year may only receive one year of funding, making it an impractical option for individuals seeking a 2-year training program.
- Lack of oversight/quality of control: Additional monitoring of training standards, including insuring that promised support and mentorship is provided, is needed. An external, independent review is one option that would reduce the pressure on the trainee to identify and report issues with the training program.

Existing NIH policies, programs, or resources

- Increased flexibility in the training plan to allow clinician-researchers to integrate more clinical training into NIH funded research fellowships in order to promote the development of the next generation of clinically-focused researchers. Alternatively, development of a specific postdoctoral training grant option for clinician-researchers that allows for clinical training compatible with the requirements for board certification in their field would be of significant benefit.
- Modification of NRSA payback requirement to reduce burden on trainees.
- Develop funding mechanism to support individuals whose postdoctoral training is affected by mentor's loss of funding (e.g., T32 isn't renewed as anticipated).
- Expand NIH Loan Repayment Program so it is available to a larger number of individuals and thus serves as an additional financial incentive for individuals who forego higher salaries available in clinical positions to pursue research training and ultimately research careers.
- Increase costs allowed for travel and training-related expenses on training grants. In particular, funding that supplements the stipend should aim to comprehensively cover out-of-pocket costs that currently contribute to increased debt incurred during fellowship. This includes, but is not limited to, budget allocated for relocation costs, conference travel, poster printing, statistical software, professional memberships, and other training opportunities. We believe that none of these costs should be expected to come out of the postdoctoral fellow's stipend.

Proven or promising external resources or approaches

- Add a locality adjustment for the stipend, such as that used in the VA system (i.e., General Schedule (GS) Locality Pay Tables) or allow individual universities to match salaries paid to other fellows.
- Provide incentives to individuals who complete academic fellowships such as:
- Develop unique funding opportunities limited to individuals who are or have completed NIH postdoctoral fellowships, and in particular clinical psychologists. There are special funding mechanisms designed to keep physicians in academic medicine, but there is nothing comparable we are aware of for our field.
- Unique training and/or networking experiences that can only be accessed by individuals who participating in academic fellowships; as an example the VA holds an annual meeting for Career Development Award (CDA) recipients that is attended by all of the program officers and provides an excellent opportunity to engage with the leaders of VA Research and Development and peers throughout the country.

Response 3078

Perspectives on the postdoc roles and responsibilities

Being a postdoc feels like a middle management position. We are not ultimate decision makers but we do have some independence and mentoring roles. In my postdoc position, I am the day-to-day mentor to two graduate students. This important responsibility is on top of the many lab management type roles I fulfill, as well as my own research and training. It often feels like postdocs wear many hats—and that this is not always acknowledged or valued by institutions or funding agencies. Postdocs are highly trained and effective scientists; we are adept at not only experimental work but also at management and administrative roles as well. It often feels like we're the behind the scenes scaffolding that holds the faculty and graduate students together.

Fundamental issues and challenges

To put it bluntly: the pay. I am only one of the few members of my graduate school cohort who are in an academic postdoc. Most are in industry—either biotech, pharma, or consulting—simply because the pay is better. I am able to work within the NIH postdoc payscale because my spouse has a well paying non-science corporate job. Her income basically subsidizes my choice to stay in academia. Academia strives to increase diversity among scientists, but we are not providing the pay necessary to recruit individuals who are living on a single income or may be from economically disadvantaged backgrounds. The issue is even more dire for postdocs who are attempting to support children or other members of their family. And this isn't even to mention the immense financial stress of student loans, which many postdocs also need to

contend with! Of course there are other issues within academia like the toxic culture of overwork and discrimination, but the core issue is pay.

Existing NIH policies, programs, or resources

Increase the postdoc salary minimums and increase research grant budgets to allow faculty to pay their postdocs more. It is difficult to fully embrace training and the academic pathway when financially insecure. Everything starts with pay.

Proven or promising external resources or approaches

In my opinion, the training ecosystem does well. F and K grants are fantastic ways to formalize training plans and future research goals. To get more scientists in the door and choose the academic career path pay must be increased. The current pay scales are not sustainable.

Response 3079

Perspectives on the postdoc roles and responsibilities

Historically, the postdoctoral role has been focused on the idea of preparation for a tenure-track position. This is no longer true. Many postdocs ultimately move towards careers as staff scientists, where they are still at the bench, but do not independently lead a lab. There are similarities between this role and the traditional tenure-track assistant professor, in terms of needing to lead and manage a project at a high level, learn about financial and project management, and gain new scientific skills. However, there are major differences too, especially in terms of learning specific arts of self promotion and communication that are usually NOT the role of the staff scientist. Classically, NIH support for postdoc training has asked the question "how does this training teach you to get an R01?" , and has not asked "how does this train you to be a rigorous research-supporter?" That concept should shift.

The other thing to consider that is changing is duration. Postdocs should not be permanent positions, but we need to recognize that as science gets more complex, a reasonable postdoc (i.e., learns enough to make a publishable unit) is 3 years at a minimum and often longer. It is not reasonable to expect 2 years of focused training to be sufficient, because many modern approaches would require a year to learn competently, a year to use to generate data, and a year to navigate publication (which is necessary to prove that one actually does know/possess a technique).

Fundamental issues and challenges

Current generation postdocs are older, more likely to have caregiver responsibilities, and more likely to have personal medical problems. This is a natural consequence of

a) grad programs often preferring candidates who have experience post college and

b) attempts to diversify the academy. Historically, structural/systemic factors have excluded people from academia if they lacked family wealth and strong support networks, factors that are highly correlated with race, ethnicity, and national background.

Recent attempts to explicitly promote and admit, e.g., BIPOC scientists, have not yet considered that this means that we have more scientists who have more complex needs and less ability to be solely work-focused.

At the same time, academic centers are in areas facing housing and transportation challenges, with rapidly escalating costs of living. This makes a standard postdoc economically unviable without additional resources, e.g. the aforementioned family wealth or a clinical degree enabling extra income.

As times to publication become longer and papers more complex (particularly in our field of Neuroscience), this also means postdocs are being asked to take on extended periods of uncertainty before they know their career prospects. That uncertainty itself often makes careers outside research look more promising.

Existing NIH policies, programs, or resources

We should change: pay, hiring practices, and in the longer run, the philosophy underpinning training programs.

First and foremost, we need to reevaluate the NRSA scale. The ideal standard for such a reevaluation would be a single salary scale that is livable in any high-cost city AND is indexed to inflation. That is, it should be a standard assumption of Federal programs (which will trickle down to R01-like grants) that a postdoc should in fact come with a living wage. This is critical to address the diversity problems just mentioned.

The benefit of such a change is that postdocs could afford to take jobs in the high-cost cities/R1 institutions that might best suit their training needs. The other benefit is that some postdocs might choose to take jobs in lower-cost cities as a way of improving their quality of life, which could benefit academically strong but less famous/prestigious institutions in these 'less desirable' places. Regardless of where postdocs choose to work, they would be able to more directly focus on their research and training. (The increased productivity from lack of financial stressors would also be a benefit to their PIs.)

The corollary is that NIH would need to correspondingly increase the $500k prior authorization cap. NIH has not raised the cap for more than 25 years, despite increasing the salary caps for investigators. This has weakened the purchasing power of grants by nearly half since 1998, and it is unsustainable. We recognize programmatic concerns that raising the cap limits the ability to fund as many grants, and may exacerbate the inequality biased towards "super labs" . To address at least the first concern, increases could be phased in over time, or could be first targeted towards labs without multiple R-equivalent grants.

[A further response is coming with the second half of this]

Proven or promising external resources or approaches

Two core concepts above are the creation and maintenance of a living wage, and providing more support for postdoctoral trainees who also have family obligations. These are, in fact, proven resources/approaches. Specifically, we know that PhD graduates are less frequently choosing to become postdocs, and we can reasonably assume that the majority of them are also not choosing unemployment or non-science careers. Rather, the majority are taking roles within industry—which by definition is required to provide economically competitive pay, and in many states, either required or strongly encouraged to provide paid family leave and benefits. We need to recognize that academia is in fact in competition with industry for talent, and that we are losing talent because we are not competing.

Improving the training of postdoc mentors is also likely to be helpful—in the current postdoc shortage, a trainee will be more likely to pick a mentor who is clearly attuned to the needs of a postdoc at levels beyond just the science (i.e., someone who establishes a supportive lab environment, demonstrates open and supportive communication, and is sensitive to work/life balance). These are likely features of successful and well-established mentors, but some junior and established investigators will need training in how to get there. Supporting laboratory leadership and mentorship training (particularly for minoritized/diverse trainees) would accelerate this.

Response 3080

Perspectives on the postdoc roles and responsibilities

[this is a continuation of a prior response]

Fundamental issues and challenges

[this is a continuation of a prior response]

Existing NIH policies, programs, or resources

There are numerous axes that likely should change: pay, hiring practices, and in the longer run, the philosophy underpinning training programs.

[continued from prior repsonse]

Third, in the longer run, could a program be designed to prepare trainees to become both staff scientists and team scientists? The K pathways are designed to help postdocs train, but they entirely focus on independent, tenure-track positions. We recommend exploration (e.g., convening design workshops, seeking best practices) of the creation of a K pathway designed to help a trainee gain project-management skills while working on a specific R01-attached research project. Graduates of such a program would be attractive lab employees—it is hard to find trained managers and mid-level lab leaders.

Fourth, family leave needs to be explicitly considered on NIH grants for other than the PI. In the institutions of our Liaison Committee members, we are seeing an increasing number of postdocs who need to take child-related or medical-related FMLA-like leave. If a PI takes such leave, it is allowable to seek supplemental funds for the grant to either extend it or to cover additional costs related to child care. We need to achieve the same for postdocs and other technical personnel on grants. The assumption currently is that some other staff member can simply "substitute" for the lab member who is out on leave. That is not valid in an era of rapidly advancing biomedical techniques. Postdocs are not fungible resources, and should not be assumed as such.

Proven or promising external resources or approaches

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Response 3081

Perspectives on the postdoc roles and responsibilities

Academic post-doctoral researchers (post-docs) are in a transitional role, serving as a senior trainees but in many ways also as junior colleagues. This dual perception creates challenges where some post-docs are treated not as trainees pursuing their own independent goals but instead are perceived as temporary staff scientists who are easily released and replaced at the end of the grant period. This puts them in a marginalized role which can lead to an environment which is abusive, unprofessional and lacking in inclusivity and equity. While the role of post-docs was seen as a way for individuals to obtain further specialization and mentoring on their way to independence as an investigator, in some disciplines it has instead led to precarious employment as researchers compete for tenure track positions following decades of extremely high competitiveness.

Further, we recognize that the hiring landscape has changed and there is a significant need to shift the perception of post-docs as primarily looking for academic positions at large research institutions. For many of these trainees, a faculty position may no longer be a goal due to the significant opportunities in other sectors and roles. As a result there is a need for institutions to modify their education and support of these trainees to meet their career aspirations.

While there have been advances in the post doctoral oversight continues to be challenges and disparate between institutions. The availability and maturity of structured support such as post-doctoral offices and associations on campus varies significantly among institutions. Even identifying post-doctoral trainees at universities can be challenging as their hiring processes are often not centrally overseen and the individuals may hold a number of titles within a university, making it difficult to connect and ensure they are provided with connections to university support mechanisms.

Fundamental issues and challenges

There is inconsistent messaging about the value of academic post-doctoral training, particularly in a competitive hiring market, which is further occluded by institutional variance in hiring practices for NIH funded post-docs and salary and benefits issues.

We recommend moving to standardize the salary offerings so that all positions meet the NRSA standard, however, we recognize that this is likely to financially impact lesser resourced programs without a

concurrent change in budget allowances. We also want to point out the unsustainability of the lack of benefits provided in the NRSA and similar programs, particularly family leave and child care assistance. We encourage the NIH to work with Congress to modify programs in order to ensure that health insurance and retirement benefits are provided to these trainees.

Another challenge is vagueness around dedicated time for professional development for post-docs and transparent metrics for success, which leads to significant variance between institutions and investigators. We recommend that NIH develop standardized guidance such as is in the NRSA F32/T32 grants and guidance on metrics of success with requirements including formalized feedback for trainees.

There is a lack of required mentoring training for investigators which leads to disparities. While we recognize that training alone will not address all potential problems between investigators and post-docs, a consistent baseline would provide more clarity of expectations to all parties and provide a mechanism by which NIH could assess investigators in meeting their mentoring obligations.

Post-docs report significant challenges in reporting bullying and abuse. We encourage the NIH to require the establishment of institutional ombudsperson programs with confidential methods for reporting misconduct. We recommend the development and maintenance of trainee feedback in yearly progress reporting submitted separately of the documents provided by the investigator. This is especially critical for T32 programs, with their specific goal of providing training.

Existing NIH policies, programs, or resources

We recommend adding a requirement for a professional development and training plan for any grants with post-doc positions, similarly to the NSF. This could build upon the IDP program, which has been seen by some investigators as only an administrative task.

The Office of Intramural Training and Education (OITE) is an excellent program for supporting intramural postdocs, and has been doing excellent work outreaching to extramural institutions. We encourage the expansion and replication of this program for extramurally-funded postdocs, through the development of a center at NIH which could provide unified resources for trainees and investigators, mentoring support, and centralized tracking outcomes. By standardizing and centralizing this information, it would provide significant information both to institutions to understand the career paths pursued by their post-docs and would provide PhD students information about paths taken by those from specific programs and institutions. Centralized writing training, supplemented with local support, could significantly assist trainees as they draft their early career grants.

We recommend the revision of the K99/R00 program. There is inconsistent awareness of the program availability and eligibility across trainees, investigators, and institutions. Also, as many post-docs need to go through the grant application twice, they may be eliminated due to time limitations.

We support the expansion of cohort-based training programs such as the T32 programs and the IRACDA and MOSAIC programs as they provide more comprehensive mentorship and advocacy. We also recommend the expansion of eligibility of these programs to international postdocs.

We suggest building upon awards that support the transition of post-docs to staff scientist and Research Assistant Professor Positions. We recognize the excellence of the NCI Research Specialist Award (R50) and recommend mirroring this program in other ICs.

Proven or promising external resources or approaches

A successful program at the University of Illinois Chicago is the Bridge to Faculty program. This program competitively hires candidates into a two year post-doc program with targeted mentoring and a cohort support network. At the end of the two years, participants are transitioned to tenure track lines. The focus of this program has been to increase diverse faculty at this minority serving institution, which 11 participants thus far have successfully completed, with 17 more anticipated to make the transition to faculty in Fall 2023. Institutional doctoral to faculty career training grant could be implemented at other institutions.

We highly recommend the CIMER mentoring training program, developed at the University of Wisconsin. Additionally, there are excellent mentoring programs at the Rackham School and the Karolinska Institute. Adoption of programs like these nationally could support consistent mentoring understandings across investigators and disciplines.

There are a number of institutions that have exemplar post-doctoral trainee support programs including Vanderbilt University, the University of California San Francisco, and Stanford. They have varying specialities surrounding training and support and the metrics captured but have strengths which should be sought and replicated.

We encourage the adoption by NIH of the AAMC Guidance on Research Trainees (AToRT). This resource describes the issues with inappropriate treatment of research trainees. It also outlines clear characteristics that mentors should have, including encouragement, communication, self-improvement, professionalism (respect and integrity) and equity. The AToRT includes guidelines for how mistreatment should be resolved at the institutional level.

Finally, we recommend that NIH collaborate to consolidate external resources developed across disciplines into a centralized hub. This could be in partnership with the National Post-Doc Association and include the resources developed by the BEST programs, Graduate Career Consortium, Postdoc Academy, PDHub, OITE, and individual institutions that have been exemplars.

Response 3082

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity] is a professional organization representing professionals at over 185 institutions and/or organizations, and 74% of our members serve postdocs. The 2012 Biomedical Research Workforce Working Group Report and the NIH's Broadening Experience in Scientific Training (BEST) grant spurred much investment and innovation in career and professional development (CPD) for graduate students and postdocs. Many [redacted for anonymity] members led development of the BEST programs and other innovative career and professional development programs. As a function of our jobs, we are intrinsically dedicated to supporting postdocs in achieving their career and professional development goals and advancing postdocs' careers. We view the postdoc as a "temporary and intentional training" period that includes protected time for career and professional development toward academic success during the postdoc and for preparation for diverse future careers in the scientific workforce.

While it may pose a challenge for the biomedical research enterprise, we do not see a decrease in the number of PhDs pursuing postdoctoral research positions as a problem in and of itself. That decrease may result from increased clarity about employment options, a sense of greater agency among early career scientists, and an increased demand for a highly-trained scientific workforce.

Fundamental issues and challenges

As postdoc affairs staff and career and professional development advisors to postdocs, we are keenly aware of the unique challenges academic postdocs face, as well as institutional challenges in recruitment and retention. Multiple CPD challenges affect recruitment, retention, and quality of life for postdocs, including uncertainty about the career benefit of postdoctoral training, salary discrepancies between postdoc and industry positions, limited support for exploration and pursuit of diverse careers, and more.

Often career and professional development professionals serve as a touchpoint when issues beyond career preparation arise (e.g. well-being, termination of position, workplace misconduct). In fact, the National Postdoctoral Association's 2023 Postdoctoral Barriers to Success found that 81.7% of postdoc survey respondents are negatively affected by a lack of career and professional development opportunities. Therefore, a lack of value and visibility around career and professional development negatively affects postdoc experience, well-being, and future professional preparedness.

Existing NIH policies, programs, or resources

Career and professional development opportunities are a significant selling point for institutions and mutually reinforce the research endeavors of postdocs. Specifically, they enable skill building for professional success and exposure to diverse careers.

First, we recommend funding postdoc career and professional development programs and offices through training/research grants: the impact of career and professional development advising and programs is under-appreciated and not sufficiently supported. To address that, we recommend allocating a percentage of indirect costs on all NIH grants that support postdocs to contribute toward institutional support for postdoc and career and professional development offices and staff. Establishing a ratio of staff to postdocs

served as a best practice (such as 1 FTE career advisor for 250 postdocs) would ensure that postdocs are educated and empowered in their career planning.

Second, we recommend establishing a minimum percentage of postdoc time (e.g., 15% of effort) to be devoted to career and professional development activities and providing tools to assist institutions to adhere to these requirements and incentivize compliance beyond Individual Development Plans (e.g., require ongoing career and professional development, in order for postdocs to be eligible to be paid by an NIH grant).

Proven or promising external resources or approaches

A proven strategy is data transparency around postdoc experience and career outcomes (e.g., Coalition for Next Generation Life Sciences) that influences recruitment, retention and academic success. We recommend systematic and consistent reporting on postdoc experience (e.g., number and length of postdocs) and career outcomes funded by NIH through a national database, administered and funded at the federal level. Further, all research grant applications that support postdocs should require information on postdoc length and career outcomes of former and current postdocs mentored by PIs. Making postdoc career outcomes an integral component of grant evaluations and faculty tenure processes will contribute to maintaining the training ethos of postdoc positions, as a step toward a successful career transition.

Response 3083

Perspectives on the postdoc roles and responsibilities

To me, a postdoc position means I am more independent as a researcher and learning how to become an investigator, but still have the guidence from an experienced mentor. The postdoc takes on more responsibilities and how to be a leader. But a postdoc is also viewed as a placed holder until you know what next steps you are going to take in your career. Some people do not know whether they want to continue to do academia or a different pathway like industry, and a postdoc helps to give a different perspective and new experiences which either fuel your designer to be an independent investigator in academia or decide to go into industry.

Fundamental issues and challenges

One of the biggest issues inhibiting recruitment, retention, and quality of life is the postdoctoral salary, especially for those who live in expensive cities. As a postdoc in Boston, MA, the minimum NIH postdoctoral salary is way too low to have a good, comfortable quality of life because of the cost of living. We cannot afford to live on our own, or have to make significant scrafices to afford to live in this city. It also does not allow us to even save money for our future. This low salary also specifically inhibits recruitment and retention because the starting salary of an industry job is so much higher than a postdoc salary no matter what part of the country you are in. I personally have known people who either dropped out of PhD programs or left their postdoc early to go into industry for a higher salary.

Existing NIH policies, programs, or resources

I am currently on a T32 program, and while I know the institution that receives the T32 is supposed to have their own career development activies, maybe the NIH should have special career development activies as well. The NIH could have webinars or even a yearly symposium that all T32 trainees could attend to give resources like for getting grants, applying for jobs, or how to be a good mentor.

Proven or promising external resources or approaches

There are many organizations and postdoctoral societies at institutions that try to have career development resources and webinars for postdocs, but one of the things they are trying to figure out and address is also recruitment, retention, and job satisfaction. And in may opinion, no one as come up with a good answer. I can say me personally, as a postdoc, on of the biggest problems with recruiting new postdocs is the low salary, which that also ties in to job satisfaction as well. If you are struggling to survive, no matter how much you enjoy the actually work, you are going to have less motivation to work or stay at that job because you are stressed about finances. I think part of the problem to retention also has to do with the availablity of academic jobs and difficulty of getting funding. If there are more people trying to get jobs than there are jobs available, they have no other option than to find a job outside of academia or moving to another country. If it is difficult to get grants, then people who get labs cannot afford to keep it running.

Response 3084

Perspectives on the postdoc roles and responsibilities

An opportunity to expand one's training before becoming an independent investigator. I think the current system incentivizes long post-docs, often more than 5 years. This doesn't benefit the post-docs, many of whom are ready for independence soon after PhD.

Fundamental issues and challenges

The lack of TT job opportunities results in increasingly long post-docs in order to become competitive. This leave us with little pay, little long-term stability, and little intellectual independence for far too long.

Existing NIH policies, programs, or resources

No years-since PhD limit on K99 and no years-since PhD limit on Early status investigator

Improved Post-doc salary/benefits payline following the examples of St Jude/HHMI

Proven or promising external resources or approaches

Increasing the salary of post-docs significantly would have positive trickle-down effects, including shortening the duration of post-docs.

Response 3085

Perspectives on the postdoc roles and responsibilities

For several decades, the NIH has generously funded numerous post-doctoral fellows in general internal medicine, who have made and continue to make a tremendous positive impact on U.S. health care policy, population health, and patient care. To further support the pipeline of primary care—and hospital medicine-oriented researchers and leaders in academic general medicine, the [redacted for anonymity] has proposed several recommendations for improving NIH-funded post-doctoral fellowships.

Fundamental issues and challenges

1. Current funds for post-doctoral training grants are insufficient, particularly for general internists due to a relative paucity of clinical revenue to supplement research training. Moreover, HRSA T32 stipends are around $56K per year, ACGME rates are around $85K per year and rapidly rising. It is easier to fund PhDs at the $56K. Furthermore, master's degree programs are much more expensive than the stipends given for coursework in T32s; the coursework is essential for MDs to get the skills necessary for the research while PhDs may only need a few courses to supplement what they learned during their PhD. Without additional financial support, the pipeline of general internal medicine (hospitalists and primary care) physician researchers will decline. As HRSA wants to prioritize more primary care—and hospital medicine-oriented researchers, NIH should partner with HRSA to increase funding to address the unique needs of internists who require buy outs of clinical time and funds to support MPH tuition, which are currently inadequate, and fellowships often must rely on foundation awards to supplement this.
2. General internists may have unique needs that differ from subspecialty physician scientists. General internists more frequently engage in clinical and population health research (e.g., Stage T3-T4 translational research—efficacy, effectiveness, dissemination and implementation) rather than basic or translational science. For example, as opposed to lab space, health services researchers need resources to collect or purchase data, and resources to support substantial time for analysts, statistical consulting, research assistance, and project management.

Existing NIH policies, programs, or resources

To support diversity, equity, and inclusion, NIH should enhance promotion of and/or expand financial support for programs that provide provisions for child and elder care and student loan repayment. NIH should also enhance provisions for child and elder care as well as family health insurance supplements for post-docs.

Proven or promising external resources or approaches

1. Directors and mentors of post-doctoral training programs also need training (e.g., communication and team management skills), perhaps NIH can consider incorporating resources to support the training of directors and mentors. If the fellowship directors lack training on how to best support their trainees, then the trainees will lose learning opportunities.
2. Because awards are made to institutions, NIH can do more to understand how institutions are utilizing indirect costs to support postdoctoral training. Currently, NIH has 8% indirect rate caps for post-doctoral awards, however, increasing this indirect amount and then requiring greater institutional support of post-doctoral fellows in tandem could be another mechanism for NIH to consider.
3. NIH should acknowledge the growing field of implementation science and recognize that many implementation scientists often have one foot in research and another foot in health system operations (e.g., 50% clinical, 50% research) and may not fit the mold of a traditional 80/20 clinician investigator. By forcing implementation scientists to choose one path or the other, NIH may be losing talented innovators. Perhaps NIH can consider developing post-doctoral awards that cover health-system embedded implementation scientists to pursue research-informed quality and equity improvement interventions within learning health systems.

Response 3086

Perspectives on the postdoc roles and responsibilities

To my mind, there are two main objectives of a postdoc position. First, a postdoc position is intended to broaden or enhance the research subject expertise of the postdoctoral scholar. This may be learning a new set of models or techniques to address an existing interest, or application of one's knowledge to a new research question or new field entirely. If the goal is to remain in academia, then by the end of their postdoc years, a scholar should have carved out an area of investigation that will be uniquely their own. If going to industry, the goal should be to have a set of well-honed technical skill and ability to design experiments independently. Secondly, the postdoc position should provide mentorship and an opportunity to learn management skills. For a postdoc moving on to an academic role, this would consist of supervision of students, writing of grants, and, as applicable, opportunities to teach and learn about administration. For postdocs heading to industry, this would be supervision of others, budgeting, and project management skills.

Fundamental issues and challenges

By far the most pressing issue facing postdocs is that of compensation. There is a national conversation about the need for higher wages for postdocs, and this is an excellent first step. However, just a higher salary is not enough. Postdocs are by their nature temporary hires, with their time bridging their graduate work and their independent careers. However, this has resulted in them being afterthoughts when it comes to employment policies. For instance, my institution treated those postdocs on their mentors' grants as employees, with full employee health and related benefits. Once I received an extramural fellowship of my own, I was no longer considered an employee, meaning I lost my health, vision, and dental coverage and had to figure out my tax withholding on my own. The tax situation was complicated by having to constantly convince tax preparers and software that I was not, in fact, self-employed. While my institution has apparently worked to correct this inequity in the intervening years, many more institutions have similar policies.

A second issue is the lack of training in some areas, particularly for postdocs who wish to stay in academia. I knew I wanted to teach in addition to doing research, but it was up to me to find a certification program in college level teaching, and being in a medical school meant I could not easily find any actual students I was allowed to teach. I also received no formal training in how to manage lab personnel or to budget my funds, despite being expected to do both from day one in my next role as an independent investigator. I was taught to write grants and manage conflicts and harassment, but beyond that I was left to figure it out.

Existing NIH policies, programs, or resources

A potential option to encourage universities and other NIH-funded institutions to provide equitable compensation for all postdocs is to make NIH funding contingent on those institutions following guidelines on postdoc pay AND BENEFITS. Similarly, training plans are already part of postdoctoral fellowship

applications, but language could be added to the RFAs specifying that training in teaching, mentorship, and/or management and budgeting should be a part of those plans where applicable for the fellows' goals.

Proven or promising external resources or approaches

My external Fellowship was awarded by the American Cancer Society. While all of the following policies were not necessarily in place when I was a Fellow, the ACS has certainly set a good example in the policies they have for their awardees. These include newly increased stipend amounts, allowance for purchase of insurance or other benefits for the fellow, and parental leave for fellows which includes an extension of the fellowship time window.

Response 3087

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is to lead projects under the supervision of a PI. Postdocs have been my second, and often times most accessible and hands-on, mentor at every stage of my academic career. Postdocs are PIs in training. They are professionals with unique skills for their given discipline and research interest. They lend these skills to the labs their join and bring innovation.

Fundamental issues and challenges

Money. And money again. I am 31 years old and I will be a postdoc in two months. At the current NIH rate, I will only be able to do a postdoc for one year. And that is a year of great sacrifice that I will be making. My personal life has been on hold since I have started graduate school and I can no longer put off my responsibilities of taking care of my parents and starting a family. My parents were refugees and do not have the generational wealth that others enjoy to build up retirement savings. I am their retirement plan. The one year of postdoc I will do is a selfish endeavor so that I can't look back and say I didn't try. But with $56,000, I cannot pay for a nurse to help take care of my dad who has Lewy Body dementia, I cannot pay for a wedding for my fiancÃ©, I cannot buy a house for my future family to live in, and I cannot even start a family and pay for childcare on this low salary, while living in the DC area. With my skills, I could be making $150,000 in industry. I do not want that. I would rather have half of that and stay in academia. But a postdoc salary equivalent to the average amount someone fresh out of undergrad with a bachelors (i.e. what my friends were making 10 years ago) does not give me the financial security to live as an adult with dignity, after all my years of training and education. I hope I have made it clear that this is a diversity and inclusivity issues.

Existing NIH policies, programs, or resources

The effort limits on grants is an issue. I have never known a post to only work on a single project. Often times postdocs taken on administrative and mentoring responsibilities within a lab, which is labor that is unpaid. It is my understanding that with the F training grants 100% effort has to go towards that grant. That removes an chance of a lab paying extra for their postdocs. It makes the NIH rate or minimum, the effective maximum a postdoc can get. This is also a major issue at the institutional level. I have a K00, but the [redacted for anonymity] has a rule that postdocs cannot get more than the NIH minimum, even though my K grant is for 75% effort. In my instance, my PI has an RO1 with a postdoc line that she wanted to pay my remaining 25% effort. The university has blocked this. In addition, the NIH can increase the NIH rates for postdocs. Additional funds for childcare is appreciated, but the NIH needs to pay more. It should not be harder to pay a postdoc more than it is to buy new computers for an entire lab every couple of years. Additional funds should be available to postdocs in areas with a high cost of living, such as the DC metro area, NYC, and California. I don't know how this is possible, but some kind of retirement plan for graduate workers and postdocs would be great. I have had a couple of small plans for previous postbac positions. But the constant moving around from makes it impossible to save for retirement, when many places require a minimum number of years for the benefits to be "fully vested", such as 10 years for the [redacted for anonymity] pension system.

Proven or promising external resources or approaches

No response

Response 3088

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellowships should lead to research independence in technical and non-technical skills. To this end, postdocs should have access to training in management and leadership, teaching, science communication, grant-writing, experimental techniques, career exploration, and other transferable skills. NIH could promote this by making these expectations clear to mentors, some of whom focus too narrowly on technical skills.

Fundamental issues and challenges

In an economy coupling high inflation and low unemployment, lack of competitive pay and benefits is an impediment to postdoc recruitment and retention. The NPA 2023 Postdoctoral Barriers to Success report found that low salary has a negative impact on 95% of postdocs' professional and/or personal lives. The NIH could increase its stipends to postdocs on training and fellowships grants to match GS-10 federal salaries (minimum $62,898). Similarly, the NIH could promote minimum salary requirements for all NIH-supported postdocs to provide a living wage adjusted annually for inflation and location.

In addition to salary, international postdocs struggle with short contracts that create immigration problems. NIH should encourage contract lengths commensurate with the postdoc training period, fair termination notices, and ties to institutions, not PIs. NIH should also promote policies such as vacation accrual rollover for international travel needs, and subsidized costs for visas and dependent insurance. Finally, NIH should prohibit part-time postdoc positions that are designed to avoid the costs of employee benefits.

Existing NIH policies, programs, or resources

Surprisingly, postdocs often lose employee benefits when accepting an NIH Fellowship (e.g., T32 or F32 position). This striking inequity is due to NIH policy language that most university legal counsels interpret as precluding employee status in addition to preventing the use of federal funds to pay for most employment benefits (NIH policy on allowable costs to training grants, section 11). NIH should require that all postdocs receive employee-level benefits as a requirement, similar to some NASA and NSF requirements, and allow institutions to use federal funds to cover these costs.

In further support, NIH could expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. Similarly, the NIH could provide NIH-funded postdocs with moving allowances. These expenses disproportionately burden those from low socioeconomic backgrounds or coming from abroad.

Finally, NIH should collect survey data on postdoc satisfaction on an annual or biennial basis to facilitate policy adjustments to postdoc concerns. These data should provide key insights and allow postdocs to provide honest, anonymous feedback without retaliation.

Proven or promising external resources or approaches

The NIH ACD Working Group should make use of resources such as NPA Recommended Postdoctoral Policies and Practices, the triennial NPA Institutional Policy Survey, and other documents in the NPA Resource Library.

Currently, NIH ICs each develop their own professional development resources, leading to inequity, inefficiency, and confusion. NIH should develop a centralized hub linked to publicly available resources from NPA, PDHub, OITE, professional societies, and individual ICs/universities. This should be searchable and accessible to enhance professional development and an awareness of critical policies.

[Redacted for anonymity] wants to sincerely thank the NIH for a platform to voice our priorities for postdoc training. We applaud NIH's successful policies and programs that have made American postdoc training an international standard. We look forward to working with NIH to continue improving the working conditions for these valued early career scientists.

Response 3089

Perspectives on the postdoc roles and responsibilities

Role: Trainee/mentee for their next high-level scientific role, future leadership in science. Responsibilities

1. Generate high quality and quantity of papers
2. Help write grants
3. Lab mentor/trainer of more junior lab folks.

Fundamental issues and challenges

Finding high-quality candidates/recruiting is impossible these days. Why?

1. Postdocs don't want to become academic PIs and follow our path. Why would they? Postdocs see our stress, the pressure and struggle to fund our whole enterprise on grants against ridiculously impossible odds in study section.
2. They can make a better salary elsewhere (i.e. industry).

These 2 factors affect recruitment, retention and overall QOL.

Existing NIH policies, programs, or resources

1. increase R01 funding levels to be able to pay postdocs more.
2. increase paylines to retain more PIs, and less stressed-out PIs, in academic research, so post-docs want to continue their training and become PIs themselves.

Proven or promising external resources or approaches

No response

Response 3090

Perspectives on the postdoc roles and responsibilities

To me, the postdoc is an opportunity to expand my skillset and knowledge while preparing for a career as an independent scientist/professor. I chose my position because it provided an opportunity to explore a new area of science and learn a new model organism. During my postdoc, I plan to also gain additional experience mentoring students and teaching at an undergraduate level (as part of the IRACDA program) to prepare me for the next stage of my career. After my postdoc, I hope to attain a position as a professor at a primarily undergraduate institution, where I will run a small lab while also devoting a significant portion of time to teaching and mentoring.

The responsibilities of a postdoc include managing independent and collaborative research projects at a level of independence beyond that of a graduate student, while also mentoring/training undergraduates, research assistants, and/or graduate students in the lab. The postdoc should acquire skills necessary to complete their research project, reach out to collaborators when necessary, and generate ideas for their own project. They should also begin to plan their independent research program that they will take with them when they leave the lab, which will be distinct from their postdoctoral PI's research. More work on this independent research program should begin by the end of the postdoctoral position, to establish the foundation for their future lab.

Fundamental issues and challenges

The biggest problem inhibiting recruitment, retention, and overall quality of life for postdocs is money. Postdoctoral positions are incredibly underpaid for the level of training that they require. I am a postdoc at [redacted for anonymity] and [redacted for anonymity], one of the most expensive cities in the US. My salary (which started at $55k) barely covers my basic living expenses. I applied for subsidized university housing (which is still quite expensive) as soon as I could, but there were no openings. I ended up living with roommates for the first 5 months of my postdoc, and then finally found an off-campus studio apartment that I could (barely) afford at $2000/month, which is standard or even cheap for studios in [redacted for anonymity]. I did not even initially qualify for this apartment, as the requirement was to make 3X the rent, and thus I was required to pay an even higher security deposit than normal. Luckily I

had enough in savings, but this was a tremendous financial burden. Requirements like this are common, so most postdocs do not qualify for the majority of apartments in high cost-of-living cities. I find that I worry much more about money now than I did even during my PhD in New York City, because I at least had guaranteed subsidized housing for the duration of my PhD. I cannot even fathom how parents are affording their expenses as postdocs, as childcare for one child at [redacted for anonymity] costs about 70% of our income.

The low pay of postdoctoral positions is a tremendous barrier not only to recruiting talent to the scientific workforce but also to diversity and equity in academia. People who have student loans, medical, or family expenses cannot afford to work for such low pay and are forced to find employment elsewhere.

Existing NIH policies, programs, or resources

To be completely honest, there is no substitute for higher pay. Financial and/or housing instability are major stressors which make it difficult for people to achieve their full potential, and bar people from pursuing these careers in the first place. In recent years, there has been a significant increase in training programs and career workshops for graduate students and postdocs, which I think have been moderately useful but ultimately have little impact on trainees' decisions to pursue a career in academia.

One issue that I did not mention above but is also a major barrier to postdoc satisfaction and success is toxic work environments. In general, academia has not been successful in addressing bullying and harassment in the workplace. In addition, many PIs are not well-trained in mentoring and are primarily concerned with research output. PIs at R1 universities are chosen for their positions almost solely based on research productivity and other factors are not highly rewarded. Requiring PIs to undergo more extensive training in mentorship and maintaining healthy lab environments could potentially improve the postdoctoral training ecosystem. Requiring a more extensive evaluation of mentoring history for faculty positions could also be beneficial.

Although some diversity NIH grants already exist, expanding these grants could help to increase diversity in academic research. In particular, it would also be helpful to extend the timelines to apply for K99, F32, and similar grants, as it puts a lot of pressure on postdocs to get publications out quickly which may not always be possible or in the control of the postdoc. Additionally, expanding support for postdocs to receive critical training in teaching and mentoring (such as through the IRACDA grant) would help postdocs to be better prepared for faculty positions.

Proven or promising external resources or approaches

HHMI recently announced that they are increasing the minimum postdoc salary in HHMI-funded labs to $70k. NIH should increase their minimum to the same. NIH should also make it easier for labs to attain supplemental funding to keep up with salary increases after a grant has already been initiated. At [redacted for anonymity], the postdoc union successfully negotiated a higher salary. Unfortunately, many PIs opposed this effort because they would have to pay the increased salary out of existing grants that had been obtained when postdoc salaries were lower. Many PIs were talking about laying off postdocs because they would not be able to afford to keep all of them after the pay increase. This put postdocs and PIs at odds with each other and created unnecessary conflict, despite most PIs agreeing in principle that postdocs deserved higher pay.

I also think that requiring more formal evaluations throughout the postdoc would be helpful. Many companies have regular "360 degree" evaluations in which bosses evaluate their employees, and the employees also evaluate the boss. In academia, it's common to work for many years without receiving any formal evaluation or having an opportunity to give your mentor feedback about what you would like them to improve. This can lead to general job dissatisfaction, or a feeling of being lost or overlooked in your position. Requiring these types of formal evaluations could improve postdoc job satisfaction.

Finally, I think there should be more training required for alternate careers outside academia after postdoc. The truth is that there are simply not enough faculty positions for every postdoc to obtain one, so we need to be more realistic about the options that exist and help postdocs prepare for a position that will ultimately be a good fit for them.

Response 3091

Perspectives on the postdoc roles and responsibilities

to me it means, where you learn to manage high-risk projects, gain extreme expertise in one area, write grants, train (and manage) other scientists (grad/technicians)

Fundamental issues and challenges

low salary, non-existent family and fertility treatment benefits, unrealistic expectations on timeline for grants/papers, unacceptable publishing standards / measures, NON-EXISTENT faculty positions. the last one being the most detrimental factor. there is ZERO transparency in the faculty job process. it is heart breaking, unfair, and completely pushes people away.

Existing NIH policies, programs, or resources

K99 timeline has to change or the expectations for what are needed to get a K99 need to change. PIs have to go through training at NIH about how to manage a lab, train people. NIH should increase postdoc salary or provide additional support for higher-cost of living places like NYC, Boston, San Francisco, San Diego which are hubs for American and international postdocs from all backgrounds. Distributing the money to all labs so that lab sizes need to be smaller is a good idea in principle if carried out carefully but still it is not sustainable with the amount of money NIH is offering with grants right now. The NIH idea of small labs with the amount of money they are offering suggests a lab of 5-6 people which cannot be competitive in any way realistically.

Proven or promising external resources or approaches

academic vs non academic jobs are completely different. there are some hiring models and working environment changes that some companies have incorporated but they are not realistic for academia. but more transparent job market process, mentoring style set at UF Scripps (for junior faculty), and providing more positions are every job cycle by reducing the space and allocation for >85 year-old PI labs would be a great start!

Response 3092

Perspectives on the postdoc roles and responsibilities

I view postdocs as highly skilled and valuable employees, whose expertise and experience should be applied for the advancement of science. At the same time to progress and keep oneself up to date with global science postdocs should be given the opportunity to take courses, workshops, attend conferences and symposium and receive guidance for professional development.

Fundamental issues and challenges

1. Lack of financial help at the beginning of tenure: Visa fees, relocation fees, no moving in expenses adds a high financial burden on the incoming postdocs
2. Short visa duration add renewal headache: J1 Visa is subjected to DS so why not grant for full 5 years, because in case of no employment continuity anyway the candidate has to return to home county. At least with valid visa candidate can travel internationally with peace of mind.
3. No job security
4. Lack of Academic position opportunities hampers the interest and retention of postdocs
5. Low salaries hampers the possibility to stay in academic
6. Include paid parental leave and child care subsidiaries
7. Leave distribution should be similar across board, some institutes give leaves as soon as you join, some institutes have accrual of leaves. Accrual of leaves makes it very difficult to travel and leads to loss of pay incases of travel

Existing NIH policies, programs, or resources

1. The most important is the options for funding. Expand training grants opportunities for non-US citizens

Only NIH grant that is available to non-US citizens is K99/R00, which is very competitive and has a deadline of 4 years in postdoc. What happens if a postdoc changes lab? then precious years to work for the grant is lost!

2. Recommended salaries to be made mandatory and also automatically increase annually as per the pay scale , so that it is followed diligently in institutions across USA
3. Better, transparent and supporting work environment. Form a committee to listen to postdocs complaints and guide them better related to authorship issues, professional development, job search opportunities

Proven or promising external resources or approaches

NIH should align with the National postdoc association and also take in consideration the postdoc association at various institutes to get a feedback and ideas from them to make postdoctoral research experience fulfilling, satisfying and not filled fear of lack of money, job insecurities, visa insecurities. Postdoctoral years should be spend in advancing science and solving healthcare issues and not in these fears and fights.

I would like to express my sincere thanks and gratitude to NIH for giving the opportunity to share ideas, a platform to speak our minds and forming a working committee group to positively reshape the postdoctoral experience.

Response 3093

Perspectives on the postdoc roles and responsibilities

- Definition of a Postdoctoral Fellow: Following previous AAMC and NPA definitions, a Postdoctoral Fellow is an individual holding a Ph.D. or M.D., or equivalent degree who is temporarily appointed primarily to receive advanced research training under the guidance of a mentor holding a faculty appointment. In addition to research training, other training areas include grant writing, executive training, and mentoring.
- Time Limit as a Postdoctoral Fellow: The time as a Postdoctoral Fellow position should be limited with a focus on developing targeted research skills, mentoring skills, and professional skills. To promote career advancement, we recommend that NIH establish a specified time limit for the Postdoctoral Fellow position. That defined window for training as a Postdoctoral Fellow should start when the advanced degree is obtained rather than the time invested at a particular institution. However, there should also be limited exceptions such those with unemployment, health, or family issues.
- Mentored Training: For Postdoctoral Fellows to succeed in their next career phase as a research scientist, a trained mentor is needed. The mentor should be one who promotes development of new research skills, independent thinking, professional and executive training, and career exploration.
- Diversity of Postdoctoral Fellows: A pool of new investigators from diverse backgrounds starts with a diverse pool of Postdoctoral Fellows that includes trainees from different ethnic, educational backgrounds, financial resources, and countries. Approaches should include strategies that attract and cultivate Postdoctoral Fellows from diverse backgrounds, including international fellows.

Fundamental issues and challenges

- Postdoctoral Fellow Compensation: At [redacted for anonymity], Postdocs are classified as mentored trainees with no CV review but compensation is strictly based on the NRSA Table. This policy provides equity and ensures that outstanding and promising trainees funded through the T32/F32/K99 mechanisms do not have a pay cut. The NRSA Table provides a living wage for a single person in [redacted for anonymity], a $75,000 living wage is needed if there is also a child. This is an important driver for Postdocs with children or other family-related expenses. Women and those from under-represented groups particularly cannot afford the potential pay loss for a job with a poor career trajectory, poor benefits, long hours, poor work/life balance, and the continued stress these issues present. Secondly, a mentor sponsoring an international Postdoc in obtaining a H1B visa has to pay the prevailing wage of $72,000 for a trainee with 0-5 years of experience. This is a different equity issue when the highest compensation for other Postdoctoral Fellows is $61,500. The third common issue is pay for the highly competitive fields bioinformatics and artificial intelligence.
- T32/F32/K99 Postdoc Compensation: In addition to healthcare benefits, [redacted for anonymity] offers Postdocs flexible spending accounts for childcare, life insurance, and matching retirement funds. For T32/F32/K99 trainees, mentors provide an account for healthcare benefits but the [redacted for anonymity] matching benefits only applies to the ~$300 for healthcare benefits. By losing retirement benefits and Social Security deposits, many nationally competitive Postdocs turn down the offer.
- Others Struggling for Grants Decreases Enthusiasm: Career choices are highly influenced by their working research environment. Research faculty continuously write grants to stay operational and give up work/life balance to write another grant. The observant Postdoc questions if they can remain competitive throughout their career or give up that level of work/life balance.

Existing NIH policies, programs, or resources

- Raise the NRSA Stipend Scale: The increases in the NRSA Table have not matched the cost of living wage. Raising the NRSA Stipends would encourage nationally competitive Postdocs to seriously consider an academic research career. Some institutions strictly adhere to the NRSA Table for Postdoc compensation and others use the Table to establish a minimum level. Thus, raising the NRSA Table would improve compensation for a significant fraction of Postdocs.
- T32/F32/K99 Compensation: These training mechanisms should remain prestigious and policies should be established to ensure the recipient does not lose compensation or benefits available to other Postdocs at that institution.
- Train the Trainer: Mentors should promote development of new research skills, independent thinking, professional and executive training, and career exploration. NIH should encourage this by providing guidelines for expectations and requiring Postdoc mentors submit an outline how those guidelines are being addressed in their Annual Progress Report. Guidelines could include a specified number of hours required for the Postdoctoral Trainee to attend Professional Development Workshops and a specified time since degree completion to qualify for the position of Postdoctoral Fellow.
- Promote Diversity: New approaches that attract, encourage, and promote Postdocs from different ethnic, educational backgrounds, financial resources, and countries are seriously needed. As the PI of an NIGMS IRACDA K12 Program, this cohort model successfully promotes community building, peer-to-peer mentoring, networking opportunities, and career development within [redacted for anonymity], our partner institutions and nationally. International scholars (50% of [redacted for anonymity] Postdocs) also need new approaches that continue to attract those interested in a biomedical research career.
- Promote Exploration of Career Choices: While our Postdoc entry survey suggests ~75% want an academic research career for an academic position. A program like the previous BEST Program would help provide resources and opportunities for Postdocs to explore multiple career options.

Proven or promising external resources or approaches

- Cohort-based Postdoc Programs: Cohort-based programs such as the IRACDA, MOSAIC, and BEST have successfully promoted community building, peer-to-peer mentoring, networking opportunities, and career development for Postdocs from diverse backgrounds. Expansion of these cohort-based programs would not only provide opportunities to expand the diversity of the junior biomedical research workforce but also provide access to additional career and professional development opportunities.
- Support of Early-Stage Investigators: Success as an Ealy-Stage Investigator has become pivotal in securing an entry level research faculty position. This unintended consequence of this successful program puts greater emphasis on monitoring the paylines of this group, supporting career development programs, and identifying those at risk for losing their grant support.
- Appropriate Treatment of Research Trainees: [redacted for anonymity] Postdoc Working Group, a subcommittee of the AAMC Group on Research, Education, and Training (GREAT), a taskforce developed the Appropriate Treatment of Research Trainees (AToRT). This guide serves as an excellent resource that provides guidance in strategies that promote inclusive and supportive training environments for graduate students and Postdocs. Recommendations by NIH to adopt these policies will help provide the appropriate framework for institutions to identify and discipline investigators not providing a supportive environment.

Response 3094

Perspectives on the postdoc roles and responsibilities

As a graduate student contemplating the postdoc route, I perceive the academic postdoc as a critical, yet challenging stage in a researcher's career. This phase serves as a transition from graduate training to independent positions in academia or industry, enabling the development of specialized skills and the pursuit of innovative research.

In my view, the roles and responsibilities of a postdoc include conducting independent research, publishing findings, and contributing to grant writing. Additionally, postdocs often mentor students and engage in teaching activities, which can be both rewarding and demanding.

Despite the opportunities that postdoctoral positions offer, I am aware of the challenges they present, such as the pressure to publish, financial concerns, and job insecurity due to short-term contracts. As I weigh my options, I seek to strike a balance between the potential benefits of the postdoc experience and the personal and professional stability I desire in my career.

Fundamental issues and challenges

I can't help but notice several **Fundamental issues and challenges** that inhibit the recruitment, retention, and overall quality of life for postdoctoral trainees in academic research.

Financial concerns: Postdoc salaries often fall short when compared to industry positions, making it difficult for trainees to manage student loan debt and meet other financial obligations. This disparity can deter talented individuals from pursuing academic research careers.

Job insecurity: Short-term contracts and the uncertainty of obtaining a permanent position in academia can make the postdoc experience stressful and lead to a lack of job satisfaction.

Work-life balance: The pressure to publish, secure funding, and meet other expectations often results in long working hours, leaving little room for personal life and self-care. This imbalance can contribute to burnout and negatively impact mental health.

Limited career development support: Insufficient mentorship and professional development opportunities can hinder postdocs from reaching their full potential and make them question the long-term benefits of staying in academia.

Competitive job market: The scarcity of tenure-track positions and the increasing number of highly qualified postdocs create fierce competition, further exacerbating job insecurity and dissatisfaction.

Existing NIH policies, programs, or resources

Postdoc salaries: NIH stipend levels lag behind industry standards. Reevaluating and increasing these could draw and keep talented postdocs in academic research.

