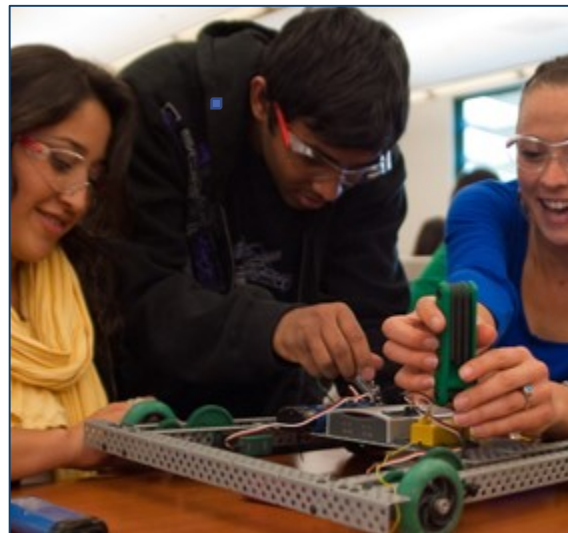


In Pursuit of Funding for Graduate School

Research
Academics
Service
Outreach
Leadership



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



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

The institution is the source of \$

In Pursuit of Funding for Graduate School



External

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

Government, nonprofits, industry \$

2018 Heartland McNair Research Conference

Sources of Funding for Graduate School



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

*Normally you apply for external funding one year in advance (i.e., same time you apply to the grad program.)

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



Why take the time to Apply for Funding?

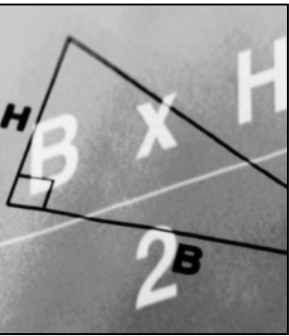
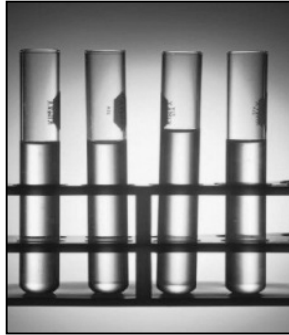
What are the benefits of applying for funding?

- 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



Official GRFP Solicitation

NSF National Science Foundation WHERE DISCOVERIES BEGIN

Contact | Help

Search

NSB Research Areas Funding Awards Document Library News About NSF

Document Library

Home > Document Library

Email Print Share

Graduate Research Fellowship Program (GRFP)

Available Formats: [HTML](#) | [PDF](#)

Document Type: Program Announcements & InformationView Program Page

Document Number: nsf18573

Document History: Posted: July 27, 2018. Replaces: [nsf16588](#).

For more information about file formats used on the NSF site, please see the [Plug-ins and Viewers](#) page.

NSF National Science Foundation

Research.gov

News
All News
Multimedia
Gallery

Funding & Awards
A-Z Index of Funding Opportunities
Find Funding
Award Search
Proposal & Award Policies Procedures Guide (PAPPG)

Document Library & About NSF
Document Library
About NSF
Careers
Staff Directory

About Services
Application Submission
ACIM\$ (Award Cash Management Service)
Notifications & Requests
Project Reports
Proposal Status

NSF Award Highlights
Research Spending & Results

Contact
Contact Help Desk

This is the ONLY source of *official* GRFP information.

FASTLANE GRFP: <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



Eligibility



Always verify eligibility in the current NSF GRFP solicitation.

- 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)

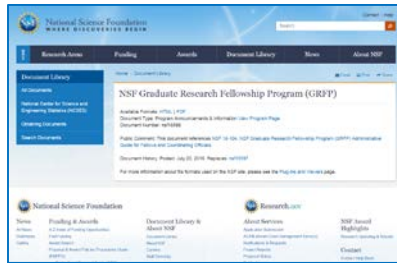
Psychology (15)

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 Eligibility

Bioengineering grad research that:

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

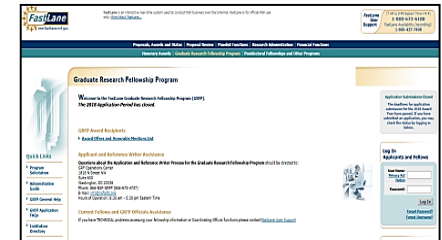
is eligible as long as...

