NIH Research Fellowships: Why, What, and How?

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Sponsored Research and Program Development
http://www.rockefeller.edu/sr-pd/?page=Training_Area
RRB 110
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Why Apply for Funding

• Prepare for a career as an independent investigator
• Contribute to the University mission
• Be an active member of the larger research community and participate in the discovery process
• Secure resources for training & research expenses
• Publish your findings
University Support for Grant-seeking

The process of applying for external resources to support research is a complex and integrated effort coordinated by several departments and offices:

- **Sponsored Research & Program Development** (program development, pre-award, post-award and training)
- **Finance** (post-award)
- **Compliance areas**
- **Infrastructure - Resource Centers**

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Types of Pre-Doctoral Funding

- Fellowships
- Training Grants
- Dissertation Grants
Where to Apply

• Federal
  – NIH
  – NSF
  – Department of Defense
  – Other federal sponsors as funding programs are made available

• Foundations

• Internal (via Deans Office and Development)
Resources for Finding Funding Opportunities

• SR-PD
  – Predoc Fellowship Funding Sources
  – Funding Opps Database
  – SR-PD weekly Funding alerts
  – Community of Science (COS)
  – Other Online Resources maintained by SR-PD’s Program Development

• Mentor and peers
Research Training & Career Development Timeframe at NIH

From NIH Regional Seminar on Program Funding & Grants Administration, June 2012 “Research Training Awards” presented by Henry Khachaturian, OER

Research Awards

Career Stage

‘Formal’ Training/Career Awards

Pre-Bac Institutional Training Grant (T34)
Pre-Bac Institutional Training Grant (T34)
Predoctoral Institutional Training Grant (T32)
Predoctoral Individual NRSA (F31)
Predoctoral Individual MD/PhD NRSA (F30)
Postdoctoral Institutional Training (T32)
Postdoctoral Individual NRSA (F32)

NIH Pathway to Independence (PI) Award (K99/R00)
Mentored Research Scientist Development Award (K01)
Mentored Clinical Scientist Development Award (K08)
Mentored Patient-Oriented RCDA (K23)
Mentored Quantitative RCDA (K25)

Independent Scientist Award (K02)
Midcareer Investigator Award in Patient-Oriented Research (K24)

Senior Scientist Award (K05)

‘Informal’ Training and Career Development on RPGs and Supplements

Small Grant (R03)
Research Project Grant (R01)
Exploratory/Development Grant (R21)
NIH Kirschstein National Research Service Awards (NRSA)

- **F31 Predoctoral**
  for promising doctoral candidates who will be performing dissertation research and training in scientific health-related fields

- **F32 Postdoctoral**
  for promising applicants with potential to become productive and successful independent research investigators in scientific health-related fields

- **T32 Institutional Training Grant**
  for institutions with established programs of supervised research career development in the fields of biomedical and behavioral research

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NIH Kirschstein National Research Service Awards (NRSA)

NRSA Fellowships and Training Grants (F & T Awards) for Individuals With or Earning a Research Doctorate

From http://grants.nih.gov/training/nrsa.htm, for individuals working on a research doctorate
Citizenship Requirements

• Must be Citizen, non-citizen national, or lawfully admitted for permanent residence
  – Fellowships: Must have been admitted as a Permanent Resident by the time of award
  – Training Grants: Must have been admitted as a Permanent Resident at time of appointment
Degree Requirements

• **Predoctoral**: Must have a baccalaureate degree and be enrolled in doctoral program leading to PhD or equivalent, or dual research/clinical doctorate such as the MD/PhD

• **Postdoctoral**: Must have a PhD or MD or comparable doctoral degree from an accredited domestic or foreign institution
NRSA Limitations

Duration of Support:
- Predoc: 5 years
- Postdoc: 3 Years
- Aggregate limits apply: any combination from individual and/or institutional awards

Exceptions:
- Physicians/Clinicians (combined-degree F30 allows 6 years)
- Interruptions (break in service)
- Waiver request requires NIH prior approval
Individual Fellowships: Predoctoral