Loan repayment help: Broadening the NIH Loan Repayment Programs (LRP) to cover more postdocs or offer extra repayment choices would lessen financial burdens and make academia more enticing.

Targeted grant opportunities: Additional funding aimed at early-stage researchers like postdocs would enhance their ability to secure grants and transition to independent research roles.

Enhanced mentorship: The NIH should foster programs prioritizing mentorship and career development, arming postdocs with essential skills to succeed in academia and other sectors.

Mental health support: NIH-funded institutions need encouragement to allocate resources for mental health, promoting a healthier work-life balance, and addressing burnout among postdocs.

Job stability: Supporting longer postdoc contracts could alleviate job insecurity, allowing researchers to focus on their work without the constant worry of finding their next position.

Proven or promising external resources or approaches

Industry partnerships: Collaborating with the biotech and pharmaceutical industries could provide postdocs with exposure to alternative career paths and valuable practical experiences, making the academic route more appealing.

Professional development programs: Adopting successful models from institutions like the National Postdoctoral Association (NPA) can help improve training, mentoring, and overall job satisfaction for postdocs by offering workshops, networking events, and career guidance.

Remote and flexible work options: Encouraging remote work and flexible hours can improve work-life balance and attract a diverse pool of candidates, including those who may face geographical or personal constraints.

Interdisciplinary research initiatives: Fostering interdisciplinary collaborations can broaden postdocs' perspectives, strengthen their research skills, and increase job satisfaction by exposing them to new ideas and methodologies.

Mental health support: Drawing inspiration from universities with robust mental health and wellness programs could help NIH-funded institutions create a supportive environment that addresses stress and burnout among postdocs.

Postdoc advocacy groups: Establishing or expanding postdoc advocacy groups can empower postdocs to voice their concerns and work collectively to improve their working conditions, training, and career prospects.

Response 3095

Perspectives on the postdoc roles and responsibilities

I elected to pursue a postdoc position in 2012 as I was finishing graduate school. To me, the position meant:

1. opportunity to learn new techniques, and immerse myself in a new but related area of research,
2. opportunity for additional development relating to a science career such as mentoring others and grant writing, and
3. required preparation for an academic career, which I was heavily considering. I held a postdoc position from 2014-2019 and began a tenure track faculty position in early 2021 (with a staff scientist role in my postdoc lab bridging the gap).

I obtained an R01 in 2022, and have been attempting to recruit a postdoc since November, 2022. In my current role, I would like to provide an opportunity for someone become acquainted with my field through helping complete the experiments I have put forth in my R01, and importantly, also support them in pursuing interesting side projects to develop something they have ownership over, and could use to launch their own independent line of research.

Fundamental issues and challenges

Issue 1: The F32 program has numerous problems:

1. Fellowship stipends are not "earned income" thus fellows are not "employed" by their university. They pay taxes health insurance benefits as imputed income. Health insurance premiums have become immensely expensive, so a postdoc supporting a family may owe taxes on upwards of $20,000 of imputed income.
2. F32 fellows are ineligible to contribute to retirement programs, placing them financially behind peers working traditional jobs.
3. While stipend levels have improved, the stipends are still insufficient for high COL cities, considering postdocs relocate for these positions and may support families.
4. Personally, I trepidatious on accepting my F32 award due to the payback agreement--I did not want to leave my position early, but I would not have been able to stay if there were interruptions in my spouse's income.
5. PIs with NIH funds are prohibited from increasing the salary support of F32 fellows, but PIs with other types of funding are able to do this. This results in inequity within departments and universities.

Issue 2, recruiting international scholars: In five months of advertising, I have only received one qualified (and excellent) applicant. They had to reject my offer, as it was unsafe for them to leave the US in order to apply for a J1 visa from China due to COVID lockdown policies during that time. I regret that I had no other mechanism in which to hire them. Fixing issues imposed by visas would require cooperation of multiple governmental agencies, but this was the deciding factor that cost me an excellent postdoc in a time when recruitment is already strained. Promising graduate students from countries experiencing instability would be discouraged from taking a postdoc position due rules obtaining and fulfilling a J1.

Existing NIH policies, programs, or resources

In my view, F32s can only be undertaken by postdocs with external financial support and without financial dependents. This harms/discourages postdocs who are from economically disadvantaged backgrounds or who have children. I realize some of this falls under the purview of the IRS, but that should not preclude an award mechanism from functioning differently than it currently does (e.g., change the F32 from a scholarship for a non-degree-earning individual to earned income.)

Remove the rule limiting PIs from paying F32 fellows additional stipend support from NIH funds. This will be necessary as other institutions (e.g., University of California, HHMI) have higher postdoc salaries than the NIH F32 salary.

The K99/R00 should not be tied to 4 years from graduation date. Many external factors influence a postdoc's ability to begin a project and achieve meaningful results and publications in order to compete for the K99 (e.g., time for relocation or family reasons). This timeline also discourages ambitious, long-range projects in favor of fast or predictable results. It also overlaps the practical support time for the F32.

The modular R01 budget is becoming insufficient to support the staff required to complete the research due to increasing postdoc salaries. It is also difficult to afford and retain career technicians and staff scientists.

Proven or promising external resources or approaches

No response

Response 3096

Perspectives on the postdoc roles and responsibilities

When I just started I saw the postdoc experience as something that can enrich me professionally, open me to new fields and new techniques, and serve as a path to hopefully open my own lab. Personally, I also saw it as an opportunity to be exposed to a new culture (I am not originally from the US, but got a green card during my time as a postdoc). I've been in my postdoc lab for over 5 years, and the lab is great, but honestly I am not so sure why I'm still doing this. I am a parent and I feel like I need to choose between my kids and my academic career.

Fundamental issues and challenges

Low salaries are a major problem.

Difficulties in combining the requirements of lab work along with being a parent that actually wants to spend time with my kids.

Feeling of isolation when working on a project in solitude may be hard for some.

Existing NIH policies, programs, or resources

Expanding the eligibility window of grants like K99 (further than the addition of two cycles due to the pandemic). Maybe allowing more revisions.

It would be so helpful if the turnaround of time-sensitive awards (like K99 that has a 4 year eligibility window) was quicker. currently it takes about 10 months from submission to decision. If turnaround was quicker then it would be possible to revise the application and resubmit quicker, helping to secure funding and gain some much needed confidence that we are on the right track.

Generally, allocating more funds to K level awards so that more talented postdocs may get them and survive the transition to independence.

Proven or promising external resources or approaches

consider establish funding mechanisms that will aim at funding a technician for postdocs. This would be a great way for postdocs to practice in writing a small grant, and will help them tremendously in advancing with their work, while keeping a healthier work-life balance.

Response 3097

Perspectives on the postdoc roles and responsibilities

The NPA and NIH jointly developed the definition of a postdoc. NIH should adhere to a consistent universal definition of a "postdoc" regardless of funding mechanism. "Trainee" is seen as diminutive by many, and should be avoided, while "scholar" or "fellow" is more appropriate. Postdocs are usually intent on entering different positions after a defined period of time unlike permanent staff. Establishing clear expectations at the offer of appointment for both postdocs and their PI's regarding their role and how it differs from staff scientists will alleviate misunderstandings.

Fundamental issues and challenges

The NPA 2023 Postdoctoral Barriers to Success report indicates that salary has a negative impact on 95% of postdocs' professional and/or personal lives. Higher postdoctoral salaries will assist those who wish to contribute to academic research and innovation, but struggle to support themselves and their families, especially in high cost areas. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Using "Rest of U.S." locality levels, the 2023 NIH minimum award would be $62,898, with higher amounts in areas with defined cost-of-living levels. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step. Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit.

For myself personally, I am concerned that the NIH "minimum" salary schedule for postdocs is treated as a "maximum" salary schedule by my institution, except in the case of extreme circumstances. As such, my PI's hands are tied by administration policy that is based on NIH guidelines, even though he would like to be able to pay me a more livable salary from available funding. For me, this means delaying motherhood until after my postdoc due to the high cost of childcare in my area, a challenging choice to make. If I am unable to secure a better-paying position within a few years, I will have to choose either between risking a potentially complicated geriatric pregnancy or leaving my institute/academia in general, although I love my lab and would otherwise choose to stay. I currently make ends meet by supplementing my income with additional work beyond my full-time postdoctoral efforts.

Existing NIH policies, programs, or resources

Postdocs deserve equitable benefits regardless of funding source. NIH should issue written guidance explaining that the mere fact of a postdoc receiving an NIH grant or fellowship does not prevent the host

institution from categorizing such postdoc as an employee. (Other implications, such as tax, do not stem from NIH.) Currently, postdocs can lose employee benefits when accepting an NIH fellowship, making these prestigious awards less feasible. NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs. In addition, NIH could allow PIs to supplement fellowships from their NIH RPG funds. NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies. The NIH should expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.

Proven or promising external resources or approaches

I sincerely thank NIH for the platform to share our vision for postdoctoral training in the biomedical sciences. I applaud NIH's policies and programs that have progressed postdoc training to date, including offering OITE resources to external audiences, promoting DEIA through COSWD and UNITE, tailored training programs like MOSAIC and IRACDA, and supporting reentry and reintegration supplements for scientists with career gaps.

Response 3098

Perspectives on the postdoc roles and responsibilities

The role of a postdoc is to implement the scientific training they gained during their doctorate to begin their journey to an independent researcher. Ideally, new and complimentary research techniques are learned during their postdoc to broaden the sort of questions they can ask in their own lab. Time should be spent by the postdoc and their supervisor on filling gaps in expertise to set them up for their independent career such as grant writing, mentoring, teaching. Postdocs should work on a project that they are able to take with them to start their own lab. Postdocs should help mentor and teach lab members, especially in experimental techniques, as this will be vital for their own lab.

Fundamental issues and challenges

There is no greater issue or challenge to postdocs than compensation. Having already sacrificed a great deal of earnings potential in pursuing their PhD, postdocs are then kept at depressed wages. These early years, during people's 20's and 30's, are vital for retirement savings. Yet, PhD students and postdocs rarely get access to tax advantaged retirement accounts. Even those who do have access, the point in largely moot as wages are depressed and retirement savings are unthinkable. During my postdoc I gained and lost access to my university's 403(b) plan depending on my funding source. Prestigious fellowships costs me tens-of-thousands of dollars in lost retirement savings. This brings the broader issue of how universities and institutes treat postdocs as employees or not, seemingly when convenient for them. The postdoc period is stressful enough, but worrying about a lapse in health insurance due to being awarded a fellowship is absurd.

Universities and even PI's seem to be completely out of touch with market rates a doctorate level of training demands in industry. Compensation discrepancies are only further exacerbated by differences in geographic location. It is a disgusting disservice to science trainees that the NIH does not provide cost of living adjustments to the NRSA postdoc salary scale.

Many people think about starting families around the time of their postdoc. However, at current compensation levels this is nearly impossible, especially in HCOL cities. The $2,500 childcare supplement is frankly a slap in the face and shows just how out of touch the NIH is with the current cost of childcare.

For all that the NIH attempts to do for DEI, compensation could be the single greatest tool to raise up those of underrepresented groups. Instead, these groups are given the opportunity to hamstring their abilities to gain generational wealth and meaningful upward mobility.

Existing NIH policies, programs, or resources

Increase NRSA pay scales to be competitive with industry. Tie NRSA salary to inflation. Provide cost of living adjustments to NRSA salaries. The NRSA scale is always the pathetic fallback universities exploit to also not pay their non-NIH funded post-docs a depressed wage. Increasing the NRSA scale would have a massive impact on postdocs across the country. Provide meaningful childcare support in terms of

supplements that will actually make an impact, around $15,000. Provide a retirement saving vehicle and supplement retirement savings plans.

Proven or promising external resources or approaches

Literally just pay us competitively. We obviously already want to do follow this career path, having already completed a PhD and choose to continue our training as a postodc. I cannot make it more clear that the NIH just needs to pay better.

Response 3099

Perspectives on the postdoc roles and responsibilities

It should not be viewed as a training program. Postdocs should not be treated like a cheaper temporary alternative to permanent full time scientist.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Increase the salary for postdocs starting from $75000 considering the inflation and responsibilities for providing for the family.

Proven or promising external resources or approaches

No response

Response 3100

Perspectives on the postdoc roles and responsibilities

Through my 5+ years as a postdoc in two different labs, I have found that the responsibilities of being a postdoc in the biomedical sciences are very similar to those of being a doctoral student. With the support and mentorship of their advisors, both are expected to drive forward their own scientific research projects and learn all the background information and techniques required to do so. For doctoral students, their research project is a way of training them how to do science and design lines of inquiry, while most postdocs already know how to do this. However, in my experience, postdoctoral training differs from doctoral training not just in what skills it can provide training in, but also the fraction of trainees who actually require that training and in the efficacy of that training process. For postdocs who wish to pursue careers as independent investigators, their research project is a way of building expertise in a new field and building a scientific foundation for their new lab, but according to McConnell et al. 2018 eLIFE, among postdocs in the US (the majority of whom are in the life sciences), only 50-60% aim to pursue careers in academic research. For postdocs with other career aims (e.g., industry, teaching, etc.), further experience doing scientific research provides little to no career-relevant training, meaning that their roles and responsibilities as a postdoc are far more similar to a research job than to a training position. Thus, I think it is important that we reckon honestly with how heterogeneous the postdoc population is in what they actually need and get out of postdoc positions, allowing us to shape postdoctoral experiences in a more practical manner.

Fundamental issues and challenges

The primary issues I see with postdoctoral positions are shortcomings in support and training. Doctoral and postdoctoral training are both highly dependent on the mentor-mentee relationship. Because faculty are not trained in how to mentor and are not held to any standards for the quality of their mentorship, the level of support that trainees receive is highly variable from lab to lab. When mentorship from an advisor falls short, trainees are forced seek out other sources of training on their own, which is an extremely fraught process given that trainees rarely fully understand what skills they need to learn before they themselves have learned them. While this issue is not unique to postdoctoral training, postdoc differs from doctoral training in that there is no formalized program to scaffold the process. The support structures of doctoral programs such as coursework and thesis committees—which can sometimes help to mitigate gaps in advisor mentorship—are absent in postdoctoral training. Additionally, postdocs who wish to pursue careers as faculty must learn skills that are not taught through the day-to-day pursuit of doing science

(e.g., managing people, managing lab finances), meaning that some simply lack these skills or are forced to organize their own training in these skills. These challenges are made even more daunting by the time limits that postdocs are subject to. Nearly all postdoctoral fellowships deem postdocs ineligible if they are more than a certain number of years removed from getting their doctorate. This means that any postdocs who experience bumps or delays in their training (e.g., poor mentorship, being scooped) will have more difficulties in achieving their career goals through no fault of their own. These flaws in the postdoc experience increase stress, decrease overall quality of life, and can even drive prospective postdocs away from academia entirely.

Existing NIH policies, programs, or resources

Poor mentorship—I think is one of the largest issues plaguing academia, causing problems for all trainees. In my mind, fixing this issue would require a two-pronged approach. Firstly, current and prospective faculty should receive formal training in how to mentor effectively and sensitively. This type of training could become a prerequisite both for receiving NIH funding and for using it to pay postdocs. For current faculty, mentorship training could be treated much like education in responsible conduct of research; they would be required to receive this training and to update it regularly in order to receive NIH funding. Additionally, for postdocs who seek to become faculty, the NIH could stipulate that advisors of these postdocs can only pay them using NIH funds if they submit a plan for how the postdoc will be formally trained in how to mentor. The second facet to solving mentorship issues in science is for faculty mentors to be held accountable for the quality of their mentorship. This could be done through requiring regular (e.g., yearly) evaluations of an investigator's mentorship from their trainees, and these evaluations could, again, be made part of the criteria used to evaluate investigators for NIH funding. Admittedly, given the sometimes-complicated power dynamics that exist between mentors and mentees, ensuring that the mentorship evaluations are honest may prove to be a difficult and nuanced task. However, if we are to truly hold faculty accountable for their mentorship—one of the primary responsibilities they are entrusted with—I believe that trainees themselves will be the most accurate judges of this. There are fixes for several other postdoc problems that I think the NIH should make, including either lengthening or completely abolishing eligibility timelines for postdoctoral fellowships, but I do not have space here to discuss these at length.

Proven or promising external resources or approaches

While I do not have a detailed familiarity with training in how to mentor, I think it is important to remember that this is not something that we as scientists will need to make up on our own. For example, there are entire schools dedicated to teaching management skills. While management and mentorship aren't quite the same thing, I think there is enough overlap between the two to make it clear that we are not the first to try to figure out how to effectively mentor others.

Response 3101

Perspectives on the postdoc roles and responsibilities

We

Fundamental issues and challenges

Need

Existing NIH policies, programs, or resources

Higher

Proven or promising external resources or approaches

Pay!

Response 3102

Perspectives on the postdoc roles and responsibilities

The academic postdoc, more often than not, represents the major workhorse of American research. While it was historically meant to represent a training position on the route to becoming an independent PI, the reality of the current academic climate is that there are not nearly enough academic/faculty jobs to

support the number of postdoctoral trainees. When it was truly a training position and the odds of getting a faculty position were high, it made sense that the salaries and benefits/status given to postdocs were quite low--as this was typically a very temporary situation. However, postdoc position lengths have now been extended to well beyond 4+ years, often without the guarantee of a faculty position on the other side. Thus, while I still view continued training to be a major component of a postdoctoral position, the reality is that postdocs offer a lot more value to their labs and to institutions than this would suggest. They perform the majority of the country's research, they mentor younger scientists, they help manage labs, they produce publications, they contribute to the generation of intellectual property for institutions, and they forge collaborations. All of these responsibilities often take place for 4 years or more, making postdocs very valuable employees and drivers of American science.

Fundamental issues and challenges

The biggest issues facing postdoctoral trainees include low salary (particularly in high cost-of-living areas) coupled with institution's resistance to view and treat postdoctoral trainees as true employees. Postdocs are consistently on temporary contracts that must be renewed, instead of being hired as long-term employees. This precarious situation undoubtedly contributes to postdocs being exploited by their heads of lab, as their employment status is constantly hanging over their heads. This is especially true of international postdocs and scholars, who feel even more pressure about their performance and output given that it directly impacts their ability to stay in the country. Moreover, the low salary offered to postdocs is made that much worse by the added issue that postdoctoral trainees cannot contribute to retirement accounts or start 401Ks at any point during their training at all/most institutions. So not only are trainees falling behind their peers in terms of salary/net worth over the course of their late 20s and 30s, they are also losing years of potential retirement contributions. Given that there are so few permanent academic jobs available following a postdoctoral position, the disadvantages associated with the position can no longer be explained away by emphasizing that it's solely a 'training' position. Postdocs are employees and professional researchers, and their salaries and status within their institutions must reflect this moving forward. Also, given that alternative career paths often offer an income of at least double, it's hard for many postdocs to justify staying in the position. A higher salary and treatment as true employees would almost certainly improve recruitment, retention, and overall quality of life for postdocs.

Existing NIH policies, programs, or resources

The NIH minimum salary policy for postdocs must be raised to a level that actually reflects the extensive training and expertise that postdocs provide to institutions and to the American research enterprise more broadly. The current salary minimum does not signal that postdocs are valued. A starting salary of at least $60,000 would be a good start. In addition, the most logical adjustment to the NIH salary policy would also include regional salary minimums that account for cost-of-living. The same salary in one region would need to be significantly higher to support a meaningful quality of life in an expensive region like New York City. I also think it would go very far if the NIH mandated that postdocs must be treated and categorized as full-fledged employees of the institutions they work at. This means that postdocs can no longer be put on vague tax forms that end up becoming a confusing, added burden to deal with, and it also means that postdocs must be eligible for the same 401Ks and retirement programs that are offered to other employees. At some institutions, postdocs must pay health insurance out of their own salary (while other employees do not), and this is a massive added financial burden being placed on them on top of a lower salary. Ideally, postdoc contracts would also no longer be only 1-2 years in length moving forward.

Proven or promising external resources or approaches

HHMI just this week raised the starting salary of postdocs to $70,000, and just overall offers a lot of benefits to postdocs that are in line with what it offers its other employees. Much of how HHMI treats its postdocs could be modeled by the NIH.

Response 3103

Perspectives on the postdoc roles and responsibilities

I believe the standard view of a postdoc is someone who is expected to crank out data, publications, and funded grants, while training others in the lab.

Fundamental issues and challenges

The most glaring issue with postdoctoral training is the lack of applicability of the training activities to the career for which they are training. It focuses on generation of data and is ridiculously lacking in skills required to be a PI, including management, reviewing grants and papers, service, interpersonal effectiveness, interactions with administrators, how tenure works, networking with other postdocs and junior scientists, and budgeting.

Postdocs' identities as humans suffers from unrealistic expectations and a lack of support, including lack of career development opportunities (or lack of support from their mentor to participate in these), mental health awareness, and sense of community. Additionally, the salary is not commensurate with the high level of expertise and demanding work ethic. All of these issues lead to people not wanting to become a PI, as they feel ill-prepared, or not wanting to become a postdoc, as the conditions are widely known to be less-than-favorable.

Existing NIH policies, programs, or resources

Higher salaries

Proven or promising external resources or approaches

National Postdoc Association

Response 3104

Perspectives on the postdoc roles and responsibilities

An academic postdoc gains technical and theoretical experience under the mentorship and supervision of a more experienced academic, to gain credentials and qualifications for an independent research career. An academic postdoc may also assist in supervising more junior colleagues (e.g. undergraduate or graduate students) to gain experience in teaching and mentorship.

Fundamental issues and challenges

Salary and benefits, including family leaves with pay, especially in locations with high cost of living; competition from other academic institutions that either offer higher salaries or are in locations with lower costs of living; lack of a core postdoctoral pool in a PI's lab to stimulate intellectual growth and productivity of individual postdocs.

Existing NIH policies, programs, or resources

NIH postdoctoral pay scales should increase, but caps for PIs' R01 budgets need to increase. For example, the number of modules to be requested before detailed Budget Justification should increase, or be in proportion to the number of postdoctoral fellows (and years experience) that will be supported by the R01.

Proven or promising external resources or approaches

Make available funding mechanisms from the NIH to support institution-based postdoctoral workshops on career development, or proposal preparation, or invitations for outside seminar speakers.

Response 3105

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity] agrees with the NIH definition of the academic postdoc which is "an individual with a doctoral degree who is engaged in a temporary period of mentored research and/or scholarly training for the purpose of acquiring the professional skills needed to pursue a career path of their choosing." As an organization, [redacted for anonymity] is very focused on supporting postdocs in their pursuit of a career path of their choosing. We believe postdocs should be focused on independent projects that feature their peak creativity and inventiveness so they can pursue their own career with groundbreaking research.

The postdoc position should allow for bold blue-sky ideas and provide the opportunity for early career researchers to take chances. In order to support the transition to independence professional development, mentoring, and networking should be incorporated into the position. Postdocs should also be able to manage their own research funds to pursue their work and understand the administrative pieces of the

job. This is a stepping stone to the next career and postdocs should be prepared for those opportunities in the position versus focusing only on the goals of their mentor.

Fundamental issues and challenges

- The Apprenticeship Model: Many postdoc positions continue to follow the apprenticeship model which means the postdoc could largely be focused on fulfilling the goals of the lab instead of their goals to become an independent researcher. Many postdocs, especially those funded by the mentor's grant, feel pressure to focus on their mentor's priorities instead of their own research interests due to the power dynamics created in the lab. Without the scientific freedom that could come from postdocs having their own funds awarded directly to them, scientific creativity can be limited. As a result, many postdocs are stuck in their positions longer than required because they have focused on the goals of the lab instead of their individual growth.
- Barriers for International Researchers: A large pool of postdocs are international researchers. Many are discouraged from coming to the US for their postdoc due to immigration and funding challenges. Currently, many foreign postdocs are limited to the K99/R00 mechanism for supporting their transition from an academic postdoc to an independent researcher. This limits their opportunities to secure jobs as independent researchers and pushes postdocs to return to their home country even when it's not desired. In addition, due to immigration policies, it is difficult for this pool of talent to stay in the country and have a good quality of life.
- Lack of Funding Opportunities to Transition into Independent Roles: Many postdocs that would like to become independent researchers are discouraged due to low paylines and success rates at the NIH. Researchers have a less than 20% chance of receiving independent research funding from the NIH. This makes it very difficult to transition out of the postdoc position. Additional funds are needed to support these researchers at this critical stage.

Existing NIH policies, programs, or resources

Expansion of the funds dedicated to early career researchers to support the transition of postdocs to independent positions. NIH should set a goal to invest at least 10% of its overall budget to young researchers, specifically postdocs.

Enhance bridge funding to support young investigators at key transitions in careers (e.g. the transition between postdoctoral researcher to early career faculty). NIH could target funding increases to the High Priority, Short-Team Project Award program (R56). This program typically funds one or two years of high-priority new or competing renewal R01 applications and are awarded to projects that fall near the payline of the IC. This program could be targeted to specifically support early career researchers at critical points in their careers such as the final years of their postdoctoral fellowship or during the years prior to receiving their first large independent funding opportunity. ICs could be required to set aside a certain percentage of their R56 funding pool for investigators with early-stage investigator status.

Double annual funding for existing award programs like the Maximizing Investigators' Research Award (MIRA) and the Stephen Katz Early-Stage Investigator Research Project Grant. NIH should encourage more ICs to support the MIRA program, which was pioneered by NIGMS.

Double annual funding for the Common Fund's High-Risk High-Reward programs, with a focus on those for early career investigators, the Director's New Innovator Award and the Director's Early Independence Award.

Increase funding for career development awards (K awards) that provide protected time for research and maximize independent funding opportunities for early career investigators.

Require all ICs to have Early Stage Investigator policies that increases the paylines and success rates for those researchers to increase the opportunity for postdocs to receive their first RPG award.

Proven or promising external resources or approaches

NIH should look to philanthropy as a promising external resource to enhance the postdoctoral training ecosystem. The cost of doing research is constantly growing despite the limited funding increases available from the government. In 2016, Philanthropists provided 44% of research funding at US universities and non-profit research institutions according to a post from the Science Philanthropy Alliance (https://sciencephilanthropyalliance.org/philanthropy-a-critical-player-in-supporting-scientific-research-alliance-blog/). Modest donations and small awards add up and the NIH should think about ways public

and private partnerships can be formed to support postdocs and overcome compensation hurdles that limit the quality of life for postdocs. Through The Foundation for the NIH, NIH uses private-public partnerships to advance research in critical areas through the Accelerating Medicines Partnership Program. This model could be used to create partnerships with philanthropists, biotech, and pharma to provide another opportunity for postdocs to receive independent research funding that will help catapult them to the next stage of their careers. The challenges and issues we see for postdocs are extreme and the NIH must address these issues with the same urgency as we address some of our largest global health challenges.

Response 3106

Perspectives on the postdoc roles and responsibilities

- Broadly defined, the goal of a postdoctoral fellowship is an independent career, whether in academia or not. If the end goal is broad, then the training and mentoring needs to be broader.
- The roles **and responsibilities** for postdoctoral fellows vary greatly across academic disciplines, with funding, whether from a training grant or other award, often dictating the type of work that is assigned. The leads to variability in terms of resources, skill training, and community building.
- There is tension between a postdoctoral fellowship being a time to learn and explore and running experiments for mentor Roles as a lab manager or mentor for graduate students can be particularly variable. Trainees should expect to develop skills in proposal development, writing grants, and mentoring younger people.
- Mentors have the responsibility for training and helping to transition to independent research and/or faculty careers. This can result in tension between mentoring/training and supervising.
- There is a need to define the commitment to the postdoctoral training period for both the trainee and the mentor.
- Postdoctoral fellowships could be defined by time. After five years, it is appropriate to have a different title and show career growth.
- Postdoctoral appointment length should vary depending on the ultimate career path. It is not clear that postdocs aiming to enter industry positions benefit from 5 years of postdoc training.

Fundamental issues and challenges

Recruitment

- Recruitment of postdoctoral fellows is impacted by low salaries compared to industry and cost of living, especially considering the life stage of postdocs due to prolonged graduate training. Given that the difference between postdocs salaries and PhD student salaries is narrowing, postdoctoral fellowships are less desirable. Going forward, salaries should be adjusted for the cost of living relative to inflation.
- The lack of relocation packages makes it difficult to recruit postdocs from across the country and internationally.
- Job descriptions should outline responsibilities, duties and a mentoring plan.
- Depending on university policy, postdoctoral fellows might be recruited through limited advertising on list serves, or through a general listing on a human resources web page. These mixed approaches could result in limiting the pool of applicants.

Retention

- Lack of clarity for the length of the postdoc position which also leads to job insecurity.
- Loss of funding can negatively impact the job security and career goals of postdocs.
- Postdocs often leave due to a poor fit with a mentor, and lack of aligning expectations in advance. Communication with the mentor is essential from the recruitment stage to ongoing communication about reaching individual postdoc goals and project milestones. Setting expectations to the length of the position not only in terms of funding but also skills learned, and mentorship provided.
- Postdocs are vulnerable to power imbalances, especially if they are also international postdocs who are dependent on their mentor for visa renewal and in many cases a recommendation letter for obtaining permanent residency.
- A private office can increase productivity and reduce interruptions.

Quality of life

- Expectations for spending evenings and weekends in the lab can become onerous.
- While postdocs may have official vacation time, like any professional employee, they are not always able to utilize it.
- Abusive relationships, toxic work environment, and mental health challenges are all impacting postdocs and affecting quality of life.

Existing NIH policies, programs, or resources

- NIH programs (K01, K99, etc.) should be presented on a pathway so that trainees have a clear understanding of eligibility requirements and how to build an independent career with those awards. If the pathway shows flags (e.g. an individual with a K01 cannot also apply for an R01) that would help with understanding how to sequence the awards. The implications of choosing one grant mechanism over another should be clear prior to application, so that a postdoctoral fellow does not become ineligible for other training opportunities.
- Awards for non-US citizens and permanent residents would be helpful in recruiting postdoctoral fellows.
- It is challenging to quickly understand what one can do with each program. Information that quickly explains eligibility across a range of awards, as well as whether the award can be moved to a different institution would be helpful.
- Effort reporting has added a layer of complexity for postdoctoral fellows supported on R01 grants, since mentoring/training is not explicitly called out in those grant mechanisms.
- Postdoctoral programs that support academic/industry partnerships would be helpful.

Proven or promising external resources or approaches

- Cohort hiring is a promising model that helps with community building for postdocs and ensures departmental resources are in place to support trainees. [redacted for anonymity] College of Nursing and Health Professions used a cohort recruitment model in 2019. Ten postdocs were hired within a few months and the program invested resources in postdoc orientation and instituted weekly meetings to support skill and community development.
- Typically, postdoc appointments are designed to train postdocs to leave and enter independent positions elsewhere. However, some universities are prioritizing a long-term commitment and treating postdocs as a pipeline to faculty. [redacted for anonymity] has excellent examples in the College of Medicine and the College of Arts and Sciences. Our experience shows that faculty converted from postdocs are highly successful, due to efforts to fully integrate them into the department, with a focus on building an independent career.
- Some institutions are focused on diversifying the faculty pipeline by offering DEI postdoc fellowships that are internally funded through the Provost Office or Research Office. These awards not only offer competitive salary and mentoring they also offer seed money for research to create preliminary results for independent grant submissions.
- Industry postdoc programs serve as an excellent employee screening tool.
- More awareness for all the K award types.
- Formal grant writing workshops for early career scientists. A cohort model with hands on mentoring, perhaps expanding the National Research Mentoring Network grant writing model would be helpful.
- More policies are needed regarding work environment such as the new NIH policy on sexual and other harassment.
- Competitive salaries, particularly in fields like epidemiology where trainees have strong analytical skills in biostatistics and informatics and thus are attractive to industry, are needed to compete from strong candidates. Some universities are already addressing this by going above suggested NIH salaries.

Response 3107

Perspectives on the postdoc roles and responsibilities

Speaking about myself as a postdoc, postdocs in my training labs, and postdocs in my own lab, I emphatically believe that postdocs are in a training role. I do not buy the academic twitter narrative that "postdocs are highly trained professionals". They are highly specialized *researchers*, and often have a lot to learn when it comes to professionalism. The postdoc is a time to learn those professional practices and also to test whether a person who really loved their PhD research is able/interested in applying research skills to new questions and to develop a scientific identity. A postdoc should be brief and serve the needs of getting the next job.

Fundamental issues and challenges

PhDs and postdocs are taking longer, and many postdocs today are at more advanced life stages (partnered, parents). I do not think the long-term solution is to make the postdoc job (pay, duration) suitable to sustain a family, but to incentivize briefer timelines so this overlap doesn't occur.

Existing NIH policies, programs, or resources

I would love a supplement for recruiting postdocs specifically. Timelines for fellowships are very long, and postdocs shouldn't be. A fast-track to be able to take on a new postdoc at any time while a grant is active even if not previously budgeted for would be very helpful. They could then apply for fellowships.

Grant support for long-term research positions off the tenure track would also be helpful.

Proven or promising external resources or approaches

No response

Response 3108

Perspectives on the postdoc roles and responsibilities

To establish your own research program, learn new skills, mentor students, preparation for higher academic positions

Fundamental issues and challenges

salary

not easy for dual career couples with one partner not in academia because one has to be flexible regarding research locations

Existing NIH policies, programs, or resources

more fellowships and participation for resident aliens

Proven or promising external resources or approaches

Higher salary

Response 3109

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

- While the increase in pay from graduate school is significant, the salary/stipend of postdocs is not high enough to continue attracting academic-oriented scholars. When taking their talents to other industries, scholars receive larger paychecks as well as training, which is more appealing, especially for those with student loan debt.
- Postdocs are spearheading a huge amount of the research conducted at institutions; however, academia pays very little attention to them. There is a general sense of postdocs paying their dues before being allowed to even consider becoming a professor. If they exist at all, postdoctoral offices generally have only a few staff members and minimal budgets to oversee a huge portion of the early career scientists at an institution.
- Many institutions do not consider postdocs as part of their alumni community, so there is no tracking of outcomes after completion of the postdoc. Additionally, while training grants may want their trainees to continue in academic research, no career path should be considered a failure should a trainee choose it over academic research. The lack of tracking exacerbates the lack of university support and adds to the sense of transience that many postdocs feel.
- While the form and style of mentorship is unique to each relationship, mentorship is a skill that can be trained and honed like any other skill. Yet very few postdocs and even fewer faculty mentors receive mentorship training. It is extremely rare for a postdoc to have an opportunity to reflect on the mentorship they are receiving and have that reflection actually lead to positive change. As mentoring achievements are not part of tenure, promotion, or grant awarding, faculty who create poor (and even toxic) environments for their postdocs go into successful careers while using the data and experience of the researchers they mistreat.

Existing NIH policies, programs, or resources

- The NIH Maximizing Opportunities for Scientific and Academic Independent Careers (MOSAIC) program is an excellent example of cohort-based postdoctoral training. The program also focuses on institutional accountability and promotes mentoring through career advancement and professional development as well as the tracking of postdoc outcomes. This model should be expanded and adapted to other types of awards.
- Similarly, the model used for the NIH Institutional Research and Academic Career Development Awards (IRACDA) program should be replicated for introducing postdocs into a chosen non-faculty career and other job markets adequate to their level of training and expertise.
- NIH needs to clarify what is referred to with "relevant research experience." On the NRSA announcements, NIH specifies that relevant postdoctoral experience "may include research experience (including industrial), teaching assistantship, internship, residency, clinical duties, or other time spent in a health-related field beyond that of the qualifying doctoral degree." This list, however, is not present in other awards, so PIs keep scholars (notably, international researchers) in postdoctoral appointments for longer periods of time.
- At the same time, NIH must emphasize protected time for professional development by clarifying effort-related language, which currently attributes 100% of effort for research in the postdoctoral experience of several awards. Postdocs' 100% effort should be for research, training, career or professional development, and other scholarly pursuits as defined by the hosting institution.
- Finally, NIH should be very strict in setting postdoc working hours at 40 hours/week or less and penalize those PIs who force their postdocs to work more than that. In fact, by establishing that T grants allow participants to work outside of their grant time for up to 10 hours, NIH is literally endorsing a 50 hours/week work time and sending the message that this is okay for our researchers.

Proven or promising external resources or approaches

Postdoc development—NIH must increase salaries and stipends for postdoctoral researchers. Institutions follow NIH minimum compensation guidelines, so the impact of the changes at the NIH will be tremendous across the country. Simultaneously, dedicated time for professional development must be considered as part of effort. This will include academic preparation, career exploration, skill development, immigration education, and financial education.

Partnerships to improve postdoc experience—As a leader in science and medicine, the NIH should partner with other government agencies and leaders to address relevant issues to the postdoctoral experience such as (re-)establishing an age of retirement for tenured professors nationwide as well as a path to permanent residence and even citizenship for advance-degree scholars who have been contributing to the development of the American scientific enterprise for a defined number of years.

Funding and tracking—NIH must create mechanisms that fund postdoctoral affairs offices to provide programming for the exploration of various career tracks in the biomedical workforce. Some examples are the NSF Accelerating Research Translation (ART) program, Burroughs Wellcome Fund Career Guidance for Trainees, or the NSF Innovations in Graduate Education (although this one does not fund postdoctoral education). At the same time, the NIH could capitalize on its prestige and influence and urge other federal agencies, professional societies, and national organizations to partner to create and fund mechanisms to track postdoc motivations into the appointment, factors influencing postdoc career decisions, and postdoc training outcomes at the national level.

Response 3110

Perspectives on the postdoc roles and responsibilities

The postdoc is critical for furthering scientific endeavors in basic translational research as they are well trained and require less upstart time to learn new skills than graduate students, can progress projects faster towards logical endpoints for dissemination.

Fundamental issues and challenges

Many postdocs are unwilling to move to locations that are not coastal big cities to pursue scientific careers.

Salaries for postdocs compared to industry options are significantly lower. Increasing salaries for postdocs would help to address this issue. However, in order to address this, current grant funding of already existing budgets that have postdocs need to be increased to account for rises in salary, whereas future budgets can be increased during the submission process. Furthermore, there would need to be a push to increase faculty salaries in many cases, as there are several places where faculty salary would be very close to postdoc salary with significant upward movement in postdoc salary.

Existing NIH policies, programs, or resources

Provide supplemental funding for additional reasons for postdoc hires or give automatic supplements to postdocs with child care costs (perhaps 3-5k/year) as a pseudo raise for those with the largest challenge staying in a lower salary position.

Raise modular budgets (including existing budgets) to account for increased costs associated with raising the salary of postdocs

Provide more avenues for permanent staff positions (e.g., grants aimed towards research/staff scientist positions) to encourage postdocs at higher salary bands to stay in the position for a career. A stable 'senior' postdoc workforce that is adequately paid and happy to maintain this scientific role will do wonders towards pushing science forward as they will need less learning for each lab versus regular turnover of new people.

Proven or promising external resources or approaches

N/A

Response 3111

Perspectives on the postdoc roles and responsibilities

The NIH should advocate for bringing the postdoc position back to its primary and intended purpose, that of career training and preparation, which should include not just research training, but also comprehensive training in skills for professional success across domains such as:

1. Scholarly and Professional Communication
2. Professionalism and Career Preparation
3. Leadership and Management
4. Ethics and EDI
5. Health and Wellness.

All postdoc positions should include dedicated time to participate in career and professional development workshops and trainings in all of these areas, not just those for advancement of their research skills or knowledge, and funding to support their participation in all such programs. We should also broaden our understanding of the purpose and utility of postdoc training as not just useful for academic faculty careers, but for a diverse array of careers both inside and outside of academia.

With the explicit understanding that one of the primary purposes of a postdoc is for training and development, all postdoc positions should be required to have learning objective and goals for the appointment, that cover not just research or technical skill development, but development of skills for professional success, such as communication (interpersonal, grant writing, etc.), working with diverse teams/individuals, effective and culturally aware mentoring, leadership, management, and other skills necessary for success across the variety of careers available to postdocs. Postdocs also play a key role in the mentorship structure within academia, and specific training for them to navigate those mentoring relationships, both as a mentee and as a mentor, should be supported both through funding and dedicated time to participate.

Fundamental issues and challenges

The key to this is to bring the postdoc position back to its primary and intended purpose, that of career training and preparation, which should include not just research training, but also training in skills for professional success, such as communication (interpersonal, grant writing, etc.), working with diverse teams/individuals, effective and culturally aware mentoring, leadership, management, and other skills

necessary for success across the variety of careers available to postdocs both inside and outside of academia but that are not currently being prioritized within the current postdoc training framework. Additionally all postdoc appointments should include dedicated, paid time to participate in these non-research related professional development workshops and activities and funding to support participation in such programs.

Recruitment adds, job postings, and job descriptions for postdocs should list learning opportunities available in the position instead of just desired skills and qualification for the role, again to bring postdoc positions back to their intended purpose of building experience and skills for future career success. The required skills for postdoc positions should be limited to those necessary as prerequisits for learning the research area or techniques in the lab, but should not require postdocs to come in with a thorough knowledge of either the research area or the techniques utilized. Instead, it should be structures as a learning opportunity where the most important prerequisite is the applicants desire to learn and documented success in learning previously. Upon hiring, an explicit training and professional development plan should be setup that meets the goals and needs of the individual postdoc based on their desired learning outcomes and career goals. These training plans should be updated at least annually during the postdoc's tenure.

Existing NIH policies, programs, or resources

Allow for costs for postdoc training and professional development activities to be charged to research grants (such as R's) if postdocs are being funded on these mechanisms. This should support not just research training activities (such as learning new techniques) but other professional development activities to build career skills, such as courses in leadership and management, mentoring, working with diverse teams, communication, and other skills desirable across the variety of careers available to postdocs both inside and outside of academia.

Similarly, allow for costs for mentor training for faculty to be charged to research grants on which postdocs are also being funded. If faculty are using trainee labor toward achieving their research goals, they should be required to document and demonstrate their competence as mentors and be required to compete and attend trainings to support this expertise. Renewal and awarding of research grants should take into consideration training/professional development plans for both the PIs and for the postdocs in the areas described above and provide adequate funds to cover those training and professional development costs

Also provide funding to train postdocs in mentorship practices, both to help them to be better mentors to graduate and undergraduate students, but to prepare them to take on these roles as future faculty members. This will help to build a pipeline of mentors trained in equitable, culturally sensitive mentorship practices for the future.

To support these training efforts, the NIH should require that a specific portion of the institutional indirect costs go towards funding staffing and operational costs for a postdoc professional development office with at least 1 full time FTE for every 500 postdocs specifically dedicated for 100% effort towards support for postdocs professional development.

Proven or promising external resources or approaches

Entering Mentoring program from the University of Wisconsin Center for the Improvement of Mentored Experiences in Research (CIMER), Postdoc Academy, NIH OITE Building Resilient Scientists, Training Resilient Scientist, and Mental Health and Wellbeing of Biomedical Researchers Programs.

Response 3112

Perspectives on the postdoc roles and responsibilities

A postdoc is just grad school but with the expectation that you're work will lead to publication fast than a grad student would publish. Nothing seems to change. No skills are learned that blow you away. Many PI only want established people in the field and are unwilling to train.

Fundamental issues and challenges

Mainly money. If I don't get paid right, I'll literally drag my feet. There are no metrics to achieving promotion. No real way to supplement salary. Whether I publish 4 or 0 papers I get paid the same given the "years PD experience" . Makes no sense.

Existing NIH policies, programs, or resources

More early career oriented programs to win money.

Proven or promising external resources or approaches

Just pay people more. 75k minimum and clear benchmarks to achieve for promotion. There NEEDS to be a way to transition from postdoc to permanent position at institutions

Response 3113

Perspectives on the postdoc roles and responsibilities

I thought that it would be an opportunity to work with a different PI and to work on a different scientific topic. Also I had a chance to apply some techniques that I learned as a grad student to different problems. I thought I would get a different perspective on research and a chance to transition to a more independent position. By independent I mean intellectually independent from my advisors, not that they couldn't still provide mentorship if they were able to do so.

Fundamental issues and challenges

In the late 1980s I interviewed in-person with four lab leaders in three different states for a postdoctoral position. Two of the labs were led by M.D. professors and two by Ph.D. associate professors. For at least one of the interviews I gave a research talk with slides to the hosting department. One reason I picked my first postdoctoral lab was because my thesis advisor had given me the PI's NIH grant proposal to read. I don't remember when I disclosed this to the PI but I did. I remember being told that was unethical. I thought that meant I was unethical. When I arrived, the PI wanted me to apply for my own funding. People who were funded by the PI's NIH grant were still working in the lab. I realized that I had no publications and no health insurance. It never occurred to me to discuss health insurance prior to doing postdoctoral research. I bought a catastrophic policy privately. The PI funded me from a departmental NCI training grant. I think that I attended two out-of-state meetings, one was in Toronto Canada; but I didn't present any results. I had one phone conversation with my thesis advisor who said I could return to his lab. I wasn't comfortable sharing various concerns. I didn't realize that I had to "pay back" the NIH training grant time but eventually concluded that I needed to find another postdoctoral position.

The second postdoctoral position was in a different state. I wrote annual reports to the PI's "managers" and gave a poster presentation at a meeting. My immediate response to the end-of-funding/completing NIH payback requirements was to apply to advertised positions that I found in journals. After 5.7 years of graduate education and 7 years of postdoctoral research I had two first-author publications.

Existing NIH policies, programs, or resources

I haven't read most of the information in the links given above. I found out around 2017 via the internet that the PI's NIH grant that funded me ended about 1.5 years into the second postdoc. I assume that private funding sources were used to allow me to work in the lab until the end of my payback requirement. Later the PI did write and submit a manuscript that wasn't accepted. The strains, the records of strains that I constructed using molecular biology, and my lab notebooks are all inaccessible to me and maybe discarded.

Someone could have explained to me that NIH had a 5-year cutoff for postdoc eligibility and a 5-year limit on data retention. I understand that policies regarding retention and handling of data are being modified and improved from the time I was a postdoc. NIH should work with postdoctoral labor unions in my opinion, especially to avoid a totally top-down system. DEI isn't served by linking opportunity and success to funding sources, especially private funding sources. The NIH benefit floor appears to be too low. I don't know if NIH salaries have followed the Consumer Price Index or something else.

Proven or promising external resources or approaches

I have tried unsuccessfully to use the IDP (individual development plan) (from AAAS) The IDP from the American Chemical Society seemed a little more applicable but still not very helpful. I joined and unjoined a smaller, more specialized scientific society. I subscribed to NRMN (National Research Mentoring Network). In both of these organizations I found that the programs are directed to younger and/or more recent Ph.D.s. They also appear to be directed towards obtaining funding from the United States government, at least initially. I listened to the Science of Mentoring podcasts produced by the National

Academy of Sciences. I was hired by a younger Ph.D. for a part-time adjunct instructor position in time for the COVID pandemic. I don’t want to use social media although sometimes I find it informative.

The listening webinars associated with this RFI were helpful in possibly explaining the differences in postdoctoral work benefits due to funding sources and locations.

Response 3114

Perspectives on the postdoc roles and responsibilities

The postdoc role is a time when academic researchers are very skilled but do not run an independent laboratory. The period is used to showcase the talent of the scientist for faculty applications and start a research trajectory that will be further investigated once the postdoc start to run a lab. The 5-6 year expected length of a postdoc today is a recent change and therefore the role of postdocs has changed. Today, postdocs are seen more as the main workers to advance the science of the PIs laboratory, rather than short term trainees. Essentially the postdoc has turned into a second PhD period.

Fundamental issues and challenges

Low postdoc salaries are the underlying cause of low postdoc recruitment and retention. PhD level job applicants can make 2-4 times as much money in an industry role. For most people, it does not make financial sense to do a postdoc. This is especially true of people who have children and people who are disadvantaged in society due to factors including race, gender, and socio-economic class. The best suggestion I have heard is to use the Federal Government GS-11scale to determine postdoc salaries. This would take into account the cost of living locally which the current NIH minimums do not.

A second major issue that reduces quality of life as well as the desire to do a postdoc is the poor job outlook following the postdoc period. Faculty positions are very hard to get and investing 5 years to something so uncertain is not an attractive option for many people. The low number of faculty positions also increases competition between postdocs, requiring more output to be competitive. As a result, postdoc stress and work—life balance is very poor, however, long work hours are the only way to advance in the career path.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3115

Perspectives on the postdoc roles and responsibilities

Already submitted.

Fundamental issues and challenges

Already submitted.

Existing NIH policies, programs, or resources

- NIH position about fellows' employee status—The NIH has not been clear about whether its fellows can be employees. The language used in the policies is open to multiple interpretations. Most institutions have decided to act on the safe side by considering NIH fellows as non-employees in most institutions. This has been creating disastrous consequences affecting the living and working conditions for fellows, as their health benefits may be more expensive than those of their employee-status peers, they may not be able to make contributions to a tax-deferred retirement, they may no longer be paying into Social Security (FICA) or Medicare, they may no longer have FMLA benefits, and their time as a fellow is not eligible for the Public Service Loan Forgiveness Program. This generates unjustified stress during a critical stage in the researcher's career. Also, with the average age of postdoctoral appointees constantly increasing across the country, it also creates difficulties for family planning, wellness, and financial stability.
- Need to include international scholars in NIH mechanisms—Postdocs on temporary visas constitute more than 50% of the postdoctoral population in the U.S., and the number is growing due to the increasing awareness of career pathways requiring little or no postdoctoral training among graduate students, particularly those of domestic backgrounds. In this context, the postdoctoral community will benefit from the expansion of NIH awards' eligibility criteria to include international scholars, who pay federal taxes as well as state and local taxes where required. Currently, only the K99/R00 mechanism (except for MOSAIC) accepts U.S. non-citizens. Keep in mind that this is an award for transition to independence, which means that applicants should provide evidence of academic accomplishments. With scarce funding opportunities, international scholars are at a disadvantage in their research careers in comparison with domestic scholars.

Proven or promising external resources or approaches

Already submitted.

Response 3116

Perspectives on the postdoc roles and responsibilities

Already submitted.

Fundamental issues and challenges

Already submitted.

Existing NIH policies, programs, or resources

New NIH mechanisms for workforce development—Although the NIH integrates career, professional, and workforce development into T, F, and R mechanisms, it barely provides mechanisms that fund the activities of postdoctoral offices and specialized practitioners in the field of career and professional development for early-career scientists. Grants and opportunities similar to the Broadening Experiences in Scientific Training (BEST) awards with emphasis on advancing postdocs should be available every year to broaden postdocs' knowledge and exploration of diverse career options. It has been shown that participation in professional development does not increase time to degree or manuscript output (Brandt et al 2021), NIH-funded training programs will most likely enhance faculty/department buy-in, create institutional long-term commitment, and encourage other funding agencies to support these initiatives.

