Fellowship Application

**SURVIVAL TIPS**

To Make the Process Less Painful Than it Has To Be

Paulina Krzyszczyk & Alvin Chen
It may seem overwhelming, especially with classes and experiments, so your first question may be...
WHY
BOther?
• Fellowship stipends typically range from $25,000- $35,000/yr
• Some up to 5 years!
• They can include conference travel funds as well!
• They also don’t look too shabby as a line on your CV

• It’s a relief to secure long-term funding
“Grant-writing is a form of thinking”

Dr. Martin Yarmush
Fringe Benefits

- Flesh out your project/proposal!
- Practice writing!
- Gain a deeper appreciation for what professors are actually doing when they say they are “grant-writing”
- Learn how to “brag about yourself”, which you will need in your future career search!
When should I start the application process?

NOW!

I’m talking to YOU, Procrastinators!
How do I start the application process?

1) Find a fellowship that you are eligible for
   – MAKE SURE YOU ARE ELIGIBLE!
     • Year in grad school (Early Career/All But Dissertation)
     • Diversity Fellowships
     • Topic Specific
   – Read the application package and understand the submission process!
Predoctoral STEM Fellowships

**Early Graduate Studies (Yrs 1-2)**
- National Science Foundation GRF
- National Defense Science & Eng. Fellowship
- Hertz Foundation Fellowship
- National GEM Consortium Fellowship
- Ford Foundation Fellowships
- Paul and Daisy Soros Fellowship

**Post-Qualifier Research (Yrs 3-4)**

**All But Dissertation (Yrs 5+)**
- Rutgers Bevier Fellowship
- IBM Fellowship
- Ford Fellowship
- American Association of University Women Fellowships
- PEO Scholarship
- NIH F31 Diversity
- UNCF/Merck GRSF
- HHMI Gilliam Fellowships
- Neuroscience Scholars Program

**NJ Department of Health Fellowships**
- (Spinal Cord Injury, Brain Injury, and Cancer Research)

**National Institutes of Health F31**
- National Physical Science Consortium Fellowships
- American Heart Fellowship

**General Fellowships**
- National Science Foundation GRF
- National Defense Science & Eng. Fellowship
- Hertz Foundation Fellowship
- National GEM Consortium Fellowship
- Ford Foundation Fellowships
- Paul and Daisy Soros Fellowship

**Diversity Fellowships**
- Rutgers Bevier Fellowship
- IBM Fellowship
- Ford Fellowship
- American Association of University Women Fellowships
- PEO Scholarship
- NIH F31 Diversity
- UNCF/Merck GRSF
- HHMI Gilliam Fellowships
- Neuroscience Scholars Program
Then What?

2) Break out your calendar!
   – Mark the deadline
   – Have your final draft ready several days before the final deadline
Deadlines

- **DOD SMART**—Dec 1, 2016
- **NSF GRFP**—Oct 24-28 (depends on research field)
- **Ford Fellowship**—Nov 17 (Pre-doctoral)
- **Paul & Daisy Soros Fellowship for New Americans**—Nov 1
- **NIH F31**—April 8, August 8, December 8
- **Gilliam Fellowships for Advanced Study**—February 2, 2017
- **Ford Fellowship**—November 10 (dissertation)
- **PEO Scholarship**—November 20
- **Bevier Scholarship (Rutgers)**—February
- **NJ Commission on Cancer Research**—October 21, 2016
- **NJ Commission on Brain Injury Research**—October 5, 2016
- **American Foundation for Pharmaceutical Education**—December
- **Pharmaceutical Research and Manufacturers of America (PhRMA) Fellowship**—September 1 or February 1 (depending on subfield)

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Typical Application Components

• Personal Statement
  – Why do you love science?
  – Past research experiences

• Research Plan
  – Overall goals and hypothesis
  – Details of the proposed research
  – Preliminary Results

• Reference Letters

• Supplementary Documents
Defining Your Research Plan

- **Problem and Significance (Why do I care?)**
  - What is the scientific or health problem?
  - What is the gap in current knowledge/methods/tools?
  - Why is this a critical gap to fill?
  - What is the rationale behind your approach?

