On the path to a research career: NIH funding and career opportunities

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OBJECTIVES

• How did I get here?
• Overview of NIH, NIDA
• Early career funding opportunities
• Navigating the process
What a long strange trip it’s been…

1. College
2. Pharmacology
3. NIDA IRTA
4. Walter Reed
5. UMD
6. JHSPH
7. NIDA
NIH Structure and Function

- Component of the U.S. Department of Health and Human Services
- Comprised of 27 Institutes and Centers
- *Science in pursuit of fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to extend healthy life and reduce the burdens of illness and disability*
What is NIDA?

NIDA’s Mission is to lead the nation in bringing the power of science to bear on drug abuse and addiction.

- through the support and conduct of research across a broad range of disciplines
- ensuring rapid and effective dissemination and use of research results to improve prevention, treatment, and policy
What does NIH/NIDA fund?

What kind of grants of interest to early career investigators does NIH Fund?

- Research
- Research Training
NIDA Research Career Development Timetable

Graduate Student

NRSA F30, F31, T32, R36

Post-doc

NRSA F32, T32

Early Career

K01, K08, K23, K25, R03, R01, R15, K99/R00

Mid Career

R01, K02, K24, P01

Senior Investigator

K05
Purpose of Research Training and Career Development Awards

- **Predoctoral and Postdoctoral Fellowships**: To provide funding for individualized training experiences for promising pre/post docs
- **Mentored Career Development Awards**: To provide support and protected time to continue training and conduct research to support the transition to an independent research career
- **Salaried Career Development Awards**: To provide established investigators with salary support for conducting drug abuse research and making a commitment to training junior investigators
Predoctoral Training
National Research Service Award
Predoctoral Fellowships

- Individual Predoctoral Fellowship (F31)
- Individual Predoctoral Fellowship for MD/PhD Students (F30)
- Institutional Training Grants (T32)

FEATURES
Duration - up to 5 yrs (F31), 6 yrs (F30)
Mentor - Yes
Stipend - $22,032
Tuition, Fees, Health Insurance
Eligibility - U.S. Citizen or Naturalized Resident
Dissertation Research Awards

- **R36 Mechanism**
- **Used by some, not all ICs** (e.g. NIDA, NIMH, NIA)

**FEATURES**
- Duration – Up to 2 years
- Mentor – No
- Support – $15,000 to 50,000 (varies by IC)
- Renew – No
- Eligibility – U.S. Citizen or Naturalized Resident
Research Opportunities at NIH

- **The Postbaccalaureate Intramural Research Training Award (IRTA) Program**
  Biomedical research program that enables eligible recent college graduates planning to apply to graduate or professional school to spend one or two years working with investigators at the NIH.

- **The Graduate Partnerships Program (GPP)**
  Opportunity to conduct all or part of dissertation research at NIH.

[https://www.training.nih.gov/programs](https://www.training.nih.gov/programs)
Postdoctoral and Career Development Training
National Research Service Award
Postdoctoral Fellowships

- Individual Postdoctoral Fellowship (F32)
- Institutional Training Grants (T32)

FEATURES
- Duration – up to 3 years
- Mentor – Yes
- Stipend – $39,264 up to $54,180
- Renew – No
- Eligibility – U.S. Citizen or Naturalized Resident
Mentored Career Development Awards (K Awards)

- Mentored Research Scientist Development (K01)
- Mentored Clinical Scientist Development (K08)
- Mentored Patient-Oriented Research Career Development (K23)
- Mentored Quantitative Research Development (K25)

FEATURES
Duration - 3, 4 or 5 years
Mentor - Yes
Salary - Up to $90,000
Res. Costs - Up to $50,000
Renew - No
Eligibility - U.S. Citizen or Non-citizen Nationals, Permanent Resident (EXCEPT for K99); Doctoral level Degree; Full-time faculty or other research appt (EXCEPT for K99)
Intention of K Mechanism: Ideal K Candidates