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

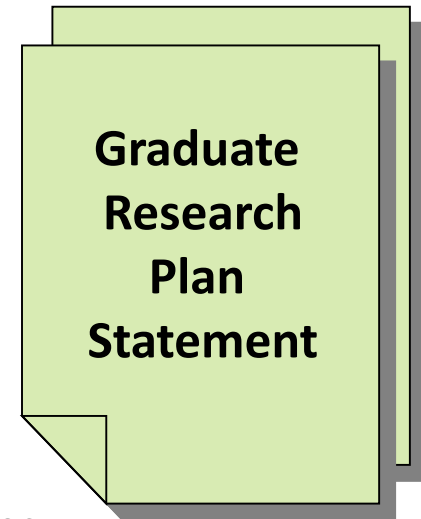


3 pages

- Motivation for an advanced degree
- Professional development plans
- Research & professional experiences
- Educational & Career goals

and

- **Intellectual Merit**
- **Broader Impacts**



2 pages

- Original research topic
- General approach (methods)
- Resources needed
- Literature citations

and

- **Intellectual Merit**
- **Broader Impacts**

IM or BI? Easy Way to Remember the Difference

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

Year	# Applications	# Awards	Success
2008	10,000	1,000	10%
2010	12,000	2,000	17%
2014	14,000	2,053	14%
2015	16,500	2,000	12%
2017	13,000	2069	16%
2018	12,000	2,116	17%
2019	?????	1,500	??

Source: <http://www.nsfgrfp.org/>



Distribution of GRFP Awards

Fellowships MUST be distributed equitably for:
geographic location ♦ gender ♦ disability ♦ veteran
race & ethnicity ♦ institutional type ♦ discipline



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.

McNair Students ARE Successful!

26 McNair Scholars Selected as 2017* NSF GRFP Fellows

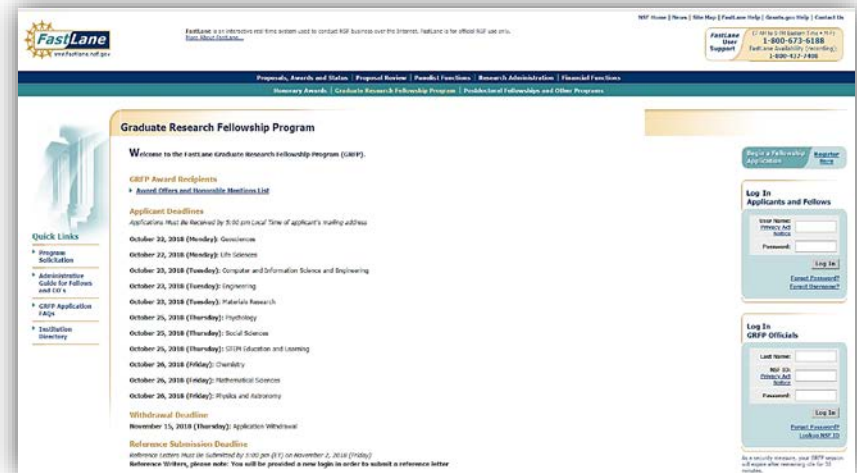
- Augsburg College
- Ripon College (3)
- Rochester Institute of Technology
- University of Eastern Washington
- University of Florida (3)
- University of California Davis
- University of Central Florida (3)
- University of Kansas (2)
- University of Missouri
- University of Nevada, Reno (2)
- University 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!

A close-up, high-contrast photograph of an elephant's face, focusing on its eye and wrinkled skin. The lighting is dramatic, with the right side of the face (viewer's right) being brightly lit, revealing the texture of the skin and the detail of the eye. The left side of the face and the background are in deep shadow. The text 'THE ELEPHANT IN THE ROOM' is overlaid on the left side of the image.

THE ELEPHANT IN THE ROOM

Personal statements seem daunting.

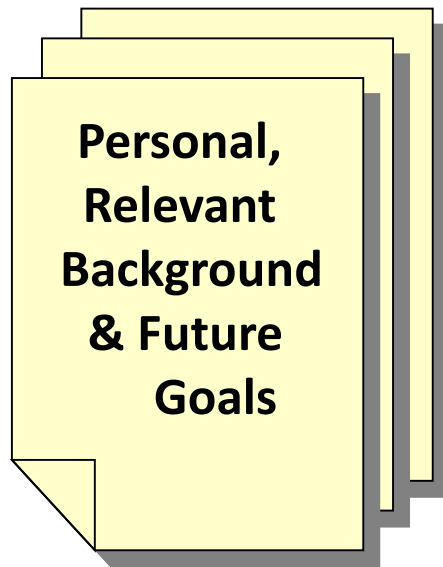
Students have told me:

