

# National Science Foundation Graduate Research Fellowship Program (GRFP)

Avery Lane

Department of Anthropology, Washington State University

Regional Approaches to Women's Leadership in STEMM

ADVANCE at WSU

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The background of the slide features a light blue, semi-transparent globe of the Earth. Overlaid on the right side of the globe is a close-up, semi-transparent image of a hand holding a glass test tube. The overall aesthetic is clean and scientific, with a cool color palette of blues and whites.

## NSF's official program solicitation:

“The purpose of the NSF Graduate Research Fellowship Program (GRFP) is to help ensure the vitality and diversity of the scientific and engineering workforce of the United States. The program recognizes and supports outstanding graduate students who are pursuing **research-based master's and doctoral degrees in science, technology, engineering, and mathematics (STEM) or in STEM education.** The GRFP provides three years of support for the graduate education of individuals who have demonstrated their potential for significant research achievements in STEM or STEM education. **NSF especially encourages women, members of underrepresented minority groups, persons with disabilities, veterans, and undergraduate seniors to apply.**”

# NSF GRFP: start your graduate career off right!

## Who can apply?

1. US Citizens, nationals, or permanent residents by the application deadline.
2. Undergrads or post-baccalaureates not enrolled in graduate school, but plan to begin the Fall following GRFP application **OR**
3. Graduate students who have not completed more than 12 months of a graduate program as of August 1<sup>st</sup> of application year. In other words, in the first or second year of graduate school.
4. Those pursuing a research-based Masters or doctoral degree in a STEM or STEM education field.

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What does the fellowship provide?

- \$34,000 annual stipend, directly to the fellow
- \$12,000 annual cost-of-education allowance to fellow's institution
- 3 years of support, distributed over a 5 year fellowship period

# Application components- GRFP FastLane Module

1. Submit personal information, work/other experience, graduate school information, electronic transcripts, *proposed field(s) of study, proposed graduate study*
2. Personal, Relevant Background, and Future Goals Statement (3 pp)
3. Graduate Research Plan Statement (2 pp, including references)
4. Names and email addresses of at least 3 reference letter writers
  - Letter writers should be given ample notice (at least one month)
  - Should be given drafts of applicant's statements, and ideally are involved in their revision
  - Ideally, references are: past/present/future advisors, perhaps involved in the proposed study itself

**\*\*A lack of adherence to formatting guidelines and application instructions is a deal-breaker \*\***

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# Application components- important deadlines

<b>Fields of Study</b>	<b>2018 Deadlines</b>
Life Sciences, Geosciences	October 22
Computer and Information Science and Engineering, Engineering, Materials Research	October 23
Psychology, Social Sciences, STEM Education and Learning	October 25
Chemistry, Mathematical Sciences, Physics and Astronomy	October 26
<b>Reference Letter Submission</b>	November 1 (5:00 PM ET)

## Creating a successful GRFP application

- ❖ *Intellectual Merit*: the potential to advance knowledge.
- ❖ *Broader Impacts*: the potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

Additionally, *feasibility* of the proposed project must be demonstrated.

# The Personal Background Statement

- Educational background and course experience
- Lab and/or field experience
  - Detail your role in the project(s)
  - Data collection? Analysis? Publications?
  - How did these experiences shape you as a researcher?
  - Emphasize those experiences and skills which will facilitate your success in the GRFP proposed project

# The Personal Background Statement

- Proposed or current graduate program and committee
  - How will your advisors and collaborators facilitate your success in the proposed project?
  - What resources will you have access to?
- Directly address NSF's main criteria: *intellectual merit* and *broader impacts*
  - How will your research address gaps in knowledge of your field?
  - Illustrate the potential for your research to be creative, original, and transformative
  - How will your research benefit society? E.g. human health, science outreach
  - Be topical: cite NSF Dear Colleague Letter, for example

# The Graduate Research Plan Statement



- I. Background, theoretical justification, and relevant findings (<1 pp)
- II. Explicit research question(s) and hypotheses
- III. Research approach (~0.5 page)
  - I. Succinctly detail how you will answer your questions.
  - II. Field sites, populations, lab facilities, advisement, collaborators, datasets, sample sizes, timelines, etc.
  - III. Demonstrate the feasibility of the project in this section.
- IV. Intellectual Merit
  - I. Spell it out in a few sentences. What gap(s) in the literature will this study address?
- V. Broader Impacts
  - I. Societal impacts, interdisciplinary collaboration, advancement of the fellow's career, science communication, education, and outreach

## Additional things to keep in mind...

- Follow formatting guidelines and be concise!
- The GRFP seeks to fund **the applicant**, not simply the proposed study itself.
- Demonstrate the feasibility of your project- cover all your bases.
- Examples from an unsuccessful attempt (2015):
  - “While the applicant provides ample background into why the project is important, it would have been great to situate this more in why her own project will make such an important contribution to our understanding of the endocrinology/microbiology of social relationships.”
  - “...the broader impacts could be articulated a little more clearly and extensively, and more thought given to engagement in outreach activities, as opposed to simply disseminating the research findings.”
  - “Establishing a connection between the strength of social relationships and maternal-infant health among primates has clear implications for human public health and public policy although not well articulated how she will do it.”

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# NSF GRFP: Early career foundations

- NSF is investing in *your potential* to make significant contributions to both your field of research and broader society.
- Access to unique opportunities:
  - Graduate Research Opportunities Worldwide (GROW)
  - Graduate Research Internship Program (GRIP)
- The GRFP provides an external funding source which goes directly to the recipient.
  - Demonstrates recipients' aptitude for designing and executing their own research projects.
  - Allows for independence, time, and creativity in one's early career.

# NSF GRFP: Early career foundations

- Keep in mind...
  - The GRFP stipend is viewed as taxable income!
  - Consider your graduate career timeline, as active fellowship years may preclude fellows from teaching assignments
- Establish a track record of securing your own funding.
- Applying is a win-win: gain experience in designing a research project and NSF-caliber grant writing!

# Thank you!

- My utmost gratitude to past and present advisors, who provided invaluable advice and support during the preparation of my GRFP application:
  - Dr. Courtney Meehan (WSU-Anthropology, Graduate Committee Chair)
  - Dr. Shelley McGuire (WSU-Biological Sciences, Committee Member)
  - Dr. Stacey Tecot (U. Arizona-Anthropology, Undergraduate Advisor)
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- Questions welcome!