- **Central Hypothesis**
  - Specific question you propose to ask
    - *(not a general examination of a topic)*

- **Key Research Objectives (2-3)**
  - Each objective should test the central hypothesis
  - Each objective should result in a measurable outcome
Three C’s

- **Completeness**
  - No missing sections!
  - Pay attention to details!

- **Clarity**
  - Audience: smart scientists, but may not be in your sub-field
  - Minimize jargon, use active voice, format appropriately
  - Make use of figures and graphics
  - Write many drafts, and use outside readers

- **Coherence**
  - Tie your entire application around some central points
  - Hammer in your main strength/passion via repetition
  - Application should be a portrait of YOU, not the project

Reference: [http://www.pgbovine.net/fellowship-tips.htm](http://www.pgbovine.net/fellowship-tips.htm)
Applying is a Team Effort!

- Set up meetings and request items from others early!
  - With your advisor/committee members
    - Develop an application strategy
    - Past, related applications
    - Reference letters
      - Don’t forget your past connections!
  - Grants specialists
    - Department Specific
      - [https://orsp.rutgers.edu/rutgers-gsstaff-assignments-nbpisc](https://orsp.rutgers.edu/rutgers-gsstaff-assignments-nbpisc)
    - Understand the application process....the F31 is *extensive and confusing!*
      - eRA Commons account
      - Internal documents
      - They ultimately submit your application

- GradFund
  - [http://gradfund.rutgers.edu/](http://gradfund.rutgers.edu/)

- Graduate Students
  - Especially those who have successfully applied before!
Biotech Mentors

- **NIH F31**—Alvin Chen, Paulina Krzyszczyk
- **NSF GRFP**—Seul-A Bae, Evelyn Okoke, Antoinette Nelson, Daniel Browe
- **NJ Commission on Cancer Research**—Sarah Misenko, Dharm Patel, Thomas Linz
- **NJ Commission on Brain Injury Research**—Christopher Lowe, Kate O’Neill, Peter Swiatkowski
- **Ford Dissertation Fellowship**—Kate O’Neill
- **PEO Scholarship**—Kathryn Drzewiecki
- **Gilliam Fellowships for Advanced Study**—Ileana Marrero-Barrios
- **American Foundation for Pharmaceutical Education**—Antoinette Nelson
- **Pharmaceutical Research and Manufacturers of America (PhRMA) Fellowship**—Dan Myers
Mission: Support basic and applied STEM research with strong potential to advance knowledge and benefit society.

Eligibility: At time of application
- be in 1st year of graduate school, or
- 1st semester of second year

Deadline: October 24-28 (depends on research field)

Award: 3 years, tuition ($12K/yr) and stipend ($32K/yr)

Note: Everything centered around the Merit Review Criteria
1. Intellectual Merit
   - Potential of applicant to advance knowledge in the field of study
     • Show technical proficiency through past research experiences and a strong (well-defined) research plan
     • Ideally, connect your research topic to your past experiences

2. Broader Impact
   - Potential of applicant to benefit society, by:
     • effectively integrating research and education
     • encouraging diversity
     • enhance scientific and technical understanding
     • benefit society
Application Sections

1. Personal Background and Future Goals (3 pages)
2. Graduate Research Plan (2 pages)
3. Reference Letters (3 letters)
4. Electronic Transcripts
5. GRE’s no longer required!

