THE AMERICAN ASSOCIATION OF IMMUNOLOGISTS

December 6, 2016

Response of the American Association of Immunologists (AAI) to the NIH Request for Information: Including Preprints and Interim Research Products in NIH Applications and Reports (<u>http://grants.nih.gov/grants/guide/notice-files/NOT-OD-17-006.html</u>)

> Submitted on behalf of AAI by Lauren G. Gross, J.D., Director of AAI Public Policy and Government Affairs

1. Types of interim research products you or your organization create and/or host:

As a professional society comprised of research scientists and physicians, The American Association of Immunologists (AAI) does not create or host any type of interim research products. AAI members may create interim research products in the form of preprints and/or large data sets. However, our comments will focus solely on preprints.

2. Feedback on what are considered to be interim research products, and how they are used in your field:

AAI considers preprints to be interim research products. Preprints are generally understood to be documents that have not yet been peer-reviewed but have been made available in print or electronic form. However, some may consider preprints to be manuscripts accepted for publication that are not yet available through the publisher. Absent a clear definition from NIH, AAI will continue to define a preprint as a document that has not yet undergone peer review. AAI has no data regarding how preprints may be used or by whom for research purposes; for publication purposes, preprints can be submitted directly from some preprint servers to some peer-reviewed journals.

3. Insight on how particular types of interim research products might impact the advancement of science:

Although they are not peer-reviewed, preprints could potentially help advance science or medicine by disseminating urgently needed information quickly, as for example, in the case of public health emergencies (such as an outbreak of disease) or where no current treatment exists. However, preprints could also hinder the advancement of science or medicine if they report incomplete, inaccurate or erroneous information.

4. Feedback on potential citation standards:

For full transparency, when citing preprints (including on a CV), including preprints which already have a digital object identifier (DOI), the citation should clearly indicate that it is a preprint (and therefore, has not been peer reviewed). If an article based on the preprint is later published in a peer-reviewed journal, NIH should require the author to request that the preprint server acknowledge publication and cite the journal reference (including the DOI to link to the published article).

5. Insight on the possible need and potential impact of citing interim products on peer review of NIH applications:

AAI does not believe that preprints should be cited in NIH grant applications because they are not peer-reviewed scientific documents and because they could undermine NIH efforts to increase rigor and reproducibility in science. Including preprints which are not identified as such with NIH application materials would place an additional burden on those reviewers who would otherwise not read or consider a preprint during the peer review process. While including preprints in an NIH application could potentially be useful in the peer review process for early stage investigator applicants who have a limited number of publications (in order to show progress and/or productivity), AAI recommends against allowing their inclusion because they are not peer-reviewed and therefore cannot show quality.

6. Advice on how NIH reviewers might evaluate citations of interim research products in applications:

Including preprints in NIH application materials could undermine application page limits. If preprints were to be included on NIH applications, NIH reviewers should view them as similar to progress reports since they are not peer-reviewed. If a preprint is the basis for a manuscript that is later accepted for publication in a peer-reviewed journal, applicants can indicate this through post submission materials, per the new NIH post-submission policy effective January 25, 2017.

7. Any other relevant information:

Preprints do not necessarily "increase the impact and rigor of a research study." (NIH RFI) This would occur only if useful comments are made to the authors, who can then improve their study. However, many preprints which are published on preprint servers show no posted comments at all; for example, 95% of the 40 immunology preprints posted on bioRxiv from January 2016 through November 2016 show no posted comments.

Although the NIH RFI describes preprints as "permanent," it is important to note that while they may be permanently located on a server, and may receive a DOI, they may also be succeeded by a revised final version which is published in a peer-reviewed journal following the peer review and editing process.