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



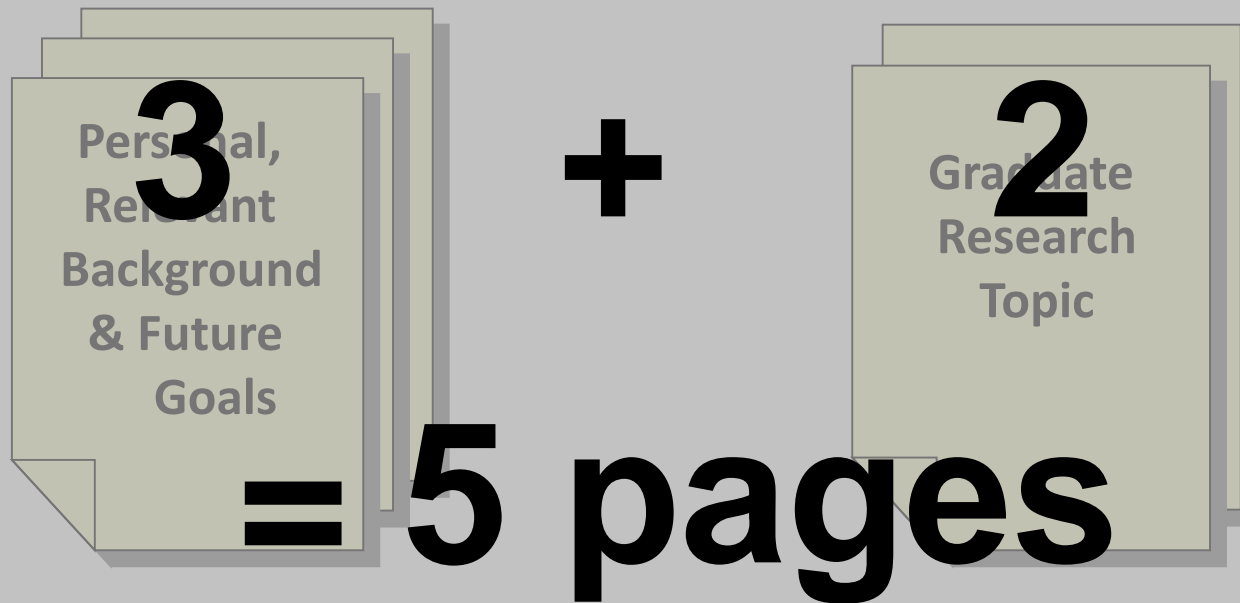
BE WILLING
TO ALLOW
YOUR CHALLENGES
TO BECOME
MOTIVATION

Still Not Convinced to Apply?



Q: Is it really worth the effort?

Ponder This



for \$138,000+?



<https://www.nsfgrfp.org/>

Find Experienced GRFP Resource Persons

Looking to submit a more competitive application? Want to get in touch with someone who is already familiar with this program? Contact a guide listed below who is at your current institution. GRFP Resource Persons are volunteers who have experience with the program in different capacities. Most will either be current or past fellows, fellowship advisors, or professors.

Please Note: Resource Persons Are Not Likely To be Technical Experts In Your Field.

Don't see someone from your institution? Please contact your department to see if someone is willing to be listed and have them submit their information here.

Following the resource person's name: (P) designates a professor/faculty member; (F) designates a current or past fellow; (FA) designates a fellowship advisor; (AD) designates university administration; (GS) designates a graduate student and (C) designates a post-doc, etc.

A B C D E F G H I J K L M N O P Q R S T U V W X Y Z			
Institution	Name (Current Status)	Email	Department Or Field Of Study (If Known Or Applicable)
A			
Air Force Institute of Technology	Richard Martin (P)	richard.martin@afit.edu	Dept. of Electrical and Comp. Engineering
Air Force Institute of Technology	Mary Lancerotti (F)	mary.lancerotti@afit.edu	Electrical and Computer Engineering
Allegheny College	Patrick Jackson (FA)	patrickj@allegheny.edu	National Fellowship Advisor
Allegheny College	Bradley Hersh (P)	bhersh@allegheny.edu	Biology
Allegheny College	Ryan Van Horn (P)	rvanhorn@allegheny.edu	Chemistry
Allegheny College	Lynne Eckstein Jackson (F, P)	ljackson@allegheny.edu	Psychology
American University	David Haaga (P)	dhaaga@american.edu	Psychology
American University	Ellen Meade (P)	meade@american.edu	Economics
Acadia University	Katherine Moore (P)	moorek@acadia.edu	Cognitive Neuroscience
Arizona State University	David M. Hondula (P)	david.hondula@asu.edu	Environmental Science
Arizona State University	Elizabeth Andrew (Postdoc) (P)	elizabeth.andrew@asu.edu	Chemical Engineering

