

# THE NIH PEER REVIEW PROCESS

Courtesy of the staff at  
Review Branch, NHGRI  
National Institutes of Health

# Three Fundamental Components

1. Program – Develops and defines the research goals and objectives of the NIH Institute, and makes the final funding decisions.
2. Review – Organizes the initial peer review of applications submitted to NIH.
3. Grants Management – Enforces business rules, policies and reporting requirements for grants – keeps all of us out of jail.

# The NIH Peer Review Process

What happens to your application after you submit it, and what are the steps involved in the NIH peer review process?

# The Center for Scientific Review

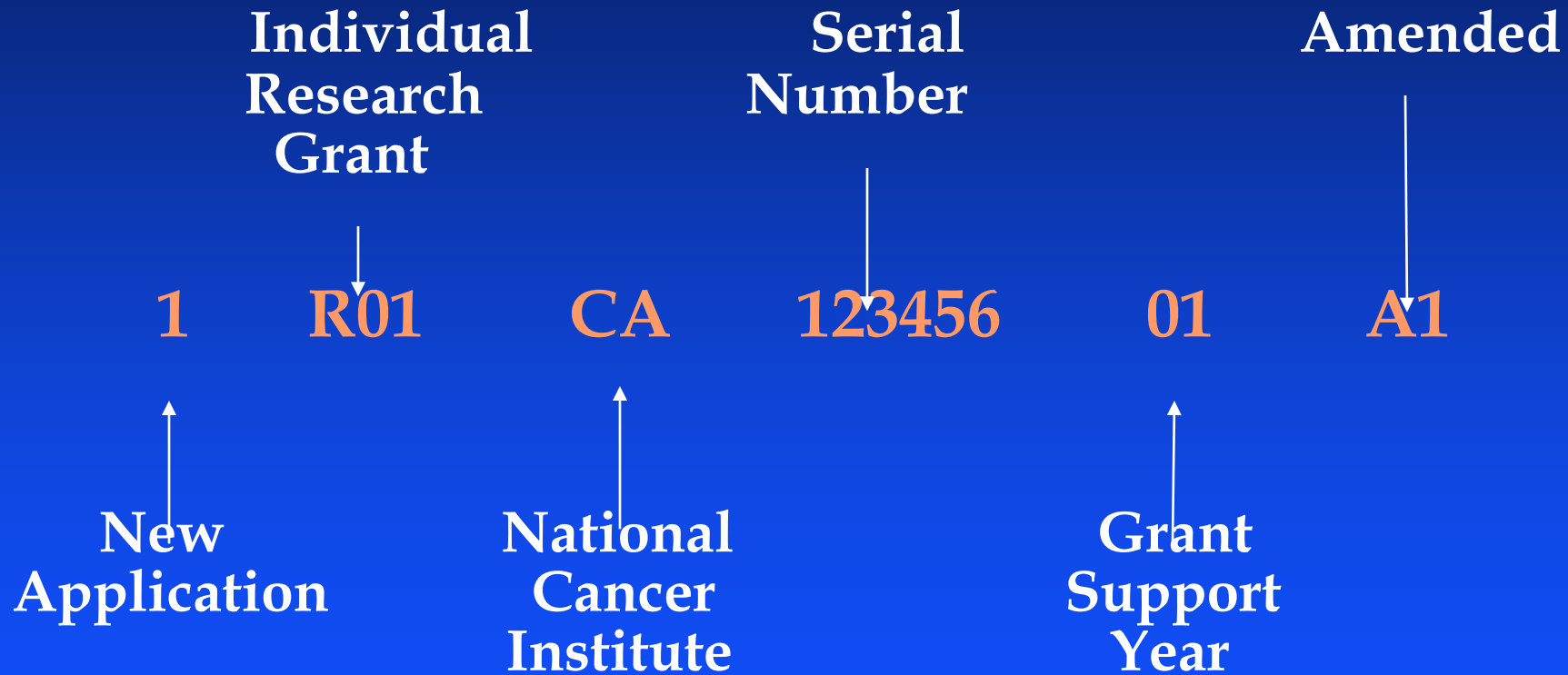
You will submit your application to NIH,  
not to any specific Institute or Center

CSR is the only entry point for all  
applications submitted to the NIH

Applications are received and assigned  
by the Receipt and Referral Office in CSR

Your application does not exist until it is  
logged into the NIH central database

# Sample Application Number



# Dual Review System for Grant Applications

## First Level of Review

### Scientific Review Group (SRG)

- Provides Initial Scientific Merit Review of Grant Applications
- Rates Applications and Makes Recommendations for Appropriate Level of Support and Duration of Award



## Second Level of Review

### Council

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

# Overall Timeline from Submission to Award

Dec Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov

→ Applications Received

→ SRO Reads Applications

→ SRO Recruits Reviewers

→ Reviewers Read Applications

→ The Review Meeting

→ SRO writes Summary Statements

→ Advisory Council Meeting

→ Funding Plan Finalized

→ Pre-Award Reporting Activities

\$\$\$ Award is Made

# Setting Up the Review Meeting

- SRO reads through all of the applications to be reviewed.
- SRO determines the range of expertise needed to review all of the applications.
- SRO recruits the panel members to serve on the committee.

