



## Enhancing Peer Review For NINR Grant Applications

CANS Special Topics Conference  
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## Outline

- **Brief History of NINR**
- **Overview of NIH Peer Review Process**
- **Enhancing NIH Peer Review**

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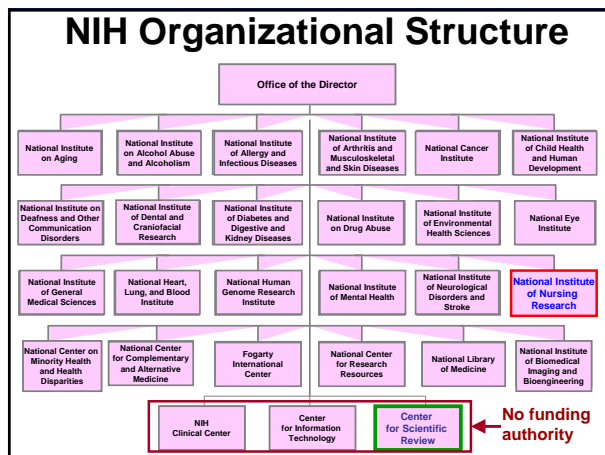
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## National Institutes of Health

Comprises 27 Institutes and Centers (IC)



One agency of 11 within U.S. Department of Health and Human Services (HHS)



### National Institute of Nursing Research

- 1986 Established at the NIH as the National Center for Nursing Research (NCNR)
- 1993 Center elevated to an NIH Institute: **National Institute of Nursing Research (NINR)**

### NINR Mission

**Mission**

To promote and improve health of individuals, families, communities populations.

NINR supports and conducts clinical and basic research and research training on health and illness across the lifespan.

### NINR Director

**Dr. Patricia A. Grady**  
April 3, 1995 - Present


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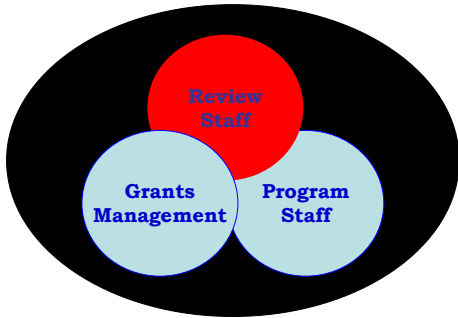
### Grantee Institution Team

**Successful grants require close coordination between all members of the grantee team.**

- **PD/PIs** manage and perform the science
- Grants are awarded to institutions as represented by **AORs**
- **Research Administrators** support business aspects of the grant



### The NIH Extramural Team



### 2 Level System for Application Review

**1<sup>st</sup> Level**

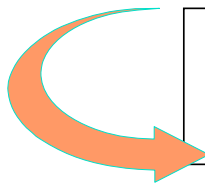
**Scientific Review Group (SRG)**

- Independent outside reviewers
- Evaluate scientific merit & significance
- Recommend length and level of funding

**2<sup>nd</sup> Level**

**National Advisory Council**

- Assesses Quality of SRG Review
- Makes Recommendation to Institute Staff on Funding
- Evaluates Program Priorities and Relevance
- Advises on Policy



## Scientific Review Groups (SRGs)-1<sup>st</sup> Level Review

### REVIEW CRITERIA

Standard criteria: *Factored into overall impact score*

- Significance
- Approach
- Innovation
- Investigator(s)
- Environment
- Protection of human subjects from research risks
- Vertebrate animal welfare
- Biohazards



Additional considerations: *Not factored into overall impact score*

- Budget
- Foreign institutions
- Resource Sharing

## Scientific Review Groups (SRGs)-1<sup>st</sup> Level Review

### Make recommendations:

- Scientific and technical merit
- Budget and project duration
- Bars to award – human subjects, vertebrate animals, biohazards
- Resource Sharing Plans
- Other administrative factors
- ✓ Overall Impact/Priority scores
- ✓ Written critiques (summary statements)



### Confidentiality:

- All materials, discussions, documents (except those in the public domain)
- Reviewers sent guidance with applications
- All questions referred to Scientific Review Officer (SRO)
- Review is closed to the public
- Program staff may observe

