Federal STEM Graduate Seminar Series

How to Successfully Apply for Federal Fellowships

Please join our panelists as they share tips on successfully applying for federal fellowships and traineeships.

Our panelists include:
• Kay Lund, National Institutes of Health (NIH)
• Carolyn Knowles, National Aeronautics and Space Administration (NASA)
• Pamela Hudson-Veenbaas, Smithsonian Institution (SI)
• Gisele Muller-Parker, National Science Foundation (NSF)

Date: Wednesday, August 24, 2016
Time: 1:00pm – 2:30pm

WebEx (Register to attend):
https://nsfevents.webex.com/nsfevents/onstage/g.php?MTID=ecd623efac41b57aefc37c1f19a6477a3
Password: 8sHU24T@
NIH supported Graduate Research Fellowships

P. Kay Lund PhD

Division of Biomedical Research Workforce (DBRW)
Office of Extramural Programs
Office of Extramural Research
Office of the Director
NIH is made up of 27 Institutes and Centers, each with a specific research and research training agenda, focusing on particular diseases or body systems.
Advice for Navigating NIH Programs

- Review Institute/Center priorities and goals ... *each has different research training and career development programs and health or disease focus*
- Learn the NIH application and review process
- Identify the specific grant programs offered by each Institute/Center ... *see NIH Guide for Grants and Contracts*
- Make early contact with program officers (with mentor assistance)
- Find innovative, well-respected mentors and collaborators
- Study successful grant applications
- Propose your best and most creative ideas-ambitious- but not over-ambitious
NIH Research Training Website

Select your educational or career level to find a funding opportunity to support your training or career development goals.
Career Path Funding Options

Graduate/Clinical Training
- T32, T35
- F30, F31

Postdoctoral Training/Clinical Residency
- T32
- F32
- R25, K12
- K22, K99
- K22, R00

Early Research Career
- K01, K07, K25
- K08, K23

Established Investigator
- R03, R21, R01
- K02, K18, K24, K26
- P01, P50, U54

Loan Repayment Programs

Diversity Supplements

Re-Entry Supplements
Ruth L. Kirschstein NRSA

- Goal is to help ensure that a diverse pool of highly trained scientists is available, in appropriate scientific disciplines, to address the Nation's biomedical, behavioral, and clinical research needs

- **Institutional Training Programs:**
  - Awards to an institution to support research training activities for graduate students, dual degree students (Medical Scientist Training Program- MSTP) and/or postdocs selected by the institution
  - Requires a program director and experienced faculty to serve as mentors

- **Individual Fellowships:**
  - Awards for graduate students working toward research doctoral degree- F31
  - Awards for combined clinical and research doctoral degree training-F30 (Some IC fund only at institutions without an NIH MSTP funded program)
  - Awards for postdoctoral fellows working toward research independence
Common Features of NRSAs

- Required to pursue their research training full-time

- **Stipends**: Subsistence allowance to help defray living expenses during the research training experience

- **Tuition and Fees**: NIH will contribute to the combined cost of tuition and fees at the rate in place at the time of award

- **Institutional Allowance (F) or Training Related Expenses (T)**: Defray expenses for health insurance, research supplies, equipment, books, travel to scientific meetings, etc.

F-Kiosk: [https://researchtraining.nih.gov/programs/fellowships](https://researchtraining.nih.gov/programs/fellowships)

T-Kiosk: [https://researchtraining.nih.gov/programs/training-grants](https://researchtraining.nih.gov/programs/training-grants)
Individual NRSA: Predoctoral

- **F31** Supports dissertation research for doctoral candidates who have identified a mentor and project (typically written and defended a research proposal with graduate committee)

- **Diversity F31** program supports individuals from groups underrepresented in the biomedical or behavioral sciences

- **F30**: Supports students during clinical and graduate training leading to a combined doctoral degree, e.g., MD/PhD, DDS/PhD, DVM/PhD
  - Matriculated (accepted into dual degree program) no more than 48 months prior to initial application, and a dissertation project and mentor identified
  - Devote at least 50% of the award period to full-time graduate research training leading to the PhD
NIH NRSA Fellowship Applications

• May be submitted at one of three dates per year
• Reviewed by a panel of experts in research and training
• Can submit to NIH and other sources e.g. other agencies private foundations at the same time – but only one fellowship can be accepted
• References: Deadline, alert referees, ensure they are informed (Your CV, draft letter, Research and Career Development aims)
• Application
  – Applicant – history, goals, professional development, IDP
  – Research Training plan: Specific Aims, Significance, Innovation, Approach, Cited Literature
  – Be concise, use diagrams – no small font!

