AMERICAN SOCIETY OF HEMATOLOGY
2021 L Street, NW, Suite 900, Washington, DC 20036 ph 202.776.0544 fax 202.776.0545 e-mail ASH@hematology.org

American Society of Hematology Response to the National Institutes of Health's (NIH) Request for Information (RFI): *Recommendations on Re-envisioning U.S. Postdoctoral Research Training & Career Progression within the Biomedical Research Enterprise (NOT-OD-24-150)*

The NIH is soliciting feedback to their RFI on Recommendations on Re-envisioning U.S. Postdoctoral Research Training and Career Progression within the Biomedical Research Enterprise. NIH issued this RFI as part of its effort to gauge feedback from the biomedical research community to inform implementation of recommendations from the Advisory Committee to the Director on re-envisioning NIH-supported postdoctoral training.

Below are ASH's comments in response to NIH's request (also submitted electronically to the NIH submission site on October 22, 2024).

Recommendation 1.3 Part 1: Limit the total number of years a person can be supported by NIH funds in a postdoctoral position to no more than 5 years.

ASH appreciates the NIH's rationale for supporting the five-year postdoctoral limit; however, the current funding and hiring landscape undermine the policy's intent. Transitioning from a post-doctoral fellowship to a faculty position in academia continues to be quite competitive and securing a position is a lengthy and time-consuming process. Additionally, hiring decisions are largely driven by an individual's ability to publish in top-tier journals, which is difficult to achieve in many areas of science that require advanced mouse models and/or multiple techniques. Research timelines vary – while some projects using invertebrate models may be publishable within three years, work with mammalian *in vivo* systems can require more than five years to complete.

NIH should carefully consider how the five-year limit could impact:

- Parents (especially mothers), who may need time-off from their program to care for their children.
- Individuals who must pause their research for severe health reasons; or
- Visa status of international researchers pursuing a postdoctoral fellowship in the United States (especially if their research takes longer than expected).

Given these factors, the five-year limit should be extended, and flexibility should be provided to ensure that talented researchers are not unfairly disadvantaged.

Recommendation 1.3 Part 2: Limit the total number of years a person can be supported by NIH funds in a postdoctoral position to no more than 5 years.

ASH is concerned that, combined with current low funding levels, limiting postdoctoral support could drive qualified researchers away from academic research and into the private sector, weakening publicly supported biomedical research at academic institutions. NIH should increase early-stage and translational funding to bridge innovation and stabilize research careers by underscoring their importance and impact on academic institutions. Collaborative grants with established researchers could further support new researchers by facilitating their transition to faculty roles.

While many institutions impose five-year limits, postdocs often continue in the same roles under different titles, such as "instructor" or "staff scientist," without any substantive change in responsibilities. NIH

should support alternative career paths, like the Assistant Clinical Investigator role. Some academic research institutions are mandated to transition postdocs after five years to Research Associate positions, offering better salaries and benefits, thus protecting trainees from long periods of exploitation.

NIH should implement accountability measures to ensure institutions support postdocs during their transition and track which institutions support the transition from postdoc to faculty position or private sector. NIH should consider ensuring grantees funding postdoctoral researchers include a "transition to independence plan" for the last 1-2 years of allowable support, like the R00 phase of the K99/R00.

Recommendation 2.2 Part 1: Revise the K99/R00 mechanism to focus on ideas and creativity over productivity.

Limiting the K99 mechanism to only two years will be difficult, if not impossible, to implement. Grant reviewers are trained to evaluate productivity, which will be hard to demonstrate within two years of a postdoctoral fellowship. Most postdoctoral researchers, especially those who are international, are not positioned to transition to an independent research program after only two years.