# Criteria For Selection of Peer Reviewers

- Demonstrated Scientific Expertise
- Doctoral Degree or Equivalent
- Mature Judgment
- Work Effectively in a Group Context
- Breadth of Perspective
- Impartiality
- Interest in Serving
- Adequate Representation of Women and Minority Scientists

# Reviewer Assignments

- The SRO assigns 3 – 5 panel members to be reviewers for each of the applications to be reviewed
- Assignments are made by matching the expertise of the reviewers to the scientific topics described in the application

# Reviewer Assignments

- One reviewer is designated as the Primary Reviewer.
- Additional reviewers are designated as Secondary Reviewers or Readers.
- Reviewers produce written reviews (critiques) of the application.
- Readers contribute to the discussion at the review meeting.

# The Review Meeting Process

# Confidentiality

- Review materials and proceedings of review meetings represent confidential information to be used only by the reviewers and NIH staff
- At the conclusion of each meeting, the reviewers will be asked to destroy or return all review-related materials
- Reviewers should not discuss review proceedings with anyone except the SRO
- Questions concerning review proceedings should be referred to the SRO

# Confidentiality

- **DON'T EVER CONTACT A REVIEW PANEL MEMBER BEFORE OR AFTER A REVIEW MEETING!**
- If you have questions about the review process contact the appropriate NIH staff member – the SRO or your Program Officer.

# Review Criteria

- **Significance:** Does the study address an important problem? How will scientific knowledge be advanced?
- **Investigators:** Are the investigators appropriately trained?
- **Innovation:** Are there novel concepts or approaches? Are the aims original and innovative?
- **Approach:** Are the study design and methods well-developed and appropriate? Are problem areas addressed? Are alternative approaches described?
- **Environment:** Does the scientific environment contribute to the probability of success? Are there unique features of the scientific environment?

# The Review Meeting Process

- Before the meeting takes place the reviewers have submitted their written reviews and preliminary scores to a secure NIH website.
- The SRO collects the scores and prepares a report of the scoring results in order to set the agenda (order of review) for the meeting.

# Streamlining = Not Discussed

- Streamlining is the process by which the applications are sorted into two groups; the upper half and the lower half.
- The committee reviews and scores applications based on the preliminary score order (from best to worst). At about the midpoint, the decision is made to end the meeting. Applications can be “rescued” from the lower half, reviewed and scored.
- Those applications remaining in the lower half are designated as “Not Discussed.”

# Streamlining implementation

- Streamlining is only done when it is logical to use it.
- If 22 applications are submitted and Program provides enough funding for four grants, then streamlining is applied
- If only 8 applications are received, then all 8 will be reviewed to give Program enough choices to make awards.

# Assigning Impact Scores

- The Primary Reviewer leads off the discussion of the application.
- Secondary Reviewers are then called upon.
- Readers are called upon.
- The application is open for discussion. Any panel member can discuss the application.
- Reviewers stick to the 5 basic review criteria and focus on the strengths and weaknesses of the application.

# Assigning Impact Scores, Cont.

- The Chair determines when the discussion has run its course and is no longer productive.
- It's not necessary for the review committee members to arrive at a consensus view, but most of the time they do.
- The Chair asks the assigned reviewers for their suggested scores.
- Each committee member votes privately.
- The final score is determined by averaging all the votes after the meeting.

# The Scientific Merit (Impact Score) is Scored Using a Rating of 1 – 9

Overall Impact: Assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved.

# Scoring Descriptions

Impact	Score	Descriptor
High Impact	1	Exceptional – Exceptionally strong with essentially no weaknesses
	2	Outstanding – Extremely strong with negligible weaknesses
	3	Excellent – Very strong with only some minor weaknesses
Moderate Impact	4	Very Good – Strong but with at least one moderate weakness
	5	Good – Strong but with at least one moderate weakness
	6	Satisfactory – Some strengths but also some moderate weaknesses
Low Impact	7	Fair – Some strengths but with at least one major weakness
	8	Marginal – A few strengths and a few major weaknesses
	9	Poor – Very few strengths and numerous major weaknesses

# The Summary Statement

Once applications are reviewed, the results are documented by the SRO in the summary statement, which is placed in the NIH eRA COMMONS database where it can be accessed by the PI and the Institute staff where a funding decision is made.

## **The summary statement contains:**

- Overall Resume & Summary of Review Discussion
- Essentially Unedited Reviewers' Critiques
- The Impact Score
- Budget Recommendations made by the reviewers
- Administrative Notes

# Additional Criterion Scores

- Each assigned reviewer provides criterion scores (1-9) for the five review criteria
- *Significance: 2*
- *Investigators: 1*
- *Innovation: 5*
- *Approach: 7*
- *Environment: 2*

**Indicates which aspects of the application are strong or weak.**

# How Are Funding Decisions Made?

- Program Officers take the results of peer review and develop a funding plan. They balance the merits of individual applications with programmatic goals and overall portfolio considerations
- Funding plans are brought to the Advisory Council for Approval / Advice / Modification
- Ultimately, funding decisions are made by the Institute Director and Program Officers, balancing impact scores against the goals and objectives of the RFA

# Points of Contact along the Way

- While you are planning and writing your application, your point of contact is your Program Officer.
- Once your application has been submitted to NIH, your point of contact should be the SRO to whom your application has been assigned.
- When the review of your application has been completed, your point of contact becomes your Program Officer again.

# Inside the NIH Grant Review Process Video



- CSR has developed a video of a mock study section meeting to show how NIH grant applications are reviewed.

<http://www.csr.nih.gov/video/video.asp>

# Important Review Issues

- Responsiveness to the goals of the RFA
- Feasibility of your approach
- Track record and expertise of the investigators
- Sustainability
- Existing institutional resources that can be leveraged (accessed) by you to support your research plan.