



# FASEB

Federation of American Societies  
for Experimental Biology

## Representing Over 130,000 Researchers

301.634.7000  
www.faseb.org

9650 Rockville Pike  
Bethesda, MD 20814

Committee on the Next Generation Researchers Initiative  
Board on Higher Education and Workforce  
The National Academies of Sciences, Engineering, and Medicine

October 3, 2017

Comments submitted via email to [LBeninson@nas.edu](mailto:LBeninson@nas.edu)

Dear Dr. Daniels:

The Federation of American Societies for Experimental Biology (FASEB) appreciates the opportunity to provide input to the Committee on the Next Generation Researchers Initiative regarding strategies to support the successful transition of young scientists into independent researchers. Comprising 31 constituent societies with over 130,000 members in the biological and biomedical sciences, FASEB has long been concerned with providing appropriate educational and career preparedness training and maintaining a robust research workforce.

### I. Level, Sources, and Stability of Research Funding

The Federation has previously advocated multi-year budget authority for the National Institutes of Health (NIH). Delays in the annual appropriations process have a significant, negative impact on the ability of NIH to plan their out-year budgets, and cause agencies to make significant cuts to ongoing research budgets because of uncertainty as to when funds will be made available throughout the fiscal year. This mechanism would ensure that the funds appropriated to NIH by Congress stay at NIH to support ongoing research, and do not have to be forfeited.

Although Common Fund programs, and the Director's New Innovator Award Program in particular, have a useful role in identifying and promoting the ability of young researchers to achieve independence, transferring funds within programs at NIH is a zero-sum game in the absence of sustained funding increases. An increase in funds for one program means a decrease in funds for others. Interestingly, though, with the recent rollout of its Next Generation Researchers Initiative (NGRI), NIH has adopted this strategy. Per the [NGRI webpage](#), NIH will "place greater emphasis on" the New Innovator Award and has directed its Institutes and Centers (I/Cs) to develop their own strategies to "identify, grow, and retain" Early Stage Investigators (ESI) and Early Established Investigators (EEI). It remains to be seen how I/Cs will prioritize programs within their respective portfolios to comply with the new policy. Concerning the recommendation to involve Congress, although the scope of NGRI was directed by Congress in the 21<sup>st</sup> Century Cures Act, the details and implementation were left to the discretion of the Director, as is most appropriate. In general, the less prescriptive Congress is towards NIH the better.

We agree in principle that placing greater emphasis on the entire range of candidates' contributions and accomplishments in the promotion process would benefit everyone, and particularly ESIs. Individual institutions and departments have been and continue to experiment with new and different metrics for

assessing investigators' productivity, including multi-PI grants and publications. In practice, however, achieving widespread adoption of more holistic assessment practices will require a culture change. This is not to say that this change would be unwelcome, just that it will take time.

## II. The Scope of Grant Award and Review

In its 2015 consensus report, *Sustaining Discovery in Biological and Medical Sciences*, FASEB recommended that research sponsors should provide longer awards; this recommendation was intended for all researchers, not just ESI. In response, a number of NIH I/Cs have adopted the R35 grant mechanism which increases the duration of support to 5-7 years, compared to 4-5 years offered by a typical R01 award. It may be worth investigating the feasibility of extending the length of support for other grant mechanisms geared toward young investigators (i.e. R03, K02, K08, etc.), although this would likely entail a concomitant decrease in annual funding provided unless the total available funds for these programs were increased.

The idea to limit the turnaround time between the submission of a grant application and the notification of a decision is attractive. However, unless the peer review process is drastically reimaged we do not see how it would be possible. This 2014 [presentation](#) from Richard Nakamura, PhD, Director of the NIH Center for Scientific Review (CSR), lays out the best-case scenario of time from grant submission to summary statement (scores and critiques from assigned reviewers) as 4.5 months. Dr. Nakamura posits that going faster "under current application loads will compromise quality." Applications received by CSR have increased from 84,000 in 2013 to 92,000 in 2015, with the same number of reviewers (17,000).

## III. Training, Mentoring, and Transparency

The goal of increasing transparency for both prospective students and current trainees regarding programmatic and career outcomes is laudable, and was a recommendation from FASEB's *Sustaining Discovery* report. Specifically, FASEB suggested that information be made available on a departmental level within institutions. The Committee might also want to consider the utility of a central clearinghouse for all such data. It is worth noting that this call for information and transparency is not new, having appeared in multiple reports over the past decades. To achieve the desired result, it may be necessary to make posting of training-related data a criterion for training grants or other federal funding.

Another recommendation in *Sustaining Discovery* was to employ more staff scientists and career technicians, and smaller proportions of graduate students and postdocs. This would help mitigate the current dualism that graduate students and postdocs face as trainees AND employees. Raising the number and profile of permanent staff scientist and core scientist positions would also provide attractive career paths for some of the huge numbers of postdocs who want to stay in academia but for whom there simply are not enough faculty positions. The National Cancer Institute debuted its Research Specialist (R50) Award two years ago to provide funding for "exceptional scientists who want to pursue research within the context of an existing cancer research program, but not serve as independent investigators." It will be important to see an analysis of the response to, and success of, the program, before extending it to other I/Cs.

There is certainly value in the idea of switching from supporting postdocs primarily on research grants to institutional training grants or individual fellowships, provided NIH increases the proportion of its budget devoted to training. This would reinforce the perception of postdocs as trainees and ensure that they have access to the mentoring and career development opportunities intrinsic to traineeships and fellowships. However, implementation of such an approach has a significant number of potential financial and structural complications that must be carefully considered. What happens at institutions that don't have the infrastructure to support training grants? Would postdocs be expected to have a fellowship before applying for a position, and if not, how would they be supported in the interim? Assuming this proposal leads to fewer postdoc positions, would schools then be expected to decrease the number of graduate students they recruit? There are too many other questions stemming from this proposal to enumerate here; suffice it to say that the realities of implementing this recommendation would be difficult to navigate on many levels.

#### IV. Underrepresented Populations

FASEB supports the recommendation that academic medical centers should reform medical and research postgraduate training for MD-PhDs to include adequate support throughout the training process. Medical Scientist Training Programs (MSTPs) are extremely effective in training physician scientists through their terminal degrees, but the post-MSTP training space is often less structured. There is no federal oversight of or funding for Physician Scientist Training Programs (PSTPs), and these are not offered at all institutions nor for all disciplines. NIH recently unveiled the Stimulating Access to Research in Residency award (StARR; R38; [RFA-HL-18-023](#)) to support "institutional programs of mentored research opportunities designed for Resident-Investigators to engage in research projects with experienced investigators...with the goal of accelerating the transition of participating residents to subsequent research and career development support." Similar to the Research Specialist award, analyses of institutional uptake and program outcomes with StARR will be important for evaluating its success. Additionally, NIH should consider broadening the criteria for participation in its loan repayment program to include clinicians and physician scientists engaged in basic research.

FASEB commends the Committee for taking on the important and difficult task of identifying policies and programs to incentivize and ease transitions to independent research careers, and looks forward to seeing your recommendations. If the Federation can be of further help, or provide additional information, please let me know.

Sincerely,



Thomas O. Baldwin, PhD  
FASEB President