• F30: Individual Predoctoral MD/PhD (or other dual degree) Fellowship

• F31: Individual Predoctoral Fellowship

• F31: Individual Predoctoral Fellowship to promote diversity in Health-Related Research
<table>
<thead>
<tr>
<th>Citizenship Eligibility</th>
<th>F30</th>
<th>F31</th>
<th>F32</th>
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<tbody>
<tr>
<td>USA or Permanent Resident</td>
<td>USA or Permanent Resident</td>
<td>USA or Permanent Resident</td>
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<thead>
<tr>
<th>Length of NRSA Support</th>
<th>F30</th>
<th>F31</th>
<th>F32</th>
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<tbody>
<tr>
<td>Up to 6 years mentored</td>
<td>Up to 5 years mentored</td>
<td>Up to 3 years mentored</td>
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<tr>
<th>Estimated Range of Annual Direct Costs</th>
<th>F30</th>
<th>F31</th>
<th>F32</th>
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<tbody>
<tr>
<td>$26,232 plus partial tuition &amp; fees</td>
<td>$26,232 plus partial tuition &amp; fees</td>
<td>$47,114 - $62,030 (varies with years of postdoctoral experience)</td>
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<th>Type of Training</th>
<th>F30</th>
<th>F31</th>
<th>F32</th>
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<tbody>
<tr>
<td>MD/PhD students</td>
<td>PhD students (or equivalent)</td>
<td>Post-doctoral</td>
<td></td>
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<th>Minimum effort committed to research training program</th>
<th>F30</th>
<th>F31</th>
<th>F32</th>
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<tr>
<td>100%</td>
<td>100%</td>
<td>100%</td>
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<tr>
<th>Letters required</th>
<th>F30</th>
<th>F31</th>
<th>F32</th>
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<tbody>
<tr>
<td>Mentor plus 3 referees</td>
<td>Mentor plus 3 referees</td>
<td>Mentor plus 3 referees</td>
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<tr>
<th>Participating NIH Institutes (check PA for listing as not all ICs participate)</th>
<th>F30</th>
<th>F31</th>
<th>F32</th>
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<tbody>
<tr>
<td>PA-11-110</td>
<td>PA-11-111</td>
<td>PA-11-113</td>
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Tips for NIH Training Fellowships

• Require 100% commitment towards research training
• Recognized/experienced mentor(s) is advised
• Training plan must be clear, focused, as well as exciting and practical
• Biosketches should reflect the potential of the candidate and the qualifications of the mentor
• Highlight coursework and professional work directly related to your research topic
• Review relevant Guidelines for Reviewers

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Timeframe of Grant-Seeking Process

The grant-seeking process is long and could take 12 months or even longer from initial planning, identifying relevant opportunities, writing applications, submitting, going through the review process, to award making and start date!

Grants Process at a Glance
Standard Due Dates for Competing Applications
Fellowship Deadlines

- 3 deadlines per year for NIH Fellowships

<table>
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<tr>
<th>Receipt Dates</th>
<th>Initial Review</th>
<th>Earliest Start</th>
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<tr>
<td>April 8</td>
<td>June/July</td>
<td>Sept or Dec</td>
</tr>
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<td>August 8</td>
<td>Oct/Nov</td>
<td>April</td>
</tr>
<tr>
<td>December 8</td>
<td>Feb/March</td>
<td>July</td>
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- Applications are due by 5 pm on deadline day
- RU’s internal deadline is 5 business days before sponsor’s deadline to allow full for review & ensure compliance
- F31 Diversity Fellowships are due on the 13th of same receipt month
Steps To Beginning Your Proposal

• Start early, approx. 6-9 months before deadline
• Review the funding program you deem relevant
• Discuss your research/proposal with your mentor
• Review recently funded proposals
• Find out sponsor’s success rate
• Contact the sponsor’s Program Official/Director
• Secure reference letters
• Register with sponsor via SR-PD
• Work with your Grants Management Specialist

SPONSORED RESEARCH AND PROGRAM DEVELOPMENT
www.rockefeller.edu/sr-pd/
Summary of Key Resources

• Mentor
• Peers
• RU SR-PD
  – Forms and format
  – Budget (e.g personnel effort & costs, indirect costs)
  – Boilerplates
  – Your Grants Management Specialist
  – NIH Fellowship Checklist
• Sponsor’s website
• NIH
  – RePORT
  – Program Official
  – Office of Extramural Research
Preparing the Proposal

• Review scope of the funding opportunity announcement
• Make note of the deadline
• Verify eligibility with your Grants Management Specialist
• Get your Mentor’s consent
• Read closely the guidelines/instructions – including special submission requirements
• Design your outline and research plan according to the sponsor’s instructions
• Discuss training and research plan with your mentor
• Fully address the review criteria in the order presented by the sponsor
Fellowship Applications