Proven or promising external resources or approaches

Already submitted.

Response 3117

Perspectives on the postdoc roles and responsibilities

The postdoc position for me personally is a space to establish my scientific confidence and learn to ask good and meaningful questions. This is further relevant as I experienced emotionally abusive and racist mentoring during graduate school which was severely traumatic. In this context, the postdoc position is a great opportunity to develop my skills further and identify my path forward. I also perceive it as an opportunity that will help me develop my mentoring skills and implement these so that I would be more

prepared if I went down the tenure track path. I am also utilizing this opportunity to further my advocacy efforts towards making academia more inclusive and equitable.

Fundamental issues and challenges

The ambigious status of postdoc positions makes receiving training and independence confusing and tricky. The "trainee" aspect is often the reasoning to offer much less pay than postdocs could be earning in industry jobs, often nearly 2-3 times less than industry. This, in addition to years of extremely lower pay during graduate school (I earned 3 times my graduate stipend before grad school, and I may not make even that much as a postdoc for the first 10 years per NIH scale), makes the entire trajectory rather frustrating and absolutely exploitative. In addition, there are no clear policies for receiving training opportunities, which really concentrates even more power in the hands of PIs.

Existing NIH policies, programs, or resources

- require institutions to cover relocation costs for postdocs as making cross-country/continent moves in your late 20s/early 30s, often with a family, is non-trivial financially and every other way, but can at least be made manageable with a relocation compensation
- establish % salary that can be used towards conferences, training workshops, visiting collaborating labs etc. to cover the "training component"
- increase the NIH minimum which is almost always used as the "maximum" salary for postdocs. Starting at $50k after a PhD, including in places with significantly high costs of living is unacceptable
- honestly, unless a respectable salary and compensation is offered, the expectation that the postdoctoral training ecosystem could become less exploitative is not reasonable and ill-founded. Many of us choose to remain in this position and be exploited because we have worked so hard to be allowed to do science, but sadly this shouldn't have been the price we had to pay and nor should this be the reason to stay.

Proven or promising external resources or approaches

- financial compensation seems to be a significant predictor for people moving to industry, and for many us wanting to make the switch
- the current system, combined with the absymal financial compensation, is not suitable for disabled scientists and there are no easy ways to discuss this for fear of jeopardizing our standing and for fear of our competence being questioned (this was my experience during graduate school in that asking for accommodations for my mental health led to a punitive response from the office of disability at [redacted for anonymity] and made things worse)
- offering training opportunities and structured workshops + requiring it for postdocs on NIH grants, to help us prepare for the path forward, either in academia or industry, would be very beneficial and mandating some of it will make it easier to carve out time and support to pursue these
- some advice on requiring a kind of training committee for postdocs would be helpful as many of us could benefit from a structured mentoring arrangement
- please include postdocs on study sections etc. or offer such training to us!

Response 3118

Perspectives on the postdoc roles and responsibilities

A postdoc's role is to gain experience in all aspects of science (experimentally, the leading project, writing papers/grants, teaching) from mentors, while simultaneously performing science related to that lab. As one is in that lab they gain experience in all these aspects from their mentors so that they might fill out any missing gaps of experience/knowledge not gained during their graduate training. The overall goal is to gain the necessary skills, likely being shown by publication records, that prepare them for an independent research career.

Fundamental issues and challenges

Financial, both in salary and grant opportunities. I am not sure how addressable the quality of life is and it seems subjective, likely something to be achieved at the more local level (i.e. university/institution).

However, the financial aspect should be set as a standard by the major supporting governance overseeing that. As such, any university/institution performing NIH-funded research should abide by NIH rules, of course. The NIH not setting standards of finances is one way that postdocs are being neglected by the NIH. Often the salaries of postdocs are set in comparison to national averages that are dictated by funding governments like the NIH. I believe this is a fundamental issue. In my situation, the deciding factor as to whether or not I stay in academia will be financial, as I know am a second-year postdoc still paying off student loans—unable to overcome the enormous interest and debt from this. My CV is good and likely will have a good chance if I can stay long enough in research. However, time is running out before I have to get a job that pays me enough to pay off student loans. This should not be the case. My career determinants should be based off of my work and not financial burden due to inadequate pay. I am not alone in this and have many friends in similar situations. I might add that the NIH offers no help to someone in my situation. The loan repayment for MD/PhD, makes sense. But to have that program before having a program for PhD's alone, who will be delayed in making as much as an MD/PhD seems a glaring oversight.

Existing NIH policies, programs, or resources

There should be a loan repayment program for PhD's, not just MD/PhDs. The idea that we need to keep MD/PhD's around but not PhD is appalling. Yes, MD/PhDs are likely to hold large debt, but so is the average American, including PhD. This problem is already pervasive among PhD's performing NIH-related research, yet it seems to not be on the radar of the NIH. If it was started next year, such a program would be years behind. Yet the problem will only escalate, choking out future PhDs whose undergraduate debts will accumulate during grad school and postdoc fellowships—only those lucky enough to survive financially long enough will be able to stay in science, not because of the rigor of their work.

The second is clear, change the standards of postdoc salary. This will aid immediately those with student loans, as discussed above, but will also match the rightful amount of salary that should have been adjusted for continual inflation, yet has not been adjusted for many years. I think simply paying postdocs a salary adjusted for inflation to that of all others in the scientific ecosystem is nonsensical that it is hard to believe it has to be pushed for.

Proven or promising external resources or approaches

Perhaps allowing for less lengthy grants for early postdocs. F32 is 3 years and K99 is needed by end of year 4. This gives very little time to apply for a grant that runs quickly into the K99 application. Such a grant then seems to not make sense for the normal pathway of a postdoc. Perhaps limiting 1-2 years of funding would be more apt and allow for more people to be funded.

Second, adding funding for those who do multiple postdocs or do a 1-2 year intermediate postdoc. I don't like it any more than anyone else that more and more training is needed to gain a faculty job, but this is how it is. The NIH should help with this—lessening timeline of K99 and providing grants for those who do a second postdoc or short secondary postdoc to increase their skillset and resume. Such funding would support very diverse research backgrounds, something the NIH is supportive of. Such postdocs will bridge fields with experience and provide niche areas of research once they reach faculty positions.

Response 3119

Perspectives on the postdoc roles and responsibilities

Postdocs are generally a temporary training stage in academia on the way to becoming a tenure-track faculty member. Postdocs gain more training opportunities that can help with their research and professional development. These positions are also important prerequisites for applying for other positions in academia.

Fundamental issues and challenges

Many issues currently plague postdoctoral trainees in academic research. First and foremost, pay and benefits are simply not competitive, especially in recent years and in high-cost-of-living areas. Salaries need to be raised significantly! Benefits also need to be evaluated and NIH should do more to ensure consistency and equality of benefits across institutions, as postdocs are often excluded from important benefits like health insurance and retirement. Training for postdocs in research and professional development is also haphazardly available and is normally poor relative to undergraduate/graduate education, which significantly detracts from the purpose of this career stage. In general, while individual

PIs may value postdocs a lot and offer great support and training (although this is far from universal), institutions appear to offer little regard for their postdoc community members. In my experience, postdocs are forgotten because we are not officially students, but at the same time, many universities get away with classifying postdocs as students and trainees when it suits them, resulting in situations where honest efforts at improving situations are met with the response "our hands are tied because you are a student/trainee" or the opposite, depending on seemingly on whether the action required significantly impacts the bottom line. I could go on, but I think the bottom line is that across almost all levels, postdocs are underappreciated and underpaid relative to the tangible benefits they provide on campuses across the country. And as a result, many are unhappy and until this changes, academia will continue having trouble recruiting and retaining postdocs. There are also significant equality issues with the current approach and if NIH and other institutions are truly behind DEI efforts, many changes are needed for the postdoc career stage.

Existing NIH policies, programs, or resources

As a postdoc, I do not have time to familiarize myself with a bunch of existing NIH policies, programs, or resources. I suspect most postdocs and academics in general would say the same thing, which makes me wonder how useful these policies, programs, or resourcesare. The most tangible way that NIH can help postdocs is by significantly improving funding for them and ensuring that training and academic environments are setup in a way that values these important members of the academic community. This starts with raising modular grant amounts so that PIs can better support postdocs. Until this and other actions are taken on this front, other modifications or improvements will hold little weight.

Proven or promising external resources or approaches

I do not have any obvious examples I can provide here. I think this underscores the fact that very few entities (NIH, NSF, universities, etc.) are properly handling postdoctoral training. I believe NIH and others should critically evaluate whether small changes to existing programs will really solve many problems, or whether more substantial changes or a "start from scratch" mentality may be more valuable and lead to better outcomes.

Response 3120

Perspectives on the postdoc roles and responsibilities

It could expand the area of science and knowledge with depth in a new environment. It could be an opportunity to learn new people and mentorship for their future.

Fundamental issues and challenges

funding

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3121

Perspectives on the postdoc roles and responsibilities

I think postdoctoral training is to practice on building their own research programs by deep dive on research from experimental details to writing proposal to get grants.

Fundamental issues and challenges

It should be not contracted yearly. Rather it should be treated as an industrial jobs. At this time of career many postdocs start to have a family and current year to year contract with low salary put lots of stress.

Existing NIH policies, programs, or resources

Salary needs to be increased along with benefits. Covering childcare and support is definitely needed.

Proven or promising external resources or approaches

Every institution has hire postdocs as research scientists not as temporary positions.

Response 3122

Perspectives on the postdoc roles and responsibilities

The postdoctoral role SHOULD be a place where after leaving graduate school, a person can acquire a final round of training in a field and/or a technique they did not have time and/or access to during their doctoral studies. Unfortunately, far too often it's "try to get out as much work as desperately as I can to be eligible for one of the shrinking number of faculty opportunities that exist". The responsibilities SHOULD include learning such new scientific directions competently, contributing to a positive work environment, and contributing to the knowledge base of the research group (through papers, mentoring, etc).

Fundamental issues and challenges

Postdocs are not paid enough, especially in high cost-of-living areas. PIs who would otherwise like to pay their postdocs more don't get a "cost-of-living-adjustment" for their grants, and thus have to possibly materially hurt the quality and/or quantity of their scientific output in order to pay postdocs a living wage, so many simply do not.

Many PIs see postdoctoral appointments not as "here is a person I will train", but "here is cheap labor to do work in my lab". It is rare for PIs to receive any formal training in management or mentoring at all, and there are no incentives for PIs to serve as high-quality mentors. Abuse or mistreatment of postdocs is allowed in many places to run rampant, especially for visa-dependent postdocs who can't risk angering a PI if they want to stay in the US, or postdocs who have to PAY BACK THEIR STIPEND IF THEY LEAVE (seriously, NIH, this is horrifying, why do you do this).

Finally, due to dwindling faculty opportunities and limited opportunities for staff scientists and/or technical specialists to gain their own funding, there are very few opportunities for postdocs to stay in academia even if they WANT to. This leads to postdocs remaining in ostensibly "trainee" positions far longer than they are actually trainees.

Existing NIH policies, programs, or resources

- Expand the R50 mechanism A LOT, creating more permanent science positions to alleviate the scarcity issues that force postdocs to stay in bad situations.
- Stop making people pay back their training grants if they leave. This promotes abuse.
- Actually make the training sections of research grants serious parts of it. Not just "I trained such and such person, they learned X" in 3 sentences. Spot check some fraction of the RPPR "training opportunity" responses with the trainees, making it more likely the PIs will actually take them seriously and do what they say they are doing.
- Make the NRSA stipends legally-enforceable minimums, and mandatorily adjust them for cost-of-living. In order to make this not a penalty for PIs in high cost-of-living areas, move from a "pure direct cost" model of funding to a "efforts plus supplies" model of funding. This would work like this—in a grant, you specify 1 grad student FTE, 1.5 postdoc FTEs, and 0.1 PI salary FTEs, and use the NRSA stipend numbers in converting this to "direct costs" to make comparisons across grants equal. If awarded, the fraction of the grant that is salary dependent is then granted at the stipend levels for the area where the research will be performed.

Proven or promising external resources or approaches

- Have serious repercussions for PIs who abuse postdocs, and reporting mechanisms that allow them to. In the same way we have special visa classes for crime victims, visa extensions could be given to postdocs under abusive PIs so that they don't have to choose between "staying and being abused" or "leaving the country". Make a PI code of conduct with respect to trainees a requirement of an institution receiving federal grant money. Make a training commitment a requirement of an institution receiving federal grant money. Make proof of trainee abuse a permanent lifetime ban on federal grants.
- Create and/or expand efforts to offer postdoctoral training with specialized curricula aimed at creating technical specialists with the deeply-needed technical skills the research community needs. In microscopy we have a couple of excellent examples of this, one aimed at creating microscopy specialists (https://microfellows.hms.harvard.edu/) and one at bioimage analysis specialists (https://cimini-lab.broadinstitute.org/training-program), there may be others in other communities as well.
- Mandate to grant-receiving organizations that postdocs are employees and as such should be allowed to have full benefits no matter their funding source, and allowing them to unionize if they so wish. No one should lose their health insurance for getting an external fellowship.

Response 3123

Perspectives on the postdoc roles and responsibilities

Academic postdocs fill a vital role for many laboratories and are a key part of a robust biomedical research workforce. Due to their advanced training, postdocs allow principal investigators to accomplish more research at a more advanced level than if supported by pre-doctoral staff or those not on a PhD track. Postdocs directly contribute to science that is more complex and more likely to be successful.

Fundamental issues and challenges

Scientists are choosing to forgo or leave careers in academics for various reasons, including:

Finding a Position: While applying for a PhD program is often a formalized and predictable process, the process for finding an academic postdoc position is often disjointed and informal. This is often a barrier for potential applicants, as those looking for positions often must rely on network connections and word of mouth to identify potential positions.

Salary: Recently graduated PhDs can receive a much higher salary working in industry than in an academic setting, which puts academia at a financial disadvantage to industry in terms of recruitment. Additionally, some institutions consider postdocs as students, while other consider them staff.

Life transitions: Many postdocs are at a stage of life when they are choosing to start or grow their families. Taking parental and family leave can often conflict with the goals of working as a postdoc, such as the pressure of gaining additional research experience and transitioning to independence.

Differing Requirements Between Institutions: The roles and requirements of a postdoc differ between institutions, with some institutions setting forth requirements that serve as barriers and deterrents to interested applicants. For instance, some institutions require postdocs to have grant funding awarded prior to a position being offered. This practice limits postdoc training opportunities for many promising scientists.

Existing NIH policies, programs, or resources

Finding a postdoc position: NIH should consider working with and providing technical assistance to grantees, institutions, and stakeholder organizations to develop a more streamlined process for postdocs to identify open academic positions and facilitate application.

Salary: While NIH has taken steps to increase salaries in Training (T) Grants, barriers remain for principal investigators seeking to bring a postdoc onto their research team. For example, paying a postdoc a competitive salary often leaves less funding available in an overall Research Project Grant (R01) to conduct critical research. NIH should consider how to increase or supplement postdoc salaries while maintaining the overall grant funding necessary to perform critical research.

Mentoring: Postdoc training is a critical time for young investigators to develop the skills and resources for a sustainable career in academic research, and this training is most effective with robust and dedicated mentorship opportunities. NIH should explore ways to promote mentorship in its existing grants and programming.

Networking/Career Growth: NIH should consider providing dedicated travel support to junior investigators to attend conferences to learn and network. Further, NIH and other relevant stakeholders should investigate opportunities to provide postdocs with externships to introduce and prepare them for their next position in academia, industry, teaching, or other fields.

Parental and Family Leave: Many postdocs are at a stage in life when they are choosing to start or grow their families. Taking parental or other necessary family leave shortens the critical window of time for young scientists to develop their skills and transition to independence. For example, taking a 4-month parental leave shortens a 2-year postdoc position by nearly 20 percent. NIH should consider ways to provide additional support for postdocs who take parental or family leave during this time, including supporting additional time and implementing programming/mentorship opportunities directly related to supporting young investigators.

Proven or promising external resources or approaches

No response

Response 3124

Perspectives on the postdoc roles and responsibilities

Postdocs should be considered as full-time working scientists in a lab, because they are. Usage of the word "trainee" is not appropriate considering the terminal degrees, work experience and skills they have and bring to any lab they work—even if they change research fields or require training for specific methods etc. Postdocs are responsible for everything in the lab like a contractor that PI hires to complete the project at hand, they are required to work and take responsibility like it is their own lab/project which indeed is not true. Personally, I can say that I work in a rather small lab, and I work like 3 people because I am responsible for 2 projects that belongs to my PI, but I am responsible for everything, I have no training opportunities rather I am expected to train junior postdocs and techs. Therefore, I think postdoc positions should have a more strict structure that is almost if not exactly the same across institutions. The responsibilities should be strictly defined, work hours and training plans should be defined. And these have to be inspected regularly by the institution or NIH (preferrably by NIH because NIH is the ultimate responsible institution for the funding and the institution has a conflict of interest in this situation). When international postdocs are involved -like me—situation gets even worse. Considering our vulnerable situation, we cannot say no to abuse and harrassment, because there is no mechanism that protects us from losing our jobs/careers/statuses. This is the main problem in academic postdoc system, which I think NIH can change significantly. Because it has a lot of components from security of those people (visa issues and human rights) to reliability of the science done in the US and NIH is the biggest funder.

Fundamental issues and challenges

- lack of protective and regulatory measures for abuse and harassment (sexual harassment, mobbing and bullying) that ultimately leads to bad science and loss of talent in academia. (this is the main problem in academia, as I know personally and from the experiences of a lot of people I talked to throughout the US institutions). Abuse and harassment have to be stopped at all means.
- lack of structure in the postdoc positions that defines job duties
- Lack of training plans for the next step in staying in academia.
- lack of proper funding mechanisms especially for international postdocs.
- lack of funding for early career researchers.
- lack of benefits for most postdocs because they are not treated as employees.
- short visa lengths that limit freedom of the postdocs to visit their home countries and make them stuck in an unsecure environment. Should they do science or deal with visa renewals and try to make plan B's for next year?
- not competitive salaries.

Existing NIH policies, programs, or resources

My personal opinion is NIH should be more involved in inspections of labs that receives NIH funding. A postdoc funding, should have a clear training plan for the next career step in academia and that should be included in the grant proposal and maybe even reviewed by the grant committees. If the PI is not able to provide it, they should not be able to hire postdocs. To determine this NIH should be auditing, and talking to not only the PI, but also the other lab members about the projects, maybe via surveys etc. Because if you only talk to PI you never know about the misconduct going on. The PIs should be audited on their responsibilities. And one more critical thing, early career researchers should be funded more than established/senior researchers. Those people are valuable for science, but considering their ages and the scientific and technological pace we have in the world, most of the time they are not able to provide adequate mentoring (having more postdocs) or cannot keep up with the changes in cultural improvements.

Proven or promising external resources or approaches

PIs should receive a training on project management, team management, mentoring, budget and time management. Like in the industrial settings, evaluations should be done bi-directionally. PI evaluates the postdoc and the postdoc evaluates the PI. And NIH should be more involved in these evaluation processes. To be honest, I am seeing a lot of PIs have no idea about how to run a lab or a project, hence they are not fit to train people to do it. So they use bullying and harassment to keep control on everything and that results in bad science and waste of taxpayer's money.

To be more aware of the problems international postdocs face, NIH should recruit more international people or maybe international postdoc representatives

Thank you for the opportunity to share my ideas with you, and I really appreciate NIH's efforts and intentions in improving postdoc experience. I believe these inputs will result in good outcomes and I will not have to give up on my childhood dreams of being and academician.

Response 3125

Perspectives on the postdoc roles and responsibilities

A postdoctoral position to me is a means to diversify one's science portfolio for two purposes:

1. Either towards independent investigation (academic route)
2. Technique learning towards another application (industry/other route)

Many PhD graduates have requisite skills for entry positions in industry in my opinion and taking on a postdoc positions comes with considerable lost wages. I advise all graduate students to think about this carefully before jumping into a postdoc position.

Postdocs should be incredibly short positions. I advise that people know their exit plan before they start. Postdocs should be independent scientists that have a plan to receive dedicated training to accomplish their career goals. This can mean different things for different people based on these goals; training/mentoring others, teaching classes, developing a technology, learning a new field. etc. Postdocs should have iterative feedback on professional development, in addition to scientific training, with PI on at least a quarterly basis to keep them on track to leave.

However, I've observed few academic labs treat postdoc positions this way and instead recruit highly trained PhD level laborers for extended positions (>3 years) at the currently acceptable low wage. Postdocs also end up doing a lot of the managerial work of a lab, which may not be on-pathway for a postdocs career development.

Fundamental issues and challenges

As stated above, few academic labs treat postdoc positions as short duration/training focused and rather as an additional PhD. The symbiosis of academia here is skewed along a power differential, where principle investigators stand to receive more labor/data/papers from postdocs than training conferred. This skewed symbiosis is also apparent in the longer duration for PhD completion in many programs. Additionally, the large salary difference for PhD holding scientists as a postdoc versus any other competitive position is staggering. I've observed many median age PhD graduate looking forward to stable salary commiserate with experience and a workplace without stark power differentials to do things like, start a family, promote/maintain sound mental health, work with active managers/in teams, and to allow work to take

less part in their lives. Most of these talented scientists ultimately decide not to pursue a postdoc because most positions do not offer any of the aforementioned.

Other issues, most postdocs apply for extramural funding but NIH funding processes typically take at least one full year (from application submission to award received) which is hampers the ability of postdocs to keep their positions training focused and short.

Academic principle investigators (PIs) are rarely good managers and PhD graduates typically see good management from friends who leave academia.

The large power differential that exists between postdoc and PIs can make doing a postdoc absolutely miserable at worst and generally ok at best.

Existing NIH policies, programs, or resources

The NIH-F32 inclusion of child-care costs is a wonderful step in the right direction towards actively facilitating people to fulfill their non-work selves while doing excellent science. However, $2500/yr is laughably low and out of tune with the current economic state of the country. Currently, at the [redacted for anonymity], it costs $2600/MONTH for a single child to attend day care. With the F32 taking care of one month of this, the remainder the postdoc would be responsible for is $29,000 which is about half of the current NIH salary. Child-care costs are not this expensive everywhere, but even with the F32 intervention in place, the prospects of having a child while a postdoc are incredibly dim. Higher salary and higher child-care offsets would enable more people to choose postdoctoral training. Additionally, this mechanism is only afforded to postdocs that are awarded an F32 grant while a majority are not awarded this funding. Moreover, it typically requires 1 year from the time of application to notification of award leaving many to have to wait a long time to even see if they have this funding available to them. We need shorter review/acceptance of grants to allow training to happen on an meaningfully short timeline. Finally, having a child-care policy for any NIH-funding receiving institution would go a long way.

The biggest policy change of all should be that postdocs be paid commiserate with their experience.

Additionally, there should be more mechanisms to fund early investigators prior to tenure-track position. Fellows positions have been increasing and these are a wonderful means for talented scientists to gain independence quickly.

Lastly, there should be a policy to transition postdocs who have completed their predefined training into non-trainee research scientist positions (with higher pay).

Larger NIH budgets to support changes.

Proven or promising external resources or approaches

Private institutions and industry pay higher salary for postdocs, do this.

Require PIs to undergo inclusive mentoring and managing training. I’ve done this training as part of my transition toward a tenure-track research/teaching professor and it makes a big difference.

Formalize pre-determined training plans for postdoc positions and a plan to transition to research scientist. Include desired postdoc length on job postings and take data on whether institutions/labs have been able to meet these pre-determined timelines.

Promote secondary mentors for postdocs that do not have a vested stake in the science.

Promote institutions to develop professional training courses and formalize this into postdoc positions.

Response 3126

Perspectives on the postdoc roles and responsibilities

I see it as a stepping stone to a permanent role in either academia or industry. Though I would have preferred it to be a more permanent and stable position, given a PhD student spends close to 10 years being financially unstable.

I also view the postdoc as an opportunity to publish more papers and develop new skills.

Fundamental issues and challenges

Low pay is a major factor, cost of living has been going up salaries of postdoc has not increased. It is not a permanent position, and with a low pay it diminishes the postdoc's quality of life. Many postdocs are in their late 20s or early thirties, a time when people get married or have kids. As a postdoc with low pay, being always considered as a "temp" worker it is not possible to pursue the many other meaningful objectives of life. As an international postdoc, I find it is very frustrating that all institutions in the US do not provide Green Card sponsorship to postdocs, makes us feel like workers who can be disposed off and not worth much. Lastly like all professions Postdocs are overworked but more importantly criminally underpaid.

Existing NIH policies, programs, or resources

I dont have clue of what to say here as I was not aware these resources, neither my Postdoc mentor or PhD advisor told me anything. Everyone looks out for themselves , long gone are the days where your PhD Advisor or Postdoc Advisor was invested in your professional growth.

Proven or promising external resources or approaches

To restate the key points

1. Increase pay to meet the rising cost of living.
2. Green Card support for international postdoc.
3. Institutions should make an effort to absorbing postdocs as permanent employees instead of getting hard work done at cheap pay.
4. Create funding programs for international postdocs and raise awareness of these programs, especially the existing ones.

Response 3127

Perspectives on the postdoc roles and responsibilities

As a postdoctoral fellow, I often find it hard to manage my different "hats." I often hear I need to prioritize my own projects or my own professional development, but that is often mismatched with the fact that my PI needs someone to help them with their project and maintaining their lab. I often take on the roles of a lab manager/technician because I can learn a new skill from that new role, but it comes at the cost of my own research project. I find the power my mentor has over me inhibits me from speaking up for myself and saying no to new tasks. It is very difficult to say no to someone who writes your letter of support. Even though my contract says I am legally obligated to work only 40 hours per week, I feel that if I don't at least work 45-50 hours a week, my mentor will be disappointed with my progress. This negatively affects my quality of life, as I find my mental health deteriorates (e.g., always worried about impressing my mentor) and have less time to spend on hobbies or with loved ones. I love working in the academic research setting, which often means I willingly work extra hours to finish an exciting experiment but feel this shouldn't be a requirement but instead a choice the postdoc can make on their own. I hope that the NIH can set clearer guidelines for mentors and postdocs in terms of working hours, research output, lab management, etc. Additionally, if there was a mechanism in place to track mentor/mentee expectations in award applications/reviews that might lead to a better respect of workers' rights.

Fundamental issues and challenges

One reason I chose this institute over another is due to better benefits. At my current employer, my husband is able to go back to school for a fraction of the cost. This helped offset the low salary I am paid as a postdoc, vs. what I could earn in other fields with a PhD. It is still very challenging to know that I do not qualify for retirement benefits at my institute, which is so critical as I might be in this role for ~5 years. That is a lot of time without help saving for retirement, especially after being in school most of my life. Recently I applied for the F32 award, yet I was afraid to be awarded the fellowship because it would mean I would lose my dental and health insurance benefits. Because my husband is a student, this would be a horribly stressful decision for our family. I don't think any postdoc should have to weigh the cost of paying a high premium on Marketplace vs. risking going without health insurance and therefore good quality health care. I wouldn't be surprised if this factor pushes many candidates away from academia.

Existing NIH policies, programs, or resources

The most important change NIH could make is to change the language in the F32 contracts that currently prevents institutions from hiring postdocs as employees. This change would allow postdocs to ultimately receive benefits, likely improving outcomes related to our well-being. As mentioned above, being awarded the prestigious F32 should not come at the cost of good quality health care. I want to progress towards an independent career in academia, but I am not sure it is worth the cost of my family's health. Given how much funding NIH allocates to public health, it surprises me that this language still persists. I think other funding sources (e.g., NSF) would follow suit if NIH made the change to allow F32 fellows to become employees of an institution. Additionally, the F32 is an excellent source of funding for salary and travel funds, but in order to submit a competitive K99/R00 application you must have a substantial amount of preliminary data. The NIH could help by creating smaller grant funds (~$25,000) for postdoctoral fellows to specifically obtain pilot data for their future independent careers. This might also lead to better working conditions for the postdoc, as they would not by completely reliant on the PI's funding and therefore have a greater say in their experimental tasks.

Proven or promising external resources or approaches

A program that works well for postdocs at my institution is a specifically designed year-long fellowship affiliated with our campus CIRTL network. They designed the program to accommodate the high research demands postdocs are under, while still learning teaching pedagogy and gaining teaching experience by co-teaching one semester. This program has helped me focus on my own professional development while not fully compromising my research progress. Additionally, I find that having benefits and being treated like any staff member at my institution would make me feel my best at work.

Response 3128

Perspectives on the postdoc roles and responsibilities

It gives me a platform to build up my research knowledge and get expertise in the relevant area

Fundamental issues and challenges

Salary is very low.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3129

Perspectives on the postdoc roles and responsibilities

Critical and indispensable to the academic and research framework.

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Salary—follow the government pay scale that includes cost-of-living i.e. GS-11 scale (see federalpay.org/gs/calculator). NIH needs to be a leader in this space, as institutions follow its lead.

Proven or promising external resources or approaches

No response

Response 3130

Perspectives on the postdoc roles and responsibilities

This response has been prepared by a subset of the [redacted for anonymity]. The [redacted for anonymity] supports the position that the quality of scientific research is a direct result of the quality of the workforce and that employer-sponsored childcare and related support systems are critical to attract and maintain a highly efficient and diverse workforce. Voting members of the [redacted for anonymity] are current [redacted for anonymity] federal employees, and several are former postdocs.

An academic postdoc is a temporary, mentored research position that includes significant training (particularly in the first 2 years of any postdoctoral position). A postdoc should receive training/mentoring in:

1. Technical research skills (techniques, research design) that complement the postdoc's existing skill set
2. Grant and manuscript writing
3. Lab management and mentoring
4. Professional development skills including networking, time management, leadership skills, and work-life balance.

Fundamental issues and challenges

Childcare costs vary widely across the country. The US Department of Labor estimates 2022 center-based infant care had a median annual cost of $8,310 in low-population counties and $17,171 in high population counties (2). Many U.S. counties have median, center-based, infant care costs well over $20,000/year with costs in Arlington County, Virginia exceeding $27,000 in 2022. These costs have a direct impact on workforce participation: a 10% decrease in the cost of childcare leads to a 0.5 to 2.5% increase in maternal employment, and the effect is even stronger for mothers with lower incomes (1).

Most postdocs are between 30 and 34 years old and many experience challenges maintaining work/life balance. Postdocs report pressure to conceal pregnancies, not request accommodations, and not utilize family leave (3). To foster a diverse and inclusive postdoctoral workforce, NIH should financially support postdocs' childcare needs and continue to encourage institutional policies (e.g., leave, telework, meetings between 10am and 4pm) to support postdocs with caregiving responsibilities.

1. US Department of Commerce, NIST, CHIPS for America Fact Sheet
2. US Department of Labor National Database of Childcare Prices
3. McConnell et al., (2018) Research: United States National Postdoc Survey results and the interaction of gender, career choice and mentor impact. eLife

Existing NIH policies, programs, or resources

NIH has several family-friendly policies for recipient institutions to help foster family-friendly environments for the NIH-supported workforce (1).

The [redacted for anonymity] is supportive of these policies and considers them to be a good start. However, we would also note that these policies are complex and have gaps in coverage. For instance, the childcare cost support only applies to NRSA-supported fellows. NIH intramural postdocs and postdocs supported on other NIH awards (i.e., R01s) are not eligible for these same benefits. NIH, via NOT-OD-21-074 and NOT-OD-21-177, has recently provided up to $2,500 in annual childcare costs for NRSA trainees. The complexities of this policy led NIH to publish a 2000 word, 25 item, FAQ. The [redacted for anonymity] would contend that the current approach is overly complex and carries hidden administrative costs. Furthermore, there is a childcare subsidy program for NIH federal employees and NIH fellows deserve similar support, which would also help with recruitment and retainment efforts.

The [redacted for anonymity] suggests that NIH work to reduce the complexity of the current policies and to make the policies uniformly supportive of parents across all categories of postdocs.

1 NIH Family-Friendly Initiatives https://grants.nih.gov/grants/policy/nih-family-friendly-initiative.htm

Proven or promising external resources or approaches

The [redacted for anonymity] supports continuing analyses of the impact of family friendly policies on extramural and intramural postdocs.

The [redacted for anonymity] endorses many policies to improve the recruitment, training, working environment, mentoring, and job satisfaction of postdocs. Some of these policies are in place at NIH, but not required in the broader academic environment. The [redacted for anonymity] continues to encourage NIH to endorse and/or require these policies.

- Paid leave for birth/adoption of a child.
- Flexible working hours, options for telework, dependent care leave, and other flexibilites.
- Meetings during core hours (10am-4pm) to allow for parents to maintain their schedules while being full participants in the lab.
- Organize parental support groups so parents can share resources and best practices within their local academic environment or location.
- Mental health support for postdocs.
- Career development trainings should include sessions on maintaining work-life balance.
- Training for PI/Mentors on the importance of supporting trainee work/life balance.
- Childcare cost support, including supplemental income. This could be weighted by local childcare pricing.
- Institutionally supported childcare facilities with availability for postdocs and other trainees.
- Use of exit surveys to determine the impact of family friendly policies on postdocs.

Response 3131

Perspectives on the postdoc roles and responsibilities

Postdoctoral position is a training process where the graduate student is allowed to work independently with little guidance/support from the PI or other senior lab members towards the goal of the project(s). As per my understanding, this position is a path to a future academic career openings in reputed institutions. Postdoc position gives us a knowledge about how the grants should be written and what are the challenges PI/Co-PI face during the overall process. Having an output in the form of good high impact publication(s) is a primary objective of every fellow which helps in acquiring a suitable position in future.

Fundamental issues and challenges

Nowadays, the cost of living is really high, and by looking at the basic salary structure of a postdoc, it is very difficult to survive financially.

Existing NIH policies, programs, or resources

The salary structure should be revised appropriately by taking into consideration all important factors from students point of view.

Proven or promising external resources or approaches

Response 3132

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Low salary that does not reflect current cost of living and the substantial amount of training a postdoc has receive before starting a postdoc.

Existing NIH policies, programs, or resources

Significantly increase the NRSA stipend scale. It is taken by institutions as a salary ceiling for postdocs.

Proven or promising external resources or approaches

No response

Response 3133

Perspectives on the postdoc roles and responsibilities

I don't believe that trainee is an accurate term for a postdoc beyond the first few months. There is a difference between trainee and mentee, and postdocs are no more trainees than any person in any new job. This description misrepresents the nature of their experience; the reality is they are experts in their fields. Consider "Young Investigator" . Additionally, many PIs are hiring cheap and highly skilled labor, not "trainees" .

Postdocs are more mature than graduate students, with an increasing number of life responsibilities: becoming parents, desire for housing, retirement etc. Postdoc comes with financial sacrifice and reduced benefits, and great risk. The reduced compensation is reasonable only as long as it is paired with corresponding experience that sets up a successful career transition which can result in significant opportunity cost. Benefits like retirement and childcare support are more important for those with lack of generational wealth. Faculty positions (i.e. the ostensible end goal of a postdoc) is increasingly only achievable for people who can afford to stay in these underpaid positions for so long (or trapped by visa circumstance), rather than being truly meritocratic. Benefit policies are also wildly inconsistent across institutions.

Fundamental issues and challenges

1. Increased stipends will improve recruitment and retention. Simple. Salary is the defining issue. Concerns about saving for housing, retirement etc. reach a critical threshold and squeezes many postdocs out of academia. There needs to be an agreed upon base, accounting for local cost of living. With stipulated minimums on R grants and annual increases and benefits. Consider "family supplements" and "international supplements" to financially support those with additional financial burdens. Increased and equal maternal/paternal benefits/time off (to avoid gender bias), with extensions to grants. Private institutions are raising their salaries at rates that public institutions cannot match, creating a disturbing inequity across institutions.
2. Lack of grant/funding opportunities. Especially for internationals (who represent the majority of postdocs).
3. Lack of benefits. Definition of postdocs as temporary employees restricts their benefit entitlements within universities.
4. Lack of structure to assist postdocs in preparation for their post-postdoc careers. An experience that also formally allows (with % of time) for career exploration, industry skill development, personal and soft skills.
5. High-stress environments with poor acceptance of work-life balance. There is a culture of trickle-down misery. For long-term sustainability, this younger generation needs to be exposed to and value work-life balance. Acknowledging postdoc burnout, NIH could stipulate 20 days' paid vacation per year and vacation accruals; this would significantly improve quality of life and force institutions to amend their postdoc policies.
6. Enormous amounts of data that are unreasonable to obtain in the span a short postdoc.
7. Variable quality in mentorship. NIH could outline expectations for universal postdoc experience—20 days' vacation, at least one professional development/conference event per year, 1 grant per year, community engagement, 10% of time reserved for development away from the bench.

Existing NIH policies, programs, or resources

Add structure to mentorship. As it stands, success is far too dependent on interpersonal relationships with precarious (and overstretched) PI/mentors, with virtually no oversight or accountability. Consider mentorship committees and postdoc cohorts. This would be particularly beneficial for international fellows

who have to navigate many hurdles and are busy acclimating to the US system; these simply won't have the confidence to seek additional mentorship. Formalize IDPs and require that they be submitted to NIH with progress reports, which would at least force some interaction between mentor/PI.

Restructure NIH grant opportunities to create smaller-scale, pilot-style, grants to support postdocs' hypotheses, production of preliminary data, growth, and independence. Open more grants to internationals and replace F-32s with additional Ks. International supplements, similar to diversity supplements could help offset inequity and would provide grant/cv opportunities for internationals. All postdocs should be required to submit grants to ensure they receive grant writing experience. Provide formal education/training for internationals about the US grant system and review processes.

Formalize "Postdoc to PI" training modules, to be run through institutions (similar to RCR) that have a threshold number of postdocs (with virtual NIH trainings for smaller institutions). E.g., in mentorship, grant writing, lab management, budgeting, staffing etc. Allocate money to postdoc offices to implement such training. A major deficit in the academic model is that faculty are acting as managers without ever receiving meaningful management training. Creation of strong, professional online hubs that prevent duplication of resources across universities.

Overall culture of postdoc dissatisfaction will remain if NIH guidelines are not implemented at institutional level. It might even metastasize if two classes of postdocs emerge—one on 60k+ NIH salaries and others on meagre institutional minimums.

Proven or promising external resources or approaches

Most postdocs don't stay in academia; this is a fact. The postdoc experience/training needs to evolve to accept this and realistically prepare postdocs for post-postdoc careers. If we can shift the perception that a postdoc is only for an academic career, and provide much stronger support for alternative career training, this will reduce the anxiety many postdocs share about planning their next steps and encourage more entrants.

Structure experience into multi-track postdocs. All postdocs spend one year as "trainee" , with defined exposure to academic and non-academic careers. Following this, choice of either an "industry track" or "young investigator track" (and potentially "teaching/communication" track) postdocs. With modules and expectations clearly outlined for each. Make very clear to PIs that there is an expectation that they should support extracurricular activities.

Establish postdoc cohorts. Postdocs on-boarded in quarterly increments could belong to a "cohort" within departments for co-mentorship and peer support to reduce sense of isolation.

Creation of a late-stage funding phase to help postdocs transition. Creation of formal, respected, staff scientist roles. Recognize that many postdocs would continue to do science in academic settings, off tenure track, if such roles existed and were financially supported. If postdoctoral researchers play a vital role in scientific research in the US, create a permanent workforce of academic researchers at this level.

Value of a postdoc is unclear. Compel universities to track postdoc outcomes, with development of common language for descriptions. Provide better support for Internships, startups, commercialization opportunities and allow for practical workforce development.

Lobby hard to ease burden of visas on internationals. US prides itself on innovation and should make efforts to retain the highly skilled talent that has been poached from abroad. Loan repayment program. Broadening the LRP program could be an enticing way to encourage graduate students to enter postdocs.

Response 3134

Perspectives on the postdoc roles and responsibilities

[redacted for anonymity], with input from faculty and postdocs.

Postdocs are the backbone in academic research communities. Having talented postdocs to lead projects and perform quality lab tasks are a critical factor for productive research and discovery. However, currently, it is difficult for our faculty members at [redacted for anonymity] to find postdocs who fulfill the minimum requirement of a postdoc. Most need extensive training to become useful and independent researchers.

The NPA and NIH jointly developed the definition of a postdoc. [redacted for anonymity] uses that definition in our postdoc policy. The training and preparation for their next career step needs to include both scientific/technical skills and professional development transferable skills, e.g. grant writing, science communication, management, leadership, teaching, and career exploration.

The NPA's 2023 Postdoctoral Barriers to Success reported most postdocs (81.7%) are negatively affected by a lack of professional development opportunities. All institutions need to provide training in the professional development transferable skills. NIH should provide tools and funding to assist academic institutions in providing this training. A percentage of indirects on all NIH grants that support postdocs could go to fund career and professional development programs and offices. Postdocs on any type of NIH grant should have protected time (~15% effort) to devote to their professional development. The NIH could require postdocs to have a certain number of professional development activities annually, similar to CMEs, to stay on an NIH grant. Postdocs should have funds to attend at least one scientific or professional development conference annually. The requirement of protected time and annual professional development will assist postdocs, mentors, and postdoc office leaders in creating a climate for success.

To keep equity among all postdocs, the NIH should adhere to a consistent universal definition of a "postdoc" regardless of funding mechanism.

Fundamental issues and challenges

Postdocs should be offered a competitive salary commensurate with local cost of living and with local competing non-academic employers. While not necessarily needing to match industry salaries due to the additional benefits of professional development available in an academic environment, one [redacted for anonymity] faculty member suggested determining the average industry starting salary for PhD recipients and then subtract $20-30k to offset costs of the "training" done in academia.

To provide a competitive salary, the budgets for NIH training and research grants need to be increased. The NIH has increased postdoc salaries annually, but the standard budgets for R01 grants haven't been increased for two decades. As a result, PIs can hire fewer postdocs.

NIH should require a percentage of indirects on all NIH grants supporting postdocs to provide postdoctoral offices (or offices with similar oversight) with increased resources to foster stronger postdoctoral communities with healthier, sustainable cultures.

International postdocs comprise 50-75% of the postdoc population in the US. At [redacted for anonymity], the postdoc population is 70% international. International postdocs face unique challenges; the NPA's 2023 Postdoctoral Barriers to Success report shows 86% were negatively impacted by cultural transitions into the U.S. NIH should work with the State Department and USCIS to accelerate and simplify the visa and immigration process for these world-class, early-career researchers.

The NIH should track postdoc career outcomes through a national database, coordinated and funded at the federal level. It should be publicly available and should link to faculty grants. Tracking outcomes is resource-intensive and most institutions lack these resources.

Many PIs lack formal mentorship training. Likewise, many postdocs lack understanding of how to succeed as mentees. To address this gap, NIH should institute reportable grant requirements for mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding.

Existing NIH policies, programs, or resources

The NIH has raised annually the NRSA postdoc pay scale, which is used by many institutions as their salary minimums. However, the standard budgets for grants like R01s haven't been increased for two decades. The NRSA salary scales need to be increased more and the postdoc salaries on research grants need to be increased accordingly. An increase in postdoc salaries along with an increase in research grant funding for postdocs was the top recommendation by [redacted for anonymity] postdocs and faculty members.

Many postdocs also have added financial burdens, such as undergraduate student loans that do not qualify for deferment while a postdoc. Increased salaries will help to allay that burden. One postdoc also mentioned having better accessibility to the NIH loan repayment plan. They suggested that it needed better advertising and a less extensive application process.

With the majority of postdocs in their childbearing years, parental leave is a much needed benefit. The current policy needs to be reviewed with an eye toward increasing the NIH NRSA stipend support for maternity leave to 10-12 weeks as well as allowing for a more inclusive parental leave.

The majority of the US postdoctoral workforce is international. However, there are fewer funding opportunities for international postdocs. NIH should allow non-citizens to apply for F grants or create a similar funding opportunity for them. This will help with funding the postdoc in their current laboratory, but will also allow the postdoc to practice grant writing and show their fundability when applying for faculty positions.

NIH has recently shortened the cumulative years allowed for NRSA postdoc support. Given the increasingly complex and interdisciplinary nature of research, one [redacted for anonymity] faculty member recommended to increase this limit to permit additional training and completion of published studies.

Proven or promising external resources or approaches

Seven institutions in Philadelphia set aside their individual needs to host a virtual postdoctoral recruitment event called the Philadelphia Postdoctoral Preview Event, www.Philadelphiapostdocs.com. This successful recruitment event with over 100 prospective postdocs brought the postdoc office administrators closer together to share other programming and opportunities throughout the year for the benefit of their postdocs.

The Postdoc Academy, https://www.postdocacademy.org/, is providing a cohort-based, online curriculum to teach postdocs how to be successful in their positions that can be supplemented with in-person local discussion groups.

NIH's OITE has been providing highly valuable, virtual programming on resiliency and mental health wellness, https://www.training.nih.gov/, both intramurally and extramurally to students, postdocs, faculty, staff, and administrators. More of this programming is needed at every institution.

I would like to thank the NIH for the platform to share a re-imagined vision for postdoctoral training in the biomedical sciences. I applaud NIH's policies and programs that have progressed postdoc training to date.

Response 3135

Perspectives on the postdoc roles and responsibilities

My understanding is that postdoc positions were first created several decades ago as the number of scientists graduating with PhDs increased, but the number of open faculty positions remained stagnant. These overflow of recent graduates needed something to do, and the postdoc was invented. In theory, the role of a postdoc is to acquire additional skills and improve your CV before applying for faculty positions. In practice, postdocs often take on the role of senior scientists in a lab. They do most of the hands-on training of graduate students and they are typically the first author for most of the manuscripts in the lab. In most labs, postdocs are the most experienced scientists who are actually "doing science." The PI or additional faculty in the lab might have more experience, but they often take on more managerial roles. In my opinion, postdocs are some of the most essential workers in the lab, and can often produce science most efficiently. I do not agree with the notion that a postdoc is a "training position."

In recent years, I've seen industry companies advertise "postdoctoral researcher" positions. My understanding of these industry positions is that they are a good entry-level role for folks graduating with a PhD. I imagine that the industry postdocs have a similar workload and job description as academic postdocs, though industry postdocs often have substantially larger salaries.

Fundamental issues and challenges

1. The salary of an academic postdoc is too low, especially compared to industry roles.
2. Low PhD stipends leave recent graduates financially strained. While they might like the idea of an academic postdoc, they have fallen so far behind their peers financially during their PhD that a low-paying postdoc seems untenable.
3. Many postdocs are hoping to pursue future faculty positions. I know several postdocs who left academia because they either couldn't get a faculty job or assumed they wouldn't be able to get a faculty job when they finished their postdoc.
4. There are not many opportunities to stay in academia after the postdoc without pursuing a tenure-track faculty position. I believe many postdocs would be excited to continue working under their current PI as a research professor, senior/staff scientist, etc. but there is not a clear funding mechanism for this in academia. This sort of position seems to be more common in industry.
5. I've often been advised to move across the country every time I take a new step in my academic career (e.g. graduating a PhD and finding a postdoc.) I've spent my entire career in Boston because my family and friends are here—I wouldn't be able to do science well without this valuable support system. But I'm often told that I'm missing out on valuable experience by not uplifting my life every 2-4 years and moving across the country. I'd like to see more opportunities for scientists to find geographic stability in academia.

Existing NIH policies, programs, or resources

1. Allow PIs to supplement postdoc salaries using their other federal grants (e.g. use an R01 to supplement a postdoc's NRSA funding.)
2. Increase the NRSA stipend minima, which is the standard by which most labs set postdoc pay
3. Vary the NRSA stipend regionally to account for cost of living differences (e.g. New York postdocs require higher pay than Kansas City postdocs). Many other federal agencies adjust salaries/pay scales for cost of living by zip code
4. Consider eliminating the postdoctoral NRSA (F32) program altogether and reallocate the funding towards higher-paying K awards for postdocs. After all, postdocs are not trainees in a majority of cases and should not be forced to compete for low-paying fellowships.
5. Consider expanding opportunities like the K99/R00 which provides postdocs with funding to pursue a faculty position. In general, consider expanding opportunities for PhD students and postdocs to pursue faculty positions.
6. Consider funding mechanisms for a "senior/staff scientist" role. Not every postdoc wants to become a PI or a tenure-track professor. However, research professor positions are hard to come by, and postdoc positions are typically limited to 5 years. Institutions might consider allowing folks to remain a postdoc indefinitely, or create new roles such as "Instructor" or "Staff Scientist" that allow postdocs to get promoted within the same institution and increase their salary.
7. The NIH should do more to encourage institutions to promote within. Postdocs shouldn't be forced to move halfway across the country to find a faculty position.

Proven or promising external resources or approaches

1. Increased salaries have helped industry companies recruit and retain top scientists
2. Most other government agencies adjust their pay scales by geographic location/cost of living.
3. Several research hospitals and universities ([redacted for anonymity]) have created "Instructor" positions. These often give postdocs a "ladder" to climb where they can be promoted at their current institution and increase their salary while they are still working towards attaining a faculty position.
4. K awards are very popular among postdocs as a way to make a higher salary than the NRSA standard. Consider expanding funding K awards and eliminating the NRSA mechanism. Postdocs are not "trainees"

Response 3136

Perspectives on the postdoc roles and responsibilities

The postdoc position is a time to establish independence on the way to apply for academic PI positions. However, it was also the next step after graduate school for many who are still unsure of their career path or an unfortunate position for those that want to stay in academia but not run a lab since there are few staff scientist positions.

Fundamental issues and challenges

Poor salary, no benefits at many places, not considered employees by many universities, high student loans. Academics cannot compete with compensation that industry can. I am going to loose a very talented postdoc to industry because she cannot afford to live in a decent apartment that doesn't have numerous leaks in the ceiling. The cost of living has increased significantly and postdoc compensation has not kept up. No retirement means they are significantly behind their peers when planning for the future. Add family obligations (cost, time) and being a postdoc is not a position in which many people wish to invest.

Existing NIH policies, programs, or resources

Higher postdoc salary guidelines, more money for R01s to pay for postdocs, the ability to supplement postdoc salary or benefits, rules to indicate postdocs are employees. Everything comes down to compensation. Expand LRP awards for postdocs.

