

Some background on the NSF GRFP

The purpose of this award is to provide support for promising young scientists

- ensure the vitality and diversity of the scientific and engineering workforce
- support for the graduate education of individuals who have demonstrated their potential for significant achievements in science and engineering research
- stipend: \$32,000/year, 3 years; Supercomputer access; Honorable Mention

Who can apply for an NSF GRF?

■ Eligibility

- Applicants must be U.S. citizens or nationals or permanent resident aliens at the time of applications
- Applicants must be either in the final year of a bachelor's program, the first year of graduate studies, or at the beginning of their second year of graduate studies.
- Students with graduate degrees are not eligible
- Applicants must be working in an area supported by the NSF:
 - the mathematical, physical, biological, engineering, and behavioral and social sciences, including the history of science and the philosophy of science
- Research with disease-related goals is NOT funded

Deadlines vary by discipline!

How do you apply for an NSF GRF?

- All applicants must apply on-line using the NSF FastLane GRFP process via <https://www.fastlane.nsf.gov/fastlane.jsp>
- Review the NSF GRFP Guidelines and FAQ for Submission of Applications.
- 3 letters of recommendation
- Transcripts are submitted online

1. Personal Statement and Prior Research Experience (3 pages)

- Experiences which led you to science, prepared you for further study
- Competencies
- Evidence of leadership potential
- Career goals
- Explanation of anything 'odd' or red flags in your application
- Explain the broad goals of prior research
- Highlight your contributions and accomplishments
- Describe outcomes
- Why did you choose that particular experience? What did you learn?

2. Proposed Plan of Research

- There are two primary goals when you develop the Proposed Plan of Research:
 - To demonstrate your knowledge and ability to do research in your discipline and your understanding of the scientific method by describing a research plan of interest to you
 - To demonstrate your communication and organizational skills by writing a clear and concise essay
- Comment on your advising and the resources at Yale that will enable you to do this project

Suggestions from the NSF on your application

- Be specific. Formulate one question or hypothesis.
- Demonstrate how you can accomplish this research using the scientific method for your discipline.
- Structure your Proposed Plan of Research like a research proposal in your discipline.
- Focus on basic research for eligibility purposes. Especially in the life sciences or psychology, make sure that the primary focus is on basic science, not the application to disease.

National Science Foundation Graduate Research Fellowship Program & Other Fellowship Opportunities in the Sciences

- Be original. Present original ideas, and acknowledge if your topic is part of a larger project managed by your professor. A less polished essay that shows evidence of the student's own creativity is usually more impressive than a sophisticated plan that is not original. Applicants who do take a portion of their research interest from a project initiated by a faculty researcher are advised to declare this and outline what part they will work on as their own and what questions they intend to pursue.
- Relate the proposed research to your undergraduate research experience if possible. This helps assure reviewers that the ideas are original and that you have some background in the area.
- Remember that the Proposed Plan of Research is just one part of the overall application. The research topic itself is not as important as the qualities you demonstrate in the essay. The purpose of the essay is to demonstrate knowledge in the discipline, ability to plan research, originality of writing, and general knowledge of scientific principles involved in the science.
- Include a short paragraph about why you selected your proposed graduate institution. Demonstrate that it is a good match with your proposed research.

Application Evaluation Criteria

■ **Intellectual Merit**

- (1) to plan and conduct research;
- (2) to work as a member of a team as well as independently;
- (3) to interpret and communicate research findings.
- Panelists are instructed to consider:
 - the strength of the academic record,
 - the proposed plan of research, the description of previous research experience,
 - the appropriateness of the choice of references
 - the appropriateness of the choice of institution for fellowship tenure relative to the proposed plan of research.

Application Evaluation Criteria

■ **Broader Impacts**

- (1) effectively integrate research and education at all levels, infuse learning with the excitement of discovery, and assure that the findings and methods of research are communicated in a broad context and to a large audience;
- (2) encourage diversity, broaden opportunities, and enable the participation of all citizens-women and men, underrepresented minorities, and persons with disabilities-in science and research;
- (3) enhance scientific and technical understanding;
- (4) benefit society

Panelists are instructed to consider characteristics of the applicant's background, including personal, professional, and educational experiences, prior accomplishments and future plans to integrate research and education, and the potential to reach diverse audiences and benefit society

Criteria used to make awards:

- Originality
- Adequate background
- Sound methodology
- Familiar with research area, including appropriate use of references and identification of problem areas
- Support
 - Relationship with a mentor or research supervision
 - Adequate facilities available
- Research proposal indicates clear understanding of the science
- Understanding of your own previous research experiences
- Clear, concise, and well-written proposal