*Under Tips for Applying:
Experienced Person
Resource List*

<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



The screenshot shows the homepage of the GRFP Essay Insights website. The header features the title "GRFP Essay Insights" in a stylized font, with the subtitle "Application Resources for the NSF Graduate Research Fellowship Program" below it. The main content area is divided into three columns. The left column is a sidebar with a table of contents titled "On this site" listing various resources like "GRFP Overview", "How to Apply", and "Review Criteria: IM & BI". The middle column is titled "GRFP Overview" and contains sections for "The basics" (describing the fellowship), "Financial support" (detailing the stipend and tuition waiver), and "Eligibility requirements*" (listing citizenship and degree requirements). The right column is titled "Social network discussions" and includes links to a LinkedIn group, Twitter (@NSFGRFP), Facebook (NSFGRFP), and a blog (thegradcafe). There is also a section for "Advice from Fellows" with a quote about the importance of confidence.

GRFP Essay Insights
Application Resources for the NSF Graduate Research Fellowship Program

On this site
GRFP Overview
How to Apply
Review Criteria: IM & BI
Defining Broader Impacts Planning BI Activities
Defining "Desired Societal Outcomes"
The Review Process
Personal, Relevant Background and Future Goals Statement A Sample Outline
Graduate Research Statement From Outline to First Draft
Critiquing Your Drafts & Self-Assessment Rubric
Selecting References
Reference Writers: FYI
For Future Applicants The Year You Apply
Advice from Reviewers
Writing Resources
Key links
GRFP Announcement

GRFP Overview

The basics

The GRFP is a prestigious, nationally competitive fellowship offered by the **National Science Foundation**. It provides three years of financial support for beginning graduate study leading to a research-based degree in the STEM disciplines.

Financial support

The fellowship includes a \$32,000-per-year stipend for three years. Additionally, each Fellow receives a tuition waiver via a cost-of-education allowance that is awarded to the graduate institution. After one year of graduate study, Fellows become eligible to apply for international research funding support through Graduate Research Opportunities Worldwide (GROW).

Eligibility requirements*

***Always refer to the current NSF-GRFP Solicitation for official eligibility information.**

1. **Citizenship:** Must be a United States citizen, US national, or a permanent US resident by the application deadline. Refer to the GRFP [solicitation](#).
2. **Degree requirement:** Individuals are typically eligible to apply during the senior

Social network discussions

LinkedIn group: NSF Graduate Research Fellowship

Twitter: @NSFGRFP

Facebook: NSFGRFP

thegradcafe: NSF GRFP 2014-15 not yet available

Advice from Fellows

An important reason to apply is that a significant part of the application is about assessing your confidence in yourself. Even if you don't receive the fellowship, applying can boost your confidence that you have the tools and ability to plan and propose research.

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>



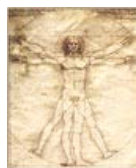
Churchill Scholarship

<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.”



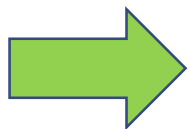
6 Tips for Success

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!



[This Photo](#) by Unknown Author is licensed under [CC BY-SA](#)

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!