Proven or promising external resources or approaches

HHMI increased minimum postdoc salary to 70K. LRP awards can help offset lower salary by paying student loans (I received one and it helped immensely. It is one of the reasons I am still in academia).

Response 3137

Perspectives on the postdoc roles and responsibilities

Postdocs are working professionals, in Ph.D. required positions, not trainees. Postdocs are given similar expectations to that of entry-level researchers in industrial positions that require Ph.D.s, and are expected to hit the ground running.

Fundamental issues and challenges

Starting as a postdoc often requires a cross-country move, and paying multiple months of rent up front. When I moved to boston, I had to pay four months rent up front which was 8000 dollars. This is a huge barrier for members of historically marginalized groups, and anyone who doesn't have wealth. Also, doing a postdoc almost always means making them choose between prioritizing their job or their family. When I moved to Boston, there wasn't a way that my wife could leave her industry position to follow me for a 2 year temporary position that paid under the low-income level for the region. To spend time with her, I have to do an extra four hour drive at the end and beginning of each week. Postdoc parents also struggle a lot, and often don't have subsidized child care, or access to affordable family health plans.

Existing NIH policies, programs, or resources

Add a cost of living adjustment based on the GS-11 scale which is already used for other similar governmental scientist positions, require that universities provide 16 weeks maternity/paternity leave to accept NIH funds, recognize that having to worry about whether you can afford to eat next month severely decreases the ability of a postdoc to do their job and thus, NIH funds would actually be better spent if postdocs were paid a livable wage. I won a major, national dissertation award when I graduated from grad school—but my experience in my postdoc has had me strongly considering leaving academia.

Proven or promising external resources or approaches

No response

Response 3138

Perspectives on the postdoc roles and responsibilities

Postdocs are highly trained, highly skilled scientists that drive the bulk of scientific research worldwide. They are critical independent contributors to their labs by leveraging their expertise and perspectives from their PhD training to rapidly start and progress on independent projects. Ideally they gain additional technical, scientific, and management training during this time from their postdoc adviser and colleagues, enabling them to start their own labs successfully, but in reality this training is often self-driven.

Fundamental issues and challenges

Salary. The "trainee" title is used in practice as an excuse to underpay postdocs. Many institutions use the NIH salary minimum as a maximum, or put restrictions in place preventing PIs from easily paying more than the minimum. The NIH salary minimum is well below a sustainable living wage in most cities. Salaries do not keep pace with inflation, housing costs, or childcare costs. Postdoc fellowships occur at a time in life when many are trying to start families and save for their future, a burden felt especially strongly by women. The lack of pay is the primary reason for the mass exodus of postdocs to industry positions where they can receive a comfortable salary, benefits, and promotion opportunities.

Volatile benefits:

1. Some universities punish trainees for winning fellowships by reducing the trainee's salary to the value of the award, rather than continuing to pay them at previous levels, or by removing healthcare or retirement benefits. Some universities take the institutional allowance and put it towards university expenses like health insurance without input from the trainee.
2. Benefits are further restricted through the "trainee" status. As simultaneous students and employees, postdocs denied benefits like childcare and retirement benefits granted to other staff employees their age.

Lack of training and mentorship. Postdocs are called trainees but simultaneously expected to be independent, and therefore receive less help and mentorship from their advisor than as a student, even if they've switched fields or are learning new techniques. Further, a postdoc's success and livelihood relies almost entirely on their advisor, with little to no oversight of this dynamic if it becomes toxic.

Existing NIH policies, programs, or resources

Replace the postdoc title with a staff scientist position, providing appropriate pay and benefits. Salary would grow with experience, starting higher than current postdoctoral salary levels ($70k minimum) and with the opportunity to seek promotion. This role is still compatible with training. The staff scientist role would provide a career option for scientists who wish to remain in academia without running their own lab. These scientists would become pillars of their lab's knowledge and output, accompanied with the credit attribution to recognize their independent contributions, including co-PI title on grant applications and corresponding authorship on papers.

Increase salary minimums to be location-based to account for cost-of-living differences. This would require an increase in the size of the modular budget, which has lagged far behind inflation. The NIH could further limit the total funds or grants that can be held by a single lab in order to make larger modular budgets more widely available.

Protect existing pay by adding requirements to NIH postdoc fellowships that if funded, the university cannot reduce the trainee's salary or existing benefits, and the university must reserve the institutional allowance for research costs at the discretion of the trainee.

Compile training resources to supplement what is provided by individual PIs. Create a platform to disseminate workshops and courses on grant writing, mentorship, teaching, budget management, hiring, etc.

Return the K99 eligibility window to 5 or 6 years. The growing duration of postdoc appointments cannot be solved by applying arbitrary deadlines and increased financial pressure to postdocs. The current eligibility window punishes postdocs for pursuing creative or risky scientific projects. Further the removal of the K99 extension for the COVID-19 pandemic particularly punished postdocs who were the most vulnerable and at the earliest stages of data collection when the pandemic hit.

Proven or promising external resources or approaches

No response

Response 3139

Perspectives on the postdoc roles and responsibilities

A postdoctoral position should prepare postdocs to move to a permanent position, either by moving to a research position in industry or to a Faculty job. A postdoc should be able to lead their own research project, participate in the training of undergrads and grad students, and learn how to apply for funding, while still receiving training and mentoring from a PI.

Fundamental issues and challenges

The cost of living in the USA has risen considerably, especially in areas such as the Bay Area, where the cost of rent, food, transportation, and medical care exceeds the salary of postdocs. This is a greater burden for postdocs with children who also have to pay for childcare. Many postdocs end up in debt, and some even leave academia due to the financial burden. International postdocs face even more challenges as their visas may prohibit their spouses from working, and they have to support their families with a single salary. Single postdocs often have to live in unsafe conditions and far away from campus. These conditions can affect their performance, leading to fewer opportunities and grants, and ultimately ending their academic careers. The situation is even worse for postdocs from underprivileged backgrounds, and the ones who succeed are those with generational wealth or high-earning partners.

Faculty members often cite the minimum NIH salary as a reason not to increase postdoc salaries, claiming that their grants do not allow for it. NIH should increase the postdoc minimum salary, and make it dependent on geographical location, with regular updates to keep up with inflation. It is disheartening to think that success as a PI depends on exploiting the people working for them.

Postdocs are not asking for luxuries, just a salary that covers basic needs such as food, shelter, and transportation. Retention of postdocs may be affected due to the low likelihood of getting a tenure-track job, leading to feelings of hopelessness. It may be necessary to rethink how science is conducted in the country, perhaps by creating more staff scientist positions or alternative paths to the tenure track.

Existing NIH policies, programs, or resources

For international postdocs, there are not many opportunities available to complete postdoc training. The only program I am aware of is the K99 fellowship. However, a successful K99 applicant is one that could already be going to the job market. For international postdocs, it can be difficult to figure out how the system works, and when they finally figure it out, it could be too late to complete a successful application. If PIs recruit international postdocs, they should provide them with all the tools necessary to succeed. Another limitation is unplanned live events, like sickness or having to take care of relatives. There should be clear guidelines about how to deal with such situations when dealing with eligibility to apply for grants.

Proven or promising external resources or approaches

No response

Response 3140

Perspectives on the postdoc roles and responsibilities

The National Postdoctoral Association (NPA) defines a postdoctoral scholar (or fellow) as "an individual holding a doctoral degree who is engaged in a temporary period of mentored research and/or scholarly training for the purpose of acquiring the professional skills needed to pursue a career path of his or her choosing" . The postdoctoral period is meant to be a short-term opportunity (no more than three to five years) for biomedical researchers to gain valuable research experience in preparation for their chosen field of study, as well as develop their communication, leadership, and additional professional skills in preparation for a more permanent position in research-related careers or science-related non-research careers in various sectors, including academia, the private sector, government and the nonprofit sector. Though this phase is still a mentored experience, the postdoctoral phase also allows individuals the chance to demonstrate that they can operate as independent researchers with minimal supervision from their advisor, whose main role is to provide adequate training and mentoring in preparation for the next step of

their postdoctoral fellow's career. This training period offers postdoctoral fellows opportunities to broaden their scientific skills and make new connections, preparing them for their next career stage and putting them in the best position to succeed.

Fundamental issues and challenges

Postdoctoral fellows are the backbone of biomedical research [redacted for anonymity] playing an essential role in research and discovery as they prepare to launch their own careers. However, despite their critical impact on biomedical research and that performing a postdoctoral fellowship is a near-requisite step of many career paths, the postdoctoral fellowship can be a challenging time for young scientists. This can be attributed to many competing priorities and conflicts:

- Low stipends (makes it difficult to support themselves or family)
- Lack of benefits (health care, retirement, leave)
- Competing research priorities (their own vs. their mentor)
- Skill acquisition needed for the next stage of career vs. research priorities
- Publication pressures (need to publish in high-impact journals, meeting large data requirements)
- Visa issues for visiting fellows
- Mental health issues such as anxiety and depression due to poor mentoring, unbalanced power dynamics, and hostile work environments.

Many of these issues disproportionately affect women, people of color, LGTBQA+ scientists, and scientists with disabilities. For example, low stipends often force women to choose between their careers and starting or raising a family. Scientists of color and LGTBQA+ scientists, who may already be impacted by low mental health, can have that exacerbated by a lack of inclusion in labs.

Existing NIH policies, programs, or resources

The NIH IRP is well-equipped to handle many challenges. After a recent examination of the costs of living for NIH postdocs, the NIH IRP has taken steps to increase stipends significantly to match the NCI pay scale. As many top research institutions are within some of the more expensive areas of the U.S., NIH Extramural in partnership with universities could enact policies that would raise postdoctoral stipends, perhaps through location pay.

The NIH OITE and the IC training offices provide resources for career planning. They also provide provided specializing training on a variety of skill sets needed for career success. Training offices leverage alumni contacts working in fields related to their scientific mission to provide valuable networks. The NIH should reflect on funding career education for all postdoctoral fellows in order to provide an experience that can mirror what is available at the NIH IRP. In terms of opportunities for postdoctoral fellows to learn skills outside of their labs, the NIH IRP provides a national model.

The OITE provide wellness services, including mental health counseling. OITE also provides resilience training to assist fellows in building their mental health. In particular, their "Becoming a Resilient Scientist" (BRS) workshop series has equipped intramural postdoctoral fellows with the critical skills needed to cope with adversity in both their lives, covering such topics as self-advocacy, dealing with imposter fears, and helping to maximize their mentoring relationships. Evaluation of the program showed that participants that attended most of the BRS sessions showed a significant increase in resilience, as measured by a validated resilience scale. This in turn led to significant increases on fellows' ability to deal with stressful situations and reductions in depression and perceived stress.

Proven or promising external resources or approaches

Coordinated postdoctoral programs can offer additional support to postdoctoral fellows in the areas of mentorship, training navigation, and others. For example, the NCI's Intramural Continuing Umbrella of Research Experiences (iCURE) program supports mentored research experiences for qualified scientists from diverse backgrounds in the multidisciplinary research environment of the NCI. ICURE is an extension of the highly successful NCI CRCHD Continuing Umbrella of Research Experiences (CURE) program which supports career progress of its scholars towards research independence, as well as fosters and sustains diversity in the biomedical research pipeline. ICURE supports the recruited postdocs within the program and programs that supplement the postdoctoral experience for postdocs within the research environment.

Programs that address gaps or needs in the training of these individuals have also been found to be beneficial, such as the Sallie Rosen Kaplan (SRK) Postdoctoral Fellowship for Women Scientist and the Transition to Industry Fellowship (T2I) Fellowship.

Response 3141

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

I think the fact that postdocs aren't considered full employees and therefore don't receive full benefits is a bit absurd to me and being considered a "lesser class" of employee I think definitely plays into people being unwilling to take postdoc positions. Furthermore, it's almost like postdocs get punished for getting outside funding, as you immediately loose any employee benefits that you had to begin with. When I received my T32 grant as a postdoc, I lost access to university health insurance, which was not something I was informed would happen and was not handled well by the T32 program. Also, because I do not fall neatly into an employment category like student or faculty partially because of my funding, I also lost access to university software packages like microsoft office. The fact the postdocs are often overlooked when it comes to changes in university or NIH policy and that there is no oversight for universities to uphold policies for postdocs is also a big concern. At my institution, postdocs are only recently (as in within the next couple months) being given maternal leave after having a child. Also, even though the NIH has stipulations for what postdocs should be paid, many institutions do not follow these guidelines and pay their postdocs much less. All of these things give the appearance that the NIH and academia in general do not care how postdocs are treated and that our position is not valued and viewed as substandard compared to the other employees at the university.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3142

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

NIH could consider funding more positions, such as research staff, that are designed to follow postdoctoral positions. This could both provide opportunities for postdocs to move to, and also enable the research to continue with a smaller number of postdocs.

Response 3143

Perspectives on the postdoc roles and responsibilities

The postdoctoral position allows me to discover my independent research direction by obtaining new research and increasing my publishing skills. More importantly, it is to manage a group of scientists to meet this goal and mentor younger scientists. Additionally, significant time must be spent writing grants and fellowships to develop critical skills for the independent investigator position. Developing meaningful collaborations is essential to the academic postdoc.

Fundamental issues and challenges

Often postdocs must relocate to a different institution. This is detrimental to underrepresented groups as most do not have the funds to move and thus do not continue to the postdoc level, especially since the postdoc contracts are initially short-term. Do not penalize postdocs applying for grants or fellowships because of this.

There is a severe lack of minority representation at the postdoc level, which leads to a lack of diverse faculty. One way to combat this is to provide equitable compensation for the postdocs. A minimum of 70k with the cost of living increases, following in the steps of HHMI, will address this issue and lead to better recruitment and retention.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Follow the HHMI postdoctoral pay scale.

Response 3144

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity] would like to provide feedback to NIH in response to RFI (NOT-OD-23-084). [redacted for anonymity] is a private, stand-alone health sciences university that currently retains approximately 150 postdoctoral researchers [redacted for anonymity]. We are the largest private research institution in [redacted for anonymity] and also the second-largest NIH funding recipient in the state. [redacted for anonymity] ranks in the top third of all US medical schools in NIH research support (Blue Ridge Rankings). Our comments below were generated via input from our Assistant Dean of Postdoctoral Education, Dean of the School of Graduate Studies, Associate Provost for Research, several of our NIH-funded PIs, and postdocs, of course.

Perspectives on the postdoc roles and responsibilities of the academic postdoc (e.g., what the postdoctoral position means to you, how you view it).

The academic postdoctoral position is a valuable opportunity for training, mentorship, and career development. The postdoctoral position allows individuals to gain hands-on experience in their field, develop new research skills, and prepare for future career opportunities. Additionally, the postdoctoral position provides a unique opportunity for mentorship, allowing postdoctoral trainees to receive guidance on their research, career development, and networking opportunities.

To address these challenges, NIH could consider expanding support for postdocs, such as increasing funding (both in form of more fellowships & increased stipends) and providing more comprehensive benefits. Additionally, NIH could establish policies to promote work-life balance and a more inclusive research environment, such as providing more flexible work schedules or requiring diversity-focused training and mentorship programs. We also believe that a mentorship plan for postdocs supported by R-series grants should be explicitly required in proposals. By supporting the success and well-being of postdoctoral trainees, NIH can help ensure that the academic research workforce remains vibrant, diverse, and inclusive. More details on these recommendations are included below.

Fundamental issues and challenges

The academic postdoc position presents several challenges that can inhibit the success and well-being of postdocs. For example, postdocs often experience limited job security, long working hours, and low pay, which can make it difficult to balance their research responsibilities with their personal lives. Postdocs are often so focused on research deliverables that they neglect the non-laboratory auxiliary training (teaching skills, industry/business acumen, networking, etc.) needed to be competitive for future career opportunities. Additionally, postdocs from underrepresented backgrounds may face additional challenges, such as limited access to mentorship and professional development opportunities or a lack of representation in the research workforce. Furthermore, postdocs are often mentored insufficiently, as though they are graduate students. This is most often true when the principal investigator is more junior.

- Limited job security: One major challenge is the limited job security and uncertainty of the postdoctoral position, which can make it difficult for postdocs to plan for their future and make long-term career decisions. This issue is compounded by the fact that the number of available academic research positions is often limited, making it difficult for postdocs to transition to permanent academic or industry positions. The K99/R00 mechanism is well-suited to help overcome and directly addresses the difficulty in transitioning to academic positions. We believe a targeted and sizable expansion of the K99/R00 program is warranted. In addition, the NIH should consider creating a similar mechanism for transition to industry positions that are research-focused.
- Long hours & low pay: Another major challenge is the long working hours and relatively low pay that are characteristic of many postdoctoral positions. This can make it difficult for postdocs to balance their research responsibilities with their personal lives, which can lead to burnout, high levels of stress, and (increasingly) PhD graduates turning away from postdoctoral training.

Existing NIH policies, programs, or resources

Additionally, some postdocs may experience inadequate mentorship or lack access to professional development opportunities, which can inhibit their ability to grow as researchers and prepare for future career opportunities. To remedy this situation, the NIH should consider a requirement that postdocs funded by any NIH grant mechanism (beyond only T & F awards) be funded at the minimum indicated in the NRSA stipend levels. Furthermore, NIH should establish policies to prevent overwork or burnout and allow for flexible work schedules.

- Auxiliary training needs: To be competitive for limited academic/industry positions after completing their training, postdocs must have time to pursue skill-building activities outside the laboratory. Examples include teaching opportunities, familiarity with the business environment, networking in their field, professional development workshops, and possibly even shadowing or information interviews. Very few postdocs are given the time to explore these options and, as a result, become unprepared and are discouraged about their job prospects. When R-series grant proposals include a budget to support postdocs, the NIH should require PIs to submit a scorable 1-2 page document outlining a specific Postdoc Mentoring Plan. The National Science Foundation has been using this mechanism to great effect for quite some time and this scoreable feature is often the focus of discussion on grant review panels. Two options come to mind for how this could be funded:

1. the NIH could implement a policy whereby R-series grants allow for 5-10% postdoc effort to pursue these training needs outside the lab, and/or
2. the NIH could allow for administrative supplements to cover these costs, when needed.

- Mentoring issues: Faculty mentors are often far better prepared for advising graduate students than they are for advising postdocs. The Postdoc Mentoring Plan mentioned above can provide an excellent opportunity to ensure that PIs understand the needs of postdocs.

Proven or promising external resources or approaches

However, the NIH might also consider requiring first-time R-series awardees to engage in mentorship training prior to award activation. Such training could focus on the specific needs of postdocs, as differentiated from graduate students; and also some form of sensitivity training for mentors that will help postdocs from underrepresented backgrounds. This could be accomplished through an online course module or even local in-person training run by the home institution.

As mentioned above, we recommend the following improvements to existing NIH policies and programs:

- Expand the K99/R00 mechanism to help postdocs transition to academic positions
- Require institutions that receive NIH funding to insure that all postdocs be supported at NRSA stipend levels
- Promote diversity in the ecosystem by explicitly including this in mentorship training
- Further promote diversity by expanding the Diversity Supplement program (PAR-21-071) for postdoctoral fellows
- Expand the F32-Diversity fellowships (PAR-21-217) & K99/R00-Diversity awards (PAR-21-220), which are both currently limited to translational research in Alzheimer’s Disease, to include all fields of study

We recommend the following new approaches to enhance postdoctoral training:

- Require mentorship training for all first-time R-series awardees in proposals that budget support for at least one postdoc
- Require a 1-2 page Postdoc Mentoring Plan (follow the NSF model) for any proposal that includes budget support for at least one postdoc
- Implement new policies to prevent overwork or burnout and allow for flexible work schedules

Our institution greatly appreciates the efforts that NIH has made to solicit comments from the postdoctoral training community. We hope that these comments [redacted for anonymity] will help the NIH Advisory Committee Working Group to implement a range of strategies to help improve the working environment and training for postdocs. Please feel free to reach out to me for any clarifications or additional feedback at [redacted for anonymity]

[redacted for anonymity]

Response 3145

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is meant to provide the scholar with appropriate training, tools, and exposure to facilitate research independence or skills required to succeed in non-research careers. Given the lack of permanent positions in academia after a postdoc, NIH should broaden the definition of postdoc positions and a postdoc looking for opportunities outside scientific research should be supported equally. All postdocs should have access to professional training in management including budgeting, grant writing, leadership, and administration. For postdocs interested in science communications, science policy, medical writing, and other potential career trajectories appropriate opportunities should be made available. As a global early-career scientist community, we advocate that these opportunities should also be open for international scholars. This is possible by broadening the scope of job duties **and responsibilities** for postdocs and including an optional internship as part of the program so it doesn't hinder with maintaining international scholar visa status. Postdocs should be allotted protected time and funds to attend at least one scientific or professional development conference annually to explore new scientific innovations, share knowledge and perspectives, and grow their network. Additionally, NIH should establish a recommended range of postdoc time to be devoted to service, mentoring, and professional development activities. This will help all the stakeholders: postdocs, PI's, mentors, and postdoc offices (PDOs) leaders in creating a guideline for success that is tailored to individual needs. Additionally, the NIH should develop mechanism to hold academic institutions accountable in adhering to these requirements and incentivize compliance. Lastly, it should be mandated to have annual performance reviews between postdocs and PIs to establish clear expectations, yearly goals, and evaluate progress quantitatively to avoid miscommunications.

Fundamental issues and challenges

Compensation and Benefits: While the minimum salary requirements has increased over the past years, it isn't enough to provide a decent quality of life to support postdocs and their families. This becomes an important concern, especially in high-cost-of-living areas, that are often the hubs for scientific innovation. In addition, the benefits offered to postdocs differ based on the sources of the grants which creates uncertainty amongst postdocs and having differential access to health insurance, and retirement benefits for similar job responsibilities. The NIH should increase the stipends to a minimum $65,000 with an annual increase based on performance, inflation, merit, and location. NIH should also recommend a minimum scale for adjust for differences in location with higher cost-of-living. The NIH should also set mandates that irrespective of the funding sources, postdocs have access to same employment benefits through academic institutions.

Lack of representation from diverse communities: Postdocs from underserved communities and international postdocs face systemic and implicit barriers including lack of inclusion, increased micro-aggressions, lack of community leading to increased isolation affecting their mental health tremendously. The NIH should continue to invest in DEI initiatives and mandate DEI training for all stakeholders including PIs, Department Chairs, and PDOs. In addition, NIH should establish rubrics to measure outcome of the DEI initiatives and ensure accountability.

Lack of permanent opportunities in academia after postdocs: Job security and stability are another issue and challenge after postdoctoral training. With a burst in the number of academic postdocs and decreased number of academic jobs, career opportunities in academic institutions are dwindling forcing graduate students to look into non-academic careers.

Competitive environment: The increasing competitiveness, emphasis on publishing or perishing, and pressure to publish in a high impact-factor journal creates an environment that's challenging to navigate and deteriorates mental health.

Existing NIH policies, programs, or resources

Policies

Universal access to benefits

Postdocs should have access to universal and equitable benefits regardless of the funding sources. Currently, upon acceptance of NIH fellowships, some postdocs can lose employee benefits as they no longer are employed by the university. NIH should expand the family-friendly policies including paid parental leave, childcare subsidies to postdocs supported by NIH grants.

Programs

The four-year timeline for applying to fellowships such as K99 acts as a gatekeeper for p[ostdocs from underserved backgrounds. A postdoc should not be excluded from consideration for such a consequential award simply because they had a break or took upon a challenging research project. In addition to this, the K22 should be more supported as an alternative for senior postdocs that did not receive an F32-style fellowship. Similarly, the 5 year timeline for the K22 should be effectively abolished. It goes without saying that the career delays many contemporary postdocs have faced due to the pandemic.

Increase in funding programs for international postdocs

The NIH should increase the number of funding opportunities available for international postdocs. Currently, K99/R00 is the only program International aree eligible to apply for, while they constitute ~50% of the workforce. In addition, NIH should include provisions such as visa application help/subsidies, accommodate for delays in visa stamping and allow vacation accrual to allow travel for international postdocs to see families.

Programs to incentivize establishing/increasing permanent position in universities

To retain diverse talent, NIH should create or expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining continuity of lab knowledge, providing additional career options for postdocs

Evidence-based outcomes and Accountability

Conduction annual surveys on postdoc satisfaction and collecting real-time data will position NIH to analyze if policy changes were effective and adjust policy accordingly.

Proven or promising external resources or approaches

This response is consolidated by a few representatives of The [redacted for anonymity] program. The program was set up by the [redacted for anonymity] to help channel and support the passion of early-career researchers (ECRs) in driving change towards open science, greater integrity, and equity in the wider scientific enterprise.

Mentoring resources

The NIH should set up a nationwide online mentor database that postdocs can access. This will allow postdocs to search for mentors based on their specific goals and needs.

National Postdoctoral Association resources

The NIH Working Group should refer to the following resources in particular: NPA Recommended Postdoctoral Policies and Practices (updated version released Q3 2023), the triennial NPA Institutional Policy Surveys from the last decade (2023 released Q3 2023), and more specific pieces within the NPA Resource Library.

Canadian Association of Postdoctoral Scholars: https://www.caps-acsp.ca/en/

Link to data surveys conducted

https://elifesciences.org/articles/40189,

Future of Research survey: https://pubmed.ncbi.nlm.nih.gov/29946421/

Lastly, we would like to thank NIH for providing this opportunity to share our vision for improving postdoctoral experience and satisfaction. Numerous NIH programs such as MOSIAC, IRACDA, and UNITE have moved the needle in the right direction and proved effective in promoting DEI in STEM. We hope that these recommendations will help NIH spearhead much-needed change in the postdoctoral training experience.

Response 3146

Perspectives on the postdoc roles and responsibilities

The academic post-doctoral (postdoc) position is critical for growing the biomedical research workforce. As one [redacted for anonymity] member described it: "The postdoc experience pushes young investigators to get outside their comfort zone and identify a research niche. Postdocs are actively choosing to make research a long-term career goal, and this time is critical to develop the skills and resources for a sustainable career in academic research."

[redacted for anonymity] is concerned that the number of researchers with a focus on women's health across the lifespan continues to decrease and these losses in the research workforce, particularly women and women of color, will only continue to grow without action. Therefore, [redacted for anonymity] supports the NIH's efforts to improve the postdoc training experience and grow and retain investigators across research career stages.

Many postdocs are at the stage of life when they are beginning or growing their families. Taking parental, family, or other leave can often conflict with the goals of the postdoc experience, including gaining additional research experience and delaying the transition to independence. It is important to note that women are more likely than men to take on childcare and other family responsibilities. Women are also more likely to research issues that pertain specifically to women's health. Therefore, [redacted for anonymity] is concerned that there is currently little support in the system to ensure that these obstacles do not hamper career advancement for women who are underrepresented in science and further widen the gender gap in highly-trained PhD scientists.

We feel that the roles and requirements of a postdoc differ between institutions. For instance, some require postdocs to have been awarded grant funding, which limits post-doc training opportunities for many promising scientists.

Fundamental issues and challenges

Finding a Position: While the application process for PhD programs is a somewhat formalized process, establishing an academic postdoc position tends to be a disjointed/informal process. Those looking for positions often rely on network connections and word of mouth to identify positions. A [redacted for anonymity] member described the process as "chaotic," which makes the process unattractive to researchers.

Salary: Recent PhD graduates can receive a much higher salary working in industry than in the academic setting. One [redacted for anonymity] member reported that PIs have no choice but to give postdocs a low salary (i.e., what is posted by the NIH) with NIH-funded T grants Additionally, some institutions consider postdocs students, while others consider them staff. This difference impacts both postdoc salaries, students are not taxed, and the amount of overall grant funding that is dedicated to salaries. Benefits also vary based on status. Moreover, NIH training grants do not provide PIs with a budget sufficient to cover tuition or costs of coursework. This is ultimately a deterrent for faculty PIs who do not have access to other funds to pay for tuition and other learning opportunities.

Transition to Independence: A significant barrier to recruiting and retaining academic postdocs are the real and perceived barriers to transitioning to independence. Being awarded an R grant is extremely challenging for those pursuing an academic research career due to low paylines, which hinder promising young scientists from entering or remaining in the field. A member of [redacted for anonymity] said, "This is the hard fact: postdoc fellows don't see the light at the end of the tunnel to stay motivated and work in an academic setting."

Existing NIH policies, programs, or resources

Finding a postdoc position: NIH should work with grantees, institutions, and stakeholder organizations to develop a more streamlined process for postdocs to identify open academic positions and facilitate application.

Salary: While NIH has taken steps to increase salaries in some awards, difficulties remain for principal investigators bringing a postdoc onto their research team. For example, paying a postdoc the higher salary they require and deserve leaves less funding in an overall R01 award to conduct critical research. NIH should consider how to increase or supplement postdoc salaries while maintaining the overall grant funding necessary to perform critical research. In addition, NIH can take steps to increase academic postdoc salaries and make this a more attractive career path for promising scientists. Without these improvements and efforts to retain scientists, we will stifle research and scientific advances.

Transition to Independence: NIH should expand and create additional paths and awards to fund early career investigators, including K and R awards. Additionally, as we transition away from the COVID-19 pandemic, NIH should consider how to increase postdoc opportunities for MDs to pursue that allow for greater flexibility, such as research-based careers. Additionally, the NIH should foster support for individuals who are not only leaving graduate school, but for those who are considering transitioning back into the academic and scientific workforce.

[redacted for anonymity] recommends that NIH consider enhancing the postdoc training experience by supporting re-entry training and re-tooling with a specific mentor or mentor team. As an example, ORWH is currently supporting research supplements to promote re-training and re-tooling into health-related research careers. It is envisioned that the supplement scholar will be engaged in career development at a laboratory, institution, or organization different from their current place of employment with the goal of supporting the scholar's transition to independence in a multitude of career options.

Proven or promising external resources or approaches

Mentoring: As noted earlier in the comments, postdoc training is a critical time for young investigators to develop the skills and resources for a sustainable career in academic research. Gaining these skills is not possible without robust and dedicated mentorship. To distinguish quality mentorship as a benefit of an academic postdoc versus industry, NIH should investigate all its options to promote mentorship in its existing grants and programming, including creating more dedicated time and resources both mentors and mentees. One [redacted for anonymity] member suggested, "We need to do a better job of defining and disseminating what the advantages/benefits are of a postdoc. The concept may be abstract for many graduate students who think it is going to be more of the same thing."

Networking/Career Growth: To further encourage academic tracks for postdocs, NIH should consider providing dedicated travel support to early career investigators to attend conferences to learn and network. Further, NIH and stakeholders should investigate opportunities to provide postdocs with externships to introduce and prepare them for their next position in academia, industry, teaching, or other fields.

Parental and Family Leave: As noted earlier, many postdocs are at the stage in life when they are beginning or growing their families, particularly women who are balancing their work with childcare and other responsibilities. Taking parental or other necessary family leave shortens this critical time for young scientists to grow their skills and transition to independence. NIH should consider supporting postdocs who take parental or family leave during this time, including providing additional time and implementing programming/mentorship opportunities directly related to supporting young investigators. Further, they should consider how to account for loss in productivity for individual grants if a member of the research team takes leave. This is a crucial step for protecting women in the biomedical workforce.

Response 3147

Perspectives on the postdoc roles and responsibilities

A postdoc is someone who has earned a PhD and is seeking additional experience in pursuing independent research for a defined, temporary time period. PIs do not see postdocs in this fashion. Postdocs are often seen as inexpensive labor used to collect data for grants that will advance the career of a PI. Postdocs are referred to as "trainees" , which dismisses and devalues the knowledge and expertise of a PhD scientist.

Postdoctoral positions should be used to facilitate research independence while developing technical and nontechnical skills and have career exploration built into the professional development experience. This is a valuable time in a person's career to build skills that can be used for whatever career path a postdoc pursues. Professional development should be seen as a responsibility and should be normalized by PIs, not as an optional supplement.

Fundamental issues and challenges

The lack of pay is a fundamental challenge for all postdocs but especially for the postdocs living in cities with a higher cost of living. The NIH should increase its stipends to postdocs on NIH training and fellowships grants to match the GS-10 federal pay schedule including locality pay for the year of award. Year 0 postdocs should receive stipends equivalent to GS-10 Step 1, with annual increases equal to the next GS-10 Step. Similarly, the NIH should promote minimum salary requirements for all NIH-supported postdocs that provide a living wage adjusted annually for inflation, location, tenure and merit.

While DEI is an important and essential for the success of STEM researchers, NIH's definition of "underrepresented minority" does not support inclusivity of ethnic minorities. Asians are treated as one giant monolith which does not acknowledge the cultural and socioeconomic differences between different Asian ethnicities. Southeast Asians are underrepresented, but because Asians are treated as a whole, the underrepresentation is hidden. There needs to be a disaggregation of data to define and determine what groups are underrepresented.

Existing NIH policies, programs, or resources

Currently, postdocs can lose employee benefits when accepting an NIH fellowship or position on a training grant. Postdocs deserve equitable benefits. NIH should issue written guidance explaining that receiving an NIH grant or fellowship does not prevent the host institution from categorizing such postdoc as an employee. NIH should require all postdocs receive employee-level benefits as a requirement of NIH training/fellowship grants, similar to some NASA and NSF requirements, and provide funding to institutions to assist with these costs.

To increase equity, NIH should provide NIH-funded postdocs with moving allowances. Moving costs can be especially cost-prohibitive for researchers from low socioeconomic backgrounds.

NIH should expand its family-friendly policies to all NIH-supported postdocs, including paid parental leave and childcare subsidies.

Proven or promising external resources or approaches

NIH should develop a hub for professional development resources to be stored and shared. There are a lot of efforts out there that get repeated due to the lack of coordination of efforts. Bringing those resources together would make professional development for postdocs even stronger.

Thank you for the opportunity to submit comments and ideas.

Response 3148

Perspectives on the postdoc roles and responsibilities

I believe that an academic postdoc should be a defined period of intentional training to move someone along in their career. What they are learning can be very broadly defined (e.g., new research experience, new techniques, management skills, teaching, grantsmanship, communication, etc.), but the experience should be about acquiring new skills that prepare them for a career. If there is not new skill building, then the individual should move into a regular position. Furthermore, an academic postdoc should not just be used to acquire enough accomplishments (e.g., papers, grants) to be competitive for an academic position. If it's not new learning, but simply doing more of what's already known, the individual should be in a regular position. If medical residents can learn all they need to in 3-5 years, then academic postdocs should be able to do the same in a similar timeframe.

Fundamental issues and challenges

Finances: This likely will be a primary point of conversation and also the most difficult item for the NIH to address. That said, the financial burden posed to many postdocs has made continuing in this position prohibitive. I recently worked with an outstanding postdoc interested in a faculty career who was forced to

leave her postdoc because she could not afford rent and childcare on postdoc pay. Although difficult, finances and cost of living will need to be addressed in some way.

Mentorship: Many institutions have made great strides in building more effective mentoring practices among graduate faculty. Many of our biomedical postdocs conduct their training in labs with faculty who are not part of graduate programs, however. Aside from T32 appointments, and many times even within T32 grants, the lack of enforcement of postdoc mentoring best practices makes the overall postdoc experience highly variable and rife for abuse. Postdocs supported on non-NRSA mechanisms are far too frequently still seen as a cost-effective means to complete research projects, and not as an investment in the future of academic research.

Uncertainty: I believe one final challenge is the uncertainty about how postdoc training is moving someone forward in their careers. Without set expectations around length of training, what training will occur, and clear career outcomes, postdocs are asked to enter into a nebulous void of an uncertain future that in practice, may last upwards of 10 years. Consequently, the value of the postdoc is unclear and can appear largely undesirable.

Existing NIH policies, programs, or resources

Use models like IRACDA to focus on additional career options, e.g., pathways to industry, which could help build public/private partnerships and allow postdocs to gain industry experience while still focusing on academic research. This type of approach also could be paired with pathways to academic staff scientist positions, that do not carry the expectation of becoming the PI in a tenure-track role.

Rather than the K99/R00 mechanism that extends the postdoc phase, transition that award to an early faculty scientist award, such that the awardee would have a more competitive salary and full university faculty benefits. The K99/R00 awards add on additional years to what is already a long training period, and moving awardees to independent positions sooner would help make academic positions more desirable. Additionally, create more early career awards for non-TT faculty roles, so individuals can amass accomplishments in independent positions rather than remaining as postdocs longer than necessary.

Proven or promising external resources or approaches

1. Clarify NRSA language to allow institutions to provide equitable benefits to all postdocs regardless of funding source.
2. Set regionally adjusted cost of living NRSA rates.
3. Set consistent postdoc training expectations, regardless of funding source (i.e., NRSAs and R01s).
4. Before approving a postdoc's appointment to a research grant, require the postdoc and PI to submit some form of a career and training plan, potentially even uploading it to ERA commons and require annual updates.
5. Require evidence of commitment to mentoring from all faculty who want to support a postdoc. Administer mentoring evaluations to NIH supported postdocs to gauge the quality of their experience; factor those evaluations into the PIs eligibility to continue receiving funding.
6. Set consistent salary/stipend amounts for all postdocs and require following experience levels.
7. Place absolute limits on total time allowable in postdoctoral positions. This could prevent perma-docking; oftentimes postdocs do multiple postdocs not because they need more training, but because they just need more history of grants and pubs. That can happen by other potential academic junior scientist positions.

Response 3149

Perspectives on the postdoc roles and responsibilities

In order to respond to this RFI, the [redacted for anonymity] postdoc association sent out an extensive survey to its postdoc community (close to 500 postdocs). Although the majority of the postdocs were satisfied in general (based on a 5-level likert scale), one-third of them were dissatisfied. And while the largest population indicated that they felt the postdoc position is probably well defined, the second largest indicated that it was definitely not the case. This is in stark contrast with the results when postdocs were asked if they felt that their own personal responsibilities and expectations were clear to them.

A large majority of respondents were less likely or unsure about staying in academia after their postdoctoral experience. When asked about possible improvements they would like to see, either from the NIH or [redacted for anonymity], among other things, postdocs suggested that the "trainee" title be dropped, often citing what they found to be a patronizing title which allows for predatory practices, or that actual training responsibilities (either by their PI or institutions) be regulated and/or surveyed. Most postdocs appeared satisfied with their training, but there was a clear correlation with how satisfied they were with their training and their likelihood to stay in academia. When surveying the population that appeared to be more likely to stay in academia, 75% of postdocs were satisfied with their training, with most postdocs citing self-interest, followed by PI/Institution support/training as their main motivations to stay in the academic pathway.

These results imply that the postdoc role requires a more clear definition regarding its currently-accepted status as trainee. Historically, postdocs were on a leadership pathway towards a faculty position; a clear direction with supervision and training administered by their PI. Currently, lack of vacancies and structured training have eroded that concept.

Fundamental issues and challenges

More than 50% of surveyed postdocs said that compared to when they started the postdoc, they are now less likely to stay in academia

The main reasons are the following: discontent with salary, the precarity of an academic position, lack of support from PIs/institution, work/life balance issues, dissatisfaction with academia, lack of DEI, the existence of better opportunities elsewhere such as industry, and immigration issues.

Overall, postdocs don't feel that the NIH provides sufficient funding opportunities

The largest issue inhibiting retention of postdocs is proper financial compensation for their work. While postdocs are generally satisfied with their workload, working hours, time off and benefits, their salary shows a stark contrast with almost 85% of them not satisfied. A part of our survey allowed postdocs to share recommendations about possible improvements to the postdoc position, either from the NIH or [redacted for anonymity]; increase in salary was the most common answer. When asked for reasons as to why they are less likely to stay in academia after their postdoc experience, the following answers were the most common: Salary, precarity of an academic position, lack of support either from the PI or the institution, work/life balance issues and dissatisfaction with academia. Other less common answers were discrimination, better opportunities elsewhere such as industry and visa issues.

While the postdoc body clearly views their immediate situation as a consequential barrier to staying in academia, it is quite clear that many also do not wish to remain because of the poor prospects an academic career seems to evoke. As indicated above, the precarity of academic positions and work/life balance issues are some of the most common barriers for retention, and surveyed participants often cite many issues plaguing the PI position, such as "publish or perish" mentality, the "grant treadmill" , constant administrative duties and poor preparation for a managing position.

Existing NIH policies, programs, or resources

Respondents heavily support an increment of NIH base salary for postdocs, with adjustments made for cost-of-living within geographical areas of work.

More access to career-advancing funding, and opening these rewards to international postdocs

More regulation on postdoctoral traineeship

Non-surprisingly, most postdocs request that the NIH increments the base salary of postdocs, with a common argument of adjusting postdoc salaries based on local cost of life. The second most common request was for the NIH to make awards more easily accessible to international postdocs, which make up the majority of the postdoc body. The majority of respondents were dissatisfied with the funding provided by the NIH for career development, and incrementing these funds appeared as the third most common answer for recommendations for the NIH. Finally, respondents request more regulation on training, with common suggestions being to train PIs on personnel management/training, to require other senior academics to provide counseling/mentorship to postdocs and/or to create a framework to provide training in a more structured fashion.

Other recommendations which the postdoc association would like to point out included: streamlining visa applications/help with visa issues, mandated time off, more "family-friendly" policies (such as introduction

of mandatory parental time off) and better protection from harassment/discrimination/predatory PIs. Common recommendations from other parts of the survey also indicate that making the actual PI position more attractive and available by facilitating grant access/award money, reducing administrative burden on PIs, as well as changing "success" metrics to be more on par with actual research and not the number of papers published, would make pursuing an academic career more attractive.

Proven or promising external resources or approaches

Our recommendations would be to:

Observe the current state of academia in other regions were this postdoc drain is not happening, such as Europe.

The creation of more permanent and readily available positions within academic research such as Researcher.

Fomenting and streamlining more industry partnerships with the clear objective of leading to an industry job for postdocs.

Development of more centralized career development tools within the NIH, and an increment in communication/distribution from the NIH to the postdoctoral body, such as through their postdoctoral associations or the National Postdoc Association (NPA).

Response 3150

Perspectives on the postdoc roles and responsibilities

Training role with the chance to become independent if that is needed. But also the flexibility to stay in research and not pursue tenure track if that is not the career goal.

Fundamental issues and challenges

Poor compensation structure and no protection against harassment or abuse.

Existing NIH policies, programs, or resources

I have no exposure to any NIH postdoctoral programs and haven't encountered any in my 6+ years as a postdoc

Proven or promising external resources or approaches

Direct annual reviews that have transparency to NIH, mentoring reviews from trainee to supervisor.

Response 3151

Perspectives on the postdoc roles and responsibilities

The postdoc is a temporary position in academia where an experienced and qualified researcher carries out research labor under the guise of being a "trainee" . They are, in effect, "gig-economy" staff scientists.

U.S. biomedical academia is heavily dependent on postdocs to carry out the bulk of its research labor. This labor is needed to sustain the careers and finances of faculty, the finances of research institutions, and to justify funding NIH with taxpayer money to advance research into human disease. Any diminution in their workload or number will affect how productive faculty, institutions and NIH appear to those who pay them.

Postdocs are trainees when it suits PIs, universities and funding agencies, and are staff when it suits these organizations. Most postdoc advocacy in recent decades has focused on clawing back the benefits for postdocs that come with those designations.The need for postdocs to unionize and redress the power imbalance is self-evident.

"Post-postdocs" should also be included in this definition. Due to efforts to restrict the length of time that people are perceived to be in postdoc positions, many institutions have required postdocs to transition into roles with new titles after 5 years. Some postdocs receive better compensation and benefits; but for some, the only change they notice is a change in their title. Regardless, for most their function does not change: they are still in a position providing labor for someone else. This diminishes the responsibility and prestige of true staff scientist roles, which are fewer in number.

Most current faculty became faculty because their postdoc was the point at which they were most successful and so the status quo is heavily defended by survivorship bias.

Fundamental issues and challenges

In 1969, the NRC report "The Invisible University" showed that most faculty had not needed a postdoc, and 1/3 of "postdocs" at the time were actually faculty on sabbatical. Postdocs were not necessary for faculty positions in the past. They are now deemed required for "training". Such "shifting goalposts" are a clear sign to postdocs of the hypocrisy of their elders.

Across race, gender and ethnicity, the defining factor in people deciding to stay in academia is an alignment with one's values, as shown a decade ago by Gibbs and Griffin. It's worth reflecting on this and the struggle to do—and be recognized for—more outward-facing, work, or educational activities. NIH suggests that part of the reason black researchers are receiving less funding is affected by their interest in clinical research into population—and community-level interventions, which are less likely to be funded. Conversely, supporting the IRACDA program has been a great success story of NIH's diversity efforts by giving value and support—and ultimately a reason to stay in academia—to people who are interested in teaching.

Many academics perpetuate a culture of martyrdom, whereby they insist that they have had a very hard time, and have suffered greatly, in their noble cause for science. It is therefore expected that one should suffer for academia, and the more suffering one can claim, the more worthy one is of academic success. This "suffering" is very subjective, and conveniently ignores both survivorship bias and the shifting goalposts over time for who secures a faculty position. Plenty of people experienced just as many hardships during their academic training, and left academia because there aren't enough faculty positions for all the smart people who could fill them, and they didn't have the luck or pedigree of those who did.

Existing NIH policies, programs, or resources

Adapting from a recommendation made to NIH in 2018: NIH should increase the Ruth L. Kirschstein National Research Service Award (NRSA) starting salary for new postdoctoral researchers to $63,300 (in 2023 dollars), with annual adjustments for inflation and for cost-of-living increases tied to the Personal Consumption Expenditure Index. The NIH can make use of the General Schedule to determine regional adjustments. This would bring postdoc compensation policies into line with NIH's Interest in Diversity Notice that has a substantial focus on financially-disadvantaged groups.

NIH and its various institutions have the ability to open any and all career development (K) awards to foreign researchers. Similarly, NIH can work with the Department of Health and Human Services to amend the code of Federal regulations to allow foreigners onto NRSA training mechanisms.

NIH can follow the lead of federal agencies such as NASA and ensure that all NRSA award recipients receive benefits, and refuse to give awards to universities who strip postdocs of these benefits.

Numerous comments have surfaced that the postdoc is like medical residency. It isn't, but NIH could make the postdoc like residency: cap the time funded for training; cap the number of postdocs it funds; and ensure postdocs are practically guaranteed a faculty job at the end. The postdoc and residency will therefore be more comparable.

NIH should bring in its work on peer-review and research evaluation to ask what, in a defined time period, are reasonable expectations and accurate articulations of success for a postdoc. This would divorce the length of the postdoc from factors that are outwith their control—for example, the growing inefficiency of scientific magazine publishers, or rodent breeding cycles.

Proven or promising external resources or approaches

A Congressionally-mandated report developed recommendations around this exact issue, which were given to NIH in 2018. The report can be found at: https://nap.nationalacademies.org/catalog/25008/the-next-generation-of-biomedical-and-behavioral-sciences-researchers-breaking

Industry seems to be capitalizing on taking the postdoc model, but providing them training, appropriate benefits, and compensation. This might be worth a try.

Numerous institutions and funding organizations are realizing the necessity of raising postdoc salaries. NIH is in danger of being behind, whereas it was at the forefront of this effort in 2016.

DORA is looking into ways to diversify research evaluation. Postdoc length is being affected purely by a focus on publishing articles in magazines, there is a clear need to establish other ways to evaluate the postdoc. In particular, graduate students, and increasingly undergraduate students, are being evaluated in terms of journal publications, so NIH needs to justify why the taxpayer is funding yet another period of "training" that appears to just be more research labor with no discernable training outcomes.

Funding agencies in countries such as the UK have mandates to allow trainees time to leave the lab for professional development training. NIH could include such a mandate, or at the very least reduce paperwork that acts as a barrier to trainees getting training. For example, such policies from the UK's Medical Research Council (and at the University of Cambridge) allowed me to undertake pedagogical training during my PhD, and obtain an education credential and membership of the Higher Education Academy. When I was a postdoc at [redacted for anonymity], to accept a teaching fellowship position at [redacted for anonymity] my PI had to fill out paperwork to explain to NIH why I, as a "trainee" on an RPG, wouldn't be spending all my time at the bench.

Response 3152

Perspectives on the postdoc roles and responsibilities

1) It is a position seen as a default next step for PhDs even though MOST don't need it for the careers they will go into and sacrifice time and money by doing it.

SOURCES: https://rdcu.be/c6FXp and https://www.science.org/doi/full/10.1126/science.aar4638 and https://www.ncbi.nlm.nih.gov/books/NBK268777/ and https://www.ncbi.nlm.nih.gov/pmc/articles/PMC8809557/ and https://elifesciences.org/articles/48774

Fundamental issues and challenges

NIH should PLEASE PLEASE PLEASE create a national tracking database for Postdocs to track career outcomes so national and institutional data is publicly available at one source. Right now we have a patch work solution with things like: https://nglscoalition.org/ and without good data we can't make good decisions.

Existing NIH policies, programs, or resources

1. From an equity standpoint, there should be an extensive expansion of OITE services for extramurally funded Postdocs as right now Postdocs at NIH have MUCH more access to professional and career development than many Postdocs, especially those at smaller institutions with a 1 FTE or less or NO Postdoc office. Alternatively, NIH should require that institutions that get grant funding for postdocs have a 1 FTE career and professional coach per 100 Postdocs (this ratio requirement could allow combining Postdocs and Pre-docs for 1:100 trainee ratio).
2. Also for equity, extramurally funded Postdocs should be paid using the GS salary scale system (with geographic adjustments) used to pay intramural NIH Postdocs.
3. Expand programs like IRACDA with PROTECTED time for professional development skills that prepare Postdocs for non-academic and non-research careers (IRACDA focuses on teaching, perhaps have a tracks in public policy, science communication, entrepreneurship, intellectual property/tech transfer, consulting, etc.)
4. Childcare stipends should match actual costs of childcare or at least what is defined as "affordable" if we want folks with children to choose postdocs (child care is about $11,000 a year for ONE child) $2500 is NOT sufficient for most. According to the U.S. Department of Health and Human Services (HHS), child care is considered affordable when it costs families no more than 7% of their household income." Stats from: https://www.care.com/c/how-much-does-child-care-cost/ This stipend could be income-based vs available to all in case some Postdoc is married to someone with more means. Could also vary by geographical location.

