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RE: National Institutes of Health Office of Extramural Research Request for Information on Recommendations for Improving NRSA Fellowship Review

The American Society for Biochemistry and Molecular Biology is an international nonprofit scientific and educational organization that represents more than 10,000 students, researchers, educators and industry professionals. The ASBMB strongly advocates for strengthening the science, technology, engineering and mathematics workforce, supporting sustainable funding for the American research enterprise, and ensuring diversity, equity and inclusion in STEM.

The ASBMB greatly appreciates the work of the National Institutes of Health Center for Scientific Review Advisory Council [Fellowship Working Group](#) to improve the fellowship review application and process for the Ruth L. Kirschstein National Research Service Award (NRSA) fellowships. The [report](#) published October 2022 by the Fellowship Working Group incorporates nearly all of ASBMB's earlier recommendations ([here](#) and [here](#)) to reduce institutional and investigator bias and refocus the evaluation based on an applicant's potential and the impact of the proposed training. Below is ASBMB's formal response to the proposed changes as presented in [NIH's Request for Information \(RFI\) on Recommendations for Improving NRSA Fellowship Review](#).

Altogether, the ASBMB supports the modifications to NRSA fellowship application materials and review criteria proposed by the Fellowship Working Group. These changes will better guide reviewers to identify the most promising applicants while also combatting biases that exist in favor of senior investigators at well-resourced institutions.

Perspectives on proposed changes to NRSA fellowship review criteria

The ASBMB supports the proposed reorganization of "Institutional Environment and Commitment to Training" and "Sponsors, Collaborators, and Consultants" into "Science and Scientific Resources" and "Training Plan and Training Resources." With this change, we are optimistic that positive bias for highly resourced institutions and highly experienced sponsors will be reduced. Reviewers will be directed to focus their evaluations on an applicant's research and training potential with less influence from factors (e.g., sponsor and institution) that are largely outside of their control.

The proposed changes to NRSA fellowship review aim to “[to reduce bias and increase fairness to facilitate the identification of the strongest, highest-impact research](#)” across institutions, sponsors and applicants. With any significant change to peer-review criteria and/or process, the ASBMB strongly supports continued evaluation of the efficacy post-implementation. Continued evaluation of these changes will ensure that the scoring of an applicant’s “delta” is having the intended outcome and not creating more subjective scoring that allows bias to persist.

In combination with updated review criteria, the Fellowship Working Group recommended that CSR tailor its “Peer review bias awareness and mitigation training” for use in fellowship review by including more fellowship-specific examples. The ASBMB agrees that this would be helpful to continue combatting bias in peer review and encourages CSR to additionally consider (1) adding an implicit bias module, (2) requiring that reviewers complete the full training module and (3) encouraging reviewers to review the bias training materials (or conduct a quick refresher module) prior to review.

As the CSR begins to roll out changes to fellowship peer review, the ASBMB echoes the Fellowship Working Group in requesting additional outreach to lower-resourced institutions as well as updated and detailed resources to help inform scientists of the changes and new requirements. The ASBMB is eager to assist with the dissemination of this information to our membership. To help prevent any confusion, we request that CSR clarify the funding opportunity announcements (FOAs) that are subject to the new updates from FOAs that are subject to an independent institute’s review policy and procedures.

Perspectives on the proposed changes to the NRSA application instructions and materials

The ASBMB is thrilled that the CSR Fellowship Working Group has taken our recommendation to include an “Optional Statement of Special Circumstances.” This will provide optional space for an applicant to explain personal or professional circumstances that have caused a delay or gap in their research or career trajectory. As the scientific enterprise moves to be more inclusive and less biased of nonlinear circumstances, we must provide opportunities for applicants to explain deviations from “traditional” paths and timelines without using space in the application’s personal statements. As a result, junior scientists who have switched labs due to harassment, experienced significant research setbacks in response to COVID-19, or taken a leave of absence for illness, personal reasons or caregiving duties will have the full opportunity to shine in their application without risking negative assumptions or bias. As the directions for the optional statement are developed, the ASBMB encourages the CSR to provide an exhaustive list of possible reasons the statement would be utilized. This will help ensure that the statement is used responsibly and that applicants will feel empowered to share potentially difficult circumstances.

Removing grades from an applicant’s requested materials is strongly supported by the ASBMB, as previously stated. Similarly, the ASBMB strongly supports the changes made to the sponsor’s statements that better emphasize the quality of training, rather than the quantity. We thank the Fellowship Working Group for carefully shaping these sections to be comprehensive while also trimming areas that were prone to bias.

The ASBMB applauds the inclusions made in “Fellowship Qualifications” and other applicant statements that direct the applicant to detail both professional and life experiences in further detail. By encouraging the applicant to detail the activities and/or experiences that shape their approach to being a scientist and also how they plan to grow as a scientist, reviewers will glean a more holistic view of the applicant both at and away from the bench. The new instructions and statements also encourage applicants to detail leadership and volunteer work. Since these types of experiences help develop important soft skills that are critical for successful research careers, the ASBMB feels this is a strong addition and clarification to the fellowship instructions and materials.

Lastly, the ASBMB echoes the [Federation of American Societies for Experimental Biology’s concerns](#) about potential gamification between the new self-assessment statement and the sponsor evaluation. In these materials, the reviewers will consider the applicant’s strengths and weaknesses from the perspective of the applicant and the sponsor respectively. Due to the similarity of instructions, it’s not clear whether it is expected that the content of both materials be the same, similar or different. To prevent confusion by applicants, sponsors and reviewers, we ask that clarifications be made regarding these two materials.

In summary, the ASBMB is enthusiastic about the proposed changes to fellowship peer review and humbled by the thoughtful inclusion of ASBMB’s past recommendations to the Fellowship Working Group. We thank the CSR and the Fellowship Working Group for their hard work and dedication to improving peer review given it is a foundational element of the scientific research enterprise, and we look forward to being a continued stakeholder in these future endeavors.