- Pursuing a new research area that warrants additional supervised research experience; or in need of substantial augmentation of current skills
- In need of three, four or five years of mentored support
- Can devote a minimum of 75% of full-time professional effort
- Plan to pursue NIH R01
NIH Pathway to Independence Award K99/R00

- Up to 5 years of support in 2 phases:
  - 1-2 yrs mentored support for highly promising postdocs
  - 3 yrs independent support contingent on securing independent position

- Mentored phase: $90K salary/ $50K research support per yr
- Independent phase: up to $249K per yr

- Eligibility: no more than 5 yrs post doc training; not held an independent (R01, R03, R21) or K award
Other Mechanisms

- Small Grant – (R03, $50,000/yr, 2 years)
- Exploratory/Developmental Grant (R21, 2-year max of $275,000)
- B-START – Behavioral Science Track Award for Rapid Transition (R03, 1-year max of $50,000)
- A-START – AIDS Science Track Award for Research Transition (R03, $100,000/yr, 2 years)
- Diversity Supplement
  - Guidelines/Eligibility - [http://www.drugabuse.gov/about/organization/SPO/SPOHome.html](http://www.drugabuse.gov/about/organization/SPO/SPOHome.html)
Tips for Research Training and Career Development Applicants

- Unlike R applications, RT & mentored CDA grant applications must contain a detailed training plan.
- Unlike R applications, RT & CDA grants must submit a plan for *ongoing* training in the responsible conduct of research.
- Mentorship is essential to the training process—mentors must be chosen carefully.
- CDA applicants should discuss plans for mentorship and/or training of junior scientists in their field.
Which Mechanism Is Right for you?

• Stage of research career

• What are your research needs
  - do you need additional training?
  - do you need funding to conduct your dissertation research?

Talk with NIDA staff, they can help match your needs to the right funding mechanism
Scientific Review Officer: an extramural staff scientist and the federal official responsible for ensuring that applications receive an objective and fair initial peer review.

Program Official: extramural staff scientist responsible for developing research initiatives and for the programmatic, scientific, and/or technical aspects of assigned applications and grants.

Getting to know NIH staff
Where do I begin?

Have realistic expectations- the grants process is lengthy and requires persistence

• NIH websites: http://www.nih.gov/icd/index.html
• Office of Extramural Research Website: http://grants.nih.gov/grants/oer.htm
• NIH RePORT http://projectreporter.nih.gov/reporter.cfm
• Center for Scientific Review Website: http://cms.csr.nih.gov/
Pre-Submission Planning Timeline

**PLANNING PHASE**

- Assess yourself, your field, and your resources
- Brainstorm; research your idea; call NIH program staff
- Set up your own review committee; determine human and animal subject requirements

**WRITING PHASE**

- First outline your application’s structure; then write your application

**SUBMISSION PHASE**

- Get feedback; edit and proofread
- Meet institutional deadlines

**Receipt date**

**Months before receipt date**

- 8
- 7
- 6
- 5
- 4
- 3
- 2
- 1
A concept paper describes your research plans concisely. It’s a tool to facilitate productive discussion with an NIH Program Official.

**Study Goals**
You want support to do what?

**Problem/Significance**
Why does this topic need study?

**Research Question**
What hypotheses will you test?

**Design/Analysis**
What study design and statistical approach do you propose?

**Team**
Who will be the key participants and collaborators?
Search the NIH Guide

Office of Extramural Research home page: http://grants.nih.gov/grants/oer.htm

Grants - OER Home Page

NIH Medical & Behavioral Research Grant Policies, Guidelines & Funding Opportunities

Funding Opportunities
- Funding Opportunities (RFAs, PAs) and Notices, as published in the NIH Guide for Grants and Contracts.
- New Announcements This Week
- LISTSERV - Weekly E-Mail

NIH Research Training Opportunities
New Investigators Program NEW
Multiple Principal Investigators NEW
Small Business Funding Opportunities (SBIR/STTR)
Types of Grant Programs