F-Kiosk: https://researchtraining.nih.gov/programs/fellowships
Research Supplements to Promote Diversity

NIH-wide administrative supplement to an existing NIH research grant
• Funded researcher (Principal Investigator on the grant) prepares this
• Addresses how the candidate (student) will enhance the goals of the research project
• Section on career development of the student and expectations for advancement to the next stage (e.g. write a grant for postdoctoral training)
• Reviewed at the IC which funded the existing grant (fast) - ICs have different deadlines (e.g. continuous versus specific times)

Information at: [http://grants.nih.gov/grants/guide/pa-files/PA-12-149.html](http://grants.nih.gov/grants/guide/pa-files/PA-12-149.html)
THANK YOU
QUESTIONs/DISCUSSION?
NASA Education Aerospace Scholars & Advanced STEM Training and Research Fellowship (AS&ASTAR)

Carolyn Knowles
Director, NASA Internships, Fellowships, and Scholarships

August 24, 2016
NASA Education AS&ASTAR Fellowship Overview

- Provides fellowship awards for individuals pursuing or planning to pursue graduate studies leading to Master’s and Doctoral degrees in relevant NASA-related disciplines at accredited U.S. universities.
- Open to students pursuing advanced degrees in STEM, specifically in areas of projected deficiencies in the NASA STEM workforce.
- Conducted in conjunction with the Aeronautics Research Mission Directorate (ARMD) and the Human Exploration and Operations Mission Directorate (HEOMD).

NOTE: All NASA investments in postdoctoral fellows are excluded from this announcement. Graduate researchers interested in conducting earth and space science research must submit their applications directly to the Science Mission Directorate’s NASA Earth and Space Science Fellowship (NESSF).
Solicitation Location

The NASA AS&ASTAR Fellowship solicitation is on NASA NSPIRES: http://go.nasa.gov/1R6VYwD.
Student Eligibility:

To be eligible to receive a NASA Education AS&ASTAR Fellowship, the candidate shall meet the following requirements:

• Be a U.S. citizen or naturalized citizen (permanent residents are not eligible) at the time of proposal submission;
• Hold a Bachelor’s degree in a STEM field earned prior to August 31, 2016;
• Have a minimum 3.0 GPA on a 4.0 scale;
• Be enrolled in a Master's or Doctoral degree program no later than September 1, 2016;
• Intend to pursue a research-based Master's or Ph.D. program in a NASA relevant STEM field;
• Completed no more than twelve months of full-time graduate study (or the equivalent) on the current degree (Master’s or Doctoral) being pursued as of August 1, 2016;
• Have a projected degree plan length of two years or more;
• Meet all other eligibility requirements as set forth in the current solicitation.
Student Eligibility (continued):

• The twelve month limit applies to the **current degree** being pursued.

Examples:

• If a student is enrolled in a Master’s program and has completed 12 months for that degree, the student is ineligible.

• A student receives Master’s degree and then enrolls in a Doctoral program the “clock” starts again. They have to apply before or within the twelve months of the Ph.D. program.

• Students in joint Master's/Doctoral programs are typically eligible to apply in the second year of a five-year joint program and prior to completing any additional graduate study by August 1, 2016. Completion of any additional graduate study after the joint program would disqualify an applicant.
Eligible Institutions and Student’s Enrollment:

At the time of Fellowship acceptance, the student must be enrolled in a(n):

• Institution of higher education with U.S. accreditation and a physical campus located in the United States or its territories.
• Institution that offers graduate level degrees in eligible STEM fields (Appendix B) by fall 2016.

