



FASEB

Federation of American Societies
for Experimental Biology

Representing Over 115,000 Researchers

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Center for Scientific Review Advisory Council
c/o Bruce Reed, PhD
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National Institutes of Health
6701 Rockledge Drive, Bethesda, MD 20892

Submitted electronically via email: reedbr@mail.nih.gov

Dear Center for Scientific Review Advisory Council members,

The Federation of American Societies for Experimental Biology (FASEB), representing 28 scientific societies and over 115,000 individual researchers, has a vested interest in making the application process for National Institutes of Health (NIH) Ruth L. Kirschstein National Research Service Award (NRSA) fellowship awards both more equitable and effective to foster an inclusive biomedical research ecosystem. We praise the efforts of the [Fellowship Review Working Group](#) to reevaluate current NIH NRSA individual fellowship application materials and review criteria, and largely support the [final recommendations presented](#) during the September 2022 NIH Center for Scientific Review (CSR) Advisory Council meeting. By deemphasizing the reputation of the scientific advisor and institution in the application and placing more focus on the trainee's potential for growth, these changes are better suited to support a diverse cohort of promising early career scientists. We offer additional considerations to the proposed revisions below.

Recognizing the suggestions that follow are offered only in context of the overview provided at the Advisory Council meeting, FASEB looks forward to broad stakeholder engagement as additional details are developed. As Working Group recommendations are implemented, it is imperative that NIH undertake clear communication efforts with the extramural community to prevent unintended confusion or obfuscation in future NRSA submissions.

Criteria Revision to Consider Trajectory in Context of Available Opportunities

In the Working Group's proposed revisions to review criteria, there was significant emphasis on evaluating applicants in the context of opportunities available to them given their background. While FASEB commends this broadening of perspective in applications and clarification on "the delta" from the [previous update](#), clearer guidance is still needed for Study Review Group (SRG) members to ensure the revised criteria is properly applied during review. With the current language, contextualizing the applicant's experience remains a highly subjective process, opening the possibility that these revisions do not elicit the desired broadening in awardee backgrounds. Specifically, reviewers should be encouraged to value examples of creativity, resiliency, and problem solving skills outside of a strict research context. Additionally, in the spirit of considering both the trajectory and opportunities available to the applicant, the review process could benefit

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from grouping submissions by individual fellowship type within SRGs. As an example of this benefit, an F32 applicant who graduated from a primarily undergraduate institution (PUI) may shine when compared to other F32 applicants, but the same applicant may be viewed less favorably if reviewed directly after reading an F31 submission from a “highest research activity” school.

Furthermore, reference letter requirements must be brought in alignment with the recommended criteria revisions. Currently, applicants are required to submit three references at minimum, excluding the sponsor. As noted in [previous FASEB comments](#), students from disadvantaged backgrounds may not have experiences in research beyond their current science. Although it is not stated that reference letters must come from research-related references, the [instructions for fellowship applicant referees](#) heavily imply that they should. This may be a significant burden to students from underrepresented and historically excluded backgrounds. As such, we encourage that reference letter instructions be explicitly expanded to accept input from persons who oversaw students’ efforts in their available opportunities (e.g., academic advisor, manager, professional society chapter leader, etc.) to match the revised criteria. This will serve to include applicants who have previously been perceived as lacking the necessary experience to be successful in science, including but not limited to those who needed employment during college, those from PUIs with limited access to laboratory opportunities, and those from historically excluded communities who may have lacked access to mentors and the informal knowledge required to succeed in academia. These candidates may exhibit the traits of an excellent scientist in their non-research experiences. Expanding references to include such experiences will welcome those from these valuable backgrounds to apply for fellowships and serve to guide SRGs to thoughtfully weigh the merit of an applicant’s qualities and opportunities in their review.

Criteria Revision to Remove Peer Review of Financial Support

FASEB supports the recommendation to defer the review of financial support of the application until after the impact of the application has been discussed. Listing current financial support can lead to reviews that favor institutions with historical success in securing NIH funding and disadvantage applicants with early stage investigators (ESI) as sponsors. That said, adequate financial support is vital for the fellowship awardee’s training. NIH Program Officers evaluating the proposed just-in-time submissions must be well equipped with access to resources to properly assess whether existing funding is sufficient to complete the proposed science. This assessment should be conducted in concert with sponsors and include funding mechanisms outside NIH.

Revision to Sponsor and Co-Sponsor Section of Fellowship Supplemental Section

Current sponsor and co-sponsor statements are often populated with boilerplate language that focuses on the tenure and prestige of the sponsors, and emphasizes quantity of prior trainees over quality of mentorship for the applicant. FASEB supports the suggested revision that sponsors detail highlights of their mentorship history. However, applicants with ESI sponsors, who may not have yet had time in their independent position to guide a mentee through training completion, will still be at a disadvantage. A sponsor in this position should be able to detail mentorship trainings attended, trainees mentored while in previous positions, and plans to address the mentorship experience gap in lieu of listing trainees.

The direct calls to require individualized training plans, specify the value added of the cosponsor, and address the distinct qualifications of the applicant all aid to clarify mentorship quality as the focus of this section. However, implementation of these changes will need to be communicated prudently to avoid undesired outcomes. As an example, Advisory Council members discussed that one-to-one alignment of the applicants’

self-assessment and sponsors' evaluation of the trainees' strengths and weaknesses could be construed as skirting independent evaluations. Conversely, a lack of alignment may be negatively viewed as poor communication between the sponsor and trainee. Expectations of similarity between the applicants' self-assessment and sponsors' evaluation would need to be communicated explicitly, as it might not be obvious to those with limited NIH application experience.

Granting Honorable Mentions to Meritorious Applicants

The addition of an honorable mention function, like that of the National Science Foundation's Graduate Research Fellowship Program, could significantly bolster promising, young scientists as they continue in their scientific career. An official acknowledgement of the trainee's effort and skill as a line on their CV could be a meaningful benefit in interviews, especially for applicants too far along in their training to reasonably resubmit. In addition to the proposed usage of recognizing highly qualified applicants who could not be awarded due to competitive pay lines at varying Institutes and Centers, other scenarios might be fitting of this honor. Applicants with excellent science but underdeveloped training plans, or those deemed to have insufficient funds during just-in-time proceedings could benefit from this distinction. As a mechanism for honorable mentions is developed, NIH should clarify that an honorable mention does not unfairly elevate an application in the case of resubmission.

Broadening of Career Goals

[Echoing prior comments](#), FASEB applauds the suggestion of broadening the scope of career goals welcomed by the NRSA program. The stated [predoctoral NRSA Funding Opportunity Purpose](#) is to enable promising trainees "to develop into a productive, independent research scientist." Training provided by the NRSA fellowship functions to strengthen the highly skilled workforce that serves the U.S. biomedical ecosystem across many sectors. As this suggestion moves forward, support of careers outside of academic research must be unambiguously stated as both valuable and relevant to the mission of NRSA programs in the funding opportunity announcement. Explicit communication to applicants, sponsors, and reviewers will be critical to enacting this change.

We thank you for your ongoing efforts to reevaluate NRSA fellowship review criteria. Enabling a more diverse pool of research scientists to participate in NIH funded training is essential to the continued development of an innovative scientific workforce able to adapt to the challenges of the future. FASEB looks forward to continued engagement with extramural stakeholders on this issue as the recommendations are implemented.

Sincerely,



Kevin C. Kregel, PhD
FASEB President

Cc: Noni Byrnes, PhD, Director of the Center for Scientific Review, and Elizabeth Villa, PhD, Chair of the Fellowship Review Working Group