

Research Opportunities, Merit Review Process, Avoiding Common Mistakes and Finding Employment Opportunities for Students

> Tatiana Shchekodina Program Specialist

NSF Directorate for Biological Sciences Division of Environmental Biology tashchek@nsf.gov

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Overview

- NSF Overview
- BIO Overview
- Finding research opportunities
- Merit review process
- Common mistakes
- Employment opportunities for students

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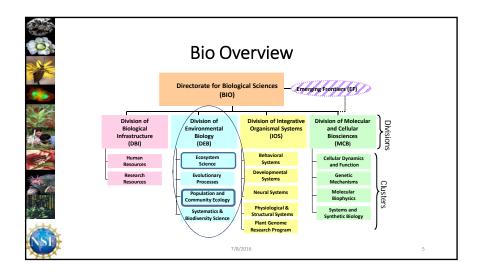
NSF Overview

- · Independent federal agency in Arlington, VA
- Supports basic research and education via grants
- Discipline-based structure
- Cross-disciplinary programs
- 1/3 "rotators", 1/3 permanent POs and 1/3 Administration and Business Operations
- Annual budget ~\$7,5B (FY16) with only 6% of overhead, the rest is award budget
- >55,000 proposals, ~12,000 new awards per year, supports ~250,000 scientists, educators and students.

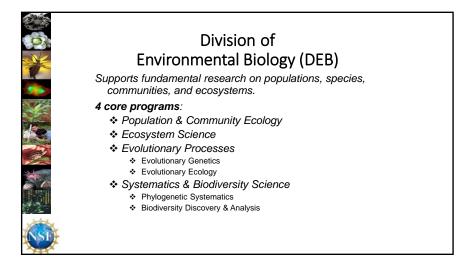
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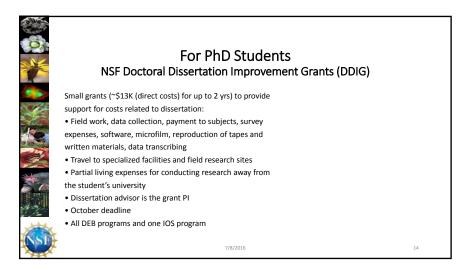




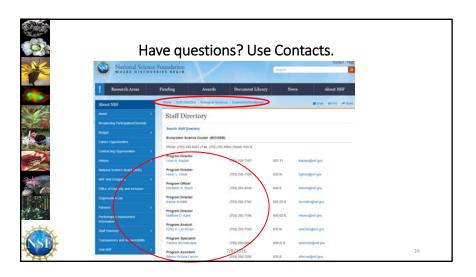






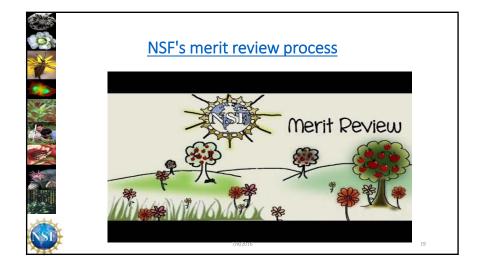


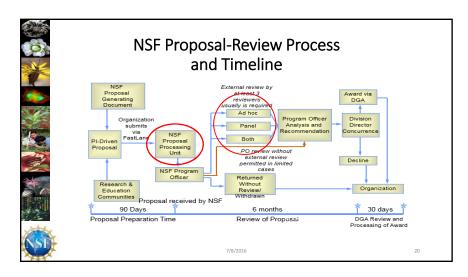














Types of Merit Review

- Ad hoc reviews -- requests for review of a single proposal by a number (3 to 6 or so) of
 experts (often specialists) in the topic/methods/locale of the research.
- Advisory panel review -- evaluation of multiple proposals by a number (6 to 30 or so) of
 individuals with varying degrees of expertise -- often more generalist than specialist. (2
 to 4 panelists may write reviews before the panel meeting.)
- Ad hoc + panel review -- evaluation of multiple proposals with panels evaluating both ad hoc and panelist reviews.
- Program officer review (without external review) -- used only in a very limited set of cases

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Merit Review Criteria Guiding Principles

- All NSF projects should be of the highest quality and have the potential to advance, if not transform, the frontiers of knowledge
- NSF projects, in the aggregate, should contribute more broadly to achieving societal goals

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Merit Review Criteria Guiding Principles cont.

