

NIH Peer Review Process

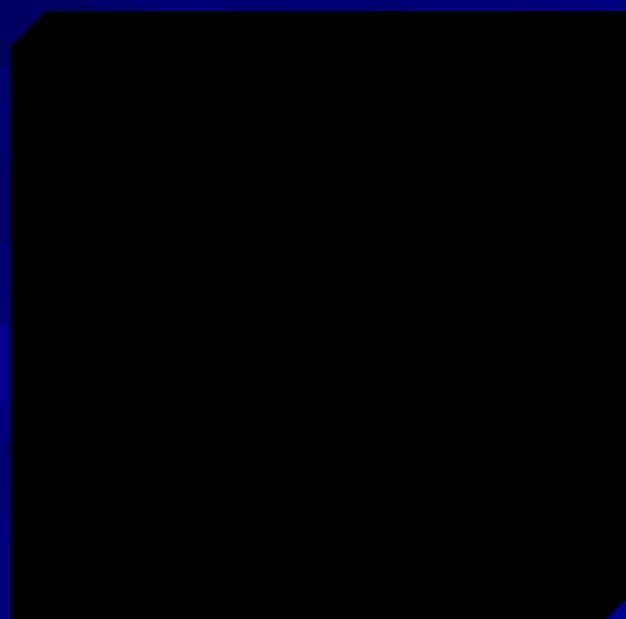
**National Institute of Biomedical
Imaging and Bioengineering**



NIH Peer Review Process

My Application

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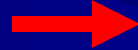
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NIH Peer Review Process

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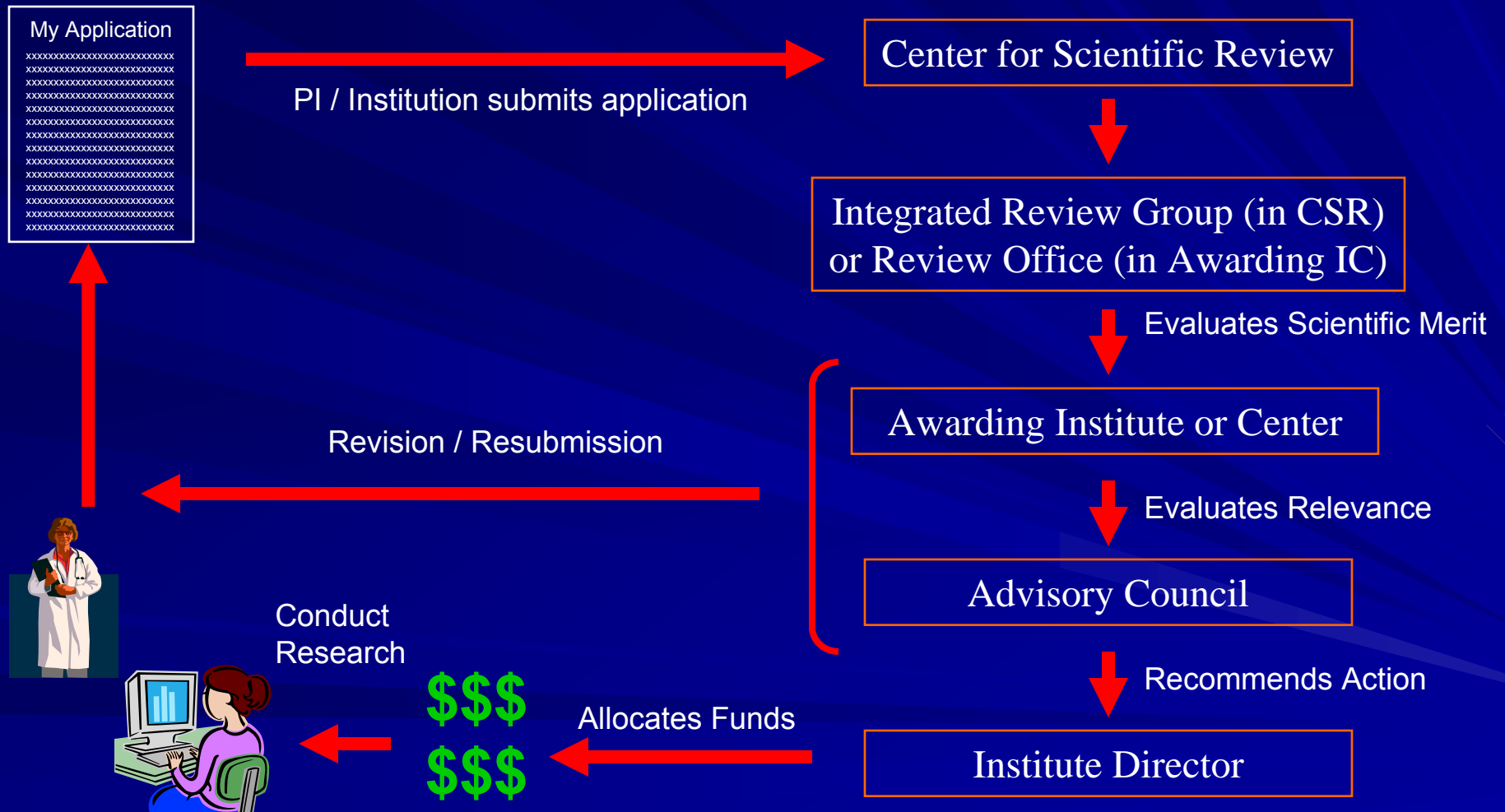