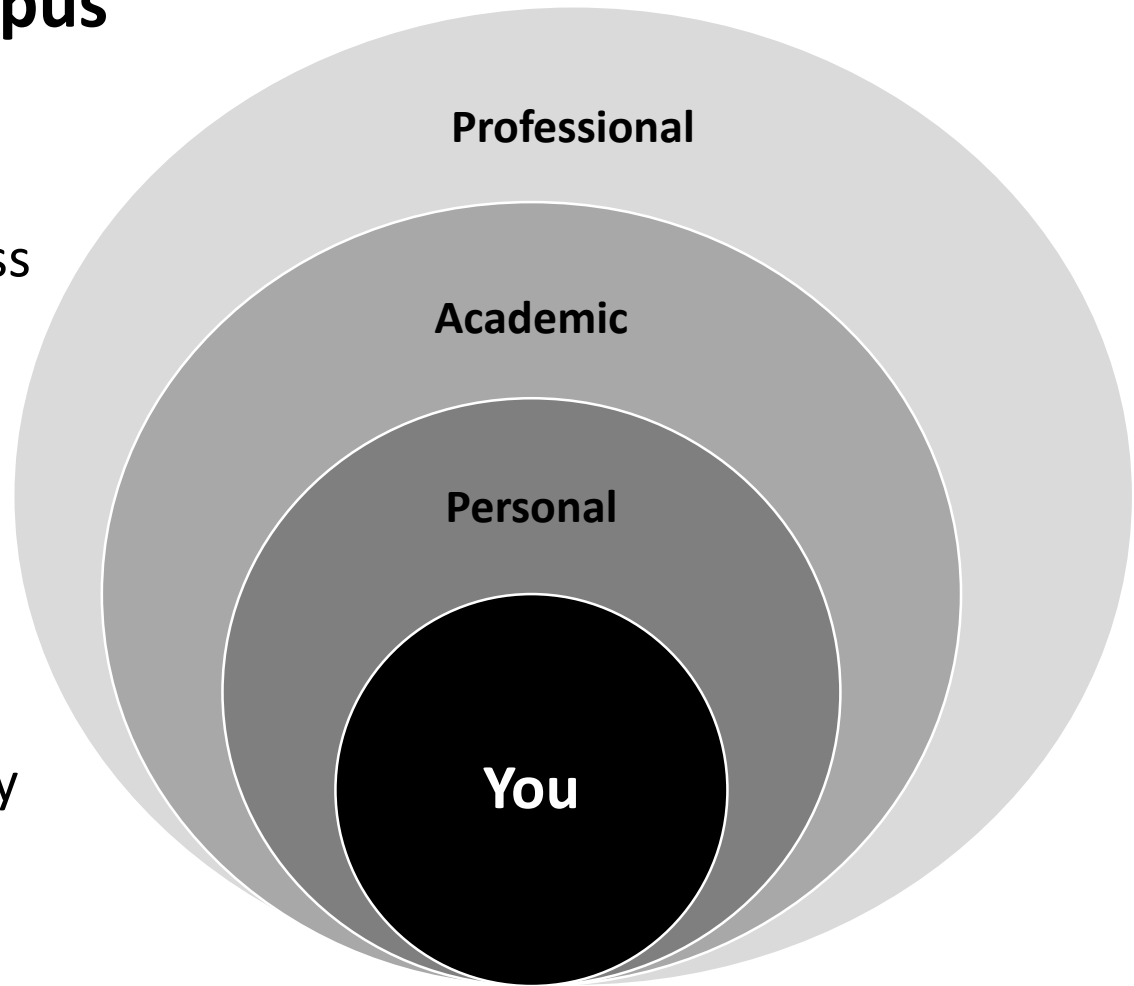
- Schedule regular meetings; update them on your research & academic achievements
- Share a copy of your updated CV or resume
- Meet your mentor for coffee - seek advice on professional development (skills you need to improve upon)
- Serve on department, college & campus committees with faculty
- Attend 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.

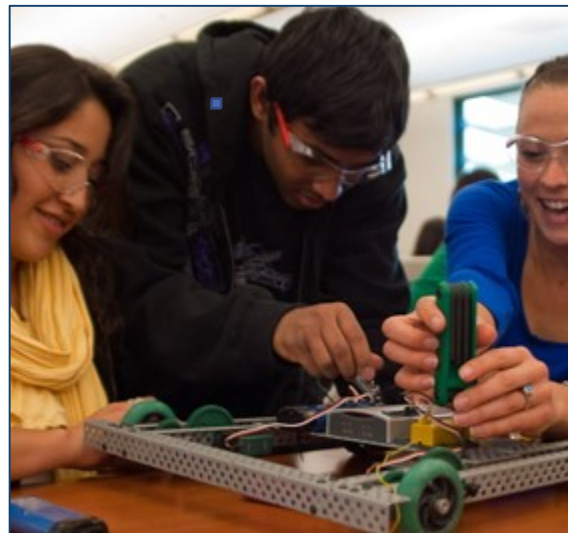
Time for questions

In Pursuit of Funding for Graduate School

*Thank you
for attending!*

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

Copyright 2018 Robin G. Walker PhD



Research
Academics
Service
Outreach
Leadership

