



THE AMERICAN ASSOCIATION OF
IMMUNOLOGISTS

**Submission by The American Association of Immunologists
to the National Institutes of Health (NIH) Request for Information (RFI): Re-envisioning U.S.
Postdoctoral Research Training and Career Progression within the Biomedical Research
Enterprise**

April 14, 2023

Perspectives on the roles and responsibilities of the academic postdoc (e.g., what the postdoctoral position means to you, how you view it).

The American Association of Immunologists (AAI), the nation's largest professional association of research scientists and physicians who are dedicated to understanding the immune system through basic, translational, and clinical research, appreciates this opportunity to comment on postdoctoral research training and career progression within the U.S. biomedical research enterprise. We begin by endorsing the thoughtful comments submitted by the Federation of American Societies for Experimental Biology on April 6, 2023. In addition, AAI wishes to emphasize the following points.

AAI views postdoctoral scholars ("postdocs") as skilled scientists who have significant expertise in a particular field and a multitude of capabilities, and who should be valued as such. The "trainee" label does not reflect their expertise and skill, and AAI urges NIH to reevaluate its use. The postdoc position should be a period of advanced training, designed to foster independence, that serves as a steppingstone to a desired career. It should have a defined timeframe appropriate for the postdoc's ultimate career goals and enable the postdoc to make contributions to their scientific field.

AAI believes that principal investigators (PIs) and institutions should invest in the postdoc's research and career development, whether in academia or other sectors (e.g., industry, policy, law, etc.). This could include meaningful training in obtaining funding, mentoring, leadership, running a lab, budget management, data management, study section service, and pursuing careers outside of academia, etc. While a postdoc's responsibilities include a level of dedication to the research and a respect for their PI's goals, time, and resources, a postdoc should not be treated as a laboratory "workhorse," and the expectation should not be that the postdoc position is a period of unreasonable personal sacrifice. It is essential that the position accommodate family responsibilities, provide sufficient financial stability, and offer health and emotional wellness benefits.

Fundamental issues and challenges inhibiting recruitment, retention, and overall quality of life of postdoctoral trainees in academic research.

One major issue that inhibits recruitment, retention, and overall quality of life for academic postdocs is insufficient compensation. AAI believes that postdoc compensation should reflect their level of education,

expertise, and knowledge; they should be paid as professionals and should not have to live “student” lifestyles. Current stipend levels do not always reflect regional cost of living, representing a barrier to recruiting and retaining postdocs in high cost of living science hubs (e.g., New York, Boston).

Another major barrier is the lack of available and adequate benefits, including parental/family leave, accessible and affordable childcare (a barrier that disproportionately affects women), and retirement benefits like employer-matched contributions. Scientists often enter their late 20s - mid 30s without having significant retirement savings or financial stability and may never catch up to their peers in other sectors. Low pay and inadequate benefits select for well-resourced individuals, as compensation is often inadequate without other external support.

The academic postdoc position, intended to be a temporary and transitional career stage, is often ill-defined in terms of length, expectations, next steps, etc., creating a period of instability that may be looked upon unfavorably compared to other opportunities. A fundamental issue affecting recruitment, retention, and quality of life is uncertainty about future career prospects during the postdoc period. Many graduate students are unwilling or unable to make the financial and personal sacrifices required of an academic postdoc, and many postdocs choose not to pursue tenure track faculty positions in academia, in part because of the difficulty of attaining such a position and of securing and maintaining funding as a PI. These and other challenges may make other career paths more attractive.

Existing NIH policies, programs, or resources that could be modified, expanded, or improved to enhance the postdoctoral training ecosystem and academic research career pathways.

To improve the postdoctoral training ecosystem, NIH should consider allowing NRSA fellows and trainees to maintain “employee” status at their institutions so that they may receive institutional benefits (health insurance, retirement benefits, etc.). In addition, developing and enhancing mentoring opportunities that allow postdocs to depend less on their PI and their PI’s networks will improve the academic research career pathway, as will making new and/or expanding funding mechanisms that bridge postdocs to academic careers, like the K99/R00 award. Furthermore, NIH should consider addressing the [imbalance](#) in the number of awards given to Ph.D. students and postdocs. For more than two decades, the number of awards for Ph.D. students has been increasing while the number of awards for postdocs has steadily declined. Addressing the reasons behind this imbalance, and reevaluating relevant funding mechanisms (for example, the limited timeline to apply for the K99/R00), may help to optimize the academic biomedical research pipeline.

NIH should consider ways to enable postdocs to obtain and thrive in stable academic scientific positions (other than as a PI), such as staff scientists. Providing grant support or other funding mechanisms for such positions would enable more postdocs to maintain careers in the academic research workforce. The [National Cancer Institute’s Research Specialist Award](#) is an example of a funding mechanism for a stable research position that is not an “independent investigator.” AAI suggests NIH evaluate this award to determine whether it might be a useful model for similar funding mechanisms outside of NCI.

Proven or promising external resources or approaches that could inform NIH’s efforts to enhance the postdoctoral training ecosystem (e.g., improving postdoctoral recruitment, training, working environment, mentoring, job satisfaction).

Many institutions provide higher pay, benefits, defined postdoc policies, etc., that the NIH should consider adopting for the postdocs they support. NIH should also create and model “best practices” for academic institutions to emulate and provide a meaningful incentive for them to do so. Finally, NIH

should encourage institutions and universities to track and report postdoc career outcomes and statistics (e.g., salary/stipend, average length of postdoc).

NIH should work with other federal agencies to facilitate the recruitment and retention of qualified international scientists who may wish to receive their doctoral degree or pursue postdoctoral training in the U.S. NIH should also provide needed support to international scientists currently studying or working the U.S.; this could include assisting with the visa process and increasing the funding opportunities for which they are eligible.

NIH should also consider partnering with the National Postdoctoral Association (NPA), which is dedicated to advancing the best interests of postdocs and the biomedical workforce. The NPA has knowledge of the current postdoc landscape and ideas on how to enrich the postdoc experience and help early career scientists embark on fulfilling careers.

AAI applauds NIH for their past and current efforts to improve postdoc training, thanks NIH for seeking stakeholder input on ways to improve the postdoc experience, and appreciates the opportunity to provide feedback now and in the future.