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NIH Peer Review Process





Timeframe from Submission to Award

Cycle 1 Three overlapping cycles per year :

JAN | FEB | MAR | APR | MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC |



Cycle 2 MAY | JUN | JUL | AUG | SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR |



Cycle 3 SEP | OCT | NOV | DEC | JAN | FEB | MAR | APR | MAY | JUN | JUL



Application Receipt Dates

- Standard Research & Career Development
 - February 1, June 1 and October 1
- Revisions, Competing Continuation & Supplements
 - March 1, July 1 and November 1
- Institutional Training Grants (new, competing continuation, & revised)
 - January 10, May 10, September 10 (Some ICs do not use all receipt dates)
- Individual NRSA Fellowships (new & revised)
 - April 5, August 5, December 5
 - May 1, November 15 (Minority and Disability)
- RFAs & PARs always have special receipt dates



Dual Review System

First Level of Review: Scientific Review Group

- Evaluates Scientific Merit
- Scores Applications
- Recommends Level & Duration of Support

Second Level of Review: Advisory Council

- Assesses Quality of Scientific Review
- Recommends Funding to Institute Director
- Evaluates Program Priorities & Relevance
- Advises Institute Policy & Strategy



What is an Advisory Council?

Each Institute has a National Advisory Council consisting of members from the scientific and lay communities.

It serves two general functions:

- (1) to advise the Institute on policy and procedures affecting the extramural research programs and
- (2) to provide a second level of review for all grant and cooperative agreement applications considered by the Institute for funding.



Types of Review Committees

■ Types of Scientific Review Groups

- standing study sections, “chartered” study sections
- Special Emphasis Panels (SEPs)

■ CSR has clusters of Study Sections

- organized into Integrated Review Groups (IRG)
- based on scientifically related areas
- most reviews are conducted by CSR



Bioengineering & Biomedical Imaging Integrated Review Groups at CSR

- **Bioengineering Sciences and Technologies IRG [BST]**
 - Gene and Drug Delivery Systems [GDD]
 - Microscopic Imaging [MI]
 - Modeling and Analysis of Biological Systems [MABS]
 - Biodata Management and Analysis [BDMA]
 - Instrumentation and Systems Development [ISD]
 - Biomaterials and Biointerfaces [BMBI]
- **Surgical Sciences, Biomedical Imaging, and Bioengineering IRG [SBIB]**
 - Biomedical Imaging Technology [BMIT]
 - Medical Imaging [MED]
 - Biomedical Computing and Health Informatics [BCHI]
 - Bioengineering, Technology, and Surgical Sciences [BTSS]
 - Surgery, Anesthesiology, and Trauma [SAT]
 - Several Small Business Panels



Types of Review Committees (cont)

■ NIBIB Special Emphasis Panel (SEP) reviews for:

- Request for Applications (RFA)
- Residency Supplement Program (PAR)
- Institutional Training Grants (T32)
- Career Development Awards (K01, K08, K23, K24, K25)
- Conference Grants (R13/U13)
- Program Projects (P01)
- Loan Repayment Program (LRP)
- Review some Roadmap and Neuroscience Blueprint Initiatives



Study Section Scope and Roster

- All CSR IRG rosters are posted on the public CSR website
 - www.csr.nih.gov/Committees/rosterindex.asp
- For Awarding ICs:
 - era.nih.gov/roster/index.cfm
 - ZEB1 (prefix for NIBIB Review Panels)



Study Section



Review Participants

- Scientific Review Administrator (SRA)
 - Designated Federal Official
 - Recruits and selects reviewers
 - Ensures proper review criteria used to evaluate applications
- Reviewers
 - 5-50 reviewers on each panel
 - Primarily from academia
 - Scientists with appropriate expertise
 - Established investigators
- Institute Program Staff
 - Present at reviews as observers
 - Advise panel on program priorities & goals



Study Section Meetings

Prior to Study Section Meeting

- Each application assigned three or more reviewers
- Reviewers read applications and write critiques
- Most reviewers assigned 3-12 applications
- Post preliminary scores and reviews on the Internet Assisted Review

At Study Section Meeting

- All assigned reviewers offer initial score (1.0 to 5.0)
- Primary reviewer presents application and offers comments / critiques
- Other assigned reviewers offer additional comments / critiques
- Discussion among entire group
- All assigned reviewers give final score (1.0 to 5.0)
- Each reviewer on the panel scores the application

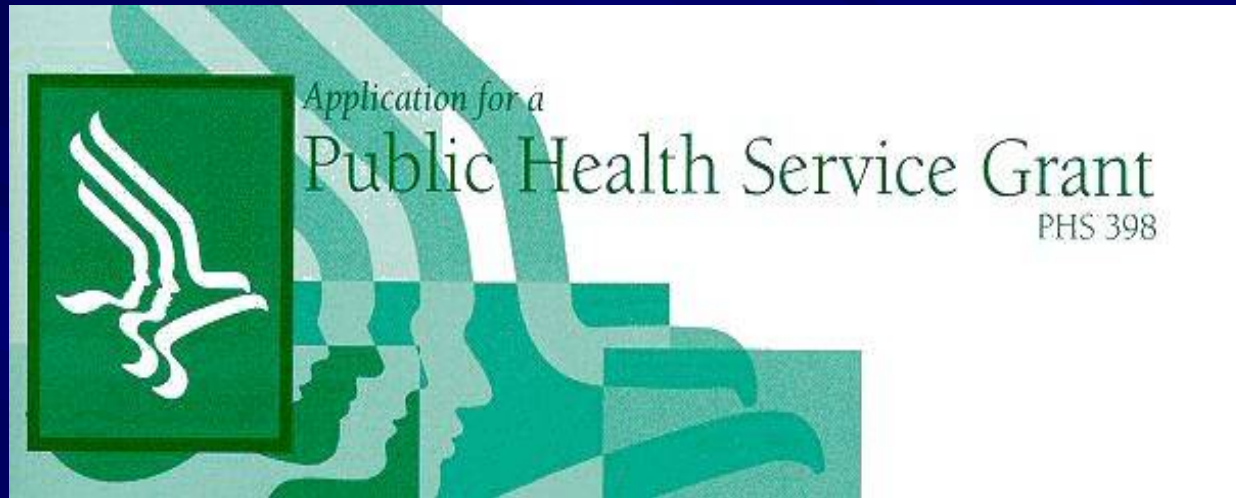
Study Section Actions

- Streamlining
 - Scored, Scientific Merit Rating
 - Unscored (lower half)
- Deferral
- Not Recommended for Further Consideration



PHS Application Kits

<http://grants.nih.gov/grants/forms.htm>



PHS 398

- Research
- Training
- Career



PHS 416-1

- Fellowship



General NIH Review Criteria

Significance

Approach

Innovation

Investigator

Environment



Additional Review Criteria

- Research involving human subjects
- Inclusion of women, minorities, and children
- Animal welfare for research involving vertebrate animals
- Proposed budget
- Proposed timeline/duration of the proposal



