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RE: Comments to Center for Scientific Review Advisory Council

The American Society for Biochemistry and Molecular Biology (ASBMB) is an international nonprofit scientific and educational organization that represents more than 12,000 students, researchers, educators and industry professionals. The ASBMB strongly advocates for strengthening the science, technology, engineering and mathematics (STEM) workforce, supporting sustainable funding for the American research enterprise, and ensuring diversity, equity and inclusion in STEM.

At the National Institute of Health's Center for Scientific Review's (CSR) Advisory Council meeting on March 28, 2022, the council presented feedback from participants in recent bias training initiatives, and the NRSA Fellowship Workgroup provided recommendations to CSR.

Below, we comment on the compelling data and ideas presented at the meeting and offer several recommendations.

Now that CSR has tested out its "Bias Awareness in Review" training on voluntary participants, the ASBMB recommends that everyone involved in scientific review be required to complete the module prior to participation on study sections. The survey results highlight both the urgent need to minimize bias during scientific review as well as the training's success in increasing reviewers' confidence in identifying and intervening in the presence of bias. We hope that CSR requires the training for all reviewers, chairs and scientific review officers and that the training will be offered recurrently to facilitate sustained and enhanced awareness of bias.

We also recommend a thoughtful review of feedback from the voluntary participants and incorporating it into new material that can enhance the curriculum, such as providing more examples of implicit and other types of bias and intervention tools for reviewers to use to counteract bias without fear of retaliation.

The NRSA Fellowship Workgroup recommendations to improve the fellowship review process were thoughtful and directed to better serve a wider diversity of applicants. We encourage CSR to implement them soon. We were delighted to see that the working group incorporated aspects of our Jan. 24 suggestions.

The working group's recommendations to improve fellowship review are below, and our responses are presented for each:

1. Eliminate grades as indicators of qualifications.

Given that grades are not an accurate measurement of success, we endorse this recommendation.

2. Eliminate the “Sponsor/Collaborator” and “Institutional Environment/Commitment to Training” criteria.

We agree that CSR should take steps to reduce the importance of the mentor and institution of the applicant, but we believe that mentorship does play an important role in trainee success. We suggest replacing the above criteria with a detailed mentorship plan, similar to the “Postdoctoral Researcher Mentorship Plan” required by the National Science Foundation [fellowship application](#).

3. Allow an optional statement of special circumstances (with an option to have the school submit a separate letter).

We agree that there should be more opportunities for applicants to describe hardships and gaps in their curricula vitae. However, we urge CSR to include a framework for applicants to 1) understand what qualifies as a special circumstance and 2) feel reassured that explaining certain special circumstances, such as harassment, will not penalize them.

4. Explicitly allow a wider range of career paths in fellowship training.

Because only a [small percentage](#) of scientists-in-training will go on to obtain tenure-track research faculty positions, it is imperative that CSR 1) explicitly state that all research careers are worthy of fellowship training support, 2) encourage applicants to be honest about their intended career goals, and 3) explicitly and repeatedly inform fellowship review panels of this shift in philosophy.

5. Encourage a statement of qualifications that extends beyond grades and publications.

We encourage the CSR to accept this recommendation and reframe the statement of qualifications as an opportunity for the applicant to tell their personal story, such as their motivations, challenges they have overcome and how they see their future as a scientist. Their personal connections to their science should provide more meaningful insight about the applicant and their potential than their accomplishments to date. There is sufficient information supplied via the biosketch to assess the applicant's academic qualifications.

6. Have review criteria that measure the total impact (delta) that the fellowship can bring to the individual and reduce the importance of external factors, such as mentor, institution, etc.

At this meeting, it was shared that 30% of fellowships applications come from only 15% of all universities and a greater proportion of those are funded; it is imperative that CSR develop novel measurements to assess applicants in a way that removes institutional and implicit bias. We endorse evaluating applications by measuring the “delta” positive impact on an applicant's career, and we encourage CSR to transparently engage a diverse set of internal and external stakeholders

when developing the criteria for quantifying an applicant's "delta."

Additionally, the ASBMB proposes that the CSR provide fellowship applicants with a repository of curated resources for writing competitive fellowship applications. There are several available resources that have already been developed by NIH ([F31 grant examples](#) and [instructive webinars](#)) as well as resources developed by extramural institutions, [like this one](#). A resource repository that was accessible via the "[How to Apply - Application Guide](#)" webpage or the Funding Opportunity Announcement would help equalize the process of preparing fellowship applications. Because research-intensive institutions already have many examples of success and resources within their network, this repository would serve to increase the competitiveness of applicants from less-resourced institutions by providing a better understanding of fellowship preparation.

To build upon the progress reported at this Advisory Council meeting, we recommend incorporating the bias training feedback as well as the recommendations from the fellowship working group into the CSR's review policies and procedures.