Study Sections  
*do not make  
funding decisions!*

## National Advisory Council-2<sup>nd</sup> Level Review

National Advisory Council assesses quality of 1<sup>st</sup> level review

– Cannot change overall impact/priority score from SRG

– Can designate application as “High” or “Low” program priority

## Who Actually Makes the Funding Decisions?

**The Institute Director!**

### • Factors Considered:

- Scientific Merit
- Contribution to Institute Mission
- Advisory Council Recommendation
- Program Balance
- Availability of Funds

## Where are NINR Applications Reviewed

### CSR (Center for Scientific Review)

#### REVIEW GROUPS

- Study Sections
- Special Emphasis Panels

#### APPLICATIONS REVIEWED

- Research Projects (R01, R21, R03)
- Academic Research Enhancement Awards AREA (R15)
- Small Business Research (R41, R42, R43, R44)

## Where are NINR Applications Reviewed

### NINR Office of Review

#### REVIEW GROUPS

- Initial Review Group (NRRC) (Standing Committee)
- Special Emphasis Panels

#### APPLICATIONS REVIEWED

- Pre- & Post-doctoral Fellowships (F31, F32)
- Career Development Awards (K01, K22, K23, K24, K99/R00)
- Institutional Training Grants (T32)
- Special Initiatives (RFAs) Centers (P20, P30) Program Projects (P01) R01

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## Priorities for Enhancing Peer Review



## Implemented Changes on NIH Peer Review

**May 2009:**

- **New Investigators/Early Stage Investigators**
- **Enhanced Review Criteria**
- **Structured (Template-Based) Critiques**
- **Scoring Scale (9-point scale)**
  - **Criterion Scoring**
  - **Overall Impact Score**

## New Investigators/Early Stage Investigators

- **New Investigator (NI)**
  - **A PD/PI who has not obtained a substantial NIH research grant**
- **Early Stage Investigator (ESI)**
  - **A New Investigator within 10 years of completing the terminal research degree or medical residency (or equivalent)**
- **Applies only to R01 applications**
- **New Investigators/Early Stage Investigators applications will be clustered together for review.**

## Enhanced Review Criteria

- **Overall Impact**
  - **Assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved**
- **New Core Criteria Order**
  - **Significance**
  - **Investigator(s)**
  - **Innovation**
  - **Approach**
  - **Environment**

## Template-Based Critiques

- **Templates contain a box for reviewers to write their comments for:**
  - **overall impact**
  - **each of the core review criteria**
  - **other review criteria and additional considerations**
- **Write evaluative statements and do not summarize the application.**
- **Comments should be in the form of bullet points or, if necessary, short narratives.**

### For RPG Review-Template Based Critique

OVERALL IMPACT SECTION

Overall Impact

Strengths

- 

Weaknesses

-

SCORED REVIEW CRITERIA SECTIONS: The five review criteria, Significance, Investigators, Innovation, Approach, Environment, with separate score for each.

1. Significance

Strengths

- 

Weaknesses

-

25

### 1-9 Scoring System

- **9-point scale**  
(1 = exceptional, 9 = poor)
- **This scale will be used for overall impact/priority scores AND for individual criterion scores**
- **All applications receive criterion scores in the summary statements.**

### Scoring Descriptions


Impact	Score	Descriptor
High Impact	1	Exceptional
	2	Outstanding
	3	Excellent
Moderate Impact	4	Very Good
	5	Good
	6	Satisfactory
Low Impact	7	Fair
	8	Marginal
	9	Poor

### Final IMPACT Scores

Applications receive an overall impact score from each eligible panel member.

- Assigned reviewers give range
- Panel Votes according to the range
- SRO calculates the final score

– Example:

6 reviewers voting ranging 1-3:  
 1, 2, 3, 2, 2, 3 so total score 13  
 $13/6=2.2$   
 Final score  $2.2 \times 10 = 22$  →  Summary Statement

➤ The 81 possible priority scores will thus range from 10-90.

