THE NATIONAL INSTITUTES OF HEALTH AND HOW IT WORKS

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Take Home Messages

• NIH: advancing biomedical knowledge and improving health
• Good research from good researchers is how this is accomplished
• Therefore, we need you
• We are your allies, not hurdles in your path to success
• Get to know the program staff, they are your friends - and co-conspirators in the name of science
• Serve on NIH study committees, advisory committees, etc. – it will be good for you and for NIH
National Institutes of Health (NIH) Mission

To seek fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability.
NIH Main Campus – Bethesda, MD
NIH Clinical Center
NIH Organizational Structure

Office of the Director

NI A  NI AAA  NI AI D  NI AMS  NCI  NI CHD
NI DCD  NI DCR  NI DDK  NI DA  NI EHS  NEI
NI GMS  NHLBI  NI MH  NI NDS  NI NR  NHGRI
NI BIB  NI MHD  NCCAM  NCRR  FIC  NLM
CC  CIT  CSR
The IC Structure of NIH

- Is a curse and a blessing
- Allows expertise regarding areas of research and manageable administrative size
- Can be an obstacle to cross-disciplinary research
- Each Institute and Center (IC) has its own character – a reflection of history, size, research communities, leadership, etc.
- Each IC sets its own paylines, percentage of funds used for investigator-initiated research, etc.
Public Law 87-838 (1962)

“...an institute for the conduct and support of research and research training related to maternal health, child health, and human development, including...the special health problems of mothers and children...”
NICHD Mission

To help ensure that:

- Children are born healthy and wanted
- Childbearing is safe for women
- People achieve the family size they desire
- Children achieve their full potential for healthy and productive lives
- Those who need it receive optimal rehabilitation and achieve minimal disability
A Typical (not that there is any) NIH Institute

- National Advisory Council
- Office of the Institute Director
- Board of Scientific Counselors

Extramural
- Scientific Programs
- Grants
- Contracts

Intramural
- Laboratory Studies
- Clinical Studies
NIH Intramural Program

- Approximately a dozen research programs comprised of over 80 units and sections (see nich.nih.gov)
- Over 80 tenured and tenure-track investigators, with total staff of approximately 1250 people
- Great postdoc, tenure-track and other opportunities, in basic, translational, and clinical research
- Extensive collaborations with extramural scientists
- Many other ICs have similarly diverse and cutting-edge intramural programs
### NIH Extramural Program

<table>
<thead>
<tr>
<th>Mechanism</th>
<th>NIH Role</th>
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<tr>
<td>Grant</td>
<td>Patron (Assistance &amp; Encouragement)</td>
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<tr>
<td>Contract</td>
<td>Purchaser (Procurement)</td>
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<tr>
<td>Cooperative Agreement</td>
<td>Partner (Assistance with Substantial Program Involvement)</td>
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Stages of Research Training and Career Development

**Pre-doctoral Training**
- Institutional Research Training (T32, T35)

**Post-doctoral Training**
- Mentored Institutional Research Training (K23)
- Mentored Clinical Scientist (K08, K12)
- Academic Career Award (K07)
- Research Grant (R01, R03, R21, R24)

**Career Development and Research**
- Midcareer Investigator in Patient-Oriented Research (K24)
- Senior Scientist/Fellowship (K05/F33)
Application for Public Health Service (PHS) Grant
Find. Apply. Succeed.

Grants.gov is your source to FIND and APPLY for federal grants. The U.S. Department of Health and Human Services is proud to be the managing partner for Grants.gov, an initiative that is having an unparalleled impact on the grant community. Learn more about Grants.gov and determine if you are eligible for grant opportunities offered on this site.

Grants.gov does not provide personal financial assistance. To learn where you may find personal help, check Government Benefits, Student Loans, and Small Business Start-up Loans.

What’s New at Grants.gov

- New Opportunities This Week
- New Self-Service Portal - Get help 24 hours a day
- View the latest Grants.gov Stakeholder Webcast information
- Verify if your Adobe Reader version is compatible with Grants.gov

March 16, 2010: OMG memo on ACORN
NIH Grant Process

1. **Initiates Research Idea and Prepares Application**
   - Investigator

2. **Submits Application**
   - Grantee Institution

3. **Conducts Research**
   - Grantee Institution

4. **Manages Funds**
   - NIH

5. **National Advisory Council/Board Recommends Action**
   - NIH

6. **Institute Makes Funding Selections & Issues Grant Awards**
   - NIH

7. **SRG Evaluates for Scientific Merit**
   - Center for Scientific Review (CSR) Assigns to Scientific Review Group (SRG) and Institute

8. **Institute Evaluates for Program Relevance and Need**
   - Center for Scientific Review (CSR) Assigns to Scientific Review Group (SRG) and Institute
Referral and Review Process

NIH Center for Scientific Review (CSR)

NIH Institutes, Centers, and Offices
- Program & Policy Considerations
- Funding Decisions
- Scientific Management

Referral and/or Review

Scientific Merit

Review
How Are Assignments Made?