• Electronic submission to Grants.gov
• At RU, applications are submitted via InfoEd – a System-to-System environment
• Reference letters are submitted separately through the NIH eRA Commons system; letters are matched with application at NIH
  – Letters are due by the application receipt date
  – 5-day grace period has been eliminated
Fellowship Review and Award

• Two-level review
  – Initial review Group and scoring
  – Institute/Center program Staff

• Generally 5-6 month period from receipt to earliest possible award

• Check Funding Opportunity Announcements to review details in the specific opportunity
NIH Peer Review: Scored Criteria

1. Fellowship Applicant
2. Sponsors, Collaborators, Consultants
3. Research Training Plan
4. Training Potential
5. Institutional Environment and Commitment to Training
NIH Review: Compliance Areas

1. Protections for human subjects
2. Inclusion of women, minorities, and children
3. Vertebrate animals
4. Biohazards
5. Training in the Responsible Conduct of Research
6. Resource Sharing Plans
Kirschstein-NRSA pre-doctoral fellowships (F31s)
Applications, awards, and success rates

From NIH Regional Seminar on Program Funding & Grants Administration, June 2012 “Research Training Awards” presented by Henry Khachaturian, OER
Additional Elements

• Easy to Read and coherent
• Format requirements
  – Font type and size
  – Margins
• Page limit
Submission Process

• Complete University Routing Form
• For full review and institutional sign-off, submit application to SR-PD at least 5 business days before sponsor’s deadline
• Visit SR-PD’s Application Review Requirements for more information
Electronic Submission

• Most competing grant applications to NIH require electronic submission
  – All NIH fellowships must be submitted electronically
• At RU, NIH grants are submitted via InfoEd
  – Contact your GMS well before submission to find out about InfoEd training
  – InfoEd FAQs
Applications must follow sponsor’s guidelines

- **SF424 (R&R) Individual Fellowship Application Guide**
- Program Announcement (**PA-11-111**, for example)
- **RU NIH Fellowship Checklist** summarizes requirements and application content
The Research Training Plan

• Should be written by the applicant in collaboration with sponsor
• Will be evaluated for scientific merit AND training potential
Important Parts of the Research Training Plan

1. Introduction
   • Resubmission only

2. Specific Aims
   • List broad long-term objectives
   • Describe goal of research
   • Limited to 1 page

3. Research Strategy
Key Elements of Research Strategy

• Limited to 6 pages, including figures and tables

• Significance
  – Importance of the problem in relevant field
  – How the project will improve scientific knowledge
  – Concepts, methods, technologies, etc. that will be changed if the aims are achieved
  – Tangible benefits to health of society

• Innovation
  – Not applicable to Fellowship applications
Key Elements of Research Strategy

• Approach
  – Overall strategy and methodology to be used to accomplish aims of project
  – Potential problems, alternative strategies, and benchmarks for success
  – Include any courses that you plan to take to support the research training experience
  – Include info on preliminary studies, if any
Important other sections of Research Training Plan

• Respective Contributions (1 page)
  – Describe collaborative process between you & your sponsor in development of research training plan

• Selection of Sponsor & Institution (1 page)
  – Explain selection of sponsor & institution

• Responsible Conduct of Research (1 page)
  – See RCR boilerplate
Sponsor & Co-Sponsor Information

• Your mentor’s information
• Limited to 6 pages
• Table of Research Support available
• Sponsor’s previous Fellows/Trainees
• Training Plan, Environment, Research Facilities
  – Description of training plan sponsor has developed specifically for you. Include specifics such as classes, seminars, etc.
  – Indicate relationship of proposed training to your career goals. Describe skills and techniques you will learn.
• Number of trainees to be supervised during fellowship
• Your qualifications for a research career

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Post-submission

• Receive confirmation of receipt and assignment
• Note sponsor’s decision date
• Receive summary statement
• If fundable score: submit “Just-in-Time” information and address any pending issues on your application; resolve any overlap of science and effort
• If low score or unscored: evaluate the reviewers’ comments; speak with your Program Official; prepare resubmission and work with your GMS
Helpful References

- Sponsored Research and Program Development
- New Investigators
- Center for Scientific Review
- NIH “Writing Your Application”
- InfoEd
Questions and Suggestions