In Pursuit of Funding for Graduate School

*Developed for the 2018 Heartland McNair Research Conference Kansas City, MO*

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Tonight’s Topics

1. What are Funding Streams?

2. NSF Graduate Research Fellowship Program

3. Other Nationally-competitive Programs

4. Congrats on Grad School! What now?

5. Q & A
Part 1: Funding Streams
Sources of Funding for Graduate School

**Internal**
- Assistantships
- Fellowships/Scholarships
- Seed/Angel Money
- Training grants
- Employment
- Fee Waiver(s)
- Travel Stipends

**External**
- Stipends
- Fellowships/Scholarships
- Conference travel
- Study abroad
- Research grants
- Thesis/dissertation completion grants

The institution is the source of $
Internal

- Assistantships
- Fellowships/Scholarships
- Seed/Angel Money
- Training grants
- Employment
- Fee Waiver(s)
- Travel Stipends

**What you need to do:**

1. CALL the grad degree program!
2. Tell them when you will need funding support.
3. Learn what scholarships & assistantships are available.
4. Obtain deadlines & application instructions.

*NORMALLY you apply for internal funding one year in advance (i.e., same time you apply to the grad program.)*
Sources of Funding for Graduate School

External

- Stipends
- Fellowships/Scholarships
- Conference travel
- Study abroad
- Research grants
- Thesis/dissertation grants

What you need to do:

- Consult mentors, postdocs & instructors for leads
- Contact Fellowships Office(s)
- Search trusted databases
- Visit sites of disciplinary professional groups
- Visit sites related to race, ethnicity, & gender
- Ask members of select social media groups

*Normally you apply for external funding one year in advance (i.e., same time you apply to the grad program.)
Why take the time to apply for funding?
What are the benefits of applying for funding?

• Gain proposal writing skills that build across your career

• Repurpose statements for grad school applications

• It will set you apart in your application cover letters:
  • Prospective programs view you as a high caliber achiever
  • Future mentors know you might bring your own $
  • It’s prestigious for faculty to mentor a national fellow (you)

• If awarded...
  • You can immerse in research rather than outside work for living expenses
  • Early career boost - strengthens your CV now & in future
  • Fellowships often lead to other opportunities, such as international travel
Part 2: Graduate Research Fellowship Program
National Science Foundation’s Graduate Research Fellowship Program
Why are these graduate students smiling?
1. No tuition payments

2. $2,833 monthly paycheck
This is the ONLY source of official GRFP information.

**FASTLANE GRFP:**  [https://www.fastlane.nsf.gov/grfp/Login.do](https://www.fastlane.nsf.gov/grfp/Login.do)
Aims of the GRFP

**NSF reviewers seek to fund:**

*Individuals from diverse backgrounds with the demonstrated potential to be high achieving scientists and engineers in a globally-engaged workforce with the vision that these new leaders will help the U.S. move to the forefront of research and innovation.*
Fellowship Provisions

- Provides 3 years of support
- Award value: $138,000*
  - $34,000 stipend per year paid to student
  - $12,000 “ed allowance” paid to institution*
- Other opportunities for active Fellows:
  - International research & internships
  - Access to super computing resources
  - Supplemental funding for researchers with disabilities
  - Provision for family medical leave

* Value may be more at institutions with higher tuition
1. Citizen or US/Territory/Permanent Resident

2. Degree requirements*: College senior or BS holder may apply before enrolling in a graduate degree program. Grad students may apply once.

3. Field of study: Must enroll in a research-based master’s or PhD degree in NSF eligible field by next year’s fall semester.

*See solicitation for BS/MS students and upcoming eligibility changes.
Eligible Fields of Study*
(You will submit to a specific sub-discipline.)

- Engineering (18)
- Computer & Information Science & Engineering (18)
- Chemistry (10)
- Geosciences (25)
- Life Sciences (19)
- Mathematical Sciences (14)
- Materials Research (10)
- Physics & Astronomy (10)
- Psychology (15)
- Social Sciences (19)
- STEM Ed & Learning (5)

*(n) = number of sub-discipline fields

* Interdisciplinary applications are also possible.
* BioMed/BioEng students should verify eligibility.
Bioengineering grad research that:

• aids persons with disabilities or
• diagnoses or treats human disease

is eligible as long as...

you apply engineering principles to problems in medicine while primarily advancing engineering knowledge.

If this applies to your research, submit your GRFP application to the Biomedical Engineering review panel.
It’s Easy to Apply!

