



24 October 2014

The Honorable Lamar Smith
Chairman, House Committee on Science, Space, and Technology
2321 Rayburn House Office Building
Washington, D.C. 20515

The Honorable Eddie Bernice Johnson
Ranking Member, House Committee on Science, Space, and Technology
394 Ford House Office Building
Washington, D.C. 20515

Dear Representatives Smith and Johnson:

On behalf of the American Geophysical Union (AGU) and its more than 62,000 members worldwide – Earth and space scientists striving to advance scientific research and understanding for the benefit of humanity – I am writing to express our support for the merit review criteria and peer review process of the National Science Foundation (NSF). It is our hope that Congress continues to recognize the value and efficacy of this process and does not attempt to place congressional judgment over scientific judgment in decision of merit review.

NSF is the nation's premier agency supporting basic research and education in science, mathematics, engineering, and technology (STEM). Its granting decisions are made on the basis of merit review by science and engineering peers and evaluated with respect to two equally important criteria – the intellectual merit of the project and the broader impacts of the work.

In January 2013, NSF implemented revised merit review criteria based on the National Science Board's report, *National Science Foundation's Merit Review Criteria: Review and Revisions*. When evaluating NSF proposals, peer reviewers now consider five elements in review for both merit criteria:

1. What is the potential for the proposed activity to:
 - a. Advance knowledge and understanding within its own field or across different fields (Intellectual Merit); and
 - b. Benefit society or advance desired societal outcomes (Broader Impacts)?

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2. To what extent do the proposed activities suggest and explore creative, original, or potentially transformative concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a sound rationale? Does the plan incorporate a mechanism to assess success?
4. How well qualified is the research team and institution(s) to conduct the proposed activities?
5. Are there adequate resources available to the project investigator(s) to carry out the proposed activities?

These five review elements are guided by a set of review principles directing that all NSF projects: are of the highest quality and have the potential to advance the frontiers of knowledge; contribute to achieving societal goals; and are evaluated using appropriate metrics.

The guiding principles and review elements further strengthen what was already considered the standard in scientific peer review. NSF's merit and peer review process is emulated and employed by foundations and review bodies throughout the U.S. and around the world. NSF funds potentially transformative research that sparks innovation, saves lives, and supports economic and national security. Furthermore, NSF works hand-in-hand with the STEM community and Congress to ensure its grant solicitations accurately represent the direction of the science and the needs of the American people.

As the House Committee on Science, Space, and Technology discusses potential authorizations for NSF and other science funding agencies, AGU hopes that the committee recognizes the exceptional work of NSF in establishing and adhering to its effective and respected merit review criteria and does not interfere with the integrity of the process.

Sincerely,



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