Modified Review Criteria

- Review criteria are modified for RFAs, PARs, fellowship, and career development awards, and other granting mechanisms
- Be sure to carefully read and understand the review criteria before writing an application
- Contact Institute program staff to discuss scope and goals of specific solicitation



Study Section Meetings

After Study Section Meeting

- Assigned reviewers submit final written critique
- SRA writes the Overall Resume and Summary of Discussion (if scored)
- Summary statement sent to applicant by Institute program staff (paper/electronic)
- Applicants encouraged to contact the Program Director with any questions



Summary Statements Contain

- Priority Score and Percentile (if appropriate)
- Overall Resume & Summary of Discussion
- Critiques
- Human Subject Concerns
 - Inclusion of women, minorities, or children
- Vertebrate Animal Welfare Concerns
- Budget Recommendations
- Administrative Notes

Assigning a Priority Score

1.0 – 1.5	Outstanding
1.5 – 2.0	Excellent
2.0 – 2.5	Very Good
2.5 – 3.5	Good
3.5 – 5.0	Acceptable

The numeric value reflects the reviewer's estimation of the application's overall merit in increments of 0.1

Each reviewer scores the application. The average of the scores is determined and multiplied by 100



Fastest Way to Receive Your Scores and Summary Statements!

- Have your institution register at the NIH's eRA Commons
- <https://commons.era.nih.gov/commons/>
- You can receive scores and summary statements online
- No more waiting for the mail
- Your institution may already be enrolled, ask them



NIH GUIDE for Grants and Contracts

- Announces NIH Scientific Initiatives
- Provides NIH Policy and Administrative Information
- Available on the NIH Web Site :
<http://grants1.nih.gov/grants/guide/index.html>
- Searchable
- Emailed to you each Friday, subscribe now!



Inside the NIH Grant Review Process

- Video

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



Electronic Grant Application Submission: Current Status 398 Form

- <http://era.nih.gov/> (under “eRA eXchange”)
- R01, R21, R03 (except Fogarty)
- Includes Investigator initiated and initiatives
- New, competing continuations, and revised
- Modular budget format only (\leq \$250K TDC)
- Appendix as a single electronic document



Electronic Grant Application Submission: Next Stages

- <http://era.nih.gov/ElectronicReceipt/>
- **Submission of Grant Applications through *Grants.gov* Using 424 (R&R) form**
- **December 1, 2005** —Small Business Innovative Research (SBIR) and Small Business Technology Transfer Programs (STTR) (R41, R42, R43, R44)
- **December 15, 2005** —Conferences & Scientific Meetings (R13 & U13)
- **January 25, 2006** —Academic Research Enhancement Awards (AREA) (R15)
- **June 1, 2006** —Small Grant Programs (R03) & Exploratory/Development Research Grant Awards (R21)
- **October 1, 2006** —Research Project Grant Program (R01)





General Review Criteria

■ Significance

Does this study address an important problem? If the aims of the application are achieved, how will scientific knowledge or clinical practice be advanced? What will be the effect of these studies on the concepts, methods, **technologies**, treatments, services, or preventative interventions that drive this field?



General Review Criteria

■ Approach

Are the conceptual or clinical framework, design, methods, and analyses adequately developed, well integrated, well reasoned, and appropriate to the aims of the project?
Does the applicant acknowledge potential problem areas and consider alternative tactics?



General Review Criteria

■ Innovation

Is the project original and innovative? For example: Does the project challenge existing paradigms or clinical practice; address an innovative hypothesis or critical barrier to progress in the field? Does the project develop or employ novel concepts, approaches, methodologies, tools, or **technologies** for this area?



General Review Criteria

■ Investigators

Are the investigators appropriately trained and well suited to carry out this work? Is the work proposed appropriate to the experience level of the principal investigator and other researchers? Does the investigative team bring complementary and integrated expertise to the project (if applicable)?



General Review Criteria

■ Environment

Does the scientific environment in which the work will be done contribute to the probability of success? Do the proposed studies benefit from unique features of the scientific environment, or subject populations, or employ useful collaborative arrangements? Is there evidence of institutional support?

