NIH 101

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Epilepsy Program Director
Acting Training Officer
NINDS-NIH-DHHS
Is this your view of the NIH?
Or maybe this?
Today’s Goals

1. Demystify the NIH.
2. Provide “insider” details on how grants are assigned to NIH institutes and study sections.
3. Explain NIH grant review processes.
4. Provide tips on how to improve YOUR chances of success.
National Institutes of Health

Much of the biomedical research in the United States is supported by the Federal Government, primarily the National Institutes of Health (NIH)
National Institutes of Health (NIH)

- 27 Institutes or Centers
- Each Institute has its own mission
- Each Institute has its own budget
- Each Institute has its own activities/priorities
- Each Institute supports different mechanisms and has its own ways of doing things
- Contact the appropriate Institute before beginning
The National Institutes of Health

- NIH is part of a much larger federal government agency (DHHS).
- Congress “oversees” all federal agencies (and sets their budgets!)
- NIH is **NOT** immune to political pressures. It can be very useful to learn what areas are of current interest.
Institute Organization

National Advisory Council

Office of the IC Director

Board of Scientific Counselors

Extramural

Scientific Programs

Grants

Contracts

Intramural

Laboratory Studies

Clinical Studies
The NIH Extramural Team

Review

Grants Management

Program
How NIH Supports Research

- Grants
  - Investigator-initiated research grants
  - Program Announcements (PA)
  - Request for Applications (RFA)
- Contracts (RFP)
- Cooperative Agreements
Extramural Training Mechanisms:

∑ Ruth L. Kirschstein National Research Service Awards (NRSA) Training Grants (T32) and Fellowships (F30, F31, F32, F33)
∑ Career Development Awards (K-Series)
∑ Programs for Special Populations
∑ International Career Opportunities
∑ Extramural Loan Repayment
# Research Training and Career Development Timetable

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<tr>
<th>Approx. Stage of Research Training and Development</th>
<th>Mechanism of Support</th>
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<tr>
<td><strong>GRADUATE/MEDICAL STUDENT</strong></td>
<td>Institutional Training Grant (T32)</td>
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<td></td>
<td>Predoctoral Individual NRSA (F31)</td>
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<td></td>
<td>Predoctoral Individual MD/PhD NRSA (F30)</td>
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<tr>
<td><strong>POST DOCTORAL</strong></td>
<td>Postdoctoral Institutional Training Grant (T32)</td>
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<td></td>
<td>Postdoctoral Individual NRSA (F32)</td>
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<tr>
<td><strong>EARLY CAREER</strong></td>
<td>Mentored Research Scientist Development Award (K01)</td>
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<td>Mentored Clinical Scientist Development Award (K08)</td>
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<td></td>
<td>Mentored Patient-Oriented Research Career Development Award (K23)</td>
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<td>Mentored Quantitative Research Career Development Award (K25)</td>
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<tr>
<td><strong>MIDDLE CAREER</strong></td>
<td>Small Grant (R03)</td>
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<td></td>
<td>Research Project Grant (R01)</td>
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<td></td>
<td>Independent Scientist Award (K02)</td>
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<td></td>
<td>Midcareer Investigator Award in Patient-Oriented Research (K24)</td>
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<td></td>
<td>Program Project (P01) and Center (P50) Grants</td>
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<tr>
<td><strong>SENIOR CAREER</strong></td>
<td>Senior Scientist Award (K05)</td>
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Predoctoral Opportunities

- **T32**: Institutional Training Grant (check with your school to see if they have one)
- **F30**: NINDS Medical Student Dual-Degree MD/PhD or MD/MPH Fellowships
- **F31**: Predoctoral Individual NRSA Awards
Postdoctoral Opportunities

- **T32**
  Institutional Training Grant (check with your school to see if they have one)

- **F32**
  Ruth L. Kirschstein NRSA for Individual Postdoctoral Fellows

- **F33**
  NRSA for Senior Fellows

- **K01 & K25**
  Career Development Awards
Career Development Awards for Clinically Trained Investigators

- **K08**
  - Mentored Clinical Investigator Award

- **K12**
  - Neurological Sciences Academic Development Award (NSADA)

- **K22**
  - Career Transition Award

- **K23**
  - Mentored Patient-Oriented Research Career Development Award
Independent Funding Opportunities

- **K02** = Independent Scientist Award
- **K24** = Midcareer, Patient-Oriented Award
- **R03** = Research Grant – small, pilot study
- **R21** = Research Grant – high risk/high impact
- **R01** = Research Grant -- “Gold Standard”
- **P01** = Program Projects – Big, multi-project
- **P50** = Centers -- Very big, many components
- **K05** = Senior Scientist Award
Process for a Research Grant

1. **Research Grant Application**
2. **School or Other Research Center**
3. **Center for Scientific Review**
4. **Scientific Review Group/IC Review Branch**
5. **Institute-NINDS**
6. **Advisory Council-NINDS**
7. **Institute Director**

**Process Flow:**
- RFA/PI Initiates Research Idea
- Submits application
- Conducts Research
- Allocates Funds
Timeline for Career Award Applications

There are three cycles per year:

- Submit on: June 1  October 1  February 1
- Review in: October  February  June
- Council in: February  May  September
- Earliest award: April  July  December
Timeline for Fellowship Award Applications

There are three cycles per year:

- **Cycle 1**: April 5
- **Cycle 2**: August 5
- **Cycle 3**: December 5

- Submit on:
- Review in:
- Council:

- June
- October
- September
- December
- February
- April
Grant writing timeline

6 months before (March for October submission)
- Outline specific aims
- Talk to program officer/peers/mentors
  - Decide institutes and study sections
  - Redo specific aims
- Plan for preliminary data to be completed in 3 months
- Let grantsmanager know you will be submitting

3 months before (July for October submission)
Grant writing timeline

2 months before (August for October submission)
Rewrite and give back for more suggestions

1 month before deadline (September for October submission)
- Final rewrite
- Get other forms together
- Package application
- Write cover letter requesting institute, study section, any additional review areas to be covered
What happens to my grant? (and why does it take so long?)