❖ The student must be affiliated with the above stated academic institution from the date of award (on or about September 1, 2016) through completion or termination of the fellowship.
The Phase I Proposal Package Requirements:

1. **NSPIRES-generated Proposal Cover Page**: Cover page that is completed online and includes a Project Abstract;

2. **Impact Statement**: Jointly written by the student and the University Faculty Research Advisor/ (PI);

3. **Faculty Adviser/ PI**: Curriculum Vitae (CV);

4. **Project Description**: Clear description of the student’s proposed research/written in response to the Research Opportunities/contain the technical elements;

5. **Degree Program Schedule**: Schedule stating the proposed start and completion dates and anticipated milestones of the student’s degree program;

5. **Biographical Sketch**: Detailed information about the student;

6. **Transcripts**: Entire college career (undergraduate and graduate).
The Phase I Proposal Package Requirements continued:

7. **Letters of Recommendation:** Submit three current letters:
   
   - One letter from and signed by the student’s PI;
   
   - Two letters from individuals with detailed knowledge of the student’s abilities (i.e. professors, undergraduate/graduate advisors, mentors, work supervisors, etc.)
   
   - All letters of recommendations to be submitted as part of the proposal package by the proposal deadline.

**NOTE:** If a student has not yet been accepted into his or her university of choice, please submit a letter of recommendation from your current academic advisor.
8. Letter of Concurrence:

- The NASA Technical Advisor (TA) to be utilized as part of the proposal effort to provide a letter stating concurrence with the proposal and willingness to serve as a NASA Technical Adviser for the fellow if the proposal is awarded a training grant.

- NASA TA to provide a statement of support to be included for any research expenses not covered by the training grant and identified as an in-kind contribution from NASA.
The Student’s Project Proposal:

- **Is a response** to one of the Fellowship Research Opportunities located in the solicitation under other documents: *AS&ASTAR Fellowship Opportunities by Center.*
  - This develops an association with a NASA Center Technical Advisor.
- **Is an independently** conceived or designed research or senior design project.
- **Is authored** by the student for the submitted Phase I Project and application.

**NOTE:** By submitting the proposal for consideration, the student and the University Faculty Research Advisor (PI) certify that the student was the principal author.
National Aeronautics and Space Administration

NASA Education AS&ASTAR Fellowships

Important Dates / Timeline (tentative):

<table>
<thead>
<tr>
<th>Dates are Tentative</th>
<th>Milestones</th>
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<tbody>
<tr>
<td>11/01/2016</td>
<td>Pre-proposal teleconference 3:00p.m. EST</td>
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<tr>
<td>02/01/2017</td>
<td>Phase I Proposal Submission Deadline: 11:59 p.m. EST (8:59 p.m. PST)</td>
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<tr>
<td>02/25/2017</td>
<td>On-line Review is open in NSPIRES</td>
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<tr>
<td>03/10/2017</td>
<td>On-line review is closes in NSPIRES</td>
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<tr>
<td>03/15/2017</td>
<td>External Review Panel Preview proposals</td>
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<tr>
<td>03/20/2017</td>
<td>External Review Panels meet for proposal review</td>
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<tr>
<td>04/10/2017</td>
<td>Selection/Awardee notifications Phase II opens if needed</td>
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<tr>
<td>04/30/2017</td>
<td>Non-selection notifications</td>
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<tr>
<td>09/01/2017</td>
<td>Start of AS&amp;ASTAR Fellowship Period of Performance</td>
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Questions:

Should you have any questions or concerns, please contact:

Elizabeth Cartier
NASA National Fellowship and Scholarships Deputy Program Manager
650-604-6958
elizabeth.a.cartier@nasa.gov
NASA Education Aerospace Scholars & Advanced STEM Training and Research Fellowship (AS&ASTAR)
Fellowships at the Smithsonian Institution

Pamela Hudson Veenbaas
Office of Fellowships & Internships
August 24, 2016
From Art History to Zoology and Everything In Between
The Smithsonian ... 

- is the world’s largest museum complex, founded in 1836, spanning 19 museums, the National Zoo, cutting edge research facilities, and extensive education and outreach programs across the world.

- has facilities and museums in New York, Virginia, Maryland, Florida, Massachusetts, Arizona, and Panama.

- is a Government Instrumentality, or a “quasi–federal” institution.