Where you’ve been → Where you are now → Where you want to be
NJ Department of Health

(Graduate Fellowships for Commissions on Spinal Cord Injury, Brain Injury, and Cancer Research)

http://www.nj.gov/health/commiss/org.shtml
NJ DoH Fellowships

- **Mission**: Support research into causes, prevention, and treatment of specific injury/disease

- **Eligibility**: Post-qualifier (dissertation research stage)

- **Deadline**:
  - **NJ Commission on Brain Injury Research**—October 5, 2016
  - **NJ Commission on Cancer Research**—October 21, 2016

- **Award**: 3 years, $22-30K/yr

- **Note**: Requirements may vary between Commissions
Application Sections

1. Project Abstract
2. **Research Plan (up to 8 pages)**
3. Resources and Environment (up to 2 pages)
4. Personal Statement (1 page)
5. Reference Letters (up to 5 letters)

This is mainly a research grant
NIH F31
(National Institutes of Health
Individual Predoctoral Fellowship)

https://researchtraining.nih.gov/programs/fellowships/F31
NIH F31

Mission:
- Enable predoctoral students to obtain individualized, mentored research training from outstanding faculty sponsors
- Enhance the recipient’s potential to develop into an independent research scientist

Eligibility: Post-qualifier (dissertation research stage)

Deadlines: April 8, August 8, December 8 (5:00 PM EST)

Award: 2-4 years, full tuition and stipend (~$23K)

Note: 33% individual fellowship
- 33% training grant
- 33% research grant
Application Sections

1. Applicant’s Biosketch (Personal Statement, CV, and Transcript)
2. Doctoral Dissertation and Other Research Experience (2 pages)
3. Goals for Fellowship Training and Career (1 page)
4. Reference Letters (up to 5 Letters, not including Sponsor)
5. Selection of Sponsor and Institution (1 page)
6. Respective Contributions (1 page)
7. Training Activities Planned Under this Award (1 page)
8. Environment, Facilities, and Equipment
9. Sponsor Information, including Reference Letter (6 pages)
10. Project Abstract
11. Specific Aims (1 page)
12. Research Plan (6 pages)
   a. significance and impact
   b. preliminary studies
   c. research design and methods
   d. human subjects and vertebrate animals
   e. literature cited
13. Appendix (can include “unofficial” letters of endorsement here)
“A fellowship application has a research project that is integrated with the training plan. The application emphasizes the applicant’s potential for an independent scientific research career, the applicant’s need for the training, and the degree to which the research project and training plan, the sponsor(s), and the environment will satisfy those needs.”
Links to Resources – General Tips

- General grant preparation
  - Preparing and submitting a competitive external graduate fellowship
  - Advice for writing Grants, fellowships, and personal statements
  - Advice for science fellowship applications (with specifics on NSF, NDSEG, Hertz)

- NDSEG
  - Notes for writing a successful NDSEG fellowship application

- NSF GRFP
  - NSF GRFP advice and examples

- NIH F31
  - Advice on writing NIH F31 applications from real NRSA reviewers
  - NIH F31 application walkthrough, writing advice, and review criteria
Links to Resources – Samples from Past Winners

- **NSF GRFP**
  - Link 1 (Sample research proposals and personal statements from 42 past winners)
  - Link 2 (More samples from numerous past winners, not all STEM)

- **NDSEG**
  - Link 1 (NDSEG winning essay, computational biology)
  - Link 2 (NDSEG winning essay, physics)
  - Link 3 (Comparison of winning and non-winning essays, computer science)

- **NIH F31**
  - Link 1 (4 full application samples from previous NIGMS winners)
  - Link 2 (F31 Diversity - 2 full application samples from NIAID winners)
  - Link 3 (research plan sample (12 pages), fatty acid metabolomics)
Additional Tips As You Apply

• Make the library your second home

• Take breaks! We are not robots...
When you have submitted it... make sure you celebrate!!

But don’t forget about post-submission materials and to check back for your result and feedback!
Don’t get discouraged!

- Most fellowships allow for resubmissions!
- The feedback that they provide helps dramatically improve your application and increase your chances for success!
If you enjoyed this talk/topic/advice check out:

The Rutgers iJOBS Blog

Connect with us!

Please, *share* your advice and experiences!

Any questions?