National Academies' Committee Meeting: Perspectives on Postdoctoral Researchers

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Question 1: What is your current career stage?

Question 2: Career preference: please tell us which of these options best matches your current career goal

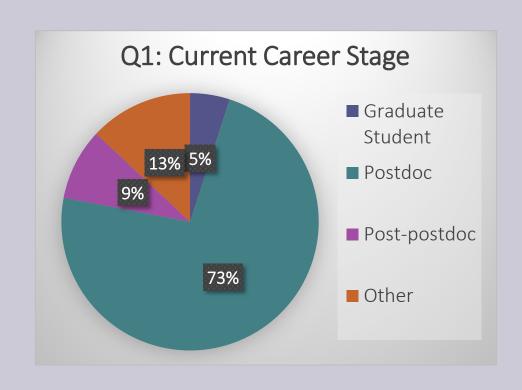
Question 3: If your career preference changed during your research training, please tell us your previous career choice

Question 4: What are your reasons for choosing your current career preference?

Question 5: Have you experienced any barriers during your scientific training that have led you to question your career preference?

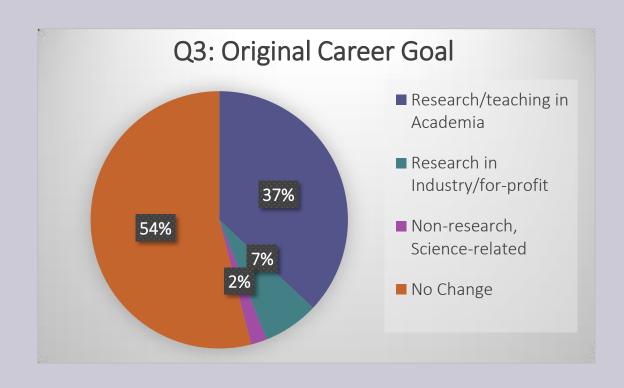
Question 6: Do you have suggestions for how your research training environment could have been improved to avoid these barriers?

Question 7: If you have any other comments (positive or negative) about your research training environment, please state them here



N= 59 responses





Why stay in academia?

Research_Impact

Research_Freedom

Teaching/Mentoring_Opportunities

Enjoy_Research

More_Flexibility

Tob Satisfaction

Why leave academia? More_Flexibility Funding_Availability_Problems Research_Impact Financial Stability Stablity Too_Competitive Better Career Dev Team_Projects Want_Happiness

Question 5: Have you experienced any barriers during your scientific training that have led you to question your career preference?

- **PI/Postdoc (Graduate student) power differential:** "PI using manuscript authorship as a bait to get students or postdocs to stay" and "I feel like <u>I can't be open about my goals</u>." and "The sticky issue is <u>what can be taken to an independent position</u>...Postdocs are pretty powerless, and can't do anything about this."
- Family planning: "It seemed that I had to sacrifice important time with my young child to be able to advance my work, all while feeling judged by my colleagues and mentors for making the decision to start a family."
- Insufficient structure and support: "if I worked in a company, there would be a reporting structure and shared accountability. instead, as a postdoc, I'm all on my own to sink or swim."
- Success measured by publications: "My PI is <u>not fair in giving authorship credit</u> on publications. The university HR department is aware of my PI misconduct and has never done anything about it. I feel like PIs have tremendous power that allows them to behave in a very unprofessional way and there is nothing HR or department chair can do or are willing to do about it."

Question 6: Do you have suggestions for how your research training environment could have been improved to avoid these barriers?

- PI/Postdoc (Graduate student) power differential: "<u>University action</u> on behaviors that hold one back/power games" and "There should be some control system in place to prevent this type of abusive behaviour...maybe some sort of <u>committee</u>, or <u>office</u>, maybe <u>a two-way annual review system</u>, where the grad student or postdoc gets to <u>evaluate the PI</u>... <u>An academic mentor</u>-not the PI, and preferably in a different department- scheme"
- Family planning: "I believe more can be done to <u>support female</u> (but also male) postdocs with young children. As I was working on my project on my own, my work would have benefitted from the <u>help by an RA or technician</u>. I believe that my PI could have made more resources and support available to me during this time, but the <u>attitude was that it was my fault the project was not progressing faster and I should not be rewarded."</u>
- Insufficient structure and support: "I think <u>PIs need to receive training in how to mentor people.</u> This is very standard practice for managerial positions in non-academic career settings. I think most PIs are well-meaning people who are both very skilled and intelligent, but going through the independence gauntlet of academia to get the papers to become a PI I think may actually disincentivize people from taking time out of their careers to learn how to mentor."
- Success measured by publications: "Come up with <u>new measures of success</u> outside of impact factor and number of publications"

N= 59 responses

Success metrics are wrong

Publication record (# of papers in "high impact" journals) = Fundability

- => Pressure
- => Rigor and reproducibility issues
- => Secrecy and massive fear of being scooped
- => Deflating as feels like success is down to luck
- => Good scientists leave academia

Metrics for success are wrong and can lead to a skewed perspective of what it means to be a good PI

- Solutions: change the metrics by incentivizing a broader outlook of what a good PI should be
 - => greater incentives to develop skills away from bench, e.g. in communication, teaching, management/business
 - => alternate metrics for measuring success, e.g. citations, reuse metrics, contribution to peer review, outreach
 - => more PI role models with diverse skill-sets
 - => generate new roles in R1/R2 institutions that welcome/encourage these skills, e.g. teaching vs research-only
- What have I done to try and help fix this?
 - => iBiology Young Scientist Seminar Series: coaching Graduate students and Postdocs in science communication
 - => Postdoc Slam Easy group: develop effective science communication with Postdocs
 - => ASAPbio Ambassador: preprint education and advocacy
 - => Preprint Journal Club: to help train early career researchers in peer review and promote open peer review



Role: to adhere to well-defined learning outcomes Compensation: time and room to learn broad skill-set, some ownership over your data??

PI's Role: a mentor to guide postdocs to reach their desired career outcome (discussed before join lab)

- Creates clear expectations
- Avoids issues caused by PI/Postdoc power differential

What *is* a Postdoc, anyway?



Or a staff researcher position?

Role: to produce data and publish Compensation: decent salary

PI's Role: a supervisor



Supportive initiatives provided at UCSF

Postdoc Office and PSA:

- Postdoc Slam
- Postdoc Interest Groups
- Bay Area Postdoc Symposium
- Data collection on career outcomes



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Office of Career and Professional Development (OCPD):

- Career development workshops (e.g. STEP-UP)
- Career exploration workshops/courses (e.g. MIND)
- Database generation for networking/career exploration (e.g. MINDbank and UCSFconnect)
- One-on-one training and support
- Data collection for career readiness guidance (ACRA)

International Students and Scholars Office:

- Host events to create an international scholar community
- Provide information and support about visa issues