Proven or promising external resources or approaches

1. Postdocs should ONLY be employed on training grants, F32s, and K99s. Faculty-focus grants (R, etc.) should only allow hiring research scientists/techs. This gives agency to Postdocs who are currently in a huge power mismatch, especially Postdocs on visas, and would requires PIs to hire staff scientists and compete for extra staff in the form of Postdocs with own funding by being good mentors. Current faculty have a disincentive to mentor Postdocs and help them move into their own careers as they lose well trained and low-cost labor by doing so.
2. We need more Postdoc (2 to 3 years) to faculty bridge programs at the SAME institutions (unlike K99/R00) so PhDs don't have to keep moving all around the county.
3. All Postdocs should be required to have a mentoring team of at least 2 other faculty (not just their PI) who meets with Postdoc at least twice a year as a group (quarterly would be even better) to look at a required IDP and create a plan to help Postdoc gain skills and competencies needed for next steps.
4. Mechanisms like the K99 need to be changed so that they are more supportive of Postdocs staying at Postdoc institution as Postdocs with spouses and kids are way less likely to want to uproot their families (same for diverse Postdocs who move to Postdoc institution to be near extended family) and move again and if you want a more diverse scientific workforce you need to create policies that are family and married people friendly.

Response 3153

Perspectives on the postdoc roles and responsibilities

The postdoctoral stage—typically consisting of one to two transient stays in research groups in the hope of securing a more permanent position—is a relatively recent compulsory step to sustain a stable career in academia.

Indeed, Cantwell et al (Expanding Research Capacity at United States Universities: a Study of Academic Research and Development Investment from 1990-2005, Higher Education Quarterly, 2012, DOI: 10.1111/j.1468-2273.2012.00522.x) found that the number of postdocs grew faster than the number of faculty members over the period 1990-2005. The authors also found that "federal R&D expenditures were also strongly associated with post-docs numbers and, to a lesser extent, non-faculty researchers, indicating an association between federal support for R&D and the growing contingency research staff. [.] Faculty salary, a proxy measure of university prestige, was a significant predictor only for post-docs. [.] It is likely that high prestige faculty members employ relatively large numbers of post-docs in order to increase their levels of research production".

This mirrors my experience. Postdocs are fully trained researchers that can produce research autonomously and even train graduate students while being barely more expensive than students. Postdocs drive research—often, the PI only offers light supervision, either because they have a large research group or because they are away taking care of other ventures (e.g. startup).

In addition, postdocs are under a lot of pressure as they have to compete to secure one of the—scarcer and scarcer—permanent positions, nowadays meaning almost exclusively tenure-track positions. For this, they need to not only maintain a healthy research program, but also apply for funding. In a nutshell, they do the job of an assistant professor, but without the associated benefits. I personally believe that this is not a period of so-called 'training'; instead, I believe that it is a period of exploitation.

Fundamental issues and challenges

From my experience in neuroscience, postdocs face increasing challenges as the duration of postdoc positions lengthens due to limited faculty openings and expanding peer review and publication pipelines. The extended period of hard work and short-term contracts often comes with significant personal sacrifices, such as difficulties maintaining a support system and relationship stress. In addition, while the postdoctoral period often extends well into their thirties, postdocs often have a hard time starting a family—because of geographic instability, financial hardship, heavy workload, expected backlash during job interviews, and/or direct pressure from the employer (which is still relatively common in my experience).

Foreign postdocs, who make up an increasingly large proportion of postdoctoral workers in the US, experience amplified challenges. They often face short-term visas and stressful renewal processes, while working in the US is considered essential for their careers.

More generally, the extension of the postdoctoral period contributes to the accumulation of biases and may act as an exclusionary factor for socioeconomically disadvantaged populations.

Despite postdocs' passion and drive for producing meaningful research, the competitive system can dampen their enthusiasm, as they perceive that survival in academia requires prioritizing speed and networking over research quality. Indeed, the research community's growth and the increased pressure for productivity make it difficult for researchers to thoroughly evaluate their peers' work. As a result, the review and faculty selection processes often fail to assess research quality accurately, leading to researchers who prioritize networking and advertising over quality research securing faculty positions. This can create a work environment that does not always reward quality over greed, causing frustration for more scrupulous researchers. Note that this is not a statement from somebody leaving academia—I want to pursue research and have earned a competitive award to help transition to a faculty job.

Existing NIH policies, programs, or resources

1. To better support the growing number of foreign researchers, expanding the range of grants they can apply for is necessary. Accounting for the shorter duration of Ph.D. training in foreign countries when evaluating grant proposals and defining eligibility periods would also be beneficial. More options to request adjustments to eligibility periods based on circumstances and life events should be provided.
2. Redirecting funding from absentee faculty members, who focus on alternative ventures like startups, to postdoctoral scientists leading the research can help mitigate harm. This would protect postdocs and graduate students from suffering due to poor management decisions made by disconnected faculty members. Though faculty must report their efforts, there is often little oversight.
3. Grant proposal evaluations could include measuring the satisfaction levels of a PI's postdoctoral researchers and graduate students, using a non-academic third party to avoid retaliation. Receiving faculty-level NIH grants could also be contingent upon PI training in the current assistant professor job market to ensure they have a comprehensive understanding of the situation.
4. Studies suggest that federal funding is becoming more concentrated among fewer faculty members, who then attract most postdocs and can quasi-automatically secure further funding (Cantwell et al, Higher Education Quarterly, 2012, https://doi.org/10.1111/j.1468-2273.2012.00522.x; Noble et al., Plos One 2020, https://doi.org/10.1371/journal.pone.0233367). To prevent this, funding for each faculty member could be capped or evaluated by considering their performance relative to their previous funding. This would free up extra funds to create a variety of permanent positions.
5. Using federal funds to establish stable research scientist positions could eliminate the instability of postdoc positions. These positions could serve as a preliminary step before considering an upgrade to a group leader role. Securing extra funding to manage other junior scientists could depend on a comprehensive report from trainees co-mentored by the research scientist and an experienced manager.

Proven or promising external resources or approaches

Research suggests that more distributed research funding—the converse of the current trends—would generally improve research performance (e.g. Aagaard et al., Concentration or dispersal of research funding?, Quantitative Science Studies, 2019, https://doi.org/10.1162/qss_a_00002).

Response 3154

Perspectives on the postdoc roles and responsibilities

An academic postdoc these days is only if you want a faculty position. It is wasted time and money if you want to go into any other career.

Fundamental issues and challenges

Pay is insulting, when PhDs can earn 2 times the salary right away in industry and 3 times as much with just a few years of experience. It is not enough for people with families, unless they have a wealthy

partner. Inflation, housing prices, and childcare have soared, and the pay is not enough to live off of, let alone save money for retirement.

There is no work-life balance, with postdocs expected to slave away even on nights and weekends. There are no checks and balances on the PIs.

Their work is exploited by their PIs, who abuse them and steal their grant ideas, limiting what they can take with them for their own labs.

There are not enough faculty positions, and even if you get lucky enough to get one, it could be at a university in the middle of nowhere. You can't really pick where you want to live, and could end up in a state with politics that actively endanger women's lives (abortion policies, etc).

Postdocs slave away for 10+ years, making their PIs famous, but can't get their own labs. In the process they give up their lives, dreams, future earnings, and retirements. This all adds up to make doing a postdoc very, very undesirable because it just exploitative.

Existing NIH policies, programs, or resources

Increase the NIH postdoc minimum to at least $70k, with much more substantial raises every year, and make it raise up for cost of living.

Make PIs accountable for how they treat their lab.

Let postdocs be PIs on NIH grants.

Proven or promising external resources or approaches

https://www.science.org/content/article/price-doing-postdoc

https://www.nature.com/articles/nbt.3766

https://www.sciencedirect.com/science/article/pii/S004873322002360?via%3Dihub

Response 3155

Perspectives on the postdoc roles and responsibilities

Additional training and especially cross—training in a lab you did not do your PHD in to refine skills and practice team management. With a substantially increased salary. Postdoc can set you up for academic OR non-academic job in science.

Fundamental issues and challenges

Family wealth. Salaries are still too low and people start dealing with aging parents, having a family, etc. You are no longer a student. You should definitely have a parental leave policy that is made clear to you without you asking for it. I stayed and watched brilliant women leave academia because of the pay and not being able to rely on other sources of funds. We didn't get paid on time for a month and they were sleeping on mattresses on the floor with no couch—people have no savings after grad school.

Existing NIH policies, programs, or resources

Salaries and benefits. People are so willing to work for less than they deserve, but now it's below the lower limit.

Proven or promising external resources or approaches

The gender pay gap; the concept of underrepresented minorities.

Response 3156

Perspectives on the postdoc roles and responsibilities

My perspective is that a postdoctoral position is a position in which highly trained scientists can substantially move science forward while also receiving mentorship to prepare them for future roles. Postdocs are arguably the most productive entities in the academic scientific reserach enterprise, yet are some of the least compensated, in terms of salary, benefits, and professional development. This has to

change, otherwise we will continue to see a drop in postdoc participation, which will have the consequence of slowing overall scientific productivity.

Fundamental issues and challenges

1. Postdocs need to be paid more.
2. Postdoc roles need to be more defined. Perhaps after a reasonable period (3-5 years) postdocs should move on to more permanent titles, or to alternative tracks. Paying "postdocs" that have 5+ years of post-PhD experiment at the same scale as fresh-out-of-PhD scientists renders it nearly impossible for postdocs to become parents in high cost-of-living areas.

Existing NIH policies, programs, or resources

I'm not familiar with NIH's existing policies.

Proven or promising external resources or approaches

The Pershing Square Foundation could fund a lot of postdocs with $5 million/year.

Response 3157

Perspectives on the postdoc roles and responsibilities

As a step towards starting a lab of our own. Postdoc position includes learning how to be a good mentor, coming up with new ideas, writing grants. All of these serve as essential experience in order to run a successful lab.

Fundamental issues and challenges

The pay scale is pathetic and the opportunities are very limited for someone that wants to be a tenure track professor. Inexcusably low pay scale is the reason why almost all of my PhD cohort (30 individuals) have moved on from academia. Only 2-3 of us have decided to stay in academia ONLY because of our privilege as our partners are able to earn enough to bridge the gap. So, this is making academic postdoctoral positions unattractive.

Existing NIH policies, programs, or resources

There are fewer opportunities to transition to tenure track positions. There is systemic racism and very limited opportunities for people of color!

Proven or promising external resources or approaches

More and more PIs are interested in their research and do not provide enough mentoring for the postdocs. Postdocs are seen as data churning machines that are not mentored and paid well!!

Response 3158

Perspectives on the postdoc roles and responsibilities

I view it as a trainee position, where a person holding a P.h.D. obtains the necessary skills to become an independent investigator (either in academia or industry). However, there is a lack of training programs for postdocs at the current institutions. More and more, postdocs are expected to have numerous responsibilities that do not correlate with the salary or compensation that we get. Our schedule is expected to be very flexible as well: working hours go beyond the signed 40 hours per week, and we are expected to work on the weekends or late nights.

Fundamental issues and challenges

There are a number of issues that challenge the recruitment, retention, and quality of life of postdoctoral trainees, especially for those who are international. First, low salary and lack of relocation expenses cover. While the starting salary of a person holding a P.h.D. can easily surpass $80k in industry, postdoc salaries start from $50k, and increase in very low rate over time. If the person is international, relocation results in a especially high expense, due to fees resulting from lack of credit score, visa fees, plus starting a new life in a new country (new furniture, car, etc). Second, lack of clear expectations and training. As I mentioned above, there rarely exist training programs at the academic institutions that provide postdocs

with the necessary skills to advance in their careers, and it is expected that the principal investigator provides them with these skills. In reality, the principal investigator is normally too busy to provide proper mentorship, especially if the postdoc is not interested in pursuing an academic career, and, moreover, this results in not a clear path for development for the postdoc. Third, lack of stability. Contracts are normally just for a year, with the possibility of renewing it each year for as long as funding is available. This is especially hard for internationals, who can only get one-year-long visas, preventing partners to get rights to work, and from attending conferences, as they need to renew the visa stamp every time they exit the United States (which also adds up to costs that the postdoc trainee needs to cover). Fourth, lack of funding sources. International postdocs can hardly apply to any NIH funding opportunity, with the exception of the very competitive K99.

Existing NIH policies, programs, or resources

Removing citizenship restrictions in NIH programs. International postdocs (who amount to the majority of the postdoctoral body in the country) should be allowed the same founding resources as national postdocs.

Proven or promising external resources or approaches

Postdoctoral training at University of Texas Health in Houston.

Response 3159

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Cost of living adjustments to NIH grants, including annual raises

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3160

Perspectives on the postdoc roles and responsibilities

During my PhD, I developed the ambition to become an independent investigator. Therefore, my perspective from a postdoc was that it would provide myself a buffer zone between PhD and independent PI, to fully formulate my original ideas and acquire new skills for executing these ideas in my own lab. However, the conflict between my viewpoint and the current postdoc program is length of time. While my own goals were achieved by 4th year, I am however still a postdoc in my 7th year. The sole reason being working towards a high-impact paper, which has been critical to become competitive for a tenure-track position. I understand that preprints are beginning to be recognized, but from conversations with senior PI's, the community is still very far from evaluating postdocs based on preprints.

So, what can be a possible solution? I envision a structured postdoc program in two phases:

Phase 1 (3-4 years): At the end of Phase I, postdoc and PI mentor will decide based on progress to either continue to Phase 2 or move to alternative career options outside of tenure-track faculty.

Phase 2 (4-6 years): Only for postdocs aiming for tenure-track positions. Postdocs will be provided technical support personnel funded by their PI to finish projects initiated in Phase I (note this criterion makes Phase 2 different from F32 and K99 postdocs). This will provide time to instead initiate independent investigations in Phase 2. This will be in parallel with managing publications from projects initiated in Phase I. Therefore, Phase 2 ensures that any time >4 years that current postdocs are putting into gathering data for high-impact publications, this time can be outsourced to technical support and instead utilized to set up their own research programs. Additionally, this will also provide mentoring opportunities for the postdoc towards their technical support personnel.

Fundamental issues and challenges

While there are several, the most critical issue is money. Currently, PhD and postdoc is >10 years, occurring mostly between 25-35 years of age. Therefore, it is impossible to sustain an acceptable lifestyle with current salaries. For example, due to financial support from my husband I was able to pursue a postdoc and still maintain my living standards. This means that the postdoc position unfortunately is favorable towards financially privileged. This represents a major drawback against NIH initiatives to promote diversity and underprivileged trainees in academia.

While one possible solution to increase salary is having smaller labs, I am not convinced this will help. Instead, it would make the postdoc position extremely competitive by catering to candidates from renowned labs. This in turn will only lengthen the time required for PhD completion since candidates will then have to be competitive enough for postdoc. So, how do we maintain size of labs and still increase salary? My thoughts arise from a recent realization. I was awarded the NIH K99 funding and was surprised to learn that 'fringe benefits' are paid for by the NIH! I realized then that previously, my benefits were coming from my PI's NIH grants. This was hard to accept, I am employed by my institute, and my benefits as an employee should be paid by my employer: my institute. For example, if my institute did provide my benefits, that would lead to re-allocating NIH funds of ~$15000 from my benefits towards my salary. I think this can reduce the burden on NIH to acquire increased funding, and still help to retain current lab sizes. Therefore, I envision that the NIH and academic institutes will restructure their agreements wherein not only NIH, but academic institutes too need to come on board to help with postdoc salary.

Existing NIH policies, programs, or resources

Existing NIH policies need to be improved to promote good mentorship. Postdocs having toxic mentors are at an alarmingly high percentage. I think we have failed as a scientific community to provide good mentorship simply because there are no real incentives to being a good mentor. Indeed, many postdocs have achieved success despite their toxic mentors, yet such mentors will list their postdoc achievements as evidence of their own mentoring achievements. So, a possible solution is to incentivize good mentorship. While postdoc funding applications (F32, K99, etc.) require letters of recommendation from mentors, the same mentors applying for R01 grants are not evaluated based on their mentorship, even though it would be their mentees like students and postdocs executing the proposed research. Therefore, I propose a "mentorship score" provided by trainees that will be considered by NIH. A few suggestions:

1. PI's must provide contact of all their senior PhD and postdocs, and any 3 will be contacted by NIH with a scoring system.
2. Scores will be provided anonymously on a 1-10 scale evaluating different aspects of mentorship: support in research initiation; research development; manuscript preparation; networking; recognition of trainees' original ideas; culture of rigor and reproducibility; mental health support; and support towards diversity.
3. Average of scores from different criteria will be considered by NIH grant reviewers to inform on the final impact score given to R01 applications, and this score will also be considered at study sections.

An objective scoring system as above will not add excessive additional burden on NIH reviewers. It also ensures that the final mentorship score is an average of different criteria, and the mentor does not fare poorly due to one aspect alone. In summary, I envision such a system will ensure that there are NIH funded incentives for being a good mentor.

Proven or promising external resources or approaches

With regard to incentivizing good mentorship, the possible practice of postdoc (and student) trainees evaluating their PI mentors is analogous to "upward feedback" practices in industry wherein employees evaluate their managers. A good write up on this method is the following Forbes article:

https://www.forbes.com/sites/forbescoachescouncil/2021/05/28/why-everyone-should-be-down-with-upward-feedback/?sh=1a2bac73f787

Response 3161

Perspectives on the postdoc roles and responsibilities

Conduct research, begin creating independent research plan while learning how to mentor and perform other administrative duties

Fundamental issues and challenges

Cost of living, job insecurity, rampant abuse

Existing NIH policies, programs, or resources

Annual increments to postdoc salaries as part of NIH modular budgets

Proven or promising external resources or approaches

Unionise for science, prevent grantee institutions from engaging in union-busting

Response 3162

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

Salaries/wages do not cover general cost-of-living expenses in most of the United States. Please increase post-doc funding and base rate salaries.

Proven or promising external resources or approaches

No response

Response 3163

Perspectives on the postdoc roles and responsibilities

The postdoc is cheap labor for established PIs who don’t actually care about scientific training/development. These PIs are not providing space for trainees to step into their own. The system is broken.

Fundamental issues and challenges

First and foremost is abysmal wages in areas with very expensive cost of living. Second, the prospects of actually conducting value-add science in those areas when venturing out as an independent investigator. Third, lack of training, mentoring, management experience from PIs. Fourth, overall toxicity in many academic departments makes the cost and sacrifice simply too much to be worth the scientific joy of independent research.

Existing NIH policies, programs, or resources

Globally, salaries that keep up with cost of living and revisit incentive systems.

Proven or promising external resources or approaches

Honestly everything is so broken I’m not even sure where to start.

Response 3164

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

No response

Existing NIH policies, programs, or resources

INCREASE MODULAR BUDGET CAP. [redacted for anonymity] recent letter addresses the limitations of the modular budget cap, and we recommend raising the current modular cap ($250,000) or eliminating the direct costs cap altogether (allowing for all applications to utilize the modular budget format). The number of modular applications significantly declined since implementation (90% in 1998 compared to 29% in 2021), and have limited ability to fully support all research activities (i.e., mentoring activities and funding multiple trainees). This is of particular concern within the context of other recommendations being considered by NIH. Modular budgets are steadily squeezed in absorbing increased activities (i.e., DMS**) and the cost to support personnel and trainees critical to individual projects.

INCREASE NRSA STIPEND LEVELS. We support comments shared by the community and postdoctoral trainees recommending the National Research Service Award (NRSA) stipend levels be increased. Increasing stipends would improve recruitment and retention and provide a living wage for trainees. Current stipend levels are insufficient in the current market and fail to account for inflation and the cost of living.

CONSIDER MORE EQUITABLE BENEFITS. NRSA fellows are compensated through stipends rather than salary, which has numerous tax and benefit ramifications for post-docs. Stipend pay limits full recognition of their work at institutions and the research enterprise at-large. NIH should engage the community on postdoctoral classifications (e.g., stipend vs. salary) and impacts on recruitment and retention to consider policy clarifications or revisions.

REEVALUATE NRSA POLICIES. Laws governing the NRSA were established in 1974, and subsequent policies remain largely unchanged. NIH should engage with the community to identify specific policy areas that can be clarified or revised, including financial policies (i.e., see above) and areas to reduce administrative burden for trainees (i.e., payback obligations), mentors, and institutions.

Proven or promising external resources or approaches

No response

Response 3165

Perspectives on the postdoc roles and responsibilities

1. An independent researcher capable of developing their own research ideas and projects and writing grants.
2. A secondary mentor to the graduate and undergraduate students in the lab.

Fundamental issues and challenges

1. Fundamental issue is salary!! They are paid way below the average cost of living wage. The situation doesn’t get any better compared to graduate school life. Postdocs are already in their 30s, most of them with dependents/families. The financial stress adds to work pressure and academic competition. And this is just the plight of all post docs irrespective of their nationality. However, international post docs have it much worse.Within the same lab, with the same level of expertise and experience, post docs are paid differently, which in my opinion is unfair.
2. Postdocs are exploited as per convenience—at times treated like trainees.
3. Most NIH grants are designed for US citizens. But if more grants are designed to support internationals, academia will definitely be able to recruit more post docs.

Existing NIH policies, programs, or resources

1. Trainings on how to become a Principal investigator, budgeting lab resources, etc
2. Trainings on how to develop mentorship with students

Proven or promising external resources or approaches

Many postdocs struggle with inadequate mentorship during their training, which can hinder their professional development and job satisfaction. NIH could consider implementing formal training programs for mentors, providing them with resources and guidance on how to effectively mentor and support their postdocs.

NIH could consider expanding the availability of postdoctoral job opportunities, including creating more permanent positions in academia and industry.

NIH could consider implementing diversity and inclusion training programs for postdocs and mentors, as well as creating more diverse and inclusive recruitment and hiring practices.

NIH could consider integrating emerging technologies into postdoctoral training programs, providing postdocs with hands-on experience in cutting-edge research techniques and methodologies.

Response 3166

Perspectives on the postdoc roles and responsibilities

A postdoc is an early-career researcher with strong research skills and an interest in developing an independent program. In the best cases, these individuals identify a lab with overlapping interests and relevant resources to host them as they develop their new direction, and become valued colleagues of the PI. Both postdoc and PI benefit considerably from this relationship, and typically both see an expansion of their research options as a result. The United States has benefited tremendously from opening its doors to creative, intelligent individuals from all countries, and retaining the best of them in academia and industry. In most cases, a postdoctoral period is a de facto requisite next step to a career in research and biomedical science, especially in academia.

Too often, however, the structure of funding to postdocs fails to properly recognize the true value of a postdoc's independent contributions, resulting in their treatment as a junior contributor, thus diminishing their expertise. Postdocs are also fully dependent on the PI for salary, reference letters, and visa support, often without clear training criteria or expectations. This creates a potential for toxic research environments, especially as postdocs are also ineligible for many types of resources offered to employees. The definition of a postdoc as a trainee must therefore evolve, since postdocs often pay a heavy personal and financial price for their eagerness to contribute to research.

If the postdoc role is to survive in academia, we need new policies that recognize

1. the extraordinary value of postdocs to US research;
2. the need to reduce the costs of the postdoctoral period for individuals who are willing to invest their time and energy to advance our research; and
3. the need for institutions to provide appropriate safeguards and an equitable experience for their postdocs.

Fundamental issues and challenges

The quality of a postdoc's life largely depends on the lab they are in. Specific issues include:

1. Unlike medical and graduate students in biomedicine, there is no central governing body to establish consistent standards and required support infrastructure for postdocs. Sometimes there is confusion about who "counts" as a postdoc, and what policies apply to postdocs, including in recruitment. Such a governing body could provide tools to help institutions, PIs, and potential postdocs come to agreement about their planned relationship, define laboratory norms, and set expectations for research and career support.
2. At many institutions the postdoc recruitment cycle is typically managed directly by individual faculty, and may occur outside institutional HR processes. Sustained attention to formal recruitment systems and guidelines would enhance opportunities to improve diversity in recruitment.
3. Postdoc salaries are low relative to the level of expertise and energy a postdoc brings, and are typically not adjusted to the cost of living in a specific region. NIH has considerable power over postdoc salaries: NIH NRSA F32 stipend levels are used as the de facto national standard in biomedical research. Since the budget for a modular R01 has not changed for over a decade, PIs must make extremely hard choices if they wish to provide postdocs with a living wage. Solutions are needed to resolve salary inequities (e.g., those stemming from stipendee vs. non-stipendee postdoc designations), provide support for dependent care (especially given the increasing length of the postdoc period), and support moving/housing costs to improve recruitment and retention of postdocs who lack family wealth.

Existing NIH policies, programs, or resources

We strongly encourage the NIH to explore the following possibilities:

1. Change the designation of postdocs as "stipendees" and require them to be treated as employees. Note that this would require a change in NIH's fellowship model, since T/F32 recipients are not considered employees; this typically costs the individual T/F32 recipient thousands of dollars, making them ineligible for certain standard benefits while imposing significant inconvenience.
2. Restructure postdoc salary minima to take account of regional variances in cost of living.
3. Require all institutions that receive NIH funding to perform a review of postdoc satisfaction annually, and to publish the results. Such a review could be administered by a body such as the National Postdoc Association, taking a step in the direction of an "accreditation" body for postdocs.
4. Encourage institutions receiving NIH funds to adopt mentoring guidelines, individualized development plans, and career tracking required of T/F32 fellows.
5. Require EOO reports from institutions receiving NIH funds to demonstrate that postdoctoral hiring specifically is performed with appropriate attention to equality of opportunity.
6. 6. Create a grievance process, where such protections do not already exist, in which the postdoc in question is ensured protection from retaliation and provided resources to pursue their work elsewhere.
7. To decrease the dependency of postdocs on the PI, increasing the number of individual postdoc fellowships available would have far-reaching effects. Additionally, fellowships should be offered to international researchers as well as domestic researchers, to continue the extremely beneficial flow of talent into the US.

Proven or promising external resources or approaches

Many institutions have no dedicated office or department for sustained postdoctoral recruitment. This is especially problematic for prospective fellows from groups historically underrepresented in biomedicine. Recently, there was a pilot program that demonstrated the feasibility to diversify a postdoctoral applicant pool by creating a centralized recruiting process that was endorsed and enthusiastically supported by the departments and faculty.

In the pilot, there was an effort to recruit, from a national pool, late-stage graduate students from broader and more diverse backgrounds, many of whom do not ordinarily submit applications. So far, in just two recruitment cycles over 7 months, the pilot program offered over 60 postdoc opportunities, posted them on a central website, and received more than 60 applications from across the US and around the globe. To date, the program has generated 41 interviews and 12 fellowship offers, resulting in 6 new postdoc hires,

thus demonstrating that it is possible to diversify the postdoctoral applicant pool and centralize recruitment with a concerted, yet unfunded, effort. In an effort to improve postdoc recruitment, a comprehensive process that recruits, hires, and trains postdocs from a broader and more diverse pool can both enhance the experience of current fellows and allow institutions to build a stronger and more welcoming environment for all trainees.

Response 3167

Perspectives on the postdoc roles and responsibilities

While the postdoctoral position is ostensibly a training position, in reality it is a hybrid training/research scientist position with little stability. Principal investigators (PIs) view hiring a postdoc as hiring someone to be the leader or principal driver on a specific project; this indicates that we are essential to the research enterprise, and that our roles are viewed as research scientists first, mentees second. Good PIs make sure that postdocs also receive mentorship in both research techniques and, if desired, in other areas like running a lab; however, postdocs are dependent on PIs taking their mentorship responsibilities seriously to receive the training that is ostensibly a fundamental part of our roles.

Fundamental issues and challenges

Postdoctoral positions inherently come with little stability and less pay than could be obtained in other positions outside academia; in addition, they come with no clear exit strategy for many postdocs. While many rewarding non-academic positions exist, and should get more press, most postdocs take their positions because of a desire to do independent research, which leads naturally to considering tenure-track professor positions. The relative scarcity of these positions leads to long years of uncertainty, where postdocs give up stability and good pay, as well as many opportunities that require stability and good pay (for example, for many people, having children) to continue buying tickets for a future lottery.

Existing NIH policies, programs, or resources

The R50 grant offered by some institutes and centers could be greatly expanded to offer stability for more scientists wishing to continue research without becoming tenure-track professors. In addition, all NIH institutes and centers could implement specific policies for supporting research and staff scientist positions on grants, such that PIs don't get penalized for trying to support permanent staff over hiring trainees. In general, approaches that greatly expand research and staff scientist positions, and paths to those positions, will benefit both the PIs who are currently searching for postdocs as well as the scientists currently holding postdoc positions.

Proven or promising external resources or approaches

No response

Response 3168

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

While the postdoc stipend is greater than the graduate student stipend it still does not allow one to live comfortably. It's still living paycheck to paycheck. The fundamental issue with the postdoc salary is that it does not account for the 5-7 years of training, which is experience. In any other field, 5-7 years of experience amounts to more than $60K. The reality is that sacrificing an additional 5 years of potentially good pay for the postdoc salary isn't worth it. It's frustrating to not be recognized for the experience being brought into an institute/lab. For an individual with a single income, this stipend is not enough to live on. A lot of graduate students finish graduate school with little savings if any, and accepting a postdoc position that pays only this much is financial suicide.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3169

Perspectives on the postdoc roles and responsibilities

Given the position of post-docs as a post-PhD training period to prepare for being a PI and the relative dearth of PI positions, post-docs should be better compensated, funded primarily through training grants, provided with more structured mentoring and limited in number. Training grant support should be limited to 2-3 years and transitions to independent funding mechanisms (K awards, etc.) should be encouraged after this time.

Fundamental issues and challenges

Fundamenta issues regarding recruitment and retention of post-docs are the lack of compensation, given the training they have already received and the degree they currently hold, the lack of structured and guided mentoring, the lack of community and the lack of a clear path of faculty positions.

Existing NIH policies, programs, or resources

post-doctoral training grant, more K grants

Proven or promising external resources or approaches

No response

Response 3170

Perspectives on the postdoc roles and responsibilities

As the [redacted for anonymity] that is responsible for stewarding the health sciences education and training mission of the [redacted for anonymity], we recognize that there are varied opinions on our campus regarding the roles and responsibilities of postdocs. That said, as a community of researchers we acknowledge the critical role that postdocs play in moving the research enterprise forward. Without the contributions of postdocs, it would be nearly impossible to complete the work proposed in research grants from the NIH and other federal agencies and foundations.

As a community we grapple with the reality that postdocs are often viewed as both a workforce and a trainee population and that these two roles can be mutually exclusive. It may be of value to embrace the idea that postdocs exist on a continuum that includes both workforce and trainee. However, there must be an understanding between the individual postdoc and their faculty mentor about where an individual postdoc falls on that continuum. New postdocs that recently finished PhD training may benefit from a more trainee-focused approach, while more senior postdocs would benefit from more autonomy and may function more in a workforce role. For new postdocs and any senior postdoc looking to advance to their next role, we as an institution and NIH as a federal agency need to do more to ensure that they have access to career discernment and professional development resources. Independent of where an individual falls on the continuum of trainee vs workforce, the postdoc should be a short-term position that leads to an intentional career path.

Fundamental issues and challenges

Salary and access to benefits are core challenges that inhibit recruitment, retention, quality of life for postdoctoral trainees. The cost of living in [redacted for anonymity] has been rising exponentially in recent years. This rapid change has put pressure on our faculty to increase support for current postdocs and offer more competitive salaries for new recruits. Benefits, including access to affordable childcare, present pinch points in recruitment and retention. We would suggest the following changes,

1. Increase the minimum postdoc stipend levels to $70,000/year;
2. Implement a regional cost-of-living adjustment to compensate for differences across the country;
3. Increase the Childcare subsidy to $5,000/year and increase availability to all postdocs supported by an NIH grant;
4. Allow T32s to budget for moving expenses;
5. Mandate paid family leave programs for postdocs that are supported by the institution, rather than the PI. Effective mentoring is an additional issue that impacts all these issues and challenges and that we believe can be addressed by NIH. It was clear in the sponsored listening sessions that many postdocs do not feel that they are receiving adequate mentoring. We have similar issues at the [redacted for anonymity]. T

here are fantastic mentors on our campus, but many of them will acknowledge that they were never trained on how to mentor and do not always have the tools needed to meet the needs of their postdocs. We would suggest the following changes be considered by NIH,

1. Require Research Mentor training for PIs holding any NIH sponsored grant that support postdocs;
2. Require PIs to submit Individual Development Plans (IDPs) for all trainees supported by NIH funds as part of the annual RPPR (R, T, U, and F mechanisms);
3. Provide grant mechanisms that support the development of research mentor training infrastructure.

Existing NIH policies, programs, or resources

Modify the F32 to a grant rather than a fellowship. Postdocs would have autonomy to move with the funds allowing individuals to move on from toxic/unproductive mentoring relationships. This would also allow universities to keep postdocs on payroll and maintain their access to benefits and consistent tax collection resulting in annual W2 forms. By placing postdocs on fellowships, we have issues related to lost access to parking, childcare resources, and retirement benefits. Postdocs are also unable to apply for loans or mortgages due to the inability to provide banks with W2s. As a grant, postdocs could pursue a faculty position mid-appointment, creating a negotiating item, rather than simply a line on the "Honors and Awards" section of their CV.

Allow international postdocs to apply for fellowships and training grants. This change could have multiple benefits,

1. Increased recruitment of top talent from outside the US;
2. Increase to probability that top international postdocs stay in the US academic system;
3. Increase the diversity of our T32 cohorts by adding postdocs with different cultural experiences and approaches to science;
4. Provide international postdocs more autonomy and freedom to do independent science;
5. Provide international postdocs with more security in their labs and careers.

Modify what is considered an allowable use of indirect funds. Postdocs could directly benefit from changes that would allow indirect funds to cover institutional benefits and infrastructure such as paid leave programs, subsidized childcare tuition, development of new childcare centers, or expanding the capacity of existing childcare centers. If these types of costs were allowed, then institutions could account for them in the negotiation of their indirect rate.

Consider increasing the current Modular Cap approach and incorporating reasonable Cost of Living Adjustments into multi-year grants limits the ability to adequately fund postdoctoral training for a stable number of years.

Proven or promising external resources or approaches

The U of Utah has developed a series of Rising Stars Symposia that serve as a recruiting tool to bring senior postdocs and graduate students from diverse backgrounds to campus. These symposia include opportunities to interface with departments and labs looking to hire faculty and postdocs. Each symposium is built around a research topic that may cross multiple departments. Symposia focused on senior postdocs, the topic area matches the interests of ongoing faculty recruitments. Our Diabetes and

Metabolism Research Center has organized Rising Stars symposia focused on research related to diabetes supporting faculty recruitment in Biochemistry, Population Health Sciences and Nutrition and Integrative Physiology. Symposia for senior graduate students focus on departments that have multiple open postdoctoral positions. The Department of Neurobiology sponsored a symposium where students met with prospective mentors, attend a workshop, and give a public talk. Both mechanisms benefit the broader postdoctoral training environment by creating opportunities at the early and late stage of an individual's postdoc career.

We have also recently implemented a Postdoctoral Fellow Parental Leave Policy that is managed by the Office of Postdoctoral Affairs and Professional Programs. With this policy eligible postdoctoral fellows may receive full pay for a period of up to eight (8) weeks to care for a child born, adopted, or fostered. The Postdoc may work part-time during some or all the parental leave of absence. The Postdoctoral Fellow and the Postdoctoral Fellow's faculty advisor enter into a written agreement that describes the Postdoctoral Fellow's responsibilities.

Finally, we would encourage NIH to utilize the Center for Improvement of Mentored Experiences in Research (CIMER)-developed curriculum as a tool for broadly improving the postdoc mentoring experience. A common core curriculum implemented over multiple institutions could help standardize the national approach to research mentoring and limit the variability experiences by individuals at different institutions.

Response 3171

Perspectives on the postdoc roles and responsibilities

I view postdoctoral position as a means to train or acquire skills that I was initially not trained or given the opportunity as a graduate student. For instance, I was trained as in a lab that focused on pharmacologically targeting targets by performing basic assays of dose or concentration responses and measuring in vitro outputs while I was a graduate student. Eventually after attending seminars, I grew to earn to learn bioinformatics or computational skills that I perceive as relevant in my future career. Therefore in order to grow as a scientist, I pursued a postdoctoral position that was in a entirely field focusing on both computational and wet bench lab work.

Fundamental issues and challenges

A major challenge in staying in academia is seeing young or junior faculty/PI who are struggling to push their research forward along with getting data to get published and grants. This is a very vicious cycle that is set on junior faculty within the department of the institutes, especially when there is no help or postdoctoral researchers to push the projects forward. Academic institutes care about NIH indirect funds that are funneled into their departments. If junior faculty struggle to get their projects forwards, I see many of them (junior faculty) working as PI, lab manager, lecturers, postdocs, and lab technician all in one. This is unhealthy and I don't see any glimmer of hope if there is no mention of skilled researchers in academia. While graduate students exist, junior faculty cannot solely depend on them to push the projects forward at an accelerated pace in order to get and publish and simultaneously apply for grants. Thus, I am discouraged from applying to become a PI. A major issue inhibiting postdocs in staying academia is the salary.

Existing NIH policies, programs, or resources

Increase the salary of postdocs like HHMI has recently done! Increase NIH funds per year and prolong the grants from 5-7 years—also increase the amounts!!! Also open NRSA fellowship grants to non-citizens.

Proven or promising external resources or approaches

I think NIH could provide incentives to ALL graduate students who will complete their PhDs to do a short-term postdoc 2-3 years in academia to enhance skills that can be transferrable to industry. For instance, communication and presentation are vital in industry or consulting—manuscript writing and creativity could be further endorsed in academic labs.

Response 3172

Perspectives on the postdoc roles and responsibilities

[Redacted for anonymity] has nearly 2500 postdoctoral scholars, and a dedicated office, the Office of Postdoctoral Affairs (OPA) to support the administrative, medical, and professional development needs of those scholars. Fourteen staff members serve these needs, and interact closely with individual scholars, advocacy groups, and faculty mentors. These interactions provide deep insight into the training environment, and the pressures on both the scholars and the faculty. OPA is in a unique position to experiment with recruitment, fellowships, professional development, and benefits in an ongoing effort to support the needs of all postdocs, and to develop a diverse, equitable, accessible, and inclusive training environment. These efforts underlie the comments below.

The NIH definition of a postdoctoral scholar reflects the transient nature of the position, the critical role of PI as mentor, and the breadth of training necessary to fully prepare people for future careers as productive scientists in a variety of settings. It seems appropriate to refer to postdoctoral scholars as scholars pursuing advanced training, rather than trainees. Further, the "acquisition of professional skills" should clearly extend beyond a specific program of research; that is, at the same time as scholars are developing independence, they should be acquiring skills in mentoring and managing people, project management and budgeting, communication, career education, and other pertinent areas. We recommend NIH be more explicit in its expectations around professional development of ALL postdoctoral scholars, regardless of their source of support (i.e., including those funded off research grants, like R01s).

Fundamental issues and challenges

1. Training time depends on factors outside of a postdoc's control, including time to publication. We recommend against any move that extends postdoc training because such would further discourage individuals, especially those from disadvantaged backgrounds, from pursuing postdoctoral training.
2. Low pay and lengthy training precludes many from pursuing postdoctoral training. Low pay reduces lifetime income, makes starting a family financially difficult, forcing choices between family and training; delayed child-bearing can have potential significant health consequences. These factors especially impact women. We recommend substantial increases in NIH stipend rates to reduce or remove these very negative impacts.
3. PIs can be excellent mentors with the interest of the postdoc front and center. Too often, the pressure on a PI to produce data as quickly as possible causes the PI to push the postdoc; and the postdoc has little ability to push back. The result is less-than-optimal training. We recommend NIH implement a formal requirement for a secondary mentor for all postdocs to act as a buffer against the extreme power-imbalance. We also recommend NIH-funded PIs be required to document active participation in mentoring as evidenced by, for example, mandatory annual IDP conversations.
4. Most postdocs do not go into faculty positions, and do not need prolonged training. We recommend a formal review of progress at two years, to identify those for whom continued postdoctoral training is the best use of their time vs. those for whom departure sooner would be optimal.
5. A lack of diversity amidst the senior faculty impacts innovation, and the broad thinking fundamental to the academic pursuit. Progress in supporting diversity in the undergraduate and graduate populations has not yet impacted the diversity of the postdoc and faculty populations. We recommend expansion of programming to incentivize recruitment and retention of a diverse postdoc population.

Existing NIH policies, programs, or resources

Centralize recruitment: Institutions can provide potential postdocs with a broader understanding of science and resources, and a better sense of the culture. Our own experience with such programs has been positive; we recommend NIH fund new initiatives in recruitment, with robust data acquisition to quantify the most effective practices.

Develop new strategies for optimizing mentor-mentee pairing: NIH could develop a more robust assessment for mentor-mentee matching and change its award structure to reflect the great value of getting this right. Institutions can broaden their training, and support mentor-mentee pairs through ongoing skills and conversation development.

Develop staff scientist career paths: There are few options for talented researchers to continue in academia beyond their postdoctoral fellowship except faculty roles. Yet for many, their own aspirations and

skill-sets best fit a different role, one where they are operating as a staff scientist who provides the breadth and depth of knowledge crucial to an ongoing research program. We recommend NIH direct extramural funding to career paths that make varied careers as a research scientist more viable through grant mechanisms such as the NCI Research Specialist Award (R50).

Change postdoc pay policies: NIH's current postdoc pay policies are inequitable. In addition to overall higher pay levels, policies should recognize differences in cost-of-living in different regions. Additional inequities stem from the policy that federal funds cannot be used to supplement the stipend of a postdoc on a NIH fellowship, even to meet an institution's minimum. This forces such fellows to work with PIs who have access to non-federal funds, thereby funneling fellows into the labs of those with the greatest resources,. We recommend, that NIH reduce these inequities by factoring in the local cost-of-living in its compensation, and removing the restriction on supplementing NIH fellowships with federal funds.

Proven or promising external resources or approaches

Increase recruitment and retention of postdocs from historically excluded populations: Currently, faculty use personal networks to recruit, reinforcing exclusion. Ineffective mentoring leads to early attrition. Improved mentoring focuses on faculty training, a necessary but insufficient step. NIH should mandate training in culturally aware mentoring for all PIs of grants with postdoctoral scholars as contributors.

Centralize recruitment: Stanford PRISM recruitment has attracted nearly 100 scholars from under-represented backgrounds. Virtual recruitment programs have arisen elsewhere. NIH should fund new initiatives in recruitment, with robust data acquisition to quantify the most effective practices.

Develop new strategies for optimizing mentor-mentee pairing: NIH should encourage institutions to implement recommendations in the AAMC Appropriate Treatment of Research Trainees.

Students choose postdoc positions based on factors that may minimize their own mentoring needs. Similarly, faculty may choose postdocs without considering postdoc needs and their own limitations. [Redacted for anonymity] is directing internal fellowships to faculty-postdoc pairs who show clear communication and culturally aware mentoring in their relationship. We recommend NIH develop a more robust assessment for mentor-mentee matching and change its award/reward structure to reflect the real importance and value of outstanding mentoring.

Shorten term limit for first phase of two-tier training: The term limit of 5 years has not accelerated the time between receipt of a doctorate and acquisition of a faculty position and could be considered somewhat arbitrary. We recommend consideration of an evaluation for postdoctoral scholars after 2-3 years; those on track for faculty positions should be transitioned to a new role with a salary increase, while others might adjust their training and time-frame to allow an early exit into a non-faculty career path.

The University of Michigan piloted a second-year review for postdocs, which could support an exit strategy for those leaving academia, and focused mentoring for those staying.

Response 3173

Perspectives on the postdoc roles and responsibilities

Postdocs are vital to academic labs. They help PIs bring their ideas to life and help train the next generation of scientists (grad students, undergrads).

Fundamental issues and challenges

Postdoc pay scale is a significant barrier to recruitment, retention , and overall quality of life for postdocs. As the age of the average postdoc has increased and many are starting families, the current salary scale does not provide the support need for retaining their talent in the academic space

Existing NIH policies, programs, or resources

Increase the modular budget pay scale.

Proven or promising external resources or approaches

Pressure institutions to support professional development that allows PIs to produce mentoring plans similar to the independent development plans that postdocs are encouraged to create. This would allow for accountability by both the postdoc and the PI. https://arxiv.org/pdf/2302.13691.pdf

Response 3174

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity] Office of Research formed a working group to provide input to the NIH RFA. The working group consisted of the vice provost for research, associate vice provosts for research, associate dean of student and postdoctoral affairs, vice deans for research, training grant directors, and other professors from schools and colleges with high numbers of postdocs. This group generally viewed the academic postdoctoral fellowship as preparation for an independent research-oriented position in academic, government and other research institutes. The position is viewed as a period of mentored, advanced training to enhance professional skills and research independence. In this position, postdocs perform primarily research and scholarship under the direction and supervision of university faculty mentors.

Fundamental issues and challenges

The [redacted for anonymity] working group agreed that current recruitment efforts are yielding fewer qualified applicants than in the past. The reasons for this are complex, including compensation and benefits, future job availability, work/life balance, and other factors. Industry jobs not only pay more, but also are increasingly viewed as providing more opportunities for making a real difference. Furthermore, fewer fellows aspire to faculty jobs due to a shrinking percent of tenured faculty and the perception that faculty job offers are increasingly rare. Wages are increasing slowly in response to a variety of forces; however, the cost of living is higher in some parts of the country. A challenge is how to pay for wage increases in excess of NIH limits from allowable sources.

Regarding overall quality of life issues, the working group agreed that these are likely to be idiosyncratic to specific labs and types of research. However, several factors were recognized to affect quality of life:

- Power differentials in mentor-mentee relationships.
- Challenges in building a sense of community for postdoctoral fellows due to most training and mentoring being specific to individual labs.
- Career and personal uncertainty for international postdocs due to issues around periodic visa renewals.
- Anxiety associated with a position that is not permanent.

Existing NIH policies, programs, or resources

The [redacted for anonymity] working group identified several issues surrounding NIH policy, programs/training, and resources that could be improved to enhance the postdoctoral ecosystem as follows:

Policy:

- Salaries, rather than stipends, should be used for training grant compensation, potentially making use of the existing GS scale.
- Greater flexibility in postdoctoral training grant funds for use outside of compensation.
- Expand NIH's family-friendly policies to all postdocs, including paid parental leave and childcare subsidies with realistic allocations.
- Offer opportunities for PIs to apply for supplements to cover re-location costs for postdocs.
- Funds to support mentorship training for both the PIs and postdocs should be included on training grants.
- Encourage policies that allows institutions to use direct costs from NIH grants to supplement postdoc compensation and benefits.
- Allow application for NIH supplements that provide cost of living (COL) adjustments for geographic regions with high COL.

Programs and Training:

- Develop NIH programs that allow customization of training experiences to meet the career needs/goals of each specific trainee. Funds on training grants should be more flexible and should allow carry forward
- Extending LRP program to postdocs and expanding the pool of money available to this program.
- New programs or expansion that allow T32-like programs for non-US citizens who are committed to staying in the US for an academic career.
- Extend term limits on a training grant to greater than 3 yrs, given the long times to publish and secure permanent positions.

Resources:

- Develop local and national data collection and dissemination resources to collect metrics of job satisfaction, career outcomes, etc.
- Make NIH funding available for Center for Improvement of Mentored Experience (CIMER) and other professional development training

Proven or promising external resources or approaches

The [redacted for anonymity] working group identified the following resources and approaches for further consideration:

- Resources provided by the National Postdoctoral Association (NPA) and Graduate Career Consortium (GCC)
- Center for Improvement of Mentored Experience (CIMER) Mentor Training
- NASEM report from 2017: The Next Generation of Biomedical and Behavioral Science Researchers
- Resources provided by NIH OITE—virtual offerings have been a huge asset over the past 4 years.
- Regular engagement of NIH with PIs, postdocs, and university leaders to assess, re-evaluate policies, and pivot as needed.
- Set up an NIH program that matches postdocs with PIs, similar to the NSF-funded Research University Alliance, which includes a Research Exchange and a match-maker website, the Postdoc Portal.

Response 3175

Perspectives on the postdoc roles and responsibilities

Postdoctoral fellows are primarily trainees, but they also represent a major part of the academic work force. They are highly trained professionals who already have an advanced degree, and should be treated accordingly.

Fundamental issues and challenges

It is extremely difficult to survive on a typical postdoctoral salary, especially in HCOL areas and/or with children. This makes the academic environment significantly less attractive then the pharmaceutical industry and other private sector employers, especially for US-

Existing NIH policies, programs, or resources

It would not be enough to increase the NIH postdoc pay scale. Without significantly increasing NIH grant budgets, including modular budgets, that would only disadvantage junior and mid-career PIs with small or medium labs. There would need to be fewer cuts to NIH grant budgets to allow for higher trainee salaries.

Proven or promising external resources or approaches

No response

Response 3176

Perspectives on the postdoc roles and responsibilities

The academic postdoc is, both historically and in practice, a time of mentored career development on a path towards an independent career. It should be a balance of work in service of larger projects and personal growth and discovery. It should always be seen as a dual role, both of a highly skilled employee and with opportunities for focus on self-interests. Ideally, a postdoc will have opportunities to experience tasks and roles that will be expected of them in their desired career. The position should be assessed with mutual goals in mind, and evaluated based on certain skills and activities that will move the postdoc closer to the next step of their career. Too often, postdocs are reduced to a labor force, focusing exclusively on the interests of the supervisor that provides salary and resources, all in the name of "training". While it is possible for a postdoc to produce high impact publications and fill an impressive CV, it is not always in the context of honing skills, but sometimes as proxy for an advisor's ambitions. There are enormous power imbalances that prevent postdocs from truly developing independence, sometimes even after leaving a supervising PI's oversight. The exception is when a postdoc obtains a K99-R00 award, when a project is developed and brought to an independent career under the guidance of a mentor, without the interference of financial burdens to a PI. Other types of individual fellowships (such as the NRSA Kirschtein F32's) are frequently worse than being paid on a PI's research grant, because there is never a true connection with an institution or PI, and the mentoring can be very unpredictable.but more on that later.

