

Subject: Written Comments from the American Society for Biochemistry and Molecular Biology to the NIH advisory committee to the director

The American Society for Biochemistry and Molecular Biology represents 12,000 basic life science researchers ranging from undergraduate students to established investigators. We support efforts by the National Institutes of Health to develop initiatives on multiple fronts including support for the next generation and efforts to ensure that taxpayer funded research is of appropriate rigor and productivity. Without robust mechanisms for supporting the next generation, we stand at risk of allowing the fruit of our training investments to wither on the vine. Furthermore, in the absence of appropriate standards for rigor, reproducibility, and productivity, we risk losing public confidence in the scientific endeavor and the ability to quickly and efficiently translate results from the bench to the clinic.

The aging of the scientific workforce represents a clear and present danger to maintaining a cadre of investigators capable of leading the scientific workforce in the future. The ASBMB has been supportive of the recent efforts by the NIH to develop strategies to appropriately support the next generation of researchers. We have engaged with Mike Lauer and Jon Lorsch as the Next Generation of Researchers Initiative (NGRI) has evolved beginning with the Grant Support Index and into its current iteration as the NGRI. We encourage the committee to think boldly on how the agency both continues to develop and implement this policy moving forward. We also laud recent testimony on strengthening the biomedical workforce given by Director Collins to the House Committee on Energy and Commerce's health subcommittee. In particular, in response to questions from Rep. Walden (R-OR 2nd) regarding a biomedical workforce "tilted toward, frankly, late career investigators" Collins indicated that the NGRI is an "area of great and high priority" in which the NIH will seek to "think boldly". We hope to continue to work with the NIH to ensure that the input of a diverse array of stakeholders are incorporated as the agency tackles this important issue.

The departure of scientists from the workforce is a difficult and significant issue. Overcoming the challenges of a departure is challenging under the best of circumstances and this challenge is likely heightened in hypercompetitive climates. The ASBMB urges the committee to pursue strategies to reengage and promote the re-entry of these highly skilled individuals. Bold thinking in this area could produce a robust program that ensures, even after an unexpected leave of absence, the biomedical workforce will retain highly qualified personnel who have been recipients of federal investments in biomedical research training.

In addition, working to ensure rigor and reproducibility will also require bold thinking as the community transitions away from evaluating quality based on journal title or impact factor in lieu of more tangible metrics. To this end, we feel that the NIH should explore a wide range of potential solutions, including, but not limited to, PQRST metricsⁱ or a Research Integrity Advisory Board.^{ii,iii}

Each of these approaches have merit and risks and the NIH should weigh the benefits of new rigor and reproducibility efforts with the cost to investigators. According to the 2012 FDP Faculty Workload Survey, principal investigators spend up to 42 percent of their time on administrative tasks.^{iv} Therefore, any additional regulatory burdens should be sufficiently evaluated to ensure that scientists are spending the majority of their time at the bench.

Each of these issues will require buy-in and participation from the scientific community in order to be effective and successful. We look forward to continuing this dialog and providing the NIH with the views of our membership. Throughout this process ASBMB will continue to offer support for the NIH's mission and would like to work closely with the committee to contribute to the development of policies that advance high quality science and ensure sustainability of the biomedical research enterprise.

ⁱ Ioannidis, J. P. A., & Khoury, M. J. (2014). *Assessing value in biomedical research: the PQRST of appraisal and reward*. JAMA 312(5), 483–484. <http://doi.org/10.1001/jama.2014.6932>

ⁱⁱ Nature Editorial Board (2017) *Research health needs a dedicated group*. Nature, 551(7681), 413–413. doi:10.1038/d41586-017-07330-5

ⁱⁱⁱ Mervis, J. (2017) *U.S. report calls for research integrity board*. Science, 356(6334), 123–123. doi:10.1126/science.356.6334.123

^{iv} <https://smrb.od.nih.gov/documents/reports/8a-FDP-2012-FWS-Research-Report.pdf>