Grants Policy
- Grants Policy and Guidance
- Grants Compliance and Oversight
- Extramural Financial Operations NEW
- Laboratory Animal Welfare (OLAW)
- OER Human Subjects Web Site
- HHS Office for Human Research Protections (OHRP)
- Intellectual Property
- Peer Review

Electronic Research Administration (eRA)
- Electronic Submission of Grant Applications

Grants News Flashes
NIH Requests Information on New Stancards for the Care and Use of Laboratory Animals

Other Site Resources:
- Advanced Search
- Site Map
- Document Index
- Help Downloading Files
- Contact Us

Frequently Requested Links:
Search Grants.Gov

Grants.gov provides organizations with the ability to search for grant opportunities. The Office of Federal Financial Management recently issued a policy directive requiring that all Federal agencies post grant opportunities online as of November 7.

To begin your search for grant opportunities, access Search Grant Opportunities below. To register to receive all email notifications of new grant postings from Grants.gov, access Receive Grant Opportunity Emails below.

Search Grant Opportunities
- Basic Search
- Browse by Category
- Browse by Agency
- Advanced Search

Receive Grant Opportunity Emails
- Selected Notices based on Funding Opportunity Number
- Selected Notices based on Advanced Criteria
- All Grants Notices
- Unsubscribe from Grant Notices

http://www.grants.gov/search/searchHome.do
What happens when I apply?
Application Cycles

There are three overlapping cycles per year:

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<th>MAR</th>
<th>APR</th>
<th>MAY</th>
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**Cycle 1**
- Receipt
- Referral
- Review
- Council
- Award

**Cycle 2**
- Council
- Award
- Referral
- Review
- Council

**Cycle 3**
- Review
- Council
- Award
- Referral
HERE'S THE WORLD FAMOUS SCIENTIST MAILING IN HIS LATEST APPLICATION...

I HAVE A HARD TIME BELIEVING THEY READ IT VERY CAREFULLY...
Overview of the Process

Principal Investigator

Initiates Research Idea

School or Other Research Center

Submits application

Conducts Research

Allocates Funds

National Institutes of Health

Center for Scientific Review

Assign to IC and SRG

Scientific Review Group

Review for Scientific Merit

Institute

Evaluate for Relevance

Advisory Council or Board

Recommend Action

Program staff/
Gentlemen,
Regarding the recent rejection slip you sent me.

I think there might have been a misunderstanding.

What I really wanted was for you to approve my application and send me $250,000.

Didn’t you realize that?!!
Common Problems in Applications

- Lack of new or original ideas
- Absence of an acceptable scientific rationale
- Lack of experience in the essential methodology (in trainee OR mentor)
- Outdated methodologies
- Uncritical or questionable reasoning in experimental approach
- Poor preparation and presentation
- Overambitious
Consult with NIDA staff and mentors every step of the way.

• If you are interested in applying...
• If you have questions...
What do you talk about with program staff?

- Funding Mechanisms
- Program Priorities
- Grant Process
- Application Procedure
- Review Process / Committees
- New Initiatives-
  - RFAs,
  - PAs
Resources

Application Information
• http://grants1.nih.gov/grants/forms.htm

NRSA
• http://grants.nih.gov/training/nrsa.htm
• http://grants.nih.gov/training/F_files_nrsa.htm

Career Awards
• http://grants.nih.gov/training/careerdevelopmentawards.htm

Diversity Supplements
• http://grants.nih.gov/grants/guide/pa-files/PA-08-190.html

Loan Repayment
• http://grants.nih.gov/grants/guide/notice-files/NOT-OD-o8-o83.html
• http://www.lrp.nih.gov

NIDA Training Information (including Update Notices)
• http://www.nida.nih.gov/researchtraining/traininghome.html
Resources

• Guidelines for Trainees at the National Institutes of Health

• NIH handbook for Postdoctoral Fellows (Office of Education, Office of the Director, NIH)

• Guidelines for Annual Review of Trainees

• Guidelines for Mentors at the National institutes of Health
Thank you for your attention!