To Scientific Review Group (SRG) based on:
- Scientific expertise of the membership

To Institutes and Centers (ICs) based on:
- Overall mission of the IC
- Specific programmatic mandates and interests of the IC
# Dual Review Process

## Scientific Review Group (SRG)
- Provides initial scientific review of grant applications
- Does not set program priorities
- Makes budget recommendations but not funding decisions

## National Advisory Council
- Assesses quality of SRG review
- Makes recommendations to Institute staff on funding
- Evaluates program priorities and relevance
- Advises on policy
Research Grants Review Criteria

- Investigator
- Environment
- Significance
- Approach
- Innovation

Applications are also reviewed with respect to:
- Plans to include children, minorities, and both genders
- Reasonableness of proposed budget and duration
- Adequacy of protection for humans, animals, and environment
Study Section Actions

- **Scored**
  - If study section finds application is qualitatively in upper half of research
  - Assigned Impact/Priority Score of 10 to 90

- **Unscored**
  - If study section finds application is not in upper half of research
  - Receives no overall Impact/Priority Score
  - Principal Investigator (PI) gets summary statement

- **Not Recommended for Further Consideration**
  - If lack of substantial scientific merit
  - If research risks are sufficiently serious and the protection against risks is so inadequate as to make the entire application unacceptable for ethical reasons

- **Deferred**
  - Not enough information in application for study section recommendation
Priority Scores

- Three lead reviewers give scores of 1 (best) to 9 (worst) for each of five elements, which are recorded on the Summary Statement.
- Three lead reviewers recommend an overall Impact/Priority score from 1 to 9 (whole numbers).
- All SRG members give in writing an overall Impact/Priority Score of 1 to 9; these are tallied, averaged, and multiplied by 10, to give the final Impact/Priority score for the application (e.g., 37).
- These scores are then assigned a percentile rank.
Percentiling Procedure

- Based on priority scores for all applications reviewed during current and two preceding review cycles by the particular SRG.
- Based on all applications reviewed by an SRG, including scored, unscored, and not recommended for further consideration.
- Includes only standing study sections in current plus two preceding review cycles.
- Retains priority score sequence as assigned by the SRG.
Summary Statement

Application Number: 1 R01 XX9267-01
NIM HUME DUAL: DK

Review Group: PHYSIOLOGICAL CHEMISTRY STUDY SECTION

Meeting Dates: SRG: OCT/NOV 2000 COUNCIL: JAN/FEB 2001 1APSFFB
Requested Start Date: 01/01/2001

Project Title:

SRG Action: **
Human Subjects: 10-NO HUMAN SUBJECTS INVOLVED
Animal Subjects: 44-ANMLS INV.-VERIFIED, SRG CONCERNS.
Program Staff Responsibilities

Program staff:

- Attend reviews and interact with SRG staff
- Present applications that involve human subjects, animal subjects, or environmental issues, for which reviewers have concerns, to the advisory council
- Interact with applicant
Advisory Council Actions

Council can:

- Concur with initial SRG action
- Modify initial SRG action—that is, change time and amount
- Recommend reaching for applications beyond the payline or not funding an application within the payline
- Defer for further review or additional information
What Determines Which Awards Are Made?

- Scientific merit
- Program considerations
- Available funds
# Review and Award Schedule

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<thead>
<tr>
<th>Jan/Feb</th>
<th>Submission Dates</th>
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<tbody>
<tr>
<td>June/Jul</td>
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<td>Oct/Nov</td>
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<th>May/June</th>
<th>SRG Dates</th>
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<td>Oct/Nov</td>
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<tr>
<th>Dec 1</th>
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Early Stage Investigators (ESIs)

- ESIs are new investigators within 10 years of completing their terminal research degree or medical residency when they apply for R01 grants.
- Entry of ESIs into the ranks of independent, NIH-funded researchers is essential to the country’s biomedical research.
- NIH announced a new policy in FY09 re identification of ESIs. ESIs are given special consideration during peer review and at time of funding. Peer reviewers are instructed to focus more on proposed approach than track record, and to expect less preliminary data than from an established investigator.
- Like many ICs, NICHD currently has a preferential payline, supporting ESIs at a slightly higher percentile than for established investigators.
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- Serve on NIH study committees, advisory committees, etc. – it will be good for you and for NIH
A word from the NIH Director (with some help from his friends) about where we are in the progression of scientific research...
A Word from the NIH Director

- http://www.youtube.com/watch?v=2SNHDlKYSto&feature=related