1. Register in NSF FASTLANE - GRFP
2. Complete *all* sections of online application
3. Write 2 statements (5 pages total)
4. Upload transcripts & statements to the online application
5. Ask 3 faculty mentors or research supervisors to submit reference letters.
6. Submit application before disciplinary deadline

Plan ahead: NSF makes no deadline exceptions!
Fall 2012 example: Mizzou applicant was disqualified for being 16 seconds late.
2 GRFP Statements = 5 pages total

**Personal, Relevant Background & Future Goals**
- Motivation for an advanced degree
- Professional development plans
- Research & professional experiences
- Educational & Career goals
  - Intellectual Merit
  - Broader Impacts
  
**Graduate Research Plan Statement**
- Original research topic
- General approach (methods)
- Resources needed
- Literature citations
  - Intellectual Merit
  - Broader Impacts

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2018 Heartland McNair Research Conference
Intellectual Merit = Scholarly Endeavors

e.g., research that advances knowledge within and/or across disciplines & sharing research findings with scientific audiences

Broader Impacts = Helping Society

e.g., how findings make lives better AND attempts to engage lay people from diverse backgrounds through outreach activities AND sharing research findings with lay audiences
How to Demonstrate Your Potential

**Intellectual Merit**
- knowledge/skills/preparedness for future research endeavors
- leadership; highly motivated to become a scientific leader
- engagement with others from diverse backgrounds in your research endeavors
- past efforts & plans to share findings in scholarly settings

**Broader Impacts**
- ability to articulate the BI of your past & proposed research
- past efforts & goals to teach & mentor others (any age/level) about STEM
- past efforts & goals as a volunteer with diverse groups, especially toward desired societal outcomes
- past efforts & plans to share findings with lay (non-scientific) groups

Jrs & Sophs build your competitiveness!
# Trends: GRFP Awards

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<th>Year</th>
<th># Applications</th>
<th># Awards</th>
<th>Success</th>
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<tr>
<td>2008</td>
<td>10,000</td>
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<tr>
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<tr>
<td>2017</td>
<td>13,000</td>
<td>2069</td>
<td>16%</td>
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<tr>
<td>2018</td>
<td>12,000</td>
<td>2,116</td>
<td>17%</td>
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<tr>
<td>2019</td>
<td>??????</td>
<td>1,500</td>
<td>??</td>
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### Distribution of GRFP Awards

<table>
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<td>17%</td>
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In 2017, of the 2,069 awardees: 1,158 women; 498 from URM groups; 75 persons with disabilities; 26 veterans; 726 undergrad seniors and 449 from baccalaureate institutions.

Fellowships MUST be distributed equitably for:
- geographic location
- gender
- disability
- veteran
- race & ethnicity
- institutional type
- discipline
McNair Students ARE Successful!

26 McNair Scholars Selected as 2017* NSF GRFP Fellows

- Augsburg College
- Ripon College (3)
- Rochester Institute of Technology
- University of Eastern Washington
- University of Florida (3)
- University of California Davis
- University of Central Florida (3)
- University of Kansas (2)
- University of Missouri
- University of Nevada, Reno (2)
- University of New Hampshire
- University of Oklahoma (2)
- University of South Carolina
- University of Washington (2)
- University of Wyoming
- Winthrop University

*The 2017 competition had 13,000 applicants
GRFP Deadlines are in Late October!

- Submit before your disciplinary deadline
- 3 panelists review your application
- Award offers in April
- All applicants receive 3 reviewer comments

Go here: https://www.fastlane.nsf.gov/grfp/Login.do

Start your application soon!

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Personal statements seem daunting.

*Students have told me:*

1. Uncomfortable sharing one’s personal story
2. Not wanting to brag about achievements
3. Having so much to say, unsure where to start
4. At this juncture, path forward unclear (goals)
5. Lack of confidence or imposter syndrome
BE WILLING TO ALLOW YOUR CHALLENGES TO BECOME MOTIVATION
Still Not Convinced to Apply?

Q: Is it really worth the effort?

Personal, Relevant Background & Future Goals

Graduate Research Topic
Ponder This

Q: Is it really worth the effort?

Personal, Relevant Background & Future Goals
3 + Graduate Research Topic
2 = 5 pages

for $138,000+
Writing Resources

Under Tips for Applying:
Experienced Person Resource List

https://www.nsfgrfp.org/
Writing Resources

GRFP Essay Insights

http://grfpessayinsights.missouri.edu

Review criteria: IM & BI
Outlines & worksheets
Checklist: stay organized
Self-scoring rubric
Selecting references
Reference writer tips
Future applicant info
Advice from reviewers
GRFP Fellows’ advice
Links to statement examples
McNair Repository of GRFP Handouts

Personal, Previous Research & Future Goals Statement
- Outline for the Personal-Previous Research-Future Statement
- Sample format for the P-PR-FG Statement
- Writing about Previous Research Experiences
- Writing Prompts (Worksheet)

Graduate Research Plan Statement
- Outline for the Research Statement
- Research Plan Worksheet
- Sample format for the Research Statement