- receives an annual Congressional Appropriated funds account for about 2/3 of SI’s total budget.

- has over 6,500 staff members
The Office of Fellowships and Internships has central management and administrative responsibility for the Smithsonian Institution’s programs of research, internships, fellowships and other scholarly appointments. One of its primary objectives is the facilitation of SI’s scholarly interactions with students and scholars at universities, museums, and other research institutions around the world. OFI administers Institution-wide research support programs, and encourages and assists other Smithsonian museums, research institutes, and research offices in the development of additional fellowships and visiting appointments.

**OFI Mission:** To strengthen, diversify, and develop academic appointment opportunities at the Smithsonian for the increase and diffusion of knowledge.
**Three Categories of Appointments**

- **Fellowships** – Smithsonian fellowships awarded to individuals who design and develop proposals for independent study in fields pursued by and of interest to Smithsonian staff.

- **Internships** – Smithsonian internships are learning experiences guided by a mentor, occurring during a specific time frame, which provide benefits relating to an intern’s education, coursework, or career goals.

- **Research Associates** – The title of Smithsonian research associate is offered to provide a formal scholarly affiliation with the Smithsonian. Are unpaid appointments usually made for three years but can be renewed.
FELLOWSHIPS AT THE SMITHSONIAN

- Smithsonian fellowships awarded to graduate, pre-doctoral students, or post-doctoral scientists, or scholars and visiting professionals.

- Offered to individuals who design and develop proposals for independent study or collaborative research in fields pursued by and of interest to Smithsonian staff.

- Research fellows receiving stipends through the Smithsonian are generally appointed to terms lasting between 1 to 3 years; with documentation charting progress, research fellow terms may be extended to 5 years.

- Eligible for enrollment in Smithsonian group health insurance if appointment is full-time and lasts 3 months or more.

- Most stipends range from $32,700 – $60,000, and may include travel, research, and health insurance allowances.
Fellows & Fellowships

- Over 800 Fellows at any given time

- Over 40 programs
  - In all areas related to the different museums and units
    - Art, History, Culture and Science
    - Libraries, Archives, and Preservation
EXAMPLES OF SMITHSONIAN FELLOWSHIP PROGRAMS

- **SMITHSONIAN–WIDE (SI)**
  - George E. Burch Fellowship in Theoretical Medicine
  - James Smithson Fellowship
  - Biodiversity Genomics and Bioinformatic Postdoctoral Fellowship Program
  - Postgraduate Fellowships in Conservation of Museum Collections Program

- **MUSEUM CONSERVATION INSTITUTE (MCI)**
  - Museum Conservation Institute Postdoctoral Fellowship in Mass Spectrometry

- **NATIONAL AIR AND SPACE MUSEUM (NASM)**
  - Guggenheim Fellowship
  - Postdoctoral Earth and Planetary Sciences Fellowship

- **NATIONAL MUSEUM OF THE AMERICAN INDIAN (NMAI)**
  - Conservation Department Program

- **NATIONAL MUSEUM OF NATURAL HISTORY (NMNH)**
  - Global Volcanism Program for Visiting Scientist/Postdoctoral Fellowship
  - Peter Buck Fellowship

- **NATIONAL ZOOLOGICAL PARK (NZP)**
  - Jogayle Howard Postdoctoral Fellowship in Felid Reproduction

- **OFFICE OF THE UNDER SECRETARY FOR SCIENCE (OUSS)**
  - Smithsonian Marine Science Network Postdoctoral Fellowship Program – Marinegeo

- **SMITHSONIAN ASTROPHYSICAL OBSERVATORY (SAO)**
  - CFA Postdoctoral Fellowship
  - Clay Postdoctoral Fellowship
  - Visiting Scientist Program

- **SMITHSONIAN GARDENS (SG)**
  - Enid A. Haupt Fellowship in Horticulture

- **SMITHSONIAN TROPICAL RESEARCH INSTITUTE (STRI)**
  - A. Stanley Rand Fellowship Program
  - Short-Term Fellowships
  - Three-Year Postdoctoral Fellowships in Tropical Biology
in–residence, pan–institutional, highly competitive and centrally run program

began in 1964

utilize our vast collections, facilities and staff resources

more than 3,000 fellows

reviewed by pan–institutional committees
Postdoctoral Fellowships are offered to scholars who have held the degree or equivalent for less than seven years. Senior Fellowships are offered to scholars who have held the degree or equivalent for seven years or more. The term is 3 to 12 months. Both fellowships offer a stipend of $48,000 per year plus allowances.