Postdoctoral researchers need time to grow and develop their skills. Requiring early K99/R00 applications would limit valuable time for generating preliminary data and publishing papers from postdoctoral research. This would discourage postdoctoral researchers from pursuing academic research, increasing pressure to apply for funding too early. The current four-year limit is already too short for certain disciplines, like mammalian in vivo research. Furthermore, shifting focus from productivity to creativity overlooks the reality that productivity is essential, and creativity is subjective and difficult to measure. This proposal would exacerbate existing challenges in the postdoctoral experience and drive more PhD students out of academia.

Recommendation 2.2 Part 2: Revise the K99/R00 mechanism to focus on ideas and creativity over productivity.

This proposal will create inequities, as some fields take longer to generate data and publish. Since first-author publications are required for K99 eligibility, this could overemphasize PhD lab publications, making it harder to discern a candidate's individual creative contributions from the mentor's, potentially biasing awards toward researchers from heavily supported labs, narrowing the pool of scholars and reducing focus on the candidate's own innovation. If reviewers use PhD productivity as a measure, it will shift the burden to extended graduate education, thus undermining the reduced award timeline.

Solely focusing on creativity may also impact long-term success for awardees, as R01 mechanisms do not currently reward creativity. The review criteria should prioritize the potential to be independent--highlighting the distinction from the mentors' work, impact on the field, and feasibility.

NCI has two K99 awards – one for computational researchers with short postdoctoral appointments, and one for fields requiring longer appointments. This model could be applied across NIH, where postdoctoral researchers can submit short innovative grants with little data, but also have a longer grant mechanism available for those needing more data to be competitive on the job market. If changes are made, substantial reviewer training is required to ensure proper evaluation.

Recommendation 4 Part 1: Promote training and professional development of postdoctoral scholars and their mentors.

ASH believes that NIH needs to invest in the future of its postdoctoral scholars. While not all will pursue the faculty path, and institutions cannot support everyone, there should be institutional support for those demonstrating success and seeking academic careers but needing additional time to build competitive research portfolios. Small research institutions are often disadvantaged when it comes to securing funding, leaving young investigators from these institutions, or those affiliated with less prestigious labs, at a disadvantage compared to those from well-funded institutions. Therefore, NIH should create more opportunities for these researchers, allowing them to grow and compete more fairly in the research landscape.

Institutions with large endowments can use that capital to create new faculty positions and provide matching funds to NIH training grants that are received. NIH needs to explicitly support career and professional development activities for large training grant mechanisms, such that principal investigators (PIs) are not forced to negotiate with leadership to operate a training grant. For example, there are many PIs of training grants struggling to find support to fully fund postdoctoral positions, organize retreats, and pay for travel for scholars to attend meetings for career development. Greater support for training and professional development is essential.

Recommendation 4 Part 2: Promote training and professional development of postdoctoral scholars and their mentors.

Mentor training is essential for PIs working with postdoctoral scholars. The NIH should establish a list of critical skills and competencies for mentors, this will allow for institutions and nonprofits to develop training programs to address them. Any additional training for PIs should be carefully considered and executed, as PIs already have a tremendous administrative burden. Additionally, postdoctoral scholars need training in key areas not typically covered in research, such as financial literacy, grantsmanship, conflict management, and effective communication (beyond the delivery of scientific presentations), to better prepare them for faculty positions. Partnerships with non-profit organizations such as ASH are essential to achieve these goals. For example, the ASH Task Force on PhD Careers provides webinars on topics important for first time faculty in a webinar series titled "Strategies for Success in Academic Careers." Increasing cross university collaboration and creating institutional support would be helpful in this regard. Additionally, increasing NIH funding for mentorship training would allow for better mentors as the time spent to be an effective mentor is not adequately valued and funded at all universities.

ASH appreciates the opportunity to provide these comments. Please consider ASH a resource; we would be pleased to provide additional information, support and/or schedule a meeting to discuss these issues further. If you have any questions or would like to arrange a meeting with the Society, please use ASH Director of Government Relations and Public Health, Stephanie Kaplan (*skaplan@hematology.org* or 202-776-0544), as your point of contact.

Sincerely,

Mohandas Narla, DSc
President