Fundamental issues and challenges

The structure and history of postdoctoral training is both a strength and a weakness. When postdocs can advocate for themselves and obtain positive mentoring relationships, it can be a period of incredible growth and intellectual stimulation. However, there is very little that outside forces can do to control the quality of those relationships, and due to the high pressure of academic research, there are frequent areas where disputes and bad feelings can arise (relationships are hard.see the national divorce rate). When you add in the very meager opportunities to truly vet a potential mentor-mentee match, it can lead to problems. PI's sometimes have a difficult time finding highly qualified people to work on their projects, especially if their institution is viewed as a somewhat remote or undesirable location, or if facilities or salary are not adequate. With the very high percentage of international scholars coming to the US on visas, it is even more difficult to properly screen a prospective postdoc. Even with such a difficult conditions finding a match, there is still an expectation that things will work out quickly (because most projects can't afford to have people in training for many months). If things do not go very well from early on, a PI can quickly decide to "not waste time" trying to train someone who is lacking in the qualities that are required to move a project forward. Those relationships, especially when immigration is involved, can be very fragile and stressful. A great deal of blame can be attributed to the way that research projects are funded by the NIH. It puts a great deal of pressure on PI's to produce high quality products in a short time, so it incentivizes internal competition and unreasonable expectations. Regarding retention and quality of life, see the next section.

Existing NIH policies, programs, or resources

The NIH individual fellowship system (F32) is nice in theory (trying to make a fellow independent and protect them from any abuses), but it is awful in practice. Host institutions are not able to take the money from the NIH and pay fellows as employees, and this causes enormous INEQUITIES and additional stress on postdocs. Benefits that the fellows are not able to receive include health care, retirement plans, parking, daycare, and many other aspects. It creates a two-tiered system for postdocs, and it is overall quite cruel. The K99 system does not suffer from this defect, as employment is one of the required criteria for the award. Other funding institutions (NASA, NSF, others) have found ways around the problem, but NIH is lagging severely behind, and severely hurting both research institutions and a generation of promising scholars.

Retention and Quality of Life, continued.

When postdocs realize that their career prospects are limited and their earnings in academia will severely hurt their future wealth, prudent individuals will strongly consider leaving academia for other career paths, many of which can offer significantly more money and equal levels of benefits and job security. Many graduate students in the US forgo postdocs completely after the pressure-cooker of graduate school and the pragmatic evaluation of job markets. Unless academic careers are incentivized in some way, the best and brightest will find other paths with less resistance.

Proven or promising external resources or approaches

There are so many good programs, but it would require a major re-working of the national funding of scientific research to try and rebalance the distribution of resources across the country, and it would require a major commitment by individual faculty to buy into a trainee-first mentoring mindset. I'm far too cynical to think that NIH could actually make the world a better place. I just wish that we could either kill the F32 system completely, replacing it with more K awards, or rework it so that it functions more like the K awards, and the postdocs can be employees of host institutions. That's all I am asking for.

Response 3177

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Science is getting more expensive but NIH budgets are not expanding. In order to meet the benchmarks of the academic system (high-impact publishing), faculty need to spend more money on technology, large-scale experiments, and increasingly sophisticated equipment. This creates a conflict-of-interest with the goal of paying postdocs better wages and employing more of them. It also creates perverse incentives to do sloppy science that is not reproducible and/or misrepresents the significance of research outcomes. With bigger budgets, more qualified staff can be hired (i.e., postdocs), paid living wages and ensure stability so that they have time to do diligent and quality science.

Science is also getting increasingly quantitative, computational and driven by AI. This means that we need to be able to at least remotely compete with big tech and other industry sectors that currently brain drain a near total majority of PhD graduates with these core competencies. Better training will not solve this — the demand for these skills across the private sector is only increasing. The reality is that PhD graduates who can do AI research (even if they're coming from the natural and life sciences!) have the option to make $250k+ salaries if they forego an academic postdoc in favor of research positions in industry. This is a sufficient gap with current postdoc salaries that it makes it incredibly difficult for these trainees to rationalize a decision to stay in academia —especially when combined with aforementioned factors.

Existing NIH policies, programs, or resources

The situation in California is different than in other states due to our much higher minimum wage. But it is still the same basic problem everywhere. Postdocs are not paid enough. In California, even though the required pay rate that is much higher than the NRSA level, it is still not competitive because of the higher cost of living here. The NRSA stipend level is ridiculously low and needs to be increased. That single thing would make a huge difference in every state. If the NRSA level were higher then everybody would have to put higher postdoc salary levels on their R01s and other grant proposals, which would increase all of the requested budgets. This would normalize the higher budget requests in the study sections. Right now you are penalized with a bad score if your budget is too high, so if your institution (or State) requires a higher postdoc salary you are faced with either asking for fewer personnel to support the work or risking not getting any money at all because you get a low score.

Caregiving support is needed. Grants should be provided to institutions so that they can develop childcare facilities in house. Supplements should be provided to R level grants for extra child care costs for postdocs who need access to child care.

If NIH refuses to increase T32 and F32 stipends, they need to reduce their effort on these grants accordingly. If the F32 stipend will only cover 70% of their salary, then only 70% of their effort should be on the grant. This allows us to put the remainder of their salary on other grants.

Proven or promising external resources or approaches

No response

Response 3178

Perspectives on the postdoc roles and responsibilities

A transition to an independent position, whether in company or in academia should be part of the postdoc training. Postdoc responsibilities must include a commitment to becoming independent in the research cycle (plan-execute-analyze and again). They are supposed to already have developed a work ethic during their grad training (work-hard play-hard is a must in this career). They are responsible for identifying and developing the skills necessary for their career (eg. grantsmanship for academia and networking for industry).

Fundamental issues and challenges

Academic research has a fundamental issue: peer review. As it is now, PR is defined by too much competition and not enough cooperation. This situation is even more extreme than in industry, and creates a vicious circle of stress, poor mentorship, unfair PR activity, unconscious bias and burnout that is propagated from mentor to mentee at all levels. To exit the cycle, those postdocs who cannot find a balance end up in company. Many grad students are already trained like employees thanks to widespread unionization and come unprepared to deal with this stressful environment.

Existing NIH policies, programs, or resources

It does NOT require more NIH funding to address the issue of hyper competition in peer-review, which can be solved by a better coordination between peer review and funding, and by developing a novel publishing platform. Regarding the former, NIH funding mechanisms must abandon study sections (that is, where established investigators anonymously maintain the status quo and stifle innovation), which are universally considered a lottery. It is crucial to insert more elements of cooperation in the competitive process of peer review: for example, if a reviewer criticizes a grant approach, they must be excited enough about their proposed alternative to be willing to collaborate with the PI on it. Otherwise, the reviewer criticism must be dismissed as subjective opinion. Maybe the NIH should have a platform to collect all junior faculty and postdoc research directions so that to facilitate new faculty hiring (for postdocs) and collaboration with senior faculties. Once a balance between competition and cooperation is reached, it will decrease the root cause of the problem with academic research careers.

Regarding publishing, peer review is currently upside down: first editors evaluate impact, then reviewers "evaluate" methods. Novel or existing pre-print platforms should be peer reviewed for methodology by both postdocs (who more experienced than them in a specific technique!) and junior faculty. Exclude senior faculties who likely have lost track of new technologies. This layer of publication should be used for promotion and funding. Current commercial publishing companies would then source the impact they aim for from this pre-print platform, adding value by summarizing multiple studies and delineating where a field is going.

Proven or promising external resources or approaches

No response

Response 3179

Perspectives on the postdoc roles and responsibilities

The post-doc position is a fundamentally exploitative role whereby senior people get an independent scientist to work for them for low wages, justified by the senior-scientist-serving myth that people need 10-15 years of training before they are independent. It is a position designed to benefit senior scientists at the expense of junior scientists—at the expense of thier mental, physical, social, and financial health. Under the guise of "training" , senior people can get a talented collaborator that they might not otherwise be able to attract and who does not have the freedom to walk away from a toxic or simply non-beneficial relationship. Post-docs' dependency on "mentors" is a completely artificial relic of a broken system—there is no reason people should not be able to move into independent permanent positions earlier.

To the argument that post-docs are "trainees" , learning should be rewarded not penalized with low wages and precarious employment. Are post-docs learning new things? Sure, as any good scientist, at any career stage, should. To the argument that post-docs are simply carrying out the PI's ideas—that has not been my experience—personally, I have had to guide my work theoretically, conceptually, and methodologically,

while mostly relying on mentors for resources/data—resources that could be made directly available to junior people.

Why is there so much concern about the independence/ abilities of junior scientists and virtually no concern about the independence/ abilities of senior scientists? How many senior scientists are capable of doing high-quality science without the system of indentured servitude that supplies a stream of fresh capable minds to their research group? If I had the power to build a dream team comprised of actual scientists I know, it would include primarily junior people—because junior people do the work and too many senior people free-ride.

Fundamental issues and challenges

I'm fed up with systemic abuse of junior people. I experienced neglect, exclusion from opportunities, and bullying in my PhD—I know many others who experienced similar/worse. I came out of my PhD in deep financial dept and on psych meds (neither debt nor meds before my PhD). I love academic research, but the low wages, the lack of seniority/independence after so many years, and the abuse I've experienced is taking a toll.

The balance of being mentored vs. being exploited is heavily tipped toward exploitation. In my post-doc, I independently wrote a grant, designing studies with new methods my PI doesn't know. Then, I helped the PI write an additional similar grant—I helped them far more than they helped me. Both grants were successful. My PI then informs me they will give the projects I independently developed to a new trainee. I eventually convinced the PI the projects are rightfully mine, but I want freedom from senior people who I have to be on guard against.

And there is the social class element. Academia is a pyramid scheme where people who attended Ivies (or similar) move up the ladder more quickly, and those of us from less privileged/ marginalized backgrounds comprise an underclass of indentured servants beholden to the professoriate class. Junior people put off having children, put off going to the dentist, live far away from partners for years, while senior people (who disproportionately rode the privilege wave to their TT position) buy second homes, take multiple vacations per year, all while demanding more and more from junior scientists (especially those from less privilege who can't advocate for themselves as well).

It is demoralizing to work long hours with low pay, be infantilized, see senior people contribute little for maximum credit, while getting very little career support.

Existing NIH policies, programs, or resources

ACTUALLY COMBAT ACADEMIC BULLYING/HARASSMENT. The worst part of my academic experience has been the neglect, active exclusion from opportunities, and outright bullying. I know many others who have left academia due to bullying and harassment. The NIH could track trainee experiences anonymously, cut off access to funding for PIs who are repeat offenders, and have grant 'environment' scores informed by department-level bullying and harassment metrics—thus incentivizing departments to actually police PI behavior even a little bit. I see bullying and harassment as a major reason junior people leave academia.

There should be some attempt to formally measure academic privilege/ adversity and adjust for its undue influence on career success. How prestigious was the applicant's undergrad/grad/post-doctoral institution/lab/PI? If applicants come from the most prestigious institutions—particularly early on in their training—they already have an enormous advantage over those who went to smaller, less prestigious schools. If a great application emerges from a lab that has never had a successful fellowship before, that is an indicator that THE TRAINEE THEMSELVES may be the driving force behind the science—THAT is something that should be celebrated and formally supported (not penalized)! One way the NIH could better support marginalized scientists is to have fellowship schemes that specifically support trainees coming from less productive/less prestigious schools/labs. Another way the NIH could better support junior scientists coming from less productive/less prestigious labs is by giving them extra time for fellowship and early career grant timescales—maybe an extra year to submit a K99 for applicants who came from less productive PhD labs. I know trainees working in great labs who get rounds and rounds of edits on their papers and applications, and I know I wrote mine myself. Competing on such an uneven playing field is exhausting and makes industry positions very tempting.

Proven or promising external resources or approaches

Pay post-docs like the professionals that they are—65K should be a bare minimum with increases for high cost-of-living areas. Create more permanent positions, enable earlier transition to independence, including

non-TT permanent positions. Actually penalize PIs accused of harassment and bullying, and use formal assessment to quantify whether senior people are contributing or free-riding. Build formal funding/support mechanisms that facilitate trainees in safely transitioning away from toxic and non-contributing senior people.

Response 3180

Perspectives on the postdoc roles and responsibilities

The impact of COVID on graduate student training is leading to degree carrying postdocs that are incapable of meeting expectations. Although a postdoc came with a strong reference, was totally unprepared for this environment and expectations and was not able to be productive.

Funding is very scarce, which makes many postdocs feel that even if they get a job, they will not be able to sustain funding for their research. Seeing their Profs struggle to get and maintain funding breeds a cycle of doom.

Shift in attitude of postdocs that has been extenuated by covid. New sentiment is that this career is too hard, & not being able to compete in it.

It’s almost impossible to get paper out in 2-3 years; now more like 5-6 years. Is it fear that they don’t have enough for a high impact paper?

As long as the NRSA postdoc stipend level is low then NIH funded efforts will have decreased productivity. Fewer prospective postdocs will choose an academic career route and the quality and productivity of those that remain will be lower. Paying more will assure that the best and most productive are retained.

Fundamental issues and challenges

Retention:

- Many local biotechs and pharma offer very attractive startup packages and signing bonuses for well-trained postdocs, especially those with bioinformatics expertise.
- Postdocs need to be paid competitive wages commensurate with their life stage. A postdoc is typically in their mid-20s to mid-30s, a time when they are transitioning into starting new families or supporting their aging family members. The latter is particularly salient for postdocs from underrepresented minority and disadvantaged backgrounds, who in many cases simply cannot afford to pursue an academic career since they do not have access to generational wealth.
- Postdocs see very few jobs available in Academia. They may have to apply for several years before getting an offer, and this may be in a place they do not want to live or work. Therefore, Academic jobs seem unapproachable, causing them to choose alternatives.

Recruitment:

- Few domestic applicants, many more recent applicants have been international and seeking VISAs—particularly H1B which risks applicants using us to facilitate relocation without return on investment as they are able to leave within a year for more money.
- Few postdoc applicants, and fewer quality postdocs
- Competition with industry positions, including perceived quality of life for having a family.
- Generational differences. Younger postdocs more reliant on social media and older PIs aren’t leveraging those tools.

Existing NIH policies, programs, or resources

Postdoc pay cannot keep pace with industry careers and opportunities; especially in cities with high cost of living like San Diego. Given current NIH budget structures, we cannot compete. Increase the size of grants so pay can be improved.

NIH needs to increased amount of grants, fellowships and salaries in order to retain top talent and remain competitive globally in science

Adjust the pay scale so that it reflections regional costs of living.

Additionally, given the rarity of assistant professor positions, there is little incentive to take on the highly stressful and underpaid position of postdoc.

Because of low number of high quality US applicants, many labs are now recruiting more candidates from international labs as quality of candidates is better. Develop fellowship mechanisms to support international applicants training in US labs.

Proven or promising external resources or approaches

No response

Response 3181

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The difficulty in postdoc recruitment and retention is mainly caused by aggressive recruitment in the biotech industry in recent years. The excessive investments in the biotech industry created a lot of positions that need to be filled with PhDs. This led to the lowering of the requirement for a typical scientist position in a biotech company from 4-5 years of postdoctoral experience to 1-2 years of postdoc experience or freshly graduated PhDs. Since the industry pays a lot more than academia for these positions, the red-hot job market lured a lot of PhD students into joining the industry directly without any postdoc training in an academic lab. I think this situation is not sustainable. Things will change when excessive investments in biotech cool down and postdoc salaries in academia start to rise. Both trends are already started.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Could there be more partnerships with industry where they contribute to the salaries of postdoctoral trainees so that the postdocs are trained within the labs that feed into industry positions? This would be more about training experience and research skills from specific labs in which the industry partner invests in and that refined training that would benefit the industry position.

Response 3182

Perspectives on the postdoc roles and responsibilities

A postdoc is a highly trained person conducting research on the highest level largely independently (i.e. NOT a trainee). Postdocs often take on a wide range of responsibilities including project management, grant writing and mentorship/supervision for junior researchers. Although a postdoc position is a transitional role (traditionally with the goal to move on to a permanent academic PI position) the acamdemic research system in the US is largely dependent on postocs and most likely could not exist as is without them.

Fundamental issues and challenges

Although an integral part of the academic system postdocs are often treated as supplicants by their academic institutions rather than valued employees. The attitude, especially in prestigious universities, seems to be that postdocs should be glad to have a position at all, that they are nothing but trainees and if they don’t like it there is someone else who will want their job. As a highly educated person who spent many years being trained and making low wages as a phd student a postdoc, no matter where in the US, should be able to afford to live on their own. With the current NIH salary scale there are many places in the US, such as NYC, Boston, Seattle or California, where this is only a far off dream and people need to share apartments in order to afford rent. Furthermore, postdocs tend to be in their 30s which is a time when for many people family planning, home ownership and retirement savings become important topics. However, many academic insitutions are not doing enough to support postdocs either by increasing wages to meet cost of living in the area or by improving benefits or both. This results in postdocs putting off

those milestones of adult life until they "have a permanent position" (which is not clear when or if it will happen). It should come as no surprise to any academic institution or the NIH that given the lack of appreciation, the often inadequate financial compensation and lacking benefits many PhDs now choose to not do a postdoc at all or leave academia for industry after only a few years of postdoc.

Existing NIH policies, programs, or resources

NIH needs to change their postdoc salary scale to account for cost of living in the area they live in. The salary a postdoc receives needs to reflect the qualification and expertise they have aquired during their PhD and needs to be comparable to what they would make outside of academia.

Proven or promising external resources or approaches

No response

Response 3183

Perspectives on the postdoc roles and responsibilities

The postdoc position is to gain experience in research areas to be able to build your own research program and get the opportunity to mentor students.

Fundamental issues and challenges

The funding situation is dire and not compatible with the education level, with PhDs being the highest level of education getting paid very poorly. Providing childcare support and access to benefits that are received in other jobs.

Existing NIH policies, programs, or resources

Structure funding to ensure postdoc minimum salary is raised, increase or create academic positions other than tenure track investigators as the only position in academia.

Proven or promising external resources or approaches

No response

Response 3184

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

NRSA Salary cap is prohibitive in the current climate, please raise the salary

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3185

Perspectives on the postdoc roles and responsibilities

Postdoctoral researchers are responsible for various research and training activities and are crucial in advancing scientific projects. More specifically, they develop and carry out research projects. Their activities include designing and implementing experiments, collecting and analyzing data, and interpreting results. Additionally, postdocs may also be responsible for developing their research projects within the scope of their mentor's research program. As part of research activities, postdocs often collaborate with other researchers, including graduate students, technicians, and other postdoctoral researchers, to complete research projects. In many instances, they informally mentor undergraduate or graduate students. Some postdocs may be involved in writing grant proposals to secure funding for their research

projects. Postdocs also contribute to the daily operations of laboratories by managing lab resources, including ordering supplies, maintaining equipment, and ensuring that the laboratory complies with safety regulations.

Fundamental issues and challenges

Particularly after the pandemic, there is a global and nationwide shortage of postdoctoral candidates. This is fueled by the worsening economy (inadequate income), decreased desirability of prospects in academia (limited career advancement opportunities, low funding, issues related to publishing), work-life imbalance, lack of adequate mentorship, limited training opportunities to improve professional and scientific knowledge, limited equity and inclusion, and visa issues for international scholars. Junior and senior investigators have difficulty recruiting competent candidates despite the available funding. Overall, this issue decreases the scientific output of our labs and increases the need and workload for other trainees, particularly graduate students, in the laboratories. This increased pressure on graduate students creates a vicious cycle that detracts potential future PD candidates from considering academic careers.

Existing NIH policies, programs, or resources

1. Expanding eligibility criteria for postdoctoral fellowships (International applicants).
2. Developing programs to train PIs on effective mentoring (and holding PIs accountable??)
3. Encouraging training on other aspects of academic responsibilities (teaching, service leadership)
4. Collaborate with different professional societies to increase the representation of postdoctoral fellows from underrepresented fields
5. Include postdoctoral fellows in early career reviewer programs.

Proven or promising external resources or approaches

1. The National Academies of Sciences, Engineering, and Medicine (NASEM): NASEM has published several reports on the state of the biomedical research workforce and postdoctoral training. These reports provide evidence-based recommendations for improving the training, mentoring, and career development of postdoctoral researchers.
2. The National Postdoctoral Association (NPA): The NPA is a professional organization that provides advocacy, education, and resources to support postdoctoral researchers. The NPA has developed a number of resources and guidelines to promote best practices in postdoctoral training, including mentoring, professional development, and job search strategies.
3. The Center for the Improvement of Mentored Experiences in Research (CIMER): CIMER is a resource center that provides training and resources to improve mentorship in research. CIMER offers workshops, coaching, and online resources to help mentors and mentees build effective mentoring relationships.
4. The Future of Research (FoR) Coalition: FoR is a grassroots organization that advocates for improvements in the research enterprise, including postdoctoral training. FoR has developed a number of resources and initiatives to address issues such as diversity and inclusion, career development, and mental health and wellbeing.
5. The Howard Hughes Medical Institute (HHMI) Postdoctoral Fellowship Program: This program provides funding to support postdoctoral researchers in their research and professional development. The program emphasizes mentorship, networking, and career development, and has been shown to enhance the training and career trajectories of postdoctoral researchers.
6. The Consortium of Social Science Associations (COSSA): COSSA is a non-profit organization that advocates for social and behavioral science research. COSSA has developed resources and tools to help social and behavioral scientists navigate the postdoctoral training and academic career pathways.

Response 3186

Perspectives on the postdoc roles and responsibilities

Ability to conduct research that is exciting and be on the path the become a PI.

Fundamental issues and challenges

Very little salary, no childcare support or benefits,

Existing NIH policies, programs, or resources

Increase salary, provide benefits, more funding opportunities for international postdocs.

Proven or promising external resources or approaches

No response

Response 3187

Perspectives on the postdoc roles and responsibilities

The mantra of our postdoc office has always been that 'The point of being a postdoc is to no longer be a postdoc.' This is because the postdoc is a transitional career phase, not a destination, and the goal is to gain the training needed for a postdoc's next career step. But is it really needed? In some academic disciplines, this is not the case, and PhDs still go straight into the professoriate. But in the biomedical sciences, the existence of the postdoctoral career phase has effectively and permanently inflated the CV accomplishments required to obtain a tenure-track or PI position. So if the postdoc is here to stay, the community needs to ensure that the experience provides additional value.

The growth in the number of postdoc offices in the past decade has helped create more accountability for the postdoctoral experience. Nevertheless, more work needs to be done to foster a respectful and effective training environment and most postdoc offices are one person offices with few resources. Real culture change needs to start with faculty PIs, and PIs respond to funding incentives. NIH has taken helpful steps to start to address the abuse and harassment concerns of postdocs. An additional helpful step would be to look at funding deliverables on research grants and ensure that positive training experiences are also an expectation instead of a conflict of interest.

Fundamental issues and challenges

As a postdoctoral community, we need to reexamine the longstanding view that postdoc salaries and benefits can be low because they are scholars in training. Firstly, postdoc supervisors are often not held accountable to provide such training. Secondly, with industry as an increasingly viable post-PhD career alternative, postdoc salaries should reflect the level of training and expertise they already possess and should become more commensurate with the broader research job market beyond the academy. Appropriate salaries would make the postdoc position more liveable for scholars who are often in their thirties with families and other financial obligations. In addition, if postdocs become more expensive on research grants, then they may be treated more often as valued colleagues instead of as "cheap labor."

The NIH NRSA stipend level is a major driver of the postdoc salary landscape, but salaries are still set at the local institutional level for non-NRSA postdocs. The NIH might consider extending salary expectations to research grants that include postdocs as well. This would ensure that a majority of grant-funded postdocs in the U.S. are receiving appropriate compensation, and provide leverage for institutions to continue to set equitable salary scales for postdocs funded through different mechanisms.

Existing NIH policies, programs, or resources

The relative share of individual fellowship funding to research grant funding from NIH and other funders has decreased over time. Yet a fellowship is an opportunity to provide a true "transition to independence" for a postdoc. The fellow must take ownership of crafting and implementing research goals, managing a budget, and typically, engaging in training and career development. The fellow identifies a faculty sponsor for mentorship, but retains the autonomy for their science direction. This process prioritizes the fellow's training needs and cultivates innovation and creativity skills through the fellow's intellectual leadership of their project. While these experiences can be garnered through a PI-led R01 grant-funded project, a grant-funded postdoc's professional education and growth will never be the top priority—and in some cases can be neglected altogether. Increasing the relative balance between individual fellowships and grants could help address this issue.

An alternative to an individual fellowship could be to treat postdoc funding for research grants as a separate educational supplement that requires training goals to be established in advance--and reported upon--for any postdoc hired. The proposal could include, for example, a postdoctoral mentoring plan like

that required by NSF. In this way, the supplement could adopt some of the advantages of the fellowship proposal process while still supporting the goals of individual investigator research grants.

Proven or promising external resources or approaches

Fellowships are an important marker of excellence for early career scientists, and yet the potential loss of benefits upon fellow appointment remains a disincentive. The federal government and NIH in particular have worked for many years to maintain fellowships as a prestigious appointment that allows greater intellectual freedom and some financial benefit by avoiding the quid-pro-quo, pay-for-work model of an employee appointment. Any advantages to this type of appointment, however, are dwarfed by the disadvantages of lacking proper institutional status and access to resources, and appropriate employee-level benefits, such as paid time off, retirement, and affordable health insurance.

The 2021 NPA Institutional Policy report shows significant inequities in benefits access for fellows versus other postdocs—but this is a longstanding problem. Stony Brook University and the SUNY system developed a solution in 2019, establishing "seamless benefits" where grant-funded postdocs and fellowship-funded postdocs had access to the same health plans. While this a major success, challenges remain, as our fellows still do not qualify for the insurance premium subsidies enjoyed by employee postdocs. Our unsubsidized health plan premiums for fellows are over four times more expensive with costs than can exceed fellowship benefits allocations, particularly for family coverage.

One model the NIH might consider is a recent change to the NASA Hubble Fellowship Program (NHFP), a prestigious postdoctoral fellowships in Astrophysics. NHFP requires any sponsoring institution to offer awarded fellows the option of being appointed with employee benefits. In this case, NASA would provide the fellowship funds to the institution as a grant, with the faculty sponsor as PI, and will provide benefits funds at the appropriate fringe rate. Adopting a similar model for NIH fellows could be one way to ensure benefits equity between fellows and grant-funded postdocs and to incentivize the pursuit of prestigious external fellowships.

Response 3188

Perspectives on the postdoc roles and responsibilities

At many academic institutions, postdoctoral scholars are the lifeblood of biomedical research. They lead independent projects at the cutting edge of their fields, provide mentorship and support to their peers and graduate students, and help to shape the research programs of the PIs that employ them. In the best case, postdocs have an opportunity to train in new skills, expand their knowledge base, explore new fields, and build interdisciplinary bridges between their previous training and their current work. In the worst case, postdocs are overworked and undercompensated expert labor for PIs whose publications and grants depend on the material and intellectual contributions of these highly skilled scientists.

There is considerable diversity in the types of scientists who pursue postdocs. Some postdocs are seeking training beyond their graduate training, for example those who are switching research fields or who are seeking to learn new methods in the same field they did their graduate work in. Other postdocs are seeking intellectual diversity, staying within the same research field but looking for training in a new perspective on that field. Because prestige, an arbitrary metric, is often used in hiring decisions, some scientists use postdoctoral training as an opportunity to acquire prestige conferred by their postdoctoral institution or their postdoctoral adviser. This last option is particularly true for postdocs from marginalized backgrounds who, due to bias in what types of institutions and PIs are viewed as prestigious, might have been limited in their access to prestige as a function of the previous academic opportunities.

Fundamental issues and challenges

Insufficient salaries, high potential for abuse, short term contracts, and the dependence on singular mentors for career progression, as well as limited academic prospects as either staff scientists or principal investigators are all major issues in postdoc quality of life. These issues are exacerbated for international scholars, a major population of researchers at many R1 research institutions, with the added precariousness of their ability to live in the US being dependent on fickle bosses, having to navigate complex immigration bureaucracy with little to no support from their employer, and fewer opportunities for funding while in the US. These issues coexist with many scientists navigating racist, sexist, homophobic, transphobic, and xenophobic environments with limited recourse either through their universities or their funding agencies. Further, because of the temporary nature of the postdoc position, scientists who are

looking for long term research positions in academia where they do not lead their own laboratories may decide against postdoctoral training in favor of a higher paying more permanent position as a staff scientist outside of academia.

Existing NIH policies, programs, or resources

F32s, T32s, K12s, K01s, K22s and K99s all serve to fund postdoctoral training, but funding levels across these awards are stagnant. Further, many postdocs who do not receive these awards are funded off of their PIs R01-level research grants, which furthers the precarity of the postdoctoral position. For many, these awards are difficult to obtain due to biases against age, time from PhD, and the relative prestige of their institution or PI.

The NIH can improve postdoctoral training by expanding all of these funding opportunities. Stipends should be increased significantly commensurate with the applicant's cost of living. Citizenship requirements for T32s and F32s should be dropped. Time-since-PhD criteria for career development awards should be dropped. All NIH postdoctoral funding mechanisms should have cohort-based duplicates targeted toward marginalized postdocs similar to the MOSAIC K99 mechanism that has proven incredibly successful.

The NIH should establish strict mentoring criteria for PIs who administer R01, T32, or K12 awards the fund postdocs. The NIH should establish clear consequences for bullying and abusive PIs.

Finally, the NIH has a role to play in removing the need for postdoctoral training in the first place. This should take two forms:

For scientists who do not need additional training, the NIH should expand its DP5 program targeted to graduate researchers looking for jobs at minority-serving institutions or other institutions that do not receive significant NIH funding.

For scientists who want to stay in academic research as staff scientists, the NIH can obviate the need for doing a postdoc by expanding the R50 mechanism to fund staff scientist positions.

In summary, through increasing salaries, increasing the presence of cohort-based career development programs, increasing oversight over mentorship, holding abusive PIs accountable, and providing direct routes from the PhD to both PI and staff scientist positions, the NIH is well positioned to considerably improve postdocs experience.

Proven or promising external resources or approaches

A litany of public complaints from universities and principal investigators indicate there is a lack of postdoc applicants. Anecdotal reports suggest that PhD students are looking to the biotechnology arm of the private sector after receiving their training. These industry jobs offer high compensation, impressive benefits, ample time off, and some assurance of career progression. Additionally, due to the threat of liability and the existence of litigation-conscious HR departments, working in industry is often accompanied with greater perceived protections from abuse compared to academia. All of these features of the biotech industry could be replicated for academic science should the NIH choose to implement the suggestions above.

Response 3189

Perspectives on the postdoc roles and responsibilities

I view a postdoctoral position as an opportunity for further specialization of your skill set and to demonstrate research independence, ideally more efficiently than during a PhD. Generally speaking, I view a postdoc as necessary to a career in our current academic system.

Fundamental issues and challenges

The largest fundamental issue to doing a traditional postdoc, in my view, is the sacrifice of years and financial opportunity at this specific stage of life. Most postdocs must spend 4-5 years to produce publications, after having spent 5-7 years in PhD training. Many people, including myself, have spent 1-2 years prior to that to become competitive for graduate programs. That is between 9-14 years of "training", without a guarantee or limit on this timeline, and all the while we and our families sacrifice financially. As a first generation college student, I pursued each stage of education as one "should", quite successfulIy, but have reached the postdoc stage at the age of 31. I am in the challenging position to choose how to

support my family in the long term and I will no longer sacrifice time and money towards this system despite my passion for science and huge empathy for the people behind it. I will likely pursue a career in industry research that values my skills and respects me as a person, while pursuing translational research. It also doesn't appear that a postdoc is strictly required to pursue independent industry roles in our current climate.

Existing NIH policies, programs, or resources

I do not have knowledge of all the specified programs above, but ultimately support and protections for trainees could be improved through paying a livable wage, supporting PIs to do so, and ultimately changing the landscape of our academic system so people do not have to sacrifice family and longterm wellbeing. Training stages (including the PhD) should aim to be as efficient as possible and to enforce or at least justify extended timeframes. For example, PIs who are funded to be mentors of PhD and postdoc trainees should be held accountable for training times. This is often at odds with the publication goals of the PI, which likely requires a larger solution if this is the metric careers are measured by.

Proven or promising external resources or approaches

Pay people livable wages. See the recent HHMI initiative that increased postdoc salaries to $70,000 or more.

Response 3190

Perspectives on the postdoc roles and responsibilities

In Neuroscience, a postdoc is a time to focus on research (away from classes or other demands), gain further skills, and, make a name for yourself by doing excellent science to slingshot yourself into a faculty position. A successful postdoc sets the stage for a bright career as a scientist.

Fundamental issues and challenges

1. All but the most overt abuse by PIs is easy to cover up, and the power dynamic is stacked against trainees. PIs who create unrealistic demands, overly-competitive workplaces, avoid their duties, etc. need to be held accountable. This is particularly insidious when no legal law has been broken, but life is made miserable by working in a given lab, because there's no clear path for affected individuals to report problems. Even if problems are reported, it is easy for universities to ignore or sweep them under the rug, especially when abusive PIs are powerful or bring in lots of NIH dollars. NIH NEEDS A SPECIFIC WAY INDEPENDENT OF UNIVERSITIES TO VET THE HEALTH OF LABS IN AN OBJECTIVE WAY. Trainees in abusive situations don't want to speak up out of fear of retribution. Any reports or reviews sent to NIH about negligent or abusive PIs should not be reviewed by other academics, which risks getting back to the PI.
2. Pay is low. It does not keep up with inflation, post-docs are already coming from low pay during grad school, and are far behind their age-matched counterparts in quality of life, retirement, etc. Academic scientists do not need to be rich, but worrying about having enough money for medical treatment, adequate housing, and all the things money pays for is a detriment to science, because it plagues the mental acuity of the scientist. This impacts trainees form under-represented backgrounds even more.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

PIs respond best to grants. The demand for jobs in academia, even now, means that postdoc positions are more in demand than there are postdocs. Even worse for faculty. There should be some mechanism, tied to grant funding, that attempts to vet PIs quality as a mentor, not just a scientist. Quality as a mentor means willingness to spend time on students, cultivating healthy lab environments, etc.

Response 3191

Perspectives on the postdoc roles and responsibilities

The role of research postdocs is less valuable and higher inequality of opportunity/ career growth than clinical postdoc/fellow. This gives higher impacts on international postdocs, including US citizen international postdocs. This also ties to the role of mentor/PI as well as the NIH regulation. It seems the NIH strongly supports only academic tenure, but not research tenure (most institutes offered staff scientists/project managers), as after training, postdocs do not always gain better opportunities after training. The more time you spent as postdocs, the more undervalue you become, not value as an expert, though they had been trained. NIH should make it clear who their targets (only academic tenure tracks) as well as other career options are for career growth, then postdocs will understand the future career paths and expectation. However, staff scientists are equal to assistant professors, but their role is like a technician with a PhD degree, not to mention, with other responsibility of mentor-mentee, teaching-training the lab members, writing grants, but no future career (except higher salary levels than postdoc position), reflecting undervalue and disrespect of staff scientist position. Not surprisingly, there are more international postdocs than US citizen postdocs, who know the system better and choose better career growth and security in industrial (or other types) jobs.

NIH should mandatorily hold institutions and mentors/PIs for supporting postdocs to get professional development training in management (personnel, budget, administrative), leadership, teaching, science communication, grant-writing, new experimental techniques, career exploration, and other transferable skills. This will be reported as the IDP and independent (from mentor) yearly evaluation back to NIH as well. Poor qualified institutes/mentors/PIs should not continue getting postdocs and research funding.

Fundamental issues and challenges

Salary is not standard; however, the NIH provides the guideline, the final decision of salary depends on the institute and the PI. As the 4th year postdoc, my salary is $56,736, not even reaching the step 0 of GS-10 federal pay schedule with minimum $62,898, and no adjustment for the cost of living or inflation.

NIH should provide early career scientists with actionable information and transparent data to make informed career choices before and during their

postdoc periods, establish a minimum percentage of postdoc time to be devoted to service, mentoring and professional development activities, including increased awareness of career options (e.g.,academia, industry, government). Mentors need to be selected well enough to devote their time for mentoring and training postdocs. Here are my bad experience:

1. 80% of my postdoc period worked as a research coordinator, not gain any research training that much,
2. one postdoc in the same year and T32 program were quited (in Mar-Apr) before the program (in June) ended as his project was failed and his mentor could not support him with anything; he ended up as a sale representative job.

Since postdocs is still under mentors/PIs, NIH should expand its DEIA initiatives and instate rigorous, impactful at least annual mandatory DEIA training for all those impacting postdocs (mentors/peers/PIs/PDOs) similar to research ethics. NIH should hold institutions accountable for fostering inclusive and supportive training environments, including the mandatory requirement for institutional commitment to preventing discrimination and harassment.

NIH should create or expand programs to support staff scientist positions in academic labs, providing additional career options for postdocs, and supporting stable and valuable position of staff scientists who do not just work as lab technicians.

Existing NIH policies, programs, or resources

Limitation of two years causes higher risk of study failure or incompleteness. The flexibility of hiring should depend on the project and/or fields.

The role of postdocs for grants is limited and unfair. For example, the study is originally proposed by me, I can only be a project leader but cannot be a co-PI, just because I am a postdoc. I am talking about the reality and fair contribution that should occur in the scientific community. I think this produce an unfair and unethical contribution.

No offend to support the international postdocs as I am. However, I consider the fairness to everyone and every job. If some regulation of visa can be exempted for postdocs, then they should apply to every job for international citizen as well, as they will face the similar problems. In reality, undergraduate/graduate international students who choose to come to study in the U.S. have to follow the university regulations as well as the U.S. immigration regulations, when they are in the U.S. This is the same situation. The basic regulation of vacations and supports have been provided before hiring; postdocs can choose to accept/decline the position.

NIH should mandate mentorship training for NIH-funded PIs, menteeship training for postdocs, and mentoring committees at all institutions receiving NIH funding, should be continue regularly such as every 2-3 years, especially if they get grant funding. NIH should mandate that all postdocs develop an IDP and that PIs support and submit documentation of progress. The institutes should get levels of penalties if there are a failure of training postdocs. NIH should create or expand programs to support staff scientist positions in academic labs. This would benefit academia by maintaining continuity of lab knowledge, providing additional career options for postdocs, while providing clear differentiation between these positions and postdocs.

Proven or promising external resources or approaches

NIH should maintain comprehensive and support professional development resources, work closely with institutions that host postdocs and NPA

on an ongoing basis to consult on institutional policy adjustments and tool development that are needed to complement public policy change, collect metrics on postdoc satisfaction on an annual basis and allow postdocs to provide honest, anonymous feedback without retaliation.

Thanks to NIH for the platform to share my opinion for postdoctoral training in the biomedical sciences. I hope all responses could help the system to maintain scientific research and prepare the next generation, especially U.S. citizen, of scientists.

Response 3192

Perspectives on the postdoc roles and responsibilities

The PD role is a senior scientific position for those who have completed the highest degree available (PhD). The science done by PDs requires skill and knowledge gained over many years and is necessary for the advancement of human knowledge in the public domain.

Fundamental issues and challenges

PAY. It is as simple as that—it's almost insulting to even have this survey when this basic fact is obvious to anyone with half a brain—let along a PhD. I am at one of the world's leading institutions doing research that is at the cutting edge of my field in medical genomics and I am making less than some people earn with a Bachelor's degree, I'm sharing with three roommates, I can't afford to fly home to visit my family, I don't have the money to even think about buying a house. It's a disgrace.

Existing NIH policies, programs, or resources

We don't want [redacted] programs like "postdoc appreciation day" or whatever that do NOTHING to improve the material conditions for the actual workforce. We want direct intervention into the pay for our time worked and the calibre of our work. This means a MINIMUM 20% rise in the current NIH pay scale.

Proven or promising external resources or approaches

No response

Response 3193

Perspectives on the postdoc roles and responsibilities

An academic postdoc is a research fellow or scholar who devotes significant time to research and professional development. Due to the lack of a consistent definition across various institutions, they are treated poorly due to a lack of proper representations or established culture. The transient nature of the position makes it difficult the passing the institutional knowledge built over time. It makes it easier for the

university to take advantage of the work they have done without proper compensation in the form of more resources or opportunities.

Fundamental issues and challenges

The postdoctoral position used to be the path toward building a career in academia and building the expertise required to conduct independent research. However, the lack of opportunities in the job market and the current financial crisis (inflation and lack of adequate, sustainable income) has incentivized a path away from academia and toward other industries. The pandemic has severely affected my trajectory. It delayed my progress in research due to lack of access during the acute crisis while also slowing down the one-to-one training once the barriers were lifted. The isolation experienced and the lack of support also soured my personal experiences.

Existing NIH policies, programs, or resources

I was negatively affected by the earning of an NIH fellowship. My university stopped treating me as a full employee, and I lost some of the benefits typically given to employees. The NIH should issue guidance explaining to the institutions that earning a fellowship is not grounds to lose the categorization as an employee. Furthermore, they should have a yearly or bi-yearly inquiry into the national postdoc situation so that the policies, programs, and resources reflect the current times.

Proven or promising external resources or approaches

Consolidation of professional development resources could be highly beneficial. They should be a central hub where postdocs nationwide can connect and take advantage of the resources that could help them advance in their career.

Engaging with Universities and postdocs associations for policy adjustments that could help retain postdocs.

Thank you for the opportunity to share my current experiences as a postdoc.

Response 3194

Perspectives on the postdoc roles and responsibilities

The [redacted for anonymity] has conducted a survey amongst the postdoctoral community, and we provide a summary of the results and appropriate responses to the questions below. A total of 17 people answered the survey, including 10 International postdocs (59%), 6 United States citizen postdocs (35%), and one permanent resident.

More than half the postdocs (53%, n=9) felt a lack of clarity in their career path to the next position, while 40% (n=7) felt there was a lack of professional skills development opportunities, including teaching.

Requiring formal performance reviews as part of an NIH award will help PIs identify these issues, and work towards developing these skills.

Additionally, requiring a minimum percentage of postdoc time to be dedicated to service, mentoring, and/ or professional development opportunities will provide us with tools for success both inside and outside academia. Postdocs should have protected time and funds to attend at least one scientific or professional development conference annually to explore new concepts, share knowledge and perspectives, and network.

Provide a safety net for postdocs pursuing non-academic careers: While the [redacted for anonymity] has resources dedicated to career services, the NIH should also require that PIs foster a supportive environment for postdocs who decide to pursue non-academic jobs. Some steps could include the use of NIH funds to attend meetings that develop these specific skills, such as a career in science policy, or repercussions towards NIH-funded PIs who mistreat or manipulate postdocs deciding to pursue non-academic career paths.

Finally, we support the NPA recommendation that NIH replace the inappropriate term “Trainee” and replace it with “Postdoc/ Postdoctoral Scholar/ Postdoctoral Fellow” in all communications.

Fundamental issues and challenges

Salary: Almost all postdocs surveyed (94%, n=16) felt at least some impact of salary on their postdoctoral experience and quality of life, with 70% (n=12) feeling a significant impact. Many complaints include not having enough income to cover childcare costs, or salary levels not being competitive enough with industry standards, especially given our skill level, workload, and responsibilities. Higher postdoc salaries, such as the NPA recommended starting minimum salary of $62,898, would be a good start to help address this very crucial issue.

Issues facing international postdocs: As outlined in the NPA's 2023 Postdoctoral Barriers to Success report, international postdocs face a multitude of challenges.

Many postdocs and their spouses/ dependents face unnecessary stress when it comes to renewing contracts and visas, with ~75% of postdocs from our survey feeling an impact from visa requirements. The current requirement of having to renew visas annually exacerbates this issue and serves as a needless distraction from an already demanding job. The NIH should encourage contracts with lengths commensurate with the intended postdoc periods, longer termination notices, and ties to institutions not PIs.

The NIH should also expand funding opportunities to visa holders through K99/R00 and new programs.

Harassment/ Abuse: Many international postdocs also face harassment and abuse from their PIs, particularly due to their vulnerability of being an international postdoc. Our survey reports that 47% (n=8) postdocs feel at least some impact from harassment by PIs, with ~35% (n=6) experiencing a significant impact. Additionally, some postdocs report that they do not get paid even the minimum salary stipulated by the NIH. We believe that the NIH has a tremendous responsibility to combat this abuse, with harsh action again PIs/ mentors creating an unhealthy and unprofessional work environment for any postdoc, and even more specifically, for international postdocs.

Existing NIH policies, programs, or resources

Postdocs in the [redacted for anonymity] system are the sole group singled out as not eligible to receive any employer contributions towards retirement. Consequently, more than 82% (n=14) postdocs surveyed felt at least some impact of lack of such benefits towards their postdoc experience, with ~70% (n=12) stating that this issue had a significant negative impact on their postdoc experience. The lack of this benefit means a delay or reduction in long-term retirement planning, forcing us to consider a transition to industry.

Additionally, clinical postdoctoral fellows on this campus do not receive paid parental leave available to other postdocs on the same campus.

We request that the NIH mandate that NIH-funded universities and institutes:

1. Make contributions towards postdoctoral retirement matching levels provided by other employers.
2. Provide the same benefits to all postdocs at a particular NIH-funded institute regardless of department.

The NIH should expand its childcare subsidy program for intramural postdocs to all NIH-supported postdocs to a $10,000 annual maximum, adjusted for household size and income.

The NIH should mandate that all NIH-funded postdocs develop an IDP (Individual Development Plan) and that PIs support and submit documentation of progress.

Also, as requested by the NPA, collecting metrics on postdoc satisfaction on an annual basis will position NIH to be nimble in its response and adjust policy accordingly based on the needs of postdoctoral researchers. These data will not only provide key insights that will determine if new policy changes are effective, but will allow postdocs to provide honest, anonymous feedback without retaliation.

Finally, the [redacted for anonymity] requests the NIH to continue expanding its DEIA initiatives, including mandatory training for all postdoc mentors, with clear measures for accountability.

Proven or promising external resources or approaches

The [redacted for anonymity] supports the answers provided to this particular question by the NPA, including using NPA resources, consolidating professional development resources, and engaging with key stakeholders involved with postdoc well-being.

We would like to thank the NIH for providing a platform to share our concerns in this unstable academic market, and for the progress made thus far in providing support to postdocs.

Response 3195

Perspectives on the postdoc roles and responsibilities

I see it as a bery low paid traineeship

Fundamental issues and challenges

Low wages. The starting pay of a postdoc is lower than that of someone with a bachelor's degree

Existing NIH policies, programs, or resources

Unsure

Proven or promising external resources or approaches

Unsure

Response 3196

Perspectives on the postdoc roles and responsibilities

We are submitting the comment on behalf of [redacted for anonymity]. Thousands of our members work in biomedical research and affiliated enterprises, including 11,000 Postdocs and Academic Researchers at [redacted for anonymity].

As a powerful funding agency, the NIH has a unique ability to help ensure that the academic Postdoc experience is sustainable and inclusive now and for the future. Postdocs are foundational to carrying out much of the work funded in academia by the NIH—and bring in billions of dollars in NIH grant money. They write grants, keep labs running, perform cutting-edge research, mentor students, and more. Yet Fundamental issues and challenges like low pay and benefits, a lack of basic workplace rights, and a failure to promote career pathways for early career researchers threaten the sustainability of the research system.

Fundamental issues and challenges

Lack of support for Postdocs and other early-career researchers threatens the sustainability of the research system. Low pay has meant that Postdocs are increasingly unable to make ends meet due to high cost of living; parental leave is extremely limited or non-existent; Postdocs with disabilities receive inadequate services; and too many Postdocs experience harassment or abuse at the hands of their supervisors. Ensuring diversity in the scientific community reduces bias and creates better research outcomes, but too often, systemic problems hold people back and force them out of academia—in particular, women, people of color, international scholars, and other marginalized communities.

These issues are of vital importance as fair compensation and equitable treatment means stronger research institutions. Multiple studies have found that Postdocs in more supportive environments (more job security, more structure, better salary and benefits) publish significantly more papers, produce more patents, and win more academic awards. Better working conditions for researchers means more successful and productive researchers.

These are not new problems—they have been reported by a series of committees organized by the National Academies, NIH, and other organizations over the past 30 years. While there is no lack of reports and data on these issues, there has been a clear lack of progress on implementing the recommendations of the reports. In our experience, the most progress has been achieved when Postdocs and early-career researchers take agency over their working conditions by forming unions. Through their unions, Postdocs at UC, UW and across the country have won significant improvements via collective bargaining. But more progress is necessary to make academic research an equitable and sustainable system—to do this, workers and federal agencies like NIH should collaborate on improving researcher working conditions, which will in turn improve the quality of research in the U.S.

Existing NIH policies, programs, or resources

These recommendations are based on feedback from [redacted for anonymity] and our experience with negotiating contracts and enforcing rights over the past two decades.

Compensation: Postdoctoral researchers bring in billions of dollars to universities, yet almost 95% (per a national survey) report that low pay affects their personal and professional lives. Low pay disproportionately impacts members of historically marginalized groups and drives inequitable research workplaces. To address this, NIH should significantly increase Postdoc pay on all NIH funding mechanisms to at least $70,000 and should implement regional-based pay adjustments (such as the GS-11 scale for federal employees).

Parent and caregiver support: Insufficient paid parental leave, childcare support and dependent healthcare coverage have been shown to drive parents (and especially women) out of academic science. Paid parental leave of at least 16 weeks should be included in all NIH funding mechanisms, all NIH grants and fellowships should include funds to fully cover childcare costs, and NIH should require grants to fully cover dependent health care.

Equity for international scholars: International scholars comprise a majority of Postdocs at many institutions but are excluded from eligibility for certain types of support include Kirschstein NRSA fellowships. To ensure fairness and equity for all researchers, NIH should eliminate all eligibility restrictions based on immigration status.

Job Security: Most Postdocs lack basic job security and could be dismissed at any time without reason, and are appointed on short contracts. To improve research outcomes and increase retention, we urge the NIH to require grantees to have just cause protections in place for Postdocs and to ensure adequate contract lengths.

Protecting the right to form a union: NIH should require grantees to remain neutral when workers are deciding to form a union so they can make their choice free from intimidation or fear.

Proven or promising external resources or approaches

A recent study in Nature found that 65% of Postdocs have experienced bullying and a National Academy of Sciences report found that academia was second to only the US military in rates of sexual harassment. These issues disproportionately impact women, trans and non-binary researchers, international scholars and people of color. A tested approach to addressing these issues is enforceable protections against harassment and bullying through a grievance procedure that includes third-party arbitration, which postdocs at both the [redacted for anonymity] have won through collective bargaining. We have seen over and over again that forming a union and collective bargaining is a key factor in changing the power dynamics that leads to abuses of power.