†Earth and Planetary Sciences Senior and Postdoctoral Fellowships stipends are $53,000 per year.

Predoctoral Fellowships are offered to doctoral candidates who have completed preliminary course work and examinations. Candidates must have the approval of their universities to conduct doctoral research at the Smithsonian Institution. The term is 3 to 12 months. The stipend is $32,700 per year plus allowances.

Graduate Student Fellowships are offered to students formally enrolled in a graduate program of study, who have completed at least one semester, and not yet have been advanced to candidacy if in a Ph.D. Program. The term is 10 weeks; the stipend is $7,000.

Deadline – December 1
Eligibility

- The program is open to US citizens and Non-US citizens.
- Applicants whose native language is not English are expected to have the ability to write and converse fluently in English.
- All application materials must be presented in English (foreign transcripts may be translated).
In addition to a base stipend, awardees may receive allowances to assist with the fellow’s research related expenses and for temporary relocation to the Smithsonian.

The budget for the research allowance should not include costs for relocation to the Smithsonian, which is awarded separately. A maximum research allowance of $4,000 is available.

The amount awarded will be determined based upon the budget and justification presented by the applicant.
How to Apply

- Apply Through: SOLAA  https://solaa.si.edu

- Applications for centrally funded Smithsonian Institution Fellowships are not listed under the museum, research facility or office in which the applicant proposes to conduct research. Applicants for centrally funded Smithsonian Institution Fellowships need to select one of the applications found under the Office of Fellowships in SOLAA.

- Applicants who wish to conduct research at the Smithsonian Astrophysical Observatory (SAO) should go here as SAO application requirements and deadlines may be different.

- Potential applicants should correspond with proposed Smithsonian advisor(s) when preparing your proposal (being sure to discuss potential research costs) with the proposed advisor(s) before submitting
Materials Needed

- Abstract
- Research Proposal
- Time Table
- Budget and Justification
  - Applicants for graduate student fellowships are not eligible for research allowances and should not submit budget justifications
- Bibliography
- Curriculum Vitae
- Transcripts (unofficial are acceptable)
- References (2)
The Smithsonian does not discriminate on grounds of race, color, religion, sex, national origin, age, disability, genetic information, parental status, marital status, sexual orientation, or participation in protected activity.
Some Smithsonian Fields of Research

- Animal behavior, ecology, and environmental science, including an emphasis on the tropics
- Anthropology, including archaeology, cultural anthropology, linguistics, and physical anthropology
- Astrophysics and astronomy
- Bioinformatics
- Earth sciences and paleobiology
- Evolutionary & Systematic Biology
- Marine Biology
- Materials Research
- Molecular Biology
Science Related Museums & Research Centers

- Museum Conservation Institute
- National Air and Space Museum
  - Center for Earth and Planetary Studies
- National Museum of Natural History
- National Zoological Park
- Smithsonian Astrophysical Observatory
- Smithsonian Environmental Research Center
- Smithsonian Tropical Research Institute
James M. Carpenter – Curator, Division of Invertebrate Zoology, American Museum of Natural History (Postdoctoral Fellow 1983/84):

“My Smithsonian fellowship was crucial in the development of my professional career. I do not say this simply for the research carried out during my year there – although that formed the basis of numerous papers, published afterwards over many years. The fellowship was more important for allowing me to integrate fully with the international community of systematists, which has such a significant presence there. The friendships and collaborations begun then continue. I don’t believe any other institution can offer the same kind of experience.”