- **Receipt** (all applications initially land at the same loading dock).
- **Referral** (assignment to Institute and review group; can take up to 1 month).
- **Initial Review** (5-6 months after receipt).
- **Council Review** (7-8 months after receipt).
- **Award** (usually 9 or more months after receipt).
- **Expedited awards**.
Applications Submitted to NIH

Approximately 60,000 grant applications are submitted to NIH each year, of which 25-30% are funded.

Grant applications are received for three review cycles per year.
The Future: Electronic Research Administration (eRA)

- NIH's vision for the 21st century.
- Infrastructure for conducting interactive electronic transactions for the receipt, review, monitoring, and administration of NIH grant awards.
- Integrates the external system, NIH eRA Commons and the internal system, IMPAC II.
There are 2 Stages of Review

**Scientific Review Group**
- Assesses Quality of Review
- Rates Application; Makes Recommendations for Appropriate Level of Support & Duration of Award

**National Advisory Council**
- Technically & Scientific Merit
- Rates Application; Makes Recommendations for Appropriate Level of Support & Duration of Award
- Assesses Quality of Review
- Makes Recommendation to Institute on Funding
- Evaluates Program Priorities and Relevance
- Advises on Policy & Strategy
Assignment to a Review Group

- Different Institutes use different mechanisms and use the same mechanism differently.

- An Institute may review a particular mechanism “in house” or at CSR.

- Assignment is the responsibility of CSR. Talk to Institute Program Staff to identify your best “target” review group and request it in the cover letter.
Center for Scientific Review (CSR)

- CSR has 20 clusters of study sections: Integrated Review Groups (IRG)
- Each IRG has review committees that are designed to overlap in expertise
- Rosters and descriptions can be found at [http://www.csr.nih.gov](http://www.csr.nih.gov)
“In House” Review Groups

- Training and Career Development Awards
- Specific review criteria (Center Grants, Clinical Trials, Conference Grants, special programs)
- RFA’s
What does a Study Section look like?
Study Sections

Composition

- ~20% Assistant, ~40% Associate, ~40% Full Professor
- ~15% Minority, ~25% Female

Basic/Clinical ranges from 80/20 to 20/80
What is the Review Workload?

Committee
40 - 120 applications

Reviewers
n Most reviewers have 3 - 12 assignments
n Most applications have 3 reviewers (primary and 2 secondary)
What reviewers want to know

WHAT are you proposing to do?

WHY is this important?

Can YOU do it?
<table>
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<tr>
<th>Study</th>
<th>Section</th>
<th>Actions</th>
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<tbody>
<tr>
<td></td>
<td>Scored</td>
<td>(priority scores and percentiles)</td>
</tr>
<tr>
<td></td>
<td>Unscored</td>
<td>(lower half)</td>
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<tr>
<td></td>
<td>Deferral</td>
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Calculation of priority scores and percentile rankings
Preparation of summary statements
Council consideration
What’s with all the numbers??

- **Type**: (1, 5, 2... new, non-competing, renewal)
- **Mechanism**: (it’s a zero, not letter O)
- **Institute**
- **Serial number**
- **Year**
- **Revision status/supplement**

*unique identifier
What Is A Summary Statement?

Dennis L. Glanzman, Ph.D. SUMMARY STATEMENT
(301) 443-1576 (Privileged Communication)
DGLANZMA@MAIL.NIH.GOV

Application Number: 2 R01 MH99999-06A1
DUAL PROGRAM CLASS CODE: C110 B DUAL: NSDAEYAA
IFCN-5

Review Group: INTEGRATIVE/FUNC/COGNITIVE NEUROSCI 8

Requested Start Date: 04/01/2003

VANDERBILT, J. ARTHUR, PHD
UNIVERSITY OF SAN SIMEON
DEPT OF PHYSIOLOGY
10550 CASTLE ROAD
SAN SIMEON, CA 93452

Project Title: NEURAL CONTROL OF INVOLUNTARY EXUBERANCE

SRG Action: Priority Score: 138 Percentile: 3.5
Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED
Animal Subjects: 30-ANMLS INV.-VERIFIED, NO SRG CONCERNS OR COMMENT
Summary Statement

- Overall resume and summary of discussion
- Essentially unedited critiques
- Priority score and percentile ranking
- Budget recommendations
- Administrative notes
Response to Summary Statement

- Cry, laugh, curse
- Advice from your colleagues
- Put it aside for a while
- Respond (respectfully)
What Is “Council”?

- Consists of senior members of the clinical, scientific, and lay communities.
- Advisory to Institute Director
- Principal focus is on policy/strategy.
- Particular emphasis of an Institute’s council is highly variable.
- Awards are not made until after Council.
What Determines Which Awards Are Made?

- Scientific merit
- Program considerations
- Availability of funds
Take-home message

This can be confusing

We are here to help

CALL US (before you submit, too)