The 2020-2021 annual equity survey at the [redacted for anonymity] reports after experiencing harassment, 81% of early career researchers who accessed resources through their union were very or somewhat satisfied, compared to their department (60%) or other institutional resources like Title IX (22%). To ensure Postdocs can work in a safe and supportive environment, NIH must require that grantees have a grievance process with a neutral third party arbitrator to ensure protections against harassment and bullying are upheld for everyone.

Additionally, through collective bargaining, University of Washington Postdocs have won an innovative, peer-to-peer training program, Empowering Prevention & Inclusive Communities (EPIC). [redacted for anonymity], EPIC is tailored to the unique environment of academic research and trains Postdocs on preventing harassment and promoting inclusive work environments. Post-training evaluations show 98% of respondents said they were likely to intervene if they witnessed harassment and a significant increase in respondents' confidence in identifying sexual harassment. The NIH must look to these types of solutions that go beyond standard legal definitions of harassment to address underlying cultural issues inside academic science.

Response 3197

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is a temporary research position that is typically taken up by PhD, MD, DVM holders who wish to gain additional research experience before pursuing a permanent academic or

research position. Postdocs are expected to conduct independent research, contribute to ongoing research projects, and collaborate with other researchers. They may also be responsible for training graduate students and other junior researchers, writing papers and grant proposals, and presenting research findings at conferences.

The specific roles and responsibilities of a postdoc may vary depending on the discipline and the specific research project they are working on. In general, however, postdocs are expected to be self-motivated, independent thinkers who can make significant contributions to their field of study. They are also expected to be able to work well with others, communicate effectively, and manage their time and resources effectively.

In addition to their research and academic responsibilities, postdocs are also expected to develop their professional skills and knowledge. This may be accomplished by attending workshops and seminars, participating in professional societies and organizations, and seeking out mentoring and networking opportunities.

Overall, the postdoctoral position is an important and challenging stage in an academic or research career.

Postdocs have the opportunity to conduct independent research, develop new skills, and make significant contributions to their field of study. At the same time, they are also responsible for managing their own career development, building their professional networks, and preparing for their next career move.

Fundamental issues and challenges

Postdoctoral researchers play a critical role in academic research, but there are several issues and challenges that can inhibit their recruitment, retention, and overall quality of life. Some of the Fundamental issues and challenges include:

1. Inadequate compensation: Postdocs are typically paid less than other professionals with similar levels of education, and many live in high-cost areas. This can create financial stress and make it difficult to maintain a reasonable quality of life.
2. Lack of mentoring and professional development: Without adequate support and guidance, postdocs may struggle to develop the skills and knowledge they need to succeed in their careers. This can lead to dissatisfaction and hinder recruitment and retention efforts.
3. Limited career prospects: The lack of clear career paths and limited job opportunities can create uncertainty and stress for postdocs, particularly for those who are nearing the end of their appointments. This can make it difficult to recruit and retain top talent.
4. Poor work-life balance: The demanding nature of academic research can make it challenging to balance work and personal responsibilities. This can lead to burnout, stress, and a lack of job satisfaction.
5. Limited access to resources and benefits: Postdocs may not have access to the same resources and benefits as other employees, such as health insurance, retirement plans, and access to affordable childcare.
6. Dependency on faculty: Postdocs are hired by a faculty and not a program which makes the department/program/institute less accountable to support them.

Existing NIH policies, programs, or resources

To enhance the postdoctoral training ecosystem and academic research career pathways, the NIH could:

1. Increase the number and size of postdoctoral fellowships and training grants to support more postdoctoral researchers.
2. Expand the scope of the K Awards to include funding for mentoring and professional development.
3. Increase the stipend level to close the gap between academic research and industry job salaries.
4. Make Career & Professional Development a mandatory part of postdoctoral training by allocating set-aside time for these activities.
5. Provide additional resources and services to support the mental health and well-being of postdoctoral researchers.
6. Increase outreach and recruitment efforts to attract more diverse candidates to postdoctoral positions.
7. Create more opportunities for postdoctoral researchers to engage with industry partners and gain experience in commercialization and entrepreneurship.

Proven or promising external resources or approaches

1. The myIDP tool: myIDP (Individual Development Plan) helps postdocs plan their career paths and set goals for professional development. The tool provides assessments, career advice, and personalized development plans to support postdocs in achieving their career goals.
2. The National Postdoctoral Association (NPA): NPA provides resources and support for postdocs. It offers training and professional development opportunities, as well as advocacy and policy initiatives to improve the postdoctoral experience.
3. The Center for the Integration of Research, Teaching, and Learning (CIRTL): CIRTL is a network of universities and colleges that provides training and resources for postdocs in teaching, mentoring, and career development. The program is designed to enhance the quality of postdoctoral training and provide more opportunities for career advancement.
4. The Science Careers website: The Science Careers website provides a variety of resources and job listings for postdoctoral researchers. The website also features articles and advice on career development, job searching, and networking.
5. The Consortium of Academic Research Training (CART): CART is a collaborative program designed to provide training and resources for postdocs in biomedical research. The program offers training in areas such as research ethics, career development, and grant writing.
6. The Future of Research (FoR): FoR advocates for better working conditions and career opportunities for postdocs. It provides resources and support for postdocs, as well as policy and advocacy initiatives to improve the postdoctoral experience.

NIH could use these external resources and approaches to inform and enhance its efforts to support postdoctoral researchers and improve the postdoctoral training ecosystem. NIH could collaborate with these organizations to share best practices, resources, and knowledge to improve postdoctoral training and enhance career pathways for postdoctoral researchers. Lastly, NIH could expand resources to support additional similar programs.

Response 3198

Perspectives on the postdoc roles and responsibilities

As a postdoc my main goal is to prepare for a faculty position. This involves developing a distinct scientific skill set from my graduate advisor/ experience and discovering my independent research interests. It also involves mentoring students and staff in the lab; writing papers and grants; presenting at conferences and seminars; networking with other postdocs, faculty, and scientists; etc. In an ideal world, the position is full of learning and freedom, but in reality, a large portion of my time is spent struggling to understand why we are not classified as employees by our employer; surveying other postdocs on the challenges they face as a consequence of our strange employment; and advocating and organizing my colleagues for better worker protections, higher pay, equitable benefits, and more.

Fundamental issues and challenges

Low salary, no annual raises, no retirement benefits, no other employee benefits (transit, childcare, HSA, FSA), termination without cause, toxic advisors, low quality mentorship, inadequate support of international postdocs, among others

Existing NIH policies, programs, or resources

PLEASE allow NRSA fellows to receive health insurance, retirement, etc similar to other institutionally funded postdocs (with tax withholding)!!!!! No one wants to apply for the F32 because they'll lose all their benefits (and probably have a lower salary)! Also expand the K mechanism and other career transition awards.

Proven or promising external resources or approaches

Postdoc to faculty bridge programs seem very promising. Create new/ extra awards for women, people of color, first generation, low SES, etc postdocs to retain diversity in academic science. Pay postdocs a living wage (hint: not 56k in NYC) and push their institutions to provide normal employee benefits.

Response 3199

Perspectives on the postdoc roles and responsibilities

This response was assembled by the [redacted for anonymity].

Although postgraduate training in the plant sciences covers a wide range of subdisciplines, the roles **and responsibilities** associated with a postdoctoral appointment are largely universal. Postdoctoral scholars are experts in their area of study. A postdoctoral appointment provides opportunities for career development, further technical training, and the capacity to explore research paths towards one's career in academia, industry, or government. The role of a postdoc demands the things learned as a graduate student: formulating and testing hypotheses in the context of existing bodies of literature and prior data. Extending beyond the typical scope of graduate researchers, the work of postdoctoral scholars also entails progressively increasing levels of mentorship, people and project management, and formal writing—all of which runs parallel with increased expectations of agency and disciplinary expertise. The intersection of these expanding day-to-day responsibilities and increasing professional expectations is a postdoctoral scholar's ability to identify research niches within their area of expertise that can be explored not only during their time in their current research group, but also as they potentially transition to managing research groups of their own. Postdoctoral appointments are often a necessary bridge between graduate training and a more permanent research position in the sciences. Effective postdoctoral training is therefore critical to the vitality and longevity of any scientific discipline, plant biology included.

Fundamental issues and challenges

As with any field, there is a wide breadth of postdoctoral experiences in the plant sciences; however, many of the challenges facing postdocs are ubiquitous. Some challenges are unique to this moment and this generation of researchers, while others are issues that have plagued postgraduate training for decades. The most immediate challenge for many postdocs is cost of living. Postdocs are subject matter experts with 10+ years of post secondary education, and should earn a wage commensurate with that experience. As the cost of living continues to rise, paying postdocs a comfortable wage will be critical to recruitment and retention across disciplines moving forward.

Many of the issues faced by postdocs pertain to training "beyond the lab" . Postdocs are often saddled with heavy research responsibilities, leaving little time to learn and develop skills such as mentoring, grant writing, and project management. The sudden need to acquire a unique and personal set of professional skills is further complicated by the ever pressing need to keep up with and contribute to the steadily evolving body of scientific literature. Little room is left after these duties are considered for other areas in which advanced doctoral training is expected, including teaching and science outreach and advocacy. This collectively stifles the transition to independence in an independent scientist role, often closing the door on opportunities outside of experimental research altogether. Although research should indeed be the focus of a postdoctoral appointment, development of those other skills should not be considered dispensable.

Please see our email for our full response to this prompt.

Existing NIH policies, programs, or resources

Postdoc stipends (according to the NRSA standards) are below the costs of living in many parts of the US. Considering recent increases in housing and many necessities including food, these stipends should be raised considerably to allow postdocs to attain a standard of living that provides security for them and their families. In high-cost-of-living areas of the country like the Northeast and California, which are also locations with high postdoc density, the

NIH postdoc stipend minima are woefully inadequate for attracting and retaining postdocs.

The criteria used to select fellowship recipients need to be revised to promote diversity in recipients. All candidates should have an equal chance at receiving awards based on their abilities and potential and not those of their mentors or institution. The current system is biased towards candidates from labs that are well-resourced and therefore deemed highly productive, labs led by experienced (often NIH-funded) mentors, labs from Institutions that already have high success rates in other NIH award programs and receive high levels of NIH funding, and labs that have produced successful recipients. By revising selection criteria to eliminate preference for candidates from already-successful environments, a more equitable selection process would open opportunities for a broader diversity of fellowship recipients.

Fellowship support should include benefits like health insurance and parental leave. The absence of these benefits represents another way in which the NIH is skewing the award of fellowships towards candidates whose labs or institutions have access to alternative means of providing these benefits.

Proven or promising external resources or approaches

The Plant Science Research Network (PSRN) comprises scientific societies and organizations with a mission to build and communicate a consensus vision of the future of plant science research, education, and training. In 2016 and 2017, the PSRN held workshops to discuss the future of postgraduate training in the plant sciences. The findings were compiled into a document titled "Reinventing Postgraduate training in the Plant Sciences" , which identifies six actions to improve the postgraduate training ecosystem in the plant sciences:

1. Increase number of grants available to trainees
2. Assemble mentoring teams to emphasize individual development
3. Establish institutional support for life-work transitions
4. Create a system of customizable modular experiences
5. Implement policies that promote individual well-being
6. Provide practical training in science communications and public engagement

In particular, funding and implementing policies focused on well-being may help to rebrand postdoctoral appointments as more positive life experiences, which may help with postdoc recruitment and retention.

In addition to the recommendations, the document also outlines the results from a number of pilot programs that were assembled under the ideals outlined therein. The report would serve as a valuable resource as the NIH considers the future of postdoctoral training. The report can be found here: https://plantae.org/wp-content/uploads/2019/09/PSRN-2018-Reinventing-Postgrad-Training-Plant-Sciences.pdf

Response 3200

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The linear STEM career pipeline is no longer the most common career path for scientists entering STEM.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Recognizing this and supporting scientists throughout their varied career paths will help attract and retain a more diverse STEM workforce. Leverage points that can help support scientists throughout their career path include:

- Longitudinal career path programs such as accessible career and skill training programming, creation of peer & mentoring networks, collaboration opportunities and open access resources, databases and scientific literature.
- Professional Societies are well positioned to support scientists throughout their careers with reforms such as improving conference accessibility, programming that supports junior scientists in transition, reconsidering membership due structures, and reassessing award programs.
- STEM Culture Change could include examination of hiring, admission and review practices, prioritizing career preparation as an integral component of professional training, and valuation of non-normative behavior, thinking, research and career paths.

Response 3201

Perspectives on the postdoc roles and responsibilities

Academic postdoctoral researchers are highly skilled and specialized workers, filling positions that require years of training in specific subject matter. They are responsible for making a principal investigator's research program happen, acting as a project lead and subject matter expert often for at least one aim of a large grant. Postdocs are also responsible for assisting in training junior members of the lab in the technical and soft skills necessary to perform well in their current position. At the same time, postdocs develop their own research programs, independent of their PI's program, and apply for grants to transition into an independent role. Often postdocs will complete a portion of a PI's grant and then get money for a research program that is somewhere in between what their PI does and what the postdoc plans to do in their own lab. The postdoc will complete at least part of this proposed research in the PI's lab.

Fundamental issues and challenges

The biggest issue for recruitment, retention and overall quality of life is salary. Most postdocs know someone from their Ph.D. program who went to industry instead of a postdoctoral position. This person makes 2-3x a postdoc salary and receives health care, dental and retirement benefits. This person works fewer hours than the postdoc and takes vacation more often. Friends that the postdoc went to undergraduate with are also now making more money than the postdoc. They have started families and own homes and boats. They all seem more comfortable in life than the postdoc. Depending on the lab the postdoc is in and the industry job the other person is in, the person in industry may have similar or less flexibility in what they work on than the postdoc. Granted, the postdoc usually has more flexibility in their projects. So, with the only benefit as flexibility in what the postdoc works on, the postdoc job seems less appealing each year. This is compounded by the fact that most postdocs eventually go to industry anyway, leading to what is in effect years of lost salary for no gain other than knowledge and maybe a prestigious paper or two. This is what academia banks on: postdocs want knowledge and publications more than a comfortable life. There is no opportunity for career advancement during postdoc position.

Postdoctoral experience is largely determined on a per-lab basis since academia operates on feudalism. There are limited protections for a postdoc, and limited options if their lab turns out to be a poor environment. There is a social punishment for complaining too loudly about poor lab environments, evidenced by the many women who have been forced out of academia entirely by sexually harassing PIs.

Existing NIH policies, programs, or resources

It would be nice if the NIH fellowships provided more money.

Pressure from the NIH to apply for grants within 1 (F32) and 4 (K99) years should be combined with pressure on universities to get their postdocs out quickly. The current duration of a postdoc is much too long.

It would be nice if grants could move in between institutions. Postdocs are eligible for most grants only within the first year or two after receiving a Ph.D. As such, they must apply for research grants immediately. If it turns out I they not like their institution or lab and move after a year, they are ineligible for many grants. This is problematic not only for the postdoc, but for the new PI who must now find even more funding.

Proven or promising external resources or approaches

PIs should have mandatory training in management and mentorship. See universities that offer such coursework, such as UNC Chapel Hill.

Response 3202

Perspectives on the postdoc roles and responsibilities

A postdoc's responsibilities are to use their expertise to help the PI accomplish their research goals, and to find their next job.

I may be an outlier, but I view this postdoctoral position as an opportunity to get some science done while I figure out which "real job" will be least miserable.

Fundamental issues and challenges

- Salary. My engineer friends make at least twice the NIH scale, straight out of grad school. As a postdoc I am above the scale but am still rent burdened in a substandard 1BR apartment. Granted, there are places a postdoc can live comfortably, but the salary is not competitive with industry STEM offerings.
- Employment in the US is transactional now. When companies stopped investing in their employees--stopped offering a stable career with a retirement to work toward--people responded with a contractor culture. The most successful money makers hop between companies every 2-4 years, with a raise at each hop, in order to afford retirement. Here's a symptom of the new culture: https://cheekyscientist.com/phds-stop-applying-postdocs-start-applying-research-scientist-positions/
- I think postdoc positions used to be primarily about the chance at a tenure track position, but the prestige of academia has been diminished by the replicability crisis, among other factors. Additionally, on my campus at least, it seems tenured positions are becoming more scarce. The chance at landing a rewarding career is no longer worth the reduced pay and risk associated with a postdoctoral position.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

https://www.federalpay.org/gs/2023 (Tie academic STEM salaries to the cost of living and/or industry salaries for STEM PhD work. Consider adding location-based allowances.)

Response 3203

Perspectives on the postdoc roles and responsibilities

To perform independent research, learn new skills, and collaborate with other internal and external researchers. A postdoc can contribute and help with other lab work which is not related to her/his project. However, I notice that some laboratories use their postdocs as technicians, preventing them from working on their own projects and forcing them to do a lot of irrelevant technical lab work instead of hiring a technician.

Fundamental issues and challenges

We receive the lowest postdoctoral salary among all postdoctoral fellows in the US. Wages are not even equal between different ICs at NIH. We all work equally, so we should earn equally. That is one of the most significant issues that my colleagues and I have. This is a huge reason for many postdoctoral fellows to leave academic research.

Independence for postdocs is not encouraged enough. This might be because there are only a few graduate students at NIH, and mentors may treat postdoctoral trainees as master students and technicians.

Existing NIH policies, programs, or resources

Postdoctoral salaries should have improved and should be equal in all NIH centers.

Proven or promising external resources or approaches

No response

Response 3204

Perspectives on the postdoc roles and responsibilities

In my perspective, it's a training position which trains you to generate new ideas, get funding and prepares to lead your own research independently.

Fundamental issues and challenges

1. Research Grants for immigrants are rare and needs to be increased. PostPHD limit for K99 should be increased to 5 years instead of 4 years.
2. NIH Salaries for early career positions after postdoc like instructors/ research scientist needs to fixed and left up to PI.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3205

Perspectives on the postdoc roles and responsibilities

Maximally productive researchers in training for PI status

Fundamental issues and challenges

Salary relative to cost of living

Existing NIH policies, programs, or resources

Increased postdoc pay

Proven or promising external resources or approaches

No response

Response 3206

Perspectives on the postdoc roles and responsibilities

Fundamental issues and challenges

salary support, this is single-handedly the reason we lose individuals from low socioeconomic (and often minoritized) backgrounds.

Existing NIH policies, programs, or resources

individuals who identify as native american and southeast asian (laotian, cambodian, hmong, etc) have no voice and are severely underrepresented in science

Proven or promising external resources or approaches

No response

Response 3207

Perspectives on the postdoc roles and responsibilities

Stepping stone to a position as a professor at a university or small liberal arts college. (I could easily get an industry job without a postdoc.)

Fundamental issues and challenges

As a disabled trainee, my primary concerns are financial and medical. I badly injured myself at the start of my F99 fellowship and had to continue working though constant severe pain, because there was no reasonable disability leave option to take a break from my research and focus on physical therapy and rehabilitation.

What if I need to take a medical leave during my postdoc on an R00 fellowship? Again, I won’t have any disability leave options beyond the state-mandated minimum. I won’t have the financial stability to

accumulate savings to support me through a medical leave. How am I supposed to afford complex medical care on a postdoc salary, let alone save for retirement?

PIs are poorly equipped to mentor trainees from diverse backgrounds —especially disabled trainees. I've experienced rampant ableism and abuse as a post-bacc and a PhD student. Every day I think about transitioning to a postdoc, I feel a deep sense of terror and despair that I'll be abused again.

To be very clear —if not for my R00 fellowship, I would not do a postdoc. I would transition to an industry job that would allow me to support myself.

The postdoc system is broken. The bubble needs to burst. We need more staff scientist positions in academia.

Existing NIH policies, programs, or resources

Higher salary minimums

Disability and/or medical leave for trainees on fellowships

Option for trainees on fellowships to take advantage of tax advantaged retirement options (401K, 403b, etc).

Funding penalties for investigators found guilty of gross misconduct.

Proven or promising external resources or approaches

Better promotion of supplemental funding for accommodations for disabled trainees.

Additional professional development funds associated with fellowships.

Perspectives on the postdoc roles and responsibilities

Having a chance to expand or slightly switch your expertise field (very important function in my view).

Getting more training to write grants, papers, and lead projects before becoming an independent PI.

A buffer stage before making a decision to stay in academia (either as an independent PI or a staff scientist under another PI), or move to industry.

Fundamental issues and challenges

Low pay compared to peers in industrial positions.

Limited job opportunities if you are only pursuing a conventional professor position in school.

Existing NIH policies, programs, or resources

More postdoc grants needed to support postdocs with families or those living in high-cost areas. Especially for those who are not US citizens or permanent residents, who have even more limited funding opportunities.

Proven or promising external resources or approaches

Not sure.

Response 3208

Perspectives on the postdoc roles and responsibilities

Academic postdocs bring expertise and perspective to their host laboratories and in return should gain the opportunity to define a research program, execute it, receiving coaching and mentoring in how to supervise and train others, disseminate research results in writing and by speaking, and to seek independent funding with support from a committed mentor. Many of the professional development elements of this role have traditionally been fulfilled via an apprentice model, which is quite literally a medieval approach to training. Postdocs could, instead, receive explicit training in management and talent development as well as in grant writing. This could be done in classes as part of the role (say 10%). Such a change in tradition would improve operations in the research labs as well as connect postdocs to one another and across laboratories, reducing isolation.

Fundamental issues and challenges

Much is written and worried about regarding postdoctoral salaries. It would be transformative if funding for salaries considered local cost of living and if institutions were required to provide childcare subsidies. These are important issues that policy and funding can solve. Another significant challenge is that the postdoc is a temporary appointment filled with uncertainty about its duration and what kinds of more permanent positions each postdoc can reasonably hope to secure. Many of today's PhD students wish to avoid committing to a second training term of uncertain duration and value.

Existing NIH policies, programs, or resources

Proven or promising external resources or approaches

Our institution's Grant Writing Academy is a proven method for improving trainees' success rate in seeking independent fellowships. Postdocs also gain training as 'grant coaches' for graduate students and this paid position improves their skills in talent development. Programs that link postdocs together into communities within an academic institution or across them foster peer support networks that can improve job satisfaction.

Response 3209

Perspectives on the postdoc roles and responsibilities

As the Associate Dean, I submitted our response on behalf of the Biomedical Postdoctoral Program. This "individual" response includes important points which were submitted without the review of the entire advisory committee.

In our view, postdoctoral training is critical to prepare junior scientists for both academic and biotech/pharma career paths. Although there are many positions that newly minted PhDs can consider without postdoctoral experience, for recent graduates on either academic or industry/pharma tracks, postdoctoral training provides the necessary experience for attaining independence. After getting their PhD, postdocs often change fields or experimental systems. Starting a completely new project can be challenging, but mentored training will provide the necessary advanced experience. For industry/biotech/pharma, 2-3 years of postdoc experience may be sufficient, as a high profile 1st author publication is not critical for obtaining this type of a position. However, for postdocs on an academic track, in addition to a solid set of papers, years 3 to 5 of postdoctoral training provide an opportunity to transition to independence by:

a) Developing a K99 or similar transition project/awards or assisting with the preparation of R01/R21 grants.

b) Preparing not only a strong draft of their 1st author or collaborative paper, but leading or co-leading the publication efforts from inception to final acceptance.

c) Leading or co-leading interdisciplinary collaborations, which provides postdocs with an opportunity to work closely with a wider group of investigators and develop leadership skills.

d) Receiving invitations (facilitated by their mentors and collaborators) to participate in peer review and share their fundamental discoveries with their national and international research communities.

e) Providing postdocs with mentorship training to establish better mentee-mentor relationship and to develop mentorship skills, as well as additional skills needed to successfully lead a research group in academia or industry.

f) Exploring teaching opportunities and mentoring undergraduate students.

Fundamental issues and challenges

No response

There are several major issues and challenges.

a) Undercompensation in comparison to biotech/pharma career options.

b) The "costs" of dependent health coverage and parental leave/child care are challenging, which may preclude postdoc training, especially for those with families.

c) Low number of URM mentors and mentors trained in Diversity Equity and Inclusion who can properly support the needs of URM postdocs.

d) Many PhDs, especially first-generation and historically excluded based on race and ethnicity, often support other family members from their salaries (e.g., parents & younger siblings) and cannot elect or accept to stay in a postdoc position when other positions offer better compensation and benefits, diminishing retention and diversity in research

e) Postdocs are concerned about the uncertainty of their future or next career step and they seek a reasonable level of expectation regarding their next step in the career advancement. To reduce a sense of uncertainty, particularly for international postdocs, schools should consider multi-year appointment letters.

f) Even at schools with established postdoctoral programs, postdocs are not well integrated within their departments/centers/institutes. Too many PIs are recruiting postdocs to perform routine laboratory tasks and do not actively support postdoc training, which could be mitigated by establishing guidelines for mentorship expectations and postdoctoral trainee committees.

g) Finally, there is a disturbing concern among international postdocs who are particularly worried that they will be targeted or fired due to the pay increase burden on faculty mentors.

Existing NIH policies, programs, or resources

a) Funds provided by NIH for postdoctoral training should be increased;

b) Eliminate disparity between post-docs paid from different sources and the restrictions of using NIH dollars to supplement stipends;

c) Need to ensure that NRSA-funded postdocs have the same access to benefits as employee-classified postdocs;

d) Need for increased support for K99/R00 grants with more flexibility on the timeline;

e) Need for increased support for T32, IRACDA grants and F32 fellowships (note that the funding for F32 and K99 at some institutes is minimal, NIAID for example;

f) Need for more support for URM trainees and trainers at every level (undergraduate, graduate students, postdocs and faculty);

g) A large population of postdocs are international. Therefore, NIH should consider opening up eligibility criteria for F32 fellowships—similar to the K99/R00 awards;

h) Need to support meetings and conferences that bring together trainees at different stages of their career (at Penn, we call it "vertical integration");

i) NIH should require that PIs report on the mentorship plan and activities related to post-doc training in annual reports. The section on mentorship in the RPPR should be expanded or emphasized.

j) Need to support efforts of the Coalition for Life Sciences to collect and analyze outcome data on postdocs. Currently, these data are presented at the national level. However, analyses at the level of a specific university, school or a department will be important to fully understand outcomes and trends.

k) The recent trend of PhD students immediately going into high salary positions in Biopharma means that the NIH is now funding workforce training for for-profit companies. One approach to have such companies contribute to the training would be for the NIH to enforce the "pay-back" of T32/R-grant funding of training for students going immediately to for-profit positions.

Proven or promising external resources or approaches

We would be glad to share how we at the [redacted for anonymity] attempt to enhance the postdoctoral training ecosystem.

Response 3210

Perspectives on the postdoc roles and responsibilities

A postdoc is an opportunity to learn new techniques or fields and to grow your skills as a researcher. Ideally this is a chance to increase publications and get experience at grant writing and training junior lab members. A postdoc should not be a treadmill and PIs should not treat it as an opportunity to trap skilled individuals in their lab long term.

Fundamental issues and challenges

Postdocs lack basic amenities given to most workers. For instance, if a post doc were to have an extremely premature baby they would be expected back at work the next day (this happened to me). Furthermore, postdocs are not guaranteed parental leave when they have children and yet this is the best time biologically speaking to have a child. This is a serious oversight. It has been extremely eye opening to work in industry—I am not sure why anyone is willing to stay long term in postdoctoral positions given the lack of pay, lack of FMLA, and being at the whim of a PI who may or may not have their best interests in mind.

Existing NIH policies, programs, or resources

Uncertain.

Proven or promising external resources or approaches

Try reverse mentorship where postdocs mentor PIs on what they need but are lacking from their training experience. This has worked extremely well in the industry I work in and has helped a group of older scientists to better understand, support, and retain younger generations.

Response 3211

Perspectives on the postdoc roles and responsibilities

The postdoc is supposed to be a period of training where you learn new skills that are pertinent to the independent research program that you want to run. It SHOULD be for a designated time period (3 years max) and should expose postdocs not only to academic career paths but also other science bases positions given the tenure track market it unpredictable and there simply are not enough positions as it currently stands.

Postdocs can get experience in what it is like to run the lab but they should not take the position or roles of a lab manager.

Fundamental issues and challenges

The fundamental challenges all revolve around stability. Current salaries, benefits and contract terms vary from department, institution and even PI. Most universities wont pay postdocs above the NIH minimum for their experience and unfortunately, that salary has not kept up with cost of living, especially in high cost areas like NYC and San Francisco. Additionally, it is next to impossible to have children on the current salaries, especially if you are doing it without a partner. Childcare costs are exorbitant and can easily eat through most of the salary and that's before basic necessities like food and rent. If my spouse was a higher in the technology industry I would have had to have forgone a postdoc once my first child was born. As it stands I had to leave my most recent postdoc because I had twins and my salary could not cover the childcare costs let alone the gas, tolls and other expenses I would incur during my time working as a postdoc. So, despite wanting to remain in academic science i have essentially been pushed out because I have children who need care.

In addition to salary, benefits vary in almost the same way. Some universities, typically ones with unionized staff, offer some type of retirement, vacation, sick days and parental leave while other place don't or have really ambiguous policies that are often left open to interpretation, which means abusive PI's get a lot of leeway in determining what is or is not acceptable. The same goes for benefits like health insurance which can vary depending on whether or not you have a fellowship.

Existing NIH policies, programs, or resources

Increase in programs like the career transition grants and also raising the minimum salaries attached to those and postdoc fellowships. Increasing the modular R01 budget so that PIs have the option to pay more without foregoing some of the science goals that they have. Enhancing or adding to the policies about abuse and discrimination for NIH funded PIs AND Institutions. There need to be real consequences for people who abuse their trainees.

Cap the time period for a postdoc and make funding available for more permanent staff scientist type positions

Proven or promising external resources or approaches

HHMI, St. Judes, Princeton and the UC have recently made some policy changes around postdoc salary.

Response 3212

Perspectives on the postdoc roles and responsibilities

I see the postdoc position as an intermediate step between graduate student and faculty member where highly technical skills acquired in graduate research can be applied and new skills in research, lab management, and grant writing can be acquired. I also see a postdoc as a way to expand one's academic lineage and reputation, which seems necessary to procuring a faculty position.

Fundamental issues and challenges

Graduate students overworked are underpaid. Postdocs are overworked and underpaid. Without familial wealth, many graduate students are financially exhausted by the time they graduate. The thought of enduring a few more years with close to zero net income and no promise of a faculty position on the other end is extremely discouraging. We love science and we love seeing our science have an impact on human health, but it can be hard to stay optimistic and altruistic when a single unexpected event can send us into financial collapse. Additionally, postdocs are often at a life stage where they are considering having children, but this feels like a near impossible task under the current funding and incentives structures.

Existing NIH policies, programs, or resources

Increased minimum salary. Extended family leave time with guaranteed pay and insurance on family leave.

Proven or promising external resources or approaches

No response

Response 3213

Perspectives on the postdoc roles and responsibilities

A postdoctoral position is an important step after finishing graduate school providing researchers with an opportunity to further expand their knowledge and skills in the field of their doctoral degree or apply their expertise and develop an interest and gain experience in new specialized areas. Postdoctoral position is also an important phase of the training to help researchers to identify the career path that is best for them, in particular for the academia career path. At the same time with current known barriers and challenges for postdocs, including limited opportunities in academia and increased opportunities in Pharma/Biotech, it is reasonable that number of graduates are deciding to apply for postdoctoral positions in industry. Importantly, well trained scientists are needed in all segments of our society.

Fundamental issues and challenges

The financial model and the salary that directly affects the quality of life; Lengthening time to have successful postdoctoral fellowship, including obtaining an independent grant, publishing in high profile journals; Limited tenured faculty positions in academia; Limited research track faculty positions and opportunities for supporting this career path.

Existing NIH policies, programs, or resources

Allowing international postdoctoral fellows to apply and be eligible for the T32 training programs; Requiring Individual Development Plan and mentorship plan to be part of the RPPR for the postdoctoral fellows who are funded through R01 grants; Increasing the funding opportunities for research track faculty in academia.

Proven or promising external resources or approaches

The training of the postdocs and their professional carrier development should be in alignment with the diverse job markets; enhance mentoring; promote work life balance and wellness; introducing policies that will increase and broader the support for postdocs such as attending on meetings, networking and etc.

Response 3214

Perspectives on the postdoc roles and responsibilities

A postdoc should be a training opportunity where the trainee gets an opportunity to do independent research to a greater or lesser extent depending on the trainees wishes, and is not solely based on the Principal Investigators wants/needs.

Importantly, technical skills training should be easily accessible in a fair way.

Work should be dedicated to research activities, not maintenance duties such as cleaning, cleaning labware, excessive establishing of Principal Investigators Lab.

Fundamental issues and challenges

-TOO LOW SALARY—get it!!!! It is not that difficult to see. You don’t need a survey to answer that question.

Quote from previous PI: “I know it’s called a training position[the postdoc position], but it is really just cheap labor”, “I don’t think it is fair that I should be paying for your training”—the latter refers to PI letting postdoc use/work on a particular technique for research/training purposes to gain experience there.

Postdoc are effectively paying 50,000-60,000 USD per year in missed salary—one should get the opportunity to get high quality training with no questions asked.

Toxic work environment across the board with people fighting more or less openly for resources.

- Tenure of professors is a part of the problem, causing PI to be virtually immune to any sort of cases of work misconduct.
- subsidized high quality housing should be mandatory—It is missing at the [redacted for anonymity], unlike the other quality research universities in NYC.

Existing NIH policies, programs, or resources

Higher salary 85,000

Pension

Job contract, ensuring rights, job security.

Housing mandatory, or alternatively rent supplements mandatory.

This survey is Missing the Point by asking “**Fundamental issues and challenges** inhibiting recruitment, retention,.”

Treating postdoctoral workers decently should be the primary goal, which hasn’t been the case for decades at this point. It is clear from this question that better treatment of postdocs and their well-being is only now an issue because it is difficult to recruit them. come on NIH.

When I first came to the US for a research project it struck me as curious that no american postdoc in the department at Mount Sinai school of medicine was to be found out of 30 postdocs or so. It quickly became clear that the reason was that american don’t want to put up with postdoc working conditions.

The system is based on exploitation of foreign academic labor.

No real possibility to complain about PI and bad behavior

Proven or promising external resources or approaches

Recognize that you have been exploiting postdocs blatantly and improve!

Response 3215

Perspectives on the postdoc roles and responsibilities

The roles and responsibilities of an academic postdoc involve conducting research, intellectual and professional development, teaching and mentoring, grant writing and funding acquisition, professional ethics and integrity, collaboration and teamwork, dissemination of research, and career development. Postdocs play a critical role in advancing research and contributing to the academic community while also preparing for their own future careers.

It is the next step in one's academic career after obtaining a doctoral degree. Postdocs are very involved positions, much more so than a doctoral candidate and often the responsibilities and roles mirror that of a principal investigator. However, at present there is a dichotomy: sometimes the academic postdoc is primarily an experienced set of hands and labor.

Conversely, Industry equivalent research track after obtaining a doctoral degree ("Senior Scientist") is often not saddled with such an extensive list of roles **and responsibilities**. Yet, Senior Scientists are rarely employed as an experienced set of hands and labor (that's what technicians and research associates are commonly hired as).

The academic postdoc experience greatly varies but is often an intensive 3-6 year experience without guarantee of further advancement into higher academic positions. Pursuing an academic postdoc is a daunting endeavor given that the postdoc experience varies substantially from lab to lab—it is challenging to appreciate the stress and rigors involved for a specific lab until one is already deeply committed to their postdoctoral work.

Fundamental issues and challenges

Postdocs would benefit from being treated more like human beings. Many postdoctoral positions are temporary with fixed terms, leaving postdocs in a constant state of uncertainty regarding their future career prospects. The lack of job security can inhibit recruitment and retention of talented postdocs who may seek more stable employment opportunities. Postdocs often receive VASTLY lower salaries compared to other academic and industry positions, despite their level of education and expertise. Limited benefits such as health insurance, retirement plans, and paid time off can also negatively impact the quality of life for postdocs, affecting their overall well-being. Postdoctoral research can be demanding, with long working hours, including evenings, weekends, and holidays. This can result in a poor work-life balance, impacting postdocs' personal relationships, mental health, and overall quality of life. Extended periods of low quality of life can quickly diminish a postdoc's motivation (burnout) to further pursue academia or even a career in science. This causes the exit of a highly trained (10+ years) technical professional from the field, usually at a loss from funding agencies that have invested significant money into funding the individuals scientific pursuits over the entire length of their education and career.

Lastly, postdocs are often expected to be incredibly productive, including conducting research, publishing papers, securing funding, and teaching. This heavy workload can impact the quality of life of postdocs and may hinder their ability to focus on their own career development.

The recruitment, retention, and overall quality of life of postdoctoral trainees in academic research are impacted by challenges such as limited job security, low pay and benefits, long working hours, work-life imbalance, and lack of career development opportunities. Addressing these fundamental issues is essential to creating a supportive and inclusive environment for postdocs to thrive and contribute to the advancement of research and academia.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Basically in the USA, an academic post doc is becoming a class luxury. One is greatly benefited by having the support of a financially advanced spouse (to compensate for lack of post doc pay) or family financial assistance. Without outside financial help, it's almost always more worthwhile to pursue an advanced career outside of academia. Why settle for a 50K/year salary for 3-6 years without guarrantee of advancement when you can get a job with a fresh PhD that yields 110-130K? And you are infinitely more mobile in the latter case. The market already prices advanced individuals at around that rate. In other words, areas that generally need more post docs have a VERY high cost of living that is incredibly difficult to manage on a post doc salary.

Response 3216

Perspectives on the postdoc roles and responsibilities

Postdocs are currently de facto staging grounds for tenure track academic jobs or the switch to industry. They have some utility in furthering development as a research, though are far less necessary for preparation for the next career stage as, e.g., a medical residency. Due to bottlenecks in the academic job market, the postdoc position has proliferated in a manner only paralleled by the growth of academic administration.

Fundamental issues and challenges

The role of postdoc must be greatly streamlined for the field of physics. Moreover, significant disparities in credentials at the subgroup level for postdocs admitted at elite institutions indicate racial and gender preferences are commonly practiced though rarely disclosed.

Existing NIH policies, programs, or resources

Reduce the university administration to leave resources to hire more professors. Release subgroup data on the qualifications of admitted postdocs and assess whether systematic preferences are being employed for select racial and gender groups.

Proven or promising external resources or approaches

Increase postdoc salary, particularly in regions with high cost of living.

Response 3217

Perspectives on the postdoc roles and responsibilities

My role is to design and perform research, with some support from my PI, but at a faster pace than graduate students and with more independence. I am also responsible for modeling good professional behavior to students and mentoring them with research projects. I view it as more stressful and lonely than my PhD, but it also has the potential to give me more fulfillment.

Fundamental issues and challenges

While universities often do a good job of recruiting postdocs, including under-represented postdocs through fellowship programs, their efforts at retention are severely lacking in my experience. The price of housing and other living expenses have outpaced postdoctoral salaries, particularly in the past two years. Given how stressful and lonely an academic research career can be, these obstacles are serious, and cause the diversity of backgrounds to decrease dramatically as you go up the chain in academia. (For data on this, see the Stanford Latinx Postdocs' living expenses survey results: https://slpa.github.io/survey2022/)

Existing NIH policies, programs, or resources

Recipients of the F32 grant could be better engaged after receiving the grant. I did not know about many of the above linked programs and resources, but some such as the podcasts are a bit sparse. Invitations to (virtual?) events and to network with other trainees or receive career development training would be impactful. Additionally, advising universities on how to ensure success under the F32 is urgent. Many universities demote the status of grantees, removing benefits they previously received and not advising them on these changes. I had to hire an accountant to understand how my tax status had changed and pay a penalty because I was not warned. I also lost my retirement benefits and am now liable for my

health insurance being considered, all while my employer is saving money on me by not paying 7.5% of my salary to social security and medicare taxes.

Proven or promising external resources or approaches

Retention, retention, retention. My university is happy to boast about recruiting postdocs and their achievements, but does almost nothing to make their experience livable. Volunteer postdoc groups who advocate for the cause are treated with disdain. The NIH could fill this gap by forming a postdoc community across universities through specialized conferences, mailing lists, and local meet-ups, particularly for under-represented groups.

Response 3218

Perspectives on the postdoc roles and responsibilities

Postdoc position in my opinion should be viewed as a transition phase from PhD to next career stage (more independent) whether it be academia or industry or non-research job opportunities. It should be treated like a job and not a studentship and should take care of the financial and social circumstances including more stable work visas. Unfortunately, most of these are currently not taken care of to the best extent which add a lot of stress and prevents a postdoc from delivering their best at work.

Fundamental issues and challenges

1. Unstable work visas—J1 visa comes with 2-year home country boundary rule for most of the countries which creates a lot of uncertainty and instability
2. Very low income specially in cities like Boston
3. Support for immigrants
4. Childcare support
5. Housing support
6. Green card/permanent residency applications should have provisions for people who did their graduate studies in the USA/ have been living for more than 5 years in the country/ people who did PhD from top notch universities in the world like Cambridge, Oxford, ETH Zurich, UCL, ICL, NUS, Peiking University, Harvard, MIT, CMU, Stanford, Yale etc.
7. Subsidized health insurance, more support towards medical bills
8. Financial support/ subsidized lawyer support for green card applications

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3219

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

Postdocs are highly skilled professionals categorised as trainees, research fellows, research associates, research scholars, instructors, or staff, among others. This variation in title creates differences in salary, tax burden, access to benefits (such as health, pension, parental leave, vacations, childcare, etc.), appointment period, and job security, while the nature of work is the same. The root problems with varying appointment titles have been repeatedly emphasised by the National Research Council in 1969 report; surveys by the National Academies of Sciences, Engineering, and Medicine (NASEM), including the Committee on Science, Engineering, and Public Policy (COSEPUP—a joint committee of the National

Academies in 1999); surveys of individual institutions since the 1990s and more recently, surveys by the National Postdoc Association (NPA).

As per the latest NPA report, the inequality in postdoc benefits differs based on appointment. While most postdocs receive basic health insurance, access to childcare subsidy, housing support, retirement benefits, adoption assistance, and long-term disability remain poor, threatening family security and responsibilities. To make matters worse, the NRSA stipend guide, which serves as a de facto minimum salary ($56,484 for 2023-24) for postdocs across most US institutions, does not account for geographical cost-of-living. It is notable that the legal minimum salary is $23,660, and postdoc salary data collected from US institutions during 2016-2022 by Gary McDowell confirm that there are postdocs receiving this salary. Many case studies and analyses (more references herein) have highlighted how and why the current NRSA stipend rates are unsustainable for postdocs in high cost-of-living areas such as Boston and NYC. In our recently published article (already submitted to [redacted for anonymity]), we argue that such an unsustainable living burden on highly skilled researchers with negligible job security creates a selection pressure on postdocs, especially with families and those who are from historically marginalised backgrounds.

Existing NIH policies, programs, or resources

We urge the NIH to remove the exploitative title of 'trainees' for postdocs. The NIH should renounce other postdoc titles of fellows, scholars, instructors, staff, etc. We strongly recommend that the NIH use the term 'Postdoctoral Appointment', which emphasises an employee position guaranteeing equal benefits as other employees of the hiring institutions.

We also urge the NIH to make the same intramural and extramural postdoc appointments in all aspects of employee benefits and compensation. The postdoc salary and benefits must be compensated in accordance with the geographical cost-of-living and the US economy. In our recent publication, we proposed a salary scale for postdocs in the Boston area upon living wage analysis, consistent with the current General Services (GS) Scale 11. The GS scale is used for federal employees and automatically considers regional and inflation adjustments. The NIH already has built-in adjustments for the GS scale as per diem rates for conference or other work travel for investigators on NIH grants are calculated per the US GS Administration. We understand that implementing suggested increases in salaries and benefits policies may encounter logistical and financial issues and may reduce postdoc appointments in the country. We argue that a capped postdoctoral appointment may improve the quality of postdoctoral experience and lead to better job security and innovative science. The Janelia Research Campus of HHMI is an exemplary and successful model with capping in the research teams.

In summary, we propose a 'compensation package' for all postdoc appointees (NRSA, intramural, extramural without any bias towards marginalised identities/visa status) that includes:

1. GS11 salaries
2. Institutional employee status
3. Benefits package-GS11 adjusted
4. Healthcare, including dependents
5. Childcare
6. Matched retirement
7. Adoption assistance and IVF coverage
8. Minimum 16 weeks of paid leave for childbirth and adoption
9. Relocation costs
10. Flexible spending account
11. Minimum 3 weeks of annual leave

Proven or promising external resources or approaches

See, https://www.nature.com/articles/s41587-023-01656-4

Response 3220

Perspectives on the postdoc roles and responsibilities

A postdoc is a critical member of a lab. They are highly trained and are often the one actually processing and analyzing data, along with writing up the results. Without a postdoc, this task is often split between junior faculty and grad students or research assistants. Postdocs really are the perfect in between to keep things moving.

Fundamental issues and challenges

Two main issues—salary and career options. The salary we can offer is way too low to retain the best postdocs. PhDs can make 5-10x as a data scientist in tech as they can in academia. Academia can never match tech, but the comparison shouldn't be so stark. It means that postdocs either need to make major compromises or that only those with extra resources or spouses who make more can stay in academia. Career options are also limited—a postdoctoral position is supposed to be a time-limited step before a faculty or career scientist position.

Existing NIH policies, programs, or resources

Honestly the main NIH policy to update would be the modular R01 budget. It's absolutely ridiculous that it has not increased from $500,000 without special permission. The salary cap for PIs just went up considerably but with a static budget cap our options are limited—we can't decrease the PI FTE too much without reviewers questioning it, research costs still exist and are increasing, so often this means fewer postdoc positions.

Proven or promising external resources or approaches

No response

Response 3221

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

1. Salary is not competitive compared to other jobs with similar qualifications. We are disillusioned to accept the current pay status as normal, while others outside of this bubble have noted the shocking salary range for someone having earned a PhD.
2. Permanent or long term scientist positions or non-PI academic positions are rare and/or lacking. For the ones that exist, such as positions in a core/center, there is a stigma of inferiority. There is not appropriate appreciation for these positions.
3. A future with total dependency on grant writing (at least at research intensive institutions) is not attractive. The process of submitting and being reviewed is highly competitive and stressful. There is a negative feedback loop between insufficient funding and low productivity.
4. For those that have restricted living areas (ie. not able to move because of family situations), acquiring a PI position in the geographical region of interest after postdoc may be unlikely. Thus, why even pursue a postdoc? More long term positions (as in point 2) would help.

Existing NIH policies, programs, or resources

By the time one obtains and is funded by a K99, one has been in the postdoc position for longer than 5 years, which seems to be the upper length of postdoc positions. It has essentially become a second PhD. Yet at the same time, 4 years to acquire enough data and create a research plan for the next five years seems short, especially with the pandemic hit. Further, the argument for a K99 is a paradox—having to prove that the candidate can be independent yet also argue that the candidate lacks a certain strength and needs further training.

Proven or promising external resources or approaches

No response

Response 3222

Perspectives on the postdoc roles and responsibilities

I think the main idea I want to stress here is that, if a position is going to be filled by someone with a PhD, then the PI should be prepared to allow that individual the autonomy to take advantage of their training and abilities to take an active, significant role in the decisions that come up in the course of a research project. This seems like it should be something that goes without saying, but I have seen instances of individuals serving in doctoral-level positions who appear to be expected to assume roles similar to research assistants, in that they largely execute the PI's decisions, and are not often given the opportunity to meaningfully shape the direction of research themselves. If a lab needs a staff member to implement decisions that have already been made, an RA should be hired for that purpose. To have a postdoc in such a position is a missed opportunity —the postdoc's training is not being fully utilized —and also puts the postdoc in the awkward position of presenting/writing up research that is based on implementation decisions in which they might not feel they had adequate say.

Fundamental issues and challenges

I am a graduate student. Due to a chronic health condition, I do my best work when I am allowed flexibility with respect to when and where I work. I don't need to work 100% remotely, but having the option to choose to work at odd hours/locations is critical, and compatible with the computational/quantitative nature of my work. However, as I seek postdocs, a major challenge I face is in identifying those PIs/labs that will be receptive to my need to take advantage of this kind of flexibility. This is not information that is posted in job advertisements. It can also be a difficult subject to bring up when interviewing with a PI, or even when conversing with other members of labs, for two reasons. First, the request for flexibility might raise the question of why this is being requested. To answer this would require describing personal health background that I might not be eager to disclose, and others might not be eager to hear. Second, I would be concerned that asking about this would be misunderstood as a lack of commitment or work ethic. As a potential solution to this problem, I think it would be extremely helpful if PIs/labs could provide information in job announcements and/or on their websites that provide some insight into openness to flexible work arrangements for those postdocs whose roles are compatible with this, or at least make it clear that prospective postdocs are welcome to discuss this without risk of being expected to disclose sensitive personal information or being viewed as a likely unproductive lab member. NIH could also take a lead on this by making clear the kinds of flexible work arrangements that might be considered for various intramural postdoc positions.

Existing NIH policies, programs, or resources

Coming from a grad student perspective, I am not terribly knowledgeable about all the details of the relevant programs, but I will try to offer a few thoughts. First, with respect to individual awards (e.g., F32, K), it would be helpful to better understand how I can get some insight into how competitive an application I submit is likely to be. That will help me best judge whether it is worth my time to try to submit now, or whether my time is better spent on other objectives, such as publication. Second, I wonder if it might be interesting/useful to consider a funding mechanism to support those who have just finished their dissertation, but could use a little more time to take care of various useful tasks (e.g., wrapping up thesis-related publications, pursuing job search-related activities, developing skills) before committing to a postdoc position that is very likely in a different lab and possibly in a different institution and city. This could almost be understood as a sort of "gap year" type of funding. Third, I wonder whether it might be helpful to increase the number of years for which a person might be categorized as a postdoctoral trainee.

Proven or promising external resources or approaches

I'll defer to others' insights on this question. In general, though: Thank you for soliciting feedback on this topic!

Response 3223

Perspectives on the postdoc roles and responsibilities

Postdocs are the workhorses of academic research. We do the experiments. We often train the grad students and other research staff. We also come up with many of the ideas that lead to funding for the lab.