James M. Adovasio – Director, Mercyhurst Archaeological Institute, Mercyhurst College (Postdoctoral Fellow 1971/72):

“I consider my fellowship experience at the Smithsonian to be one of the pivotal events of my career. Not only did I have the opportunity of accessing a wide array of collections in my area of interest and then developing expertise, I also had the opportunity of availing myself of the collective and individual experiences of an extraordinary research staff within the Department of Anthropology.”
www.smithsonianofi.com
NSF Graduate Research Fellowship Program

August 24, 2016
Gisele Muller-Parker

PROGRAM GOALS

• To select, recognize, and financially support, early in their careers, individuals who have demonstrated the potential to be high achieving scientists and engineers

• To broaden participation in science and engineering of underrepresented groups, including women, minorities, persons with disabilities and veterans.
GRFP Key Elements

Five Year Award – $138,000
- Three years of support
  - $34,000 Stipend per year
  - $12,000 Educational allowance to institution
- Professional Development Opportunities:
  GROW: International Research
  GRIP: Federal Internships
- Supercomputer access: XSEDE
- Career Life Balance (family leave)

See GRFP’s new 3-year Solicitation, NSF 16-588
GRFP Eligibility

• U.S. citizens, nationals, and permanent residents
• Early-career: undergrad & grad students
• Pursuing research-based MS and PhD
• Science and Engineering
• Enrolled in accredited institution in US by Fall

Academic Levels
• 1: Seniors/baccalaureates; no graduate study yet
• 2: First-year graduate students
• 3: Second-year grad students
  – ≤ 12 months of graduate study by August
• 4: >12 months graduate study
  – Interruption in graduate study of 2+ years (can have MS degree)
GRFP Complete Application

Complete Application Package:  *Due in late October*

1) Personal Information, Education & Work Experience, Proposed Field of Study, Academic honors, Publications

2) **Personal**, Relevant Background and Future Goals Statement (3 pages)

3) Graduate **Research Statement** (2 pages)

4) **Transcripts** (uploaded electronically)

5) **Three letters of reference**
   (received by Nov 3, 2016, 5 pm ET)

Please see new Solicitation for application details and requirements
Preparing a competitive GRFP Application

**Personal Statement**

*Tell your story; demonstrate your potential for STEM research*

- Experiences (personal and professional) that contributed to your motivation and preparation for pursuing a STEM career
- Previous research/industrial/professional experiences
  
  - *What was the project?*
  - *How did you become involved? Where was it done?*
  - *Why was this project worth doing?*
  - *What was your contribution to the project?*
  - *How did your part of the project fit into the whole?*
  - *What have you learned?*
  - *Any advanced course work?*

- Career aspirations and goals
  
  - *How have your experiences shaped your goals?*
Preparing a competitive GRFP Application

Research Statement

Describe your Research Plan

• Communicate your research idea and approach
• Explain your research plan and methods
• What do you expect to learn? How will you know if the project is successful?
• What would you do next?

Address NSF’s review criteria

How have your experiences shaped your goals?
Two National Science Board-approved review criteria:

- **Intellectual Merit**
  How important is the proposed activity to advancing knowledge within its own field or across different fields?

- **Broader Impacts**
  How well does the proposed activity benefit society or advance desired societal outcomes?
Conveying your potential

Intellectual Merit
- Academic performance; grades, curricula, awards, etc.
- Graduate Research plan
- Research/professional experience
- Reference letters

Broader Impacts
- Prior accomplishments and future plans
- Individual experiences
- Potential benefit(s) to society
- Community outreach or novel activities
- Reference letters
Advice for Applicants

- Start early!
- Read the newest Solicitation, *and read it again.*
- Read NSF GRFP websites.
- Make your list of honors, experiences, presentations, and any publications clear for the reviewers.
- Select and confirm your reference letter writers and monitor receipt of their letters on the GRFP website.
- Pay attention to NSF’s merit review criteria.
- Identify several colleagues and have them comment on your statement drafts.
- Share your application materials and the merit review criteria with your reference letter writers.
GRFP Resources

- NSF GRFP Website: [www.nsf.gov/grfp](http://www.nsf.gov/grfp)  
  *Solicitation and links*
- GRFP Website: [www.nsfgrfp.org](http://www.nsfgrfp.org)  
  *includes tips for applying, FAQs, and resource people*
- To apply on FastLane: [www.fastlane.nsf.gov/grfp](http://www.fastlane.nsf.gov/grfp)
- Phone & e-mail  
  - 866-NSF-GRFP (673-4737)  
  - info@nsfgrfp.org