 Meaningful assessment and evaluation of NSF funded projects should be based on appropriate metrics, keeping in mind the likely correlation between the effect of broader impacts and the resources provided to implement project.

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NSF Merit Review Criteria

NSF asks reviewers to comment on two major criteria:

- · Intellectual merit
- Broader impacts

Be aware that NSF merit review criteria recently have been redefined

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Merit Review Criteria cont.

- Intellectual Merit: The Intellectual Merit criterion encompasses the potential to advance knowledge
- **Broader Impacts:** The Broader Impacts criterion encompasses the **potential** to benefit society and contribute to the achievement of specific, desired societal outcomes
- **Both** should be assessed in the process.

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Examples of Broader Impacts

- Full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM)
- Development of a diverse, globally competitive STEM workforce
- Improved STEM education and educator development at any level
- · Increased public scientific literacy and public engagement with science and
- · Improved well-being of individuals in society

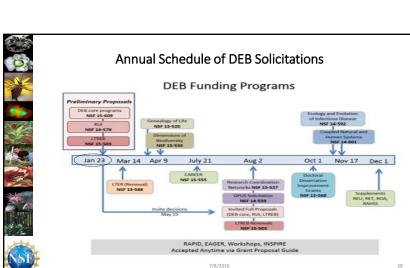


Examples of Broader Impacts Cont.

- Increased partnerships among academia, industry, and others
- Improved national security
- · Increased economic competitiveness of the United States
- · Enhanced infrastructure for research and education
- · Applied benefits of the research itself.

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DEB Funding Programs Jan 23 Mar 14 Apr 9 RAPID, EAGER, Workshops, INSPIRE cepted Anytime via Grant Proposal G





Important Deadlines in DEB

- Doctoral Dissertation Improvement grant in DEB: (DDIG): Second Thursday in October
- CNH: November 15, 2016. Third Tuesday in November, Annually Thereafter
- DEB core solicitations:
- Core preliminary proposals: Jan 25, 2016
- > RCN: first Monday in August
- > OPUS: first Monday in August
- CAREER: late July, by Division

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Important Deadlines in DEB cont.

- Ecology & Evolution of Infectious Diseases: Third Wednesday in November
- · Genealogy of Life (GoLife): Fourth Wednesday in March
- No deadlines: RAPID, EAGER, workshops
- New GPG will guide proposals submitted after January 1, 2016 [always use the latest!]
- GPG provides general guidelines, the solicitation is more specific and should be your primary guide





Avoiding Common Mistakes – DEB

Submit more than 2 pre-proposals—Limit of 2 pre-proposal submissions/year/PI for DEB. Anything after that = RWR (returned without review)

Proposal submitted after the deadline - RWR

Proposal was submitted to the wrong solicitation

Project Summary: Must be present, less than one page, and contain 3 separate sections (Overview, Intellectual Merit, and Broader Impacts), if not =RWR

Project Description: Proposal contains egregious use of small or condensed text; RWR

No Broader Impacts or Results from Prior NSF Support, RWR.

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Avoiding Common Mistakes – DEB cont.

Budget Justification: Text does not adequately justify resources requested

References: Must be present and consist of only references, and should not include project narrative text

Core proposal did not arise from an invited pre-proposal and does not fit one of the other targeted solicitations

Biosketches (CV): One biosketch must be present for every person on the cover page, should not be more than 2 pages and should not contain an "expertise related to project" section or any narrative text

Supplementary Documents: Must contain no unauthorized appendices.

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