## Changes Yet to Come

**January 25, 2010**

- Alignment of applications & review criteria
- Shorter research plans

## Alignment of Applications and Review Criteria

- Enhanced review criteria\*
  - *Significance*
  - *Investigator(s)*
  - *Innovation*
  - *Approach*
  - *Environment*
- Necessitated changes to three parts of application:
  - *Biographical sketch*
  - *Research Plan*
  - *Resources and Facilities*

\*RO1 type criteria

## Biographical Sketch

### Personal Statement added

- Briefly describe why your experience and qualifications make you particularly well-suited for your role in the project

### Publications to be limited to 15

- Make selections based on recency, importance to the field, and/or relevance to the application

## Restructured Research Plan

Introduction  
Specific Aims  
Background and Significance  
Preliminary Studies/Progress Report  
Research Design and Methods  
Inclusion Enrollment Report  
Progress Report Publication List  
Human Subjects Sections....  
    protections, women/minorities, enrollment, children  
Other Research Plan Sections....  
    animals, select agent, MPI, consortium, support, sharing  
Appendix

} **Research Strategy**

Restructured Research Plan	
Current Application	New Application
Background and Significance	<b>Research Strategy</b> <b>a. Significance</b> <b>b. Innovation</b> <b>c. Approach</b> <ul style="list-style-type: none"> <li>Preliminary Studies for New Applications</li> <li>Progress Report for Renewal/Revision</li> </ul>
Preliminary Studies/Progress Report	
Research Design and Methods	

**Environment Criteria**

Facilities and Other Resources  
(in 424 part of the R&R Other Project Information;  
in 398 the Resources Format Page)

**Environment - Address how the scientific environment will contribute to probability of success of the project, unique features of the environment, etc. For ESIs, provide a description of the institutional investment in the success of the investigator.**

Summary Results of Alignment	
Core Review Criteria	Addressed in these sections of the Application
Significance	<b>Research Strategy</b> <b>a. Significance</b>
Investigator(s)	<b>Biosketch</b> <b>Personal Statement</b>
Innovation	<b>Research Strategy</b> <b>b. Innovation</b>
Approach	<b>Research Strategy</b> <b>c. Approach</b>
Environment	<b>Resources</b> <b>Environment</b>

Shorter Research Strategy (Plan)	
Current Page Limit (Section 2-5 of Research Plan)	New Page Limit (Research Strategy)
<25	<b>6</b>
25	<b>12</b>
>25	<b>Follow FOA Instructions</b>

**R03, R21, Fs ----- 6 pages**  
**R01, R15 ----- 12 pages**  
**Ks ----- 12 pages**  
**T32 ----- 25 pages**

## CRITICAL Communications to Applicants

January 25, 2010

### 1. Download and use new application forms

- Applicants must return to the Announcement
- New forms available December 2009
- Pertains to Paper and Electronic applications
- Old forms will not be accepted by Grants.gov

### 2. Be aware of new instructions

- New page limit requirements
- Restructured application

For further information see:

Guide notice has been released (NOT-OD-09-149)

<http://grants.nih.gov/grants/guide/notice-files/NOT-OD-09-149.html>

## First Due Date for New Forms

- R01----- February 5, 2010
- R03, R21 ----- February 16, 2010
- R15 ----- February 25, 2010
- Ks ----- February 12, 2010
- F31, F32 ----- April 8, 2010
- R41- 44 ----- April 5, 2010

## Timeline: New R01 Applications

 Receipt Date	 Scientific Review	 Council Review	 Award Date
February 5	June	October	December
June 5	October	January	April
October 5	February	May	July

## Priorities for Enhancing Peer Review



## NIH Peer Review Websites

### *Additional Information*

- Enhancing Peer Review Initiative  
<http://enhancing-peer-review.nih.gov/>  
e-mail [EnhancingPeerReview@mail.nih.gov](mailto:EnhancingPeerReview@mail.nih.gov)
- Office of Extramural Research Peer Review  
[http://grants.nih.gov/grants/peer\\_review\\_process.htm](http://grants.nih.gov/grants/peer_review_process.htm)
- National Institute of Nursing Research  
<http://www.ninr.nih.gov/>
- Center for Scientific Review  
<http://cms.csr.nih.gov/AboutCSR/Welcome+to+CSR/>