Fundamental issues and challenges

Low pay. Limited academic job prospects. Awkward fellowship eligibility timelines and expectations of productivity that don't adequately account for the time needed to transition to a new area of study, etc. Lack of inter-lab mentorship structures that give postdocs resources other than their PI's, who often have conflicts of interest I associated with the postdoc's advancement

Existing NIH policies, programs, or resources

Relaxed eligibility timelines for fellowships.

Proven or promising external resources or approaches

No response

Response 3224

Perspectives on the postdoc roles and responsibilities

To me, an academic postdoc should be viewed as an equal colleague with a tenured professor, who simply has not yet gained the experience to be self-sufficient in their own laboratory, but who has the skill and potential to do that in time. Currently, most postdocs are treated as trainees, often lumped together with undergraduates and graduate students, rather than faculty with Ph.D.s.

Fundamental issues and challenges

The most fundamental issue is money. I imagine most responses will say this, because it is true.

Depending on the source, your average postdoc is 30-35 years old. Most won't finish until they are 35+. For reference, most industries consider this "middle career". For pregnancy, this is considered "geriatric". Yet most postdocs are seen as students who should be content to work 60+ hours per week, rather than seen as skilled experts in a desired field. Many postdocs forgo families, forgo hobbies, forgo "starting their life" until their 40's, and in return are paid less than half what the average Ph.D. makes in industry.

Further, the opportunities presented to academic postdocs are limited, with less than 1/3 of postdocs eventually achieving a tenured faculty position. The current "pathway to independence" is to apply for a K99 and hope you are one of the lucky 20% to receive funding to start a lab, otherwise the chances of getting a tenure-track position fall dramatically.

The biggest challenge is uncertainty, making little money with just the hope of one day having a decent job. If one compares the life of an M.D. to a Ph.D., we can see a dramatic difference in the life path. Med school takes 4 years, always, if you pass your classes/exams. Grad school can take up to 7 years, even for someone that has done everything right. Residency pays ~$60k/yr to give training required to bridge the gap between school and your first "real job", in the same way a postdoc is designed to, but is extremely rigid in the scope of what is learned, and a $200k+/yr attending position is GUARANTEED after completing the 3-6 years of training. Conversely, postdocs have no set path to guide them toward independence, and no guarantee of ever seeing a well-paying job.

Existing NIH policies, programs, or resources

Unfortunately the NIH budget is set by congress. So while more money will solve the current financial problems most postdocs face, I appreciate that the "resources may not be there". Additionally, I realize there are not enough tenure-track positions to go around to guarantee a postdoc an academic job the same way a resident is guaranteed an attending position. Yet I still believe there are things the NIH can do to help with money and a path to a job.

However, the NIH should work to prevent the "perpetual postdoc", by enforcing the standard set by many institutions that postdocs should never be more than 5 year positions. Institute a ban on NIH funds being

used to fund postdocs after 60 months, unless they are the recipient of a K99. This could free up funds to increase the salaries of postdocs years 0-5.

However, and this is incredibly crucial, you must create a resource that fosters a path to independence plan for postdocs that will not get a tenure-track position. This resource could provide mentorship, disseminate job opportunities outside of academia, or even act as a headhunting service for industry, given to 4th and 5th year postdocs who did not receive a K99 and/or are looking to transition out of academia. If a K99 is unfunded on final attempt, immediately direct them to this resource. Do not leave postdocs out to dry. It would make a world of difference for a postdoc to at least know there is an institutional "plan b" they can turn to if they realize they will not become a tenure-track professor and need to find an alternative. Even a program like the "Supplemental Offer and Acceptance Program (SOAP)" for med students that don't match to residency, but designed to help match postdocs into non-academic positions.

Proven or promising external resources or approaches

No response

Response 3225

Perspectives on the postdoc roles and responsibilities

Much of the scientific progress in the US rides on the backs of academic postdocs. In my day-to-day responsibilities, I critically analyze the literature, design and run experiments, present at key scientific meetings, train students, junior postdocs, and technicians, write grants, and also establish and build collaborations. These are all of the pillars of modern science and is the result of years of predoctoral training. Despite being classified as training period itself, postdocs are already highly trained and perform the instrumental roles in science.

Fundamental issues and challenges

Postdoctoral fellows are underpaid. Postdocs are a highly skilled workforce that is instrumental to biomedical sciences in the US. Academia has been hemorrhaging talent to industry due to the low compensation, lack of recognition, and high demands in productivity. Over time, this will lead to the stagnation of creative and innovative science. Higher compensation will communicate that postdocs are a valued group, and will lead to more recruitment of talent over time.

Postdocs often work more than a standard 40 hour week, often times exceeding 60 or even 70 hours. There is also no overtime and in many cases, poor work benefits. There is no reason why highly skilled individuals persuing a noble career in developing new therapies to diseases should struggle to make ends meet or delay raising a family due to unmanageable costs of living.

For any industry job, there is a period of training in the beginning. However they are not compensated less for requiring training. Therefore, the training nature of the academic postdoc position is not a reason to keep the compensation low.

Existing NIH policies, programs, or resources

Adding diverse merit-based funding mechanisms would be helpful. Many foundations are able to fund more cutting-edge science, however the vast majority of NIH funding mechanisms require way too much preliminary data. Postdoc is a time to try daring high risk/high reward work, and also to develop tools for one's future lab. Prioritizing these developments are instrumental for postdocs.

It would also be beneficial to reconsider what is necessary to be promoted in science. For example, if a postdoc is a highly skilled scientist and a fantastic mentor but is not keen on writing grants, this individual cannot be promoted to a professorship role in the current academic climate. Allowing for wider professorship roles with appropropriate (higher) compensation for the diverse skillsets required in science would be instrumental for the diversity of skills in the postdoc population.

Proven or promising external resources or approaches

No response

Response 3226

Perspectives on the postdoc roles and responsibilities

A postdoc should be able to learn something new in their role rather than continue doing just what they learned in their doctoral program. The position should provide opportunities to learn skills relevant in academia and outside of it. It seems that the academy in the US simply does not have enough investigator positions or staff scientist positions to accommodate all of the people graduating from doctoral programs. They design and perform research, analyze data, contribute peer review, write grants that generate money for their institutions, publish papers that contribute to the prestige and reputation of their institutions, and teach undergraduates, graduate students, and new staff. Their roles and their PIs expectations are very rarely well-defined, which can lead to a very uneven experience from PI-to-PI and institution-to-institution.

Fundamental issues and challenges

Our system is the opposite of inclusive. A crucial area to address is compensation. Many people love academia, but they are leaving for industry because they simply cannot afford to stay. I'm a first-generation college student and PhD, but I will not be able to stay a postdoc for as long as I had planned. I cannot afford to. To be competitive for academic positions, postdocs are expected to move from their doctoral institution or face punishment in NIH grant reviews. I have already experienced this as a postdoc. Relocation makes having a family or support system challenging. It is costly to relocate, and unaffordable on a graduate student or postdoc salary. The largest/most prestigious institutions that help people land academic positions are in higher cost areas of the US. Postdocs in these areas are paid less relative to their counterparts in affordable parts of the country because a much higher percentage of their income goes to housing. Despite the multifaceted skill-set postdocs bring to their laboratories, and the significant amount of unpaid labor they do to better their filed and institutions, I personally know postdocs that must go to food banks to get enough to eat. Most have roommates into their 30's, have no emergency fund, and cannot save anything for retirement. When I've asked colleagues how they afford living in the area on our pay, the universal answers are "my partner makes money", "my family helps me", or "I'm in debt" . This makes beginning in and continuing in academic research more difficult if you are not partnered with someone wealthy, or have family wealth. This leads people to delay medical care and other important life events. This does not encourage diversity. Finally, the role of a postdoc needs to be more clearly defined by the NIH.

Existing NIH policies, programs, or resources

Postdocs need to be paid commensurately with their experience. We are called trainees, but we do have significant skills and expertise that are not accounted for in our compensation. The NIH minimum wage should scale to cost of living, and years of experience as a postdoc. Postdocs should not be punished for receiving external funding outside of their PI's budgets. Despite the training and prestige provided in T32 and or F awards, these postdocs lose benefits provided by their university and are often paid less than colleagues who have not pursued outside funding and are covered by their PIs. This simply doesn't compute—we are punishing the trainees who are working to become better scientists by applying for funding as would be a requirement of a principal investigator. NIH needs to allow PIs to supplement their postdocs income using NIH funds. The current regulations limiting PIs ability to increase salaries are helping keeping postdocs in poverty.

NIH needs to provide more concrete guidance for what the role entails, and how universities can better support postdocs in moving to an independent position. If a postdoc writes and R01 and will be performing the majority of the research, they are not included as a Co-PI on the grant. This leaves them with undocumented experience that, if considered by NIH and other funding organizations, could help establish a track record of funding applications and acquisition when they move to their next position.

Proven or promising external resources or approaches

Giving postdocs a minimum contract of two years would significantly boost morale and give them some stability. More clear expectations and better avenues to establish their own independent work (Including them as PIs on grants, for example) could improve environment, training, and satisfaction. Increased pay would improve recruitment, retention, job satisfaction, and their ability to train, as less attention would be focused on finding a meal and scrounging to afford rent and more on their work.

Response 3227

Perspectives on the postdoc roles and responsibilities

The postdoctoral training period should be an opportunity to expand technical skills, develop independence and obtain mentorship from experienced investigators. The postdoc should be responsible for leading a project, mentoring and training others in the lab and work to secure funding or fellowships.

Fundamental issues and challenges

Postdoctoral scholars are generally in their 30s or 40s and have spent substantial time obtaining advanced training. They are experts in their field. They should earn a salary commensurate with their training, they should have access to benefits (including retirement), and they should have access to support for childcare.

Challenges:

- NIH NRSA postdoc payscale is a benchmark for postdoc pay and it has not kept pace with inflation.
- Postdocs who earn more than this NRSA payscale are disincentivized to apply for training grant slots or fellowships since they risk a cut in pay.
- Postdocs on fellowship are not university employees and not eligible for re-tirement and some other benefits. That is a PENALTY for earning a fellowship.
- There are currently limited paths for advancement or support if postdocs wish to stay in academic setting but not pursue an independent faculty position.
- There is limited flexibility in eligibility for fellowships (eg. K99) which can negatively impact women who may not be able to advance as quickly from PhD to postdoc for family reasons. One year family leave extension is often not enough
- There is limited financial support for family leave or funds for childcare to enable postdocs to attend conferences
- There are very few resources available for international postdocs. They are valuable members of the scientific workforce.

Existing NIH policies, programs, or resources

- NIH NRSA payscale needs to increase ASAP. Most universities use this as a benchmark for postdoc pay. Postdocs are disincentivized to apply for fellowships or training grant slots due to the low NRSA payscale. PIs cannot supplement these salaries from grants, so options to increase salary are limited.
- Postdocs on fellowship (eg. F32, K99) should be structured so that they can be paid as university employees and receive full benefits including retirement
- Modular R01 grants have not increased in 25 years! Grant budgets cannot keep pace with the need to increase pay for personnel, including postdocs
- There should be mechanisms of support for post-PhD advancement in an academic setting
- MORE flexibility in eligibility for K99 and other awards, including for junior faculty early-stage investigator status. This has been a PENALTY for young women scientists. One year extension is often not enough.
- Post-doctoral re-entry grants for those (usually women) who take a leave for family or maternity reasons.
- Loan programs for postdocs to pay for housing and childcare in high cost areas

Proven or promising external resources or approaches

No response

Response 3228

Perspectives on the postdoc roles and responsibilities

An academic postdoc was once thought to be a prestigious position on the path to becoming a faculty at an academic institution, however, the cons have now greatly outweighed the pros for almost all graduate students. This new generation is simply not willing to accept the sacrifices that were once seen as a rite of passage in the life of academia, so there has been a mass exodus to industry/pharma/biotech among my graduate student peers.

Biomedical research at academic research institutions is responsible for our nation's major scientific breakthroughs/medical advances because it is a system where the science and data drives decisions and the paths forward. Unlike most business operations, grant funded academic research projects and decisions are made by experts—the PIs most postdocs aspire to become. Academic research allows us to move forward and progress in technology and medicine. People were willing to accept unlivable wages and work overtime without compensation for the privilege of intellectual freedom and scientific rigor and excellence that academia provided. The pros no longer outweigh the cons, and the reputation of academia has been severely damaged by the unreasonable sacrifices that perceived as cruel and undesirable by younger generations. There are so many alternative career paths that very few people are interested in the excellence of what a postdoc position used to represent. I view the postdoc position and the career path in academia as the most impactful and astounding definition of what it means to be a true scientist, guided by data and curiosity towards groundbreaking scientific discoveries—but I am one of the only graduate students I know that feels this way. The NIH needs to improve the salary, working conditions, and prospects for faculty positions, or there will be no future for this nation's biomedical research legacy.

Fundamental issues and challenges

Graduate students are not seeking postdoc positions because all other entry level positions are offering DOUBLE the salary. The overwhelming majority of students are not even considering applying for postdocs because the choice is clear. Graduate students are not interested to work overtime (without compensation) to make unlivable wages any longer. It is a disgrace that scientists who have earned PhDs are still considered "trainees" that are working in exchange for their educational training, which has historically been used to justify the unlivable salaries. There is no prestige in not being able to afford rent. Traditionally it was disregarded that postdocs are adults in an economy they cannot participate in, unable to start families, and who are unable to support themselves financially. Most of society isn't even aware of the unlivable wages of experts who are basically, as they say, "curing cancer". The average American assumes that a scientists' salary would be proportional to their impact in society, and this is certainly not the case. The fixed budget that is allocated to a postdoc salary is revolting and shameful as a nation. If the salary of an academic postdoc is not comparable with industry/biotech/pharma, PhDs will certainly not consider a career as a postdoc, or in academia altogether. The reputation needs to be restored in order to reinstate a future for biomedical science.

Existing NIH policies, programs, or resources

The salaries of a postdoc must be comparable to the starting salaries for PhDs in industry/biotech/pharm. Small salary increases will change nothing.

NIH should instate a committee/department that reviews cases of abuse and exploitation in the academic workplace—The infractions to human rights and code of conduct in the workplace should be addressed, not tolerated by the NIH or the university any longer.

The small number of faculty positions in academic institutions must increase.

If postdocs are not offered competitive wages, healthy working conditions/environments, and there are very few prospects for faculty positions, there will be no future for academic science in the United States funded by the NIH.

Proven or promising external resources or approaches

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If postdocs are not offered competitive wages, healthy working conditions/environments, and there are very few prospects for faculty positions, there will be no future for academic science in the United States funded by the NIH.

Response 3229

Perspectives on the postdoc roles and responsibilities

Post docs are currently quite frankly too many things all at once. They should bring new expertise to a lab, but they are encouraged to learn something completely distinct from their PhD work. They should train others in the lab, and in fact some faculty rely entirely on this, but this time is also an important stage for their own career development. Most importantly, if they're learning something completely new in their post-doc, they're probably getting trained by grad students for the first few months and not being that helpful in the other direction. We have the blind-leading-the-blind and so we're all reinventing the wheel. I view the post-doc as a very stressful time of one's life. You're undervalued, under-appreciated, and you feel crippling imposter syndrome because you went from figuring out a problem and feeing amazing after graduating with a PhD to not knowing anything and feeling helpless as a post-doc (opinion synthesized from talking to many post-docs from many different labs).

Fundamental issues and challenges

Where to begin! The pay is awful. People coming straight out of undergrad make at least 2-3X the amount of money in the tech sector. Because PhD's and post-docs take an increasingly longer time, we not only lose the actual dollars of income but we lose years of money invested in the market because we don't have enough money to save and invest meaningful amounts. This is a lifelong handicap I was unaware of until well into grad school and my mid-late 20's. Financial prospects for academics? Bad.

Academic culture is toxic. It's a competitive environment where there are no real, enforced rules. There is no authority keeping PI's in check. Faculty encourage or behave in ways breaking the rules taught in our NIH mandated ethics courses without any repercussions. Until there is some criterion in science that cares for more than just the results someone produces or, more accurately, the journal someone publishes in, this will never change. One example is faculty who copy collaborator's data and rush to publish it before them. This behavior is routinely rewarded because "they were first" . Another is the stereotypical mistreatment and bullying of students/post-docs into producing results which I have not experienced but have witnessed. Also, labs suddenly having "funding-issues" when needing to renew a (coincidentally pregnant) employee's contract—while interviewing new candidates.

Stress, no security, low pay, and no promise of the job you actually wanted. Let's face it—no one wants to be underpayed until they're 40 years old while wondering if they'll maybe get that tenured faculty position or if they'll have to build a different career at that time, age, and likely with dependents. I think fewer people do post-docs because younger generations have developed enough self-respect and confidence to find a healthier and more stable way to live.

Existing NIH policies, programs, or resources

I would restructure the whole system. The reward for "winning" or "publishing first" is too high. In my opinion, the problem stems from the fact that faculty running labs were primarily trained to do research. There is no rigorous mentorship criterion in training these group leaders. Labs could be run by small groups of PI's working together, each being specialists in either science or mentorship. Rarely do people excel at both.

Get rid of tenure. Or dramatically redefine it, As an example: academic tenure is a one time 10 year position; maybe it can be renewed once. Or it can be maintained by passing an extensive re-certification/licensing/board exam that focuses on the accepted scientific practices of the day, mentorship, interviews with trainees from the elapsed period, etc.

There are too many trainees. Cut the number of students in half (or more) and double (or more) everyone's pay. Same for post docs. Academia as it is now worked when people could justify miserable

pay for a couple years to then upgrade to a tenured job. Projects/methods are more time consuming, the academic track takes longer, and the payout is extremely uncertain. I hope it's obvious that that is not a risk worth taking. The time equivalent spent in academia spent in industry straight out of undergrad gets you to nearly the same place, except you were making more money the whole time. People figure this out in grad school so they don't want to touch a repeat of this experience (post-doc) with a 10-ft pole.

Bottom line—there is no security in this line of work, neither financially nor career-wise—unless you're one of the few who get tenure. And that's just not a risk most people can afford anymore.

Proven or promising external resources or approaches

I cannot stress this enough—just pay people more! A post-doc is a highly skilled employee and they should be paid as such. $100k min and the post-doc shortage will be gone. Lower the number of post-docs but make it a higher quality job. Currently post-docs are being asked to do too much for too little money, too many hours (it's research, you'll often need to pull long hours, it's just reality for some projects), and a "we'll see what you produce" about their next career move. It's an *extremely* bad deal. I haven't had a single post-doc recommend the experience to me and I talk to many of them. The graduate and post-doc experiences are awful enough that I actually predicted the post-doc shortage back in 2016 just from listening to folks share their experiences. I say this to emphasize that these (any many other) problems have been around for a long time but no one was listening. This is itself part of the problem. The pervasive mentality that "you suffer and get through" breaks down when there is nothing solid on the other side.

Response 3230

Perspectives on the postdoc roles and responsibilities

The academic postdoc is a varied role that encompasses many different stages of the transition from training to independence. Each individual postdoc will have a different trajectory and timeline, with some doing significant independent work early on and others needing more supervision throughout their postdoc. Each postdoc's exit path will also look different depending on their plans and experiences, with some launching to write their own grants, others transitioning to industry, and any number of other pathways.

In all of those cases, postdocs do a significant amount of work to support the research enterprise. While the point of postdoctoral training is to gain skills and competencies in order to function as an independent scientist, a postdoc is still doing real and important work during their fellowship. At BWH they are considered full employees and receive benefits and rights accordingly.

Fundamental issues and challenges

The number one challenge with recruiting and retaining postdocs for our institution is the cost of living in Boston. This affects all roles, not just postdocs, but postdocs are in a particularly vulnerable position at academic medical centers like BWH because they are often completely reliant on the PI's NIH funding for their salary. Major academic centers in large urban centers where rents are very high are losing very qualified postdocs; when they do come, the financial struggle hugely impacts their quality of life.

Cost of living also presents an equity issue, with intergenerational wealth impacting a postdoc's ability to survive on low salary, rely on family assistance, or not be burdened with student loan debt in addition to rent and childcare.

The need to increase postdoc salaries also has a deleterious effect on the rest of the research ecosystem, particularly impacting small labs and junior faculty who can't afford to attract talented postdocs—or any postdoc at all. BWH, along with most institutions in Boston, is moving to increase minimum postdoc salaries to account for cost of living, but without the NIH's support in increasing the funds provided to PIs, this will be difficult or impossible for small labs to afford.

Existing NIH policies, programs, or resources

Expanding modular budgets to allow higher postdoc salaries with regional cost of living adjustments is necessary to protect not just the postdoc ecosystem, but the rest of the academic ladder and particularly junior faculty in small labs. Adjusting NRSA scale is particularly critical for NRSA Training Grants.

K99/R00 are in many ways the 'ideal' pathway for postdocs to transition to independence, but they are known to be highly competitive and elusive, particularly as one of the few mechanisms that are not limited by citizenship or permanent residency. If there is any way to expand this program or offer similar pathways in other programs, that would be significant for many postdocs.

The NIH Diversity Supplements are also an essential resource that needs to be protected and expanded. They are a key mechanism for PIs supporting multiple postdocs and a valuable tool for increasing the diversity of our scientists.

Proven or promising external resources or approaches

The General Schedule federal employee pay scale incorporates cost of living, and could be an example for the NIH to look to.

Response 3231

Perspectives on the postdoc roles and responsibilities

I decided to do a postdoc because I wanted to gain expertise in a different field from my graduate studies and gain the independence needed to become a PI. I feel my responsibilities are foremost to focus on experiments, grants, publications, and mentoring which will help me in my journey to being a PI.

Fundamental issues and challenges

I'm the president of our postdoc society and I have one key reason. Pay. The low salaries of both graduate students and postdocs impact all of these aspects, and critically so for those without generational wealth. I have several friends in grad school (paid through NIH grants) who had to take out over 80k in student loans to afford rent and food. Many had dreams of becoming a PI but cannot afford to gamble another 4+ years of low pay for the small chance of becoming a well-paid PI. The common denominator amongst them is that they lack generational wealth. You must understand that low pay excludes the diversity of people that you claim to want to attract.

I, fortunately, do have the privilege to take the financial risks of being a postdoc, but I am still having to make many sacrifices. The low pay means that I'm nowhere close to where my peers are to buy a house, and I'm at the whim of whatever renters want to charge. Rent increased by 25% amongst the postdoc community at my institute from the last leasing cycle to this one. Postdocs were barely holding on as it was and there was no increase in pay. This led to many postdocs quitting (we lost at least 15 out of 75 postdocs) academia and joining industry. I've heard from several PIs that the postdocs that they were in the process of recruiting rejected their offers due to the high rent. I had to move from a nice apartment near campus to one 150% smaller, in a neighborhood where shootings are common, with an added commute that is frankly terrifying to drive every day. In contrast to this, our neighboring institute increased their housing stipend and retained all their postdocs/ "graduated" some to PIs.

Existing NIH policies, programs, or resources

You need to massively change the language and policies associated with being an NRSA fellow. From the conversations I've had with HR and other fellows, it seems to be some interpretation of the language used which enables over 70% of public institutions to prevent us from being classified as employees. I've earned this fellowship but it's come with so many costs. Because I'm now a fellow I've lost the few benefits that I had as an employee of a state institute. These included good health care (dental and vision), a 3% matched retirement contribution, and access to travel grants. It has also come with over a solid week's worth of time spent doing administrative work to make sure I still get paid and I would get a significant pay cut if it weren't for supplementation by my PI's private foundation grants.

This loss of the institute's health insurance also meant that a PI at our institute told her postdoc who recently had a baby, and received an NRSA that it was a better choice for her future if she rescinded her F32 and went to work for industry instead (which she ended up doing).

From a tax standpoint, these kinds of fellowships need to be worded in a way that classifies them as earned income (as PIs grants are). Because of this discrepancy, fellowship recipients are not eligible for any earned income tax credit.

The postdoc position should also be relabeled as 'permanent' so visa holders are not in such a vulnerable state. Over 70% of the postdocs at our institute are visa holders and are critical to the discoveries and

progress we make every day. I realize that the postdoc position is supposed to be a stepping stone to something more permanent but so is any position.

Proven or promising external resources or approaches

The National Postdoctoral Association provides guidance on best practices, which are informed by the postdoctoral community, and the faculty and staff that support the postdoctoral community.

Response 3232

Perspectives on the postdoc roles and responsibilities

Postdoc is the bridge between grad student and independent scientist. Postdoc experience not only enrich the skills but also teach perspective of the field, which is essential to become an independent scientist.

So postdocs shouldn't be considered as MANUFACTURER OF DATA to get grants or publish papers. PIs should mentor rather than boss them. Postdocs will do experiments, generate data, teach grad students but alongside they need to edge their critical thinking pattern. They need to be mentored to understand the bigger picture and long-term goal of the project to learn to structure purposeful scientific questions for future.

Fundamental issues and challenges

1. Don't increase the NIH recommended salary for postdocs. MENTORS will give proper salary as per needs of the place, but BOSSES will pay salary as low as it can be given. So WHEN WE HEAR NIH RECOMMENDED SALARY INCREASES WE FEEL VICTIM AGAIN AND AGAIN. I am a 5TH YEAR POSTDOC and I get 45K PER YEAR, can you tell me what is the NIH recommended salary for a 5th year postdoc? And why I am not getting it? AND it's not only me, many many other postdocs also.
2. NIH should do an orientation for all the incoming postdocs directly and not through University/Institute, about research ethics, research integrity. Otherwise, fellows will learn to manipulate.
3. NIH should update and let every postdoc/grad student know (if there is any) about the WHISTLE BLOWER PROTECTION ACT of NIH and where to contact and whether the whistleblower's carrier will be at stake or not.
4. NIH could inform Federal Govt about VISA rules because J1 postdocs often get threats about terminating their employment and immigration status.

Not for postdocs but NIH should start scrutinizing data for all NIH grants for falsification and fabrication.

Existing NIH policies, programs, or resources

No policies/grants/rules/resources/programs/recommendations can protect postdocs from EVIL scientists. SO ALTHOUGH TEDIOUS BUT BETTER TO SEARCH FOR THE GHOST IN THE MUSTRAD.

Proven or promising external resources or approaches

Social Media.

Response 3233

Perspectives on the postdoc roles and responsibilities

The postdoctoral position is in my opinion a transition between being a grad student and officially in an academic position as a PI and teaching other students. An opportunity to get funded, develop your ideas and become independent.

Fundamental issues and challenges

The biggest issues in my opinion is toxic environments and lack of money. The number one issue in my opinion being LACK of MONEY. Post doctoral positions run in parallel with woman fertility and the stage of family building, and postdoc salaries just DO NOT cut it. I think in general there needs to be a big boost to salaries in the academic fields. Also medical residents salaries are higher for a similar education level. Not sure why such a difference between academic and clinical. Professors do not make enough these days to

make people want to put up with all that goes behind doors. You can make professor salaries this days with a BS and an MS. It almost doesnt even hold the same reputation as being a Dr. of medicine when they are two wings of the same bird. Passion can go a long way, but ultimately we all recognize our mental health and financial stability is first. Post docs feel like doing a PhD all over again, which is soooo exhausting and all for not a lot of reward. At least medicine you have big salaries to pay for the long hours and mental energy investment. Talking with students in california I heard they are paid below 40,000 in a state that is sooo expensive. Is like living poor after so much education and preparation. Also ultimately you can do research with medicine, with a fall back plan of clinical work. So there are few advantages to a PhD in general. I LOVE academia. I want to be a professor. But it does make you consider your options.

Existing NIH policies, programs, or resources

Increase managerial training for PIs to learn how to manage people and create healthy work environments and increase salaries for Post Docs and Professors.

Proven or promising external resources or approaches

No response

Response 3234

Perspectives on the postdoc roles and responsibilities

In the modern scientific ecosystem the postdoc should be viewed as a short-term position that facilitates the transition to a more sustainable career trajectory. There is limited upside to an extended postdoc unless the an individual is focused on a tenure track position at a R1 type institution. As a scientific community we should work to reduce the need for postdoctoral training by creating better career discernment for graduate students. Only those interested in long term, high level science careers should be taking on postdoctoral training.

Fundamental issues and challenges

The postdoc is a dead end position and without considerable philosophical changes there will likely be long-term issues with recruitment and retention of postdocs. Many postdocs will put off important milestones like home ownership and starting a family due to the social pressure of completing a postdoc in the hopes of reaching a long term position. The COVID pandemic has laid bare the reality that a postdoc is not required for success in the biomedical workforce and it will be hard to reverse course going forward. If it is the desire of NIH to maintain a sustainable model for postdoc recruitment and retention then salary needs to be competitive (>$70K/year), childcare must be subsidized and available, housing needs to be available, postdocs need access to retirement benefits, and the position needs to be respected within the academic hierarchy.

Existing NIH policies, programs, or resources

More training grants that are based on cohort models. IRACDA is a fantastic program that facilitated the training of postdocs for a specific career outcome. More funding for programs like this would be of high value and would attract more people to academic postdocs. Graduate students know that there are limited opportunities for tenure track faculty positions and are looking for alternative career paths. Programmatic grants that support postdocs to be in the lab 50-70% of the time while also receiving training in other spaces (e.g., teaching, entrepreneurship, industry, policy, science communication) would likely be of high interest to both postdocs and universities around the country.

Proven or promising external resources or approaches

No response

Response 3235

Perspectives on the postdoc roles and responsibilities

A postdoc is one who is responsible for generating ideas, read, think extraordinarily, stays updated with the progress in the field of study and conduct experiments in order to do good science. However, the roles and responsibilities of postdocs are not clearly defined. It is a general understanding that postdocs are expected to work beyond work hours and on weekends. Sometimes, it is the requirement of the

experiment to work in odd hours/weekends and this is indeed done voluntarily. However, this is visualised as a measure of sincerity in the scientific community. They are also expected to carry out functions of the lab technician like making media etc. inspite of having one or two in the laboratory. The distribution of duties should be clearly defined such that postdocs are not overwhelmed with side duties and not able to prioritize their research. Most importantly, it is very important to tabulate the weekly tasks done by technician (who work fixed hours per week, do not work on weekends and take all the holidays) in a formal format for assessing proper utilisation of time and work done. Interestingly, the pay difference between the technician and postdocs in current scenario is $10K/year.

Fundamental issues and challenges

The major issue in the retention of postdocs comes with the fractional hike in the salary (provisioned through unions etc.). Although this hike in the salary is important in the life of a postdoc for various reasons like living in an expensive city, expanding family, childcare expenses, but, this creates a burden on the Postdoc Advisor who is now not able to support the postdoc. This is because it is too expensive for them to afford a postdoc as the grant fund is limited and there is no increase in grant money from NIH. The only way to have a postdoc in the laboratory is to bring their own funding, which is difficult to get considering the competitive market and also time consuming in terms of grant writing that is initiated way before joining the lab and there is no guarantee of getting one. This in turn again puts a prospective postdoc in a vicious cycle of grant application whether you are applying with your PI currently working as a postdoc in a lab or thinking of joining a lab in the future.

Existing NIH policies, programs, or resources

1. If the reason for not retaining the deserving postdocs is the fixed salary dedicated to the postdoc in a lab, then increasing the salary bar for postdocs in the NIH grants provided to the Advisor should be brought into action, so that advisors are not cutting corners to retain one or let go one in order to carry out lab functions.
2. A clear demarcation of tasks done over time/day or week for the technicians would help in assessing transparent job functions/productivity and redistribution of work, if required.
3. The development of a stable funding and job security for international postdocs both in terms of job security and providing benefits like relocation assistance would be a boon.

Proven or promising external resources or approaches

A mandate/set of instructions in the form of orientation should be provided to the Advisors and Postdocs to understand and train the mindset of both for amicable work environment. This should include work ethics, mentoring, mandatory holidays to refresh mind, work life balance and enhance productivity.

Response 3236

Perspectives on the postdoc roles and responsibilities

I am still believing post doc job is to do great science, but non progressive research environment is negatively affecting our career.

Fundamental issues and challenges

Salary is very low below the average. especially in big cities it is very difficult to live with the family.

Delay in the publication is another big issue, which makes us stay in the same low salary job.

Because of the publication hold, we are unable to move to another job, even if we get good opportunities.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

twitter

Response 3237

Perspectives on the postdoc roles and responsibilities

No response

Fundamental issues and challenges

The most critical predicament of a postdoc's life is that the salary—which is directly or indirectly based on NIH stipends—does not cover the cost of living in most U.S. metropolitan areas. For an analysis of the matter, see this paper in Research Policy 52:3 April 2023:

American postdoctoral salaries do not account for growing disparities in cost of living

https://www.sciencedirect.com/science/article/pii/S0048733322002360

Moreover, the annual salary increases do not pace with inflation, especially in the current high inflationary economy. The current salary levels become even less livable when the postdoc has a child too.

The NIH should set the salaries at levels that meet the actual cost of living in expensive cities and increase them annually with inflation.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

Not having to worry about sustenance will have the most impact on almost every aspect of the training ecosystem of a postdoc. Raising the salaries will achieve that.

Response 3238

Perspectives on the postdoc roles and responsibilities

As an international postdoc that have work in different labs and countries, I appreciate clear differences in the roles and responsibilities between places. The role of a postdoc should be to train and teach students and write grants to secure funding for their future career. Their responsibility is towards their project, but at the same time towards the scientific community, and to collaborate with their peers.

However, many times and due to the system as it is, we are involved in lab manager tasks, and we spend much of our time performing tasks that a technician could do.

At the moment, what should be a postdoc for me, it is far from the reality in the US. Due to the system, and since we are not faculty, we are the cheapest professional labor in academia, we are independent and can learn by ourselves because we have a PhD. This makes us more than capable to develop ideas and perform projects, not needing training in that area but mentorship to progress in our career.

A better understanding of the role of a postdoc, with indication of objectives and milestones to be accomplice by postdocs along each year, will clearly help in our career. Also, we should not be the only ones accountable for our progress, but the efficiency and performance of PIs should be check and evaluated. Also, the career of postdocs should be follow after they finish their postdoc, since this will be a reflection of leader and mentorship from the PI.

Fundamental issues and challenges

The main challenge is the salary, that in most cases do not reflect the experience of the postdoc and do not match the cost-of-living levels in the location. Housing provided is limited in number and time. In 6 months, I will see myself in a straggle due to having to move out of the housing and having to spend half of my salary, if no more, in rent. An adjustment of the NIH stipend scale should be adjusted for the actual prices in the US as well as for local prices not only of housing but of other basic needs, like food and heath. Purse

The job security, the immigration status and the environment in the workplace makes difficult asking for what we deserved. The lack of recognition and appreciation, together with the salary, does not encourage us to follow a career in academia. Besides, the support and the opportunities to pursue a career in academia are very reduced and difficult.

On top of this, postdocs have to postpone natural decisions in life, such as having a family, buying a house, making important decision. At the same time, and due to the pressure from some PI, our time dedicated to ourselves, to meet people, to follow with our hobbies, and to take care of our health, is limited and postponed. The competitivity in academia creates toxic environments at work which reflect in our work and in our mental health.

Existing NIH policies, programs, or resources

The first thing that need to change is the definition of postdocs as trainees, making them faculty, and getting the same benefits. In most cases, there is not much training or mentorship during these years. The follow up of postdocs progression in their career and the mentorship received should be performed to assure it is happening and to make sure postdocs are receiving a fair treatment at a professional and personal level.

Proven or promising external resources or approaches

Periodical surveys to check the satisfaction of postdocs with the working environment and the mentoring, making special enfaces in reporting mistreatment from PIs. More required professional development events and courses to assure the career advancement of postdocs. Direct contact with the postdoctoral associations and the postdocs in the institution in a safe environment in order to get all the information.

Response 3239

Perspectives on the postdoc roles and responsibilities

To me, the post-doc position appears to be an academic version of a medical residency. While it may sound nice in theory, it seems somewhat leftover at this point.

Most field are able to provide on the job training (including teaching positions) w/o requiring multiple years of mandatory continued training with lower pay.

Fundamental issues and challenges

It is far too easy to be exploited (as are grad students).

Post-docs and grad students do the bulk of the research, for half or less of the pay as other positions.

Often, trainees are expected to move (i.e., staying in the same place frowned upon), which removes their support systems, is expensive, and creates upheaval.

Pay seems arbitrarily lower than trainees. (I wld rather be paid less, and there to not be such large gaps btw stages.)

Power dynamics are a *huge* problem. Trainees often do not know they can push back, or say no.

As a field, we have normalized exploiting ourselves. Mandating that our trainees endure it is worse.

Adult trainees shld be paid such that they can live off the salary, supporting responsibilities in their life any adult might have. Expectations on their work shld, similarly, be reasonable.

Often, paying post-docs ~half of what a staff scientist makes is justifies by “they’re receiving training”, but the individual experience varies. The responsibility and expectation is, too often, placed on the PI, with little to no guidance or oversight that can guarantee a good experience.

Expecting individual PIs to “figure it out”, placing the responsibility on individual scientists, seems tantamount to me to putting the responsibility on the individual to “figure out” how to avoid Covid.

They can’t. Not only bc some individuals are less skilled at it than others. But also bc an individual, inspiring mentor doesn’t cancel out a toxic one.

Existing NIH policies, programs, or resources

My post-doc position was a nominal one. It was a post-doc position on paper (and by pay, respect, and lack-of-authority), but there was no “post-doc training” and no discernable difference btw my position and a non-postdoc one. (No one knew if I didn’t tell them, and they were generally surprised. And often had questions.)

So.

I do want to defer, in some ways, to people who are, currently, having valuable postdoc experiences and want to preserve the position. (I know I am biased, and I do want you to hear their voices, too.)

However, I hear poor experiences far more often.

I do think the position needs an overhaul. My personal opinion is that we should remove the requirement/expectation for doing a postdoc at all.

Or, we should at least consider it.

Again, other fields do not have this, and they all train their people just fine. (Even teachers and profs.)

If scientists with positive experiences to identify what it is about their postdoc that was so valuable and unique, then we can look at preserving that (and whether or not that value can be provided in something like entry-level staff positions, etc., or not).

Again, I know I'm biased, and I do want the positive experiences to be heard.

However. I think it may be extremely important to include, at the table, in the conversations, voices of people with less positive experiences, so that we can truly learn how to avoid them.

And I sincerely think we should *consider* whether.we still need to "require" or expect postdoc positions or not. And, if we continue to have postdoc positions, I ask that we be very certain that we need these positions, that they add value to the trainees in them.

Proven or promising external resources or approaches

Look at how other technical fields approach training as a whole.

NASA, in particular, has a very thorough, proven history in defining how to do a thing well (incl industrialization and systems engineering).

In response to Challenger, they reevaluated a *lot* about the workplace. They have strict rules abt 40 hr workweek, etc.

The scene in Hidden Figures, where he tells them to call their wives and tell them they'll miss supper.is how they *got* to Challenger. The overworking and burn-out.

Ironically, it appears that medicine and medical research are stuck behind, eith pre-Challenger work ethics.

And because the engineers at NASA do not have PhDs, we don't listen to them.

They have an expertise we could benefit from.

We should listen.

Response 3240

Perspectives on the postdoc roles and responsibilities

As an aspiring academic investigator, I initially viewed the position as a mean to enhance my research article publication record while learning how to identify gaps in knowledge, conceptualize and formulate research projects, write grants, manage a lab, and ultimately develop into an independent principal investigator (PI). However, the experience of my lab mates post-docs convinced me that I was wrong and my own post-doctoral experience confirmed that sentiment that post-docs are actually just laborers, some sort of instruments in the hands of labs' PIs to use to advance their own career ambition at the expense of the post-doc doing the work.

Fundamental issues and challenges

At the core of the issue post-docs face is that the biomedical research field has clearly morphed into some sort of business with PIs locked into a race of competition to make a name for themselves. As a result, PIs have turned to post-docs to run the experiments the PIs need to write more grants. Even PIs with at least 2 active R01 are not satisfied and are constantly behind post-docs' backs asking for data. At my past institution, I knew of labs with only post-docs; no graduate students. As a consequence of this greed of PIs, post-docs are being exploited, abused. In the lab I did my first post-doc in, all post-docs were subjected to a mandatory work hour of 8am-6pm, 6 days per week. Saturday after the 10 hours shift, I

spent the evening preparing my weekly report to be sent to the PI the next day. When I labored to complete the manuscript that I secretly planned to submit and leave the lab, the PI sat on it for months; he wanted to submit it himself but said he did not have the time. At the same time, I was expected to be in the lab Monday-Saturday. This showed that the PI did not care about my career but was only cruelly using me as a technician to meet his experiment needs. This quick recap of my first post-doctoral experience paints a picture of research labs that have turned into some kind of concentration camps where the life is being squeezed out of post-docs. My status of minority added another layer of complication to my post-doctoral experience.

Existing NIH policies, programs, or resources

Not every post-doc has this determination. Since institutions are not addressing these serious issues facing post-docs, in fact some do not even have relevant policies in place, NIH has all interest in making sure that taxpayer dollars are not being turned into some micro businesses run by greedy, abusive, racist and discriminatory PIs who are only in it for themselves.

As suggested above, I proposed that post-docs at every NIH-funded institutions be made aware of their rights and that a system be created to allow them to report abuses. When it comes to diversity supplement grants, the recipients should submit an exit survey or report that tells their experience, the project they work on and whether the PI delivers on their career development plan. NIH needs to, PLEASE, address racism and discrimination in biomedical field and make sure post-doc hiring is fair. Most PIs are going to their home countries to source post-docs, people they know they will easily use any way they want

Proven or promising external resources or approaches

No response

Response 3241

Perspectives on the postdoc roles and responsibilities

Postdocs are in effect indentured servants, lured into their postdoc with promises of resources to be productive, time to learn new techniques, and allegedly conducive environments to write their papers. Postdoc once recruited are at the mercy of their "mentors." problematic mentors are often shielded by their institutions because these mentors can bring in funding. The situation is worse for minority trainees, people with disabilities, people with families and/or dependents, and international postdocs on visas. Take away postdocs and grad students, and academia would collapse as national strikes have demonstrated.

Fundamental issues and challenges

Postdocs are treated like trainees and not given due benefits because of this culture of exploitation.

Postdocs lack ***industry parity,*** and have been historically exploited and abused.

Postdocs are often exploited by their mentors, expected to work twice what is reasonable while being paid half or less than what they could make in any other economic sector. The means to report abuse of postdocs is often biased towards helping the funded institute maintain their prestige at the expense of burnt out and/or abused postdocs/grad students/staff/faculty. Reporters are often retaliated against, and there is minimal protection for whistleblowers despite whistleblowing effectively being protected speech.

Existing NIH policies, programs, or resources

All postdocs should have their OWN independent funding. This should NOT be tied to lengthy "competitive" processes which select for candidates cherry-picked by schools "good apples" which have possibly been abused before and scared to perform (brainwashed into thinking exploitation is beneficial to them).

For international workforce members, postdocs should have a centralized process for their visas managed by the NIH with minimal red tape to prevent institutions from holding international postdocs hostage by their visas. These people should also have the same benefits as domestic postdocs.

Institutions receiving ANY federal funding must make clearly available their past and current institutional policies and change logs so that postdocs can know whether an institution's policies would be detrimental to the postdoc's safety and wellbeing.

Postdocs should be considered federal employees so that problematic institutions can't make decisions like arbitrarily punishing and firing postdocs without due process. Due process should also not be abused.

Postdocs should AUTOMATICALLY qualify for the NIH Loan Repayment Program and/or the Public Service Loan Repayment Program. Applying and not getting the LRP can be detrimental to postdocs and their families. It's needless gatekeeping.

Proven or promising external resources or approaches

GIVE. POSTDOCS. THEIR. OWN. FUNDING. Pay postdocs at least twice as much as what they are making now. Same for grad students. Health insurance should also be covered, as well as benefits standard for a similar position in industry.

High-performing faculty often jump from mid-tier institutions/unsupportive environments and may be recruited to "better" environments. If postdocs had their own power of the purse (so to speak), then they too could leave abusive environments.

Pay postdocs for their time filling out surveys and RFIs. None of the above is new. Do something to fix this mess.

Response 3242

Perspectives on the postdoc roles and responsibilities

At many academic institutions, postdoctoral scholars are the lifeblood of biomedical research. They lead independent projects at the cutting edge of their fields, provide mentorship and support to their peers and graduate students, and help to shape the research programs of the PIs that employ them. In the best case, postdocs have an opportunity to train in new skills, expand their knowledge base, explore new fields, and build interdisciplinary bridges between their previous training and their current work. In the worst case, postdocs are overworked and undercompensated expert labor for PIs whose publications and grants depend on the material and intellectual contributions of these highly skilled scientists.

There is considerable diversity in the types of scientists who pursue postdocs. Some postdocs are seeking training beyond their graduate training, for example those who are switching research fields or who are seeking to learn new methods in the same field they did their graduate work in. Other postdocs are seeking intellectual diversity, staying within the same research field but looking for training in a new perspective on that field. Because prestige, an arbitrary metric, is often used in hiring decisions, some scientists use postdoctoral training as an opportunity to acquire prestige conferred by their postdoctoral institution or their postdoctoral adviser. This last option is particularly true for postdocs from marginalized backgrounds who, due to bias in what types of institutions and PIs are viewed as prestigious, might have been limited in their access to prestige as a function of the previous academic opportunities.

Fundamental issues and challenges

Insufficient salaries, high potential for abuse, short term contracts, and the dependence on singular mentors for career progression, as well as limited academic prospects as either staff scientists or principal investigators are all major issues in postdoc quality of life. These issues are exacerbated for international scholars, a major population of researchers at many R1 research institutions, with the added precariousness of their ability to live in the US being dependent on fickle bosses, having to navigate complex immigration bureaucracy with little to no support from their employer, and fewer opportunities for funding while in the US. These issues coexist with many scientists navigating racist, sexist, homophobic, transphobic, and xenophobic environments with limited recourse either through their universities or their funding agencies. Further, because of the temporary nature of the postdoc position, scientists who are looking for long term research positions in academia where they do not lead their own laboratories may decide against postdoctoral training in favor of a higher paying more permanent position as a staff scientist outside of academia.

Existing NIH policies, programs, or resources

F32s, T32s, K12s, K01s, K22s and K99s all serve to fund postdoctoral training, but funding levels across these awards are stagnant. Further, many postdocs who do not receive these awards are funded off of their PIs R01-level research grants, which furthers the precarity of the postdoctoral position. For many, these awards are difficult to obtain due to biases against age, time from PhD, and the relative prestige of their institution or PI.

The NIH can improve postdoctoral training by expanding all of these funding opportunities. Stipends should be increased significantly commensurate with the applicant's cost of living. Citizenship requirements for T32s and F32s should be dropped. Time-since-PhD criteria for career development awards should be dropped. All NIH postdoctoral funding mechanisms should have cohort-based duplicates targeted toward marginalized postdocs similar to the MOSAIC K99 mechanism that has proven incredibly successful.

The NIH should establish strict mentoring criteria for PIs who administer R01, T32, or K12 awards the fund postdocs. The NIH should establish clear consequences for bullying and abusive PIs.

Finally, the NIH has a role to play in removing the need for postdoctoral training in the first place. This should take two forms:

For scientists who do not need additional training, the NIH should expand its DP5 program targeted to graduate researchers looking for jobs at minority-serving institutions or other institutions that do not receive significant NIH funding.

For scientists who want to stay in academic research as staff scientists, the NIH can obviate the need for doing a postdoc by expanding the R50 mechanism to fund staff scientist positions.

Proven or promising external resources or approaches

A litany of public complaints from universities and principal investigators indicate there is a lack of postdoc applicants. Anecdotal reports suggest that PhD students are looking to the biotechnology arm of the private sector after receiving their training. These industry jobs offer high compensation, impressive benefits, ample time off, and some assurance of career progression. Additionally, due to the threat of liability and the existence of litigation-conscious HR departments, working in industry is often accompanied with greater perceived protections from abuse compared to academia. All of these features of the biotech industry could be replicated for academic science should the NIH choose to implement the suggestions above.

Response 3243

Perspectives on the postdoc roles and responsibilities

A position where one further her scientific, people, managerial, organizational skills while figuring out the next step career wise. As a postdoc you share many of the PI responsibilities in term of mentoring and managing the lab and also in term of innovative ideas. You are involved in multiple projects, work with collaborators (develop collaborations), mentor junior staff and also perform your research.

Fundamental issues and challenges

Salary is the number one issue when it comes to postdoctoral fellowship. It is very hard to swallow that most people with Master or even bachelor are making more money than you while doing probably less work. After spending so much time getting your PhD, you may want to build a family (or already have one) and supporting a child with a postdoc salary is very challenging. It feels like if your main goal is academia, you have to give everything (including your personal life) into your postdoc without even being guaranteed you will the position you desire.

Existing NIH policies, programs, or resources

No response

Proven or promising external resources or approaches

No response

Response 3244

Perspectives on the postdoc roles and responsibilities

A post-graduate research position where you work on a project to either attenuate your skillset, work on related research, or bring your skillset to a new field. This means that you work under the PI to fine tune the research in that PI's lab. In some labs, this could mean also having mentorship opportunities. The roll,

to me, is like an employee under the management (PI) and you have supervisory, contributory, and training aspects in your position.

Fundamental issues and challenges

The fundamental issue, first and foremost, is the belief and the treatment that this position is purely another "training" position that entails a corresponding "training" salary. At this stage, a person has been training for this position already for 4-6 years. The salary should reflect that. Academia, although unique from the "traditional" job, is still a job. We should not have to chose between conducting research for the "good of science" and taking a massive pay-cut as a sacrifice or being a paid a livable, decent wage at a company that rewards hard work and profit.

Next, job insecurity. The post-doc positions are low-pay for only a year or two at a time. Third, it is unlikely you will receive a stipend for relocation costs and moving is not cheap. You are never expected to receive "bonuses" as would would in a "traditional" work setting. If the PI loses funding or does not receive the grant that they expected to, you can be out of a job. This creates a stressful and competitive work environment that rewards quantity and not quality.

Have PIs been trained on how to manage post-docs? Most PIs that move from a post-doc to a PI position are untrained in how to run a lab which includes interpersonal management and hiring. Post-docs should be trained on this.

Existing NIH policies, programs, or resources

I do not have much to contribute to this question.

Proven or promising external resources or approaches

Look at the jobs that you are losing post-docs to, the benefits that they provide should be a clear "promising" approach to how to recruit and retain post-docs. You can even look at companies that have post-docs. It's there.