Other Helpful GRFP Handouts
- Checklist for Completing the GRFP Application on Time
- What to Write for IM & BI paragraphs
- 10 BI Strategies
- Broader Impacts Planning Sheet
- Selecting Reference Writers
- Handout for Reference Writers
- Rubric for Critiquing Drafts
- Tips for Getting into Grad School
- Choosing a Grad Degree Program Checklist
- PPT & Handouts for Frosh-Soph-Jrs
- THIS PPT
Part 3: Other Nationally-competitive Programs
Other nationally-prestigious fellowships

Fulbright
http://www.us.fulbrightonline.org

Churchill Scholarship
http://www.winstonchurchillfoundation.org

Goldwater Scholarship
http://www.act.org/goldwater

Ford Foundation Fellowship
http://sites.nationalacademies.org

National Defense Science & Engineering Graduate Fellowship
https://ndseg.asee.org/
Bad News/Good News

**Bad:**
There's not enough time to describe all of these other funding programs.

**Good:**
Reviewers look for similar levels of student characteristics and achievement.

What do you think they seek?
The Competitive Edge for National Awards

1. Advance level courses and solid GPA
2. Leadership on & off campus
3. Service (volunteer work)
4. Study abroad and/or interaction with people from other countries & cultures
5. EXCEPTIONAL reference letters that attest to your potential, character & professionalism.
Reviewers Want Exceptional Reference Letters

✔ Letter writers should be faculty mentors and others who have supervised your research or work.

✔ Administrator letters not recommended unless the person knows you very, very well.

1. Arrange a time to meet with mentors.
2. Take your resume/CV & proposed research plan.
3. Get right to the point. Include the deadline.

“I am applying for the National Science Foundation’s prestigious Graduate Research Fellowship. Would you be able to write a strong letter of reference for me, addressing my potential for intellectual merit and broader impacts? The deadline for reference letters is November X.”
Don’t make assertions about your attributes. Instead, give specific examples.

2 acceptable ways to document your abilities in your personal statement:

1. Use a short scenario that DEMONSTRATES your professional demeanor, character or attribute.

2. Ask your references to make note of your leadership, persistence or problem solving skills. Then you may write something like...

   “As Dr. Smith confirms in her cover letter, I have exceptional communication skills and serve as a leader in our lab.”

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6 Tips for Success

1. Analyze solicitation carefully (read 2-3 times.)
2. CALL funder if you have questions.
3. Read examples of FUNDED proposals.
4. Meet with mentor(s) often.
5. Precisely address the questions/directions.
6. Ask several others for critical feedback. (Seek help if needed e.g., stats, grammar, etc.)
Illustrative National Funding Databases

• UCLA Graduate School  
  https://grad.ucla.edu/funding/

• Peterson’s  
  https://www.petersons.com/graduate-schools/graduate-school-scholarships.aspx

• CareerOneStop  
  https://www.careeronestop.org/toolkit/training/find-scholarships.aspx

• Fastweb  
  https://www.fastweb.com/

Visit the Fellowships Office page of schools you wish to attend!
Best Advice

Don’t put all of your eggs in one basket!

Apply to several funding sources.
Part 4:
Congrats on Grad School! What now?
Seek New Opportunities: Stay Visible

Your #1 Action = Stay visible with your mentors!

• Schedule regular meetings; update them on your research & academic achievements

• Share a copy of your updated CV or resume

• Meet your mentor for coffee - seek advice on professional development (skills you need to improve upon)

• Serve on department, college & campus committees with faculty

• Attend social events with faculty & campus administrators
Seek New Opportunities: Network

Grow your professional networks on & off campus

• Seek a mentor off campus, especially if you are moving toward a position in business or industry

• Pursue job shadows, externships & internships

• Attend professional conferences – present a paper or poster

• Join professional disciplinary groups (student discount); similar groups on LinkedIn
Seek New Opportunities: Be a Servant Leader

Build your record of service and leadership

• Pursue a group or cause you are *passionate* about – keeps you authentic!
• Gain “soft” skills like supervision, public speaking and project management
• Shows you have interests & can interact with others beyond the academy
• Strengthens your CV/resume
• Employers and award committees favor these activities
Seek New Opportunities: Speak up!

Don’t be shy! Your best advocate is...YOU

- Ask faculty about future funding support from internal sources.
- Ask faculty to help with grants, presentations & scholarship.
- Get to know high level campus administrators and personnel in campus offices like Inclusion & Diversity.
- If your mentor-mentee relationship isn’t working, use effective communication skills to remedy. If necessary, take your issue to higher authorities.
- NEVER ignore discrimination, bias or harassment - of any kind. You have rights. Know how to report discrimination and harassment on your grad campus.
Summary of Key Points

• You ARE highly qualified for nationally-competitive fellowships & scholarships
• Proposal writing is a skill researchers must develop
• Apply to several internal & external funding sources
• Work closely with your mentors on proposals
• Build your record of service & leadership.
• Stay visible with your mentors & administrators
• Advocate for yourself.
Congratulations on being a McNair Scholar.

Now is the time to begin your own legacy.

Time for questions
In Pursuit of Funding for Graduate School

Thank you for attending!

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