

## Grant Review

1. The people involved in the review
2. The review process and scoring

Where does your grant go once it leaves your institution?

Your grant will be assigned to an Institute and a Review Panel (study Section)

Assignments depend on:

- Subject matter
- Type of grant

Electronic submission assigned to:

Study section

Peer review,  
Priority score  
Percentile

Institute

Council review  
Funding decision

### NIH INSTITUTES

- National Cancer Institute (NCI)
- National Eye Institute (NEI)
- National Heart, Lung, and Blood Institute (NHLBI)
- National Human Genome Research Institute (NHGRI)
- National Institute on Aging (NIA)
- National Institute on Alcohol Abuse and Alcoholism (NIAAA)
- National Institute of Allergy and Infectious Diseases (NIAID)
- National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS)
- National Institute of Biomedical Imaging and Bioengineering (NIBIB)
- Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)
- National Institute on Deafness and Other Communication Disorders (NIDCD)
- National Institute of Dental and Craniofacial Research (NIDCR)
- National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK)
- National Institute on Drug Abuse (NIDA)
- National Institute of Environmental Health Sciences (NIEHS)
- National Institute of General Medical Sciences (NIGMS)
- National Institute of Mental Health (NIMH)
- National Institute on Minority Health and Health Disparities (NIMHD)
- National Institute of Neurological Disorders and Stroke (NINDS)
- National Institute of Nursing Research (NINR)

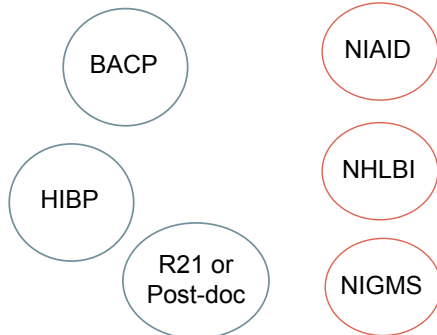
## Institute Assignment

- The apicoplast grant could be assigned to NIAID, because it concerns malaria.
- Alternative or additional assignment to NIGMS for work on cell biology and ubiquitination.
- Assignment based on Title, Abstract, Specific Aims, and Cover Letter.

## Review Panel Assignment

- Grants are assigned to review panels based on specific topic, e.g. bacterial pathogen grants go to:
  - *Bacterial Pathogenesis*
  - *Host Interactions with Bacterial Pathogens*
- Assignment based on Title, Abstract, Specific Aims, and Cover Letter.

Study Sections will review for more than one Institute and each Institute will have reviews coming from multiple Study Sections.



## Cover Letter

- You can request a particular Institute. Justify your choice.
- You can request a specific Study Section. Look at the expertise of the panels. NIH panel members are shown on the website.
- Note any conflicts of interest that would exclude particular reviewers.

## Who are the people involved?

- **SRO** – scientific review officer (CSR)
- **Program Officer** – Institute official who handles the grant once it is funded
- **Study section chair** – peer reviewer who chairs the meeting
- **Primary, Secondary and Tertiary reviewers** – peer reviewers specifically assigned to your grant
- Other **panel members** participate in discussion of your grant

A screenshot of the NIH Extramural Research website. The header includes the NIH logo and navigation tabs: Home, About Grants, Funding, Forms & Deadlines, Grants Policy, News & Events, About OER, and NIH Home. The main content area is divided into several columns: 'About Grants' (Grants Process, Grants Process Overview, How to Apply, Peer Review Process, Award Management, Foreign Grants Information, NIH Financial Operations), 'Funding' (Funding Opportunities, Search Funding Opportunities, NIH Guide for Grants and Contracts, Funding Opportunities (RFAs, RA) & Notices, Unsolicited Applications), 'Electronic Grants' (Electronic Research Admin (eRA), eRA Commons, Applying Electronically), 'Grants Policy' (Policy & Guidance, Compliance & Oversight, Research Training Human Subjects, Office of Laboratory Animal Welfare (OLAW), Peer Review Policies & Practices, Intellectual Property, Innovation Reporting (Eaton), NIH Public Access), 'Forms & Deadlines' (Forms & Applications, Submission Dates / Deadlines, Submitting Your Application), 'About OER' (OER and You, OER Offices, Writing RFP, Contact Us), 'NIH-Wide Initiatives' (New and Early Stage Investigators, Stem Cell Information, Genome-Wide Association Studies (GWAS), NIH Common Fund, OopNet (Behavioral & Social Sciences)), 'Award Data' (Recovery Act Grant Information, Research Training & Career Development, Small Business (SBR/STTR), Contract Opportunities, NIH Loan Repayment Programs), 'Global OER Resources' (Glossary & Acronyms, Frequently Used Links, Frequent Questions), 'News & Events' (News Flashes, Career, Stem Cell Information, Genome-Wide Association Studies (GWAS), NIH Common Fund, OopNet (Behavioral & Social Sciences), NIH Peer Review, NIH Tips for Applicants, NIH Center for Diversity Management), 'Get Connected' (News (Monthly News), Workshops & Training, Lessons & Tools), 'Hot Topics' (ClinicalTrials.gov and FDAAA, Financial Conflict of Interest (FCOI), Animals in Research, Enhancing Peer Review, NIH Policy Notices)).

A screenshot of the USDA Food and Nutrition Service website. The header includes the USDA logo and navigation tabs: Home, About FNS, Newsroom, Help, Contact Us, and En Espaol. The main content area is titled 'Grants' and includes a search bar, a 'Grants' section with a description, and a 'Browse by Subject' sidebar. The 'Grants' section includes links to 'The Application Process', 'Opportunities', and 'General and Historical Information'. The 'Browse by Subject' sidebar includes links to 'Community Outreach', 'Data & Statistics', 'Disaster Assistance', 'FNS Job Announcements', 'Forms', 'Food Safety', 'Grants', 'Nutrition Education', 'Regulations & Policy', 'Research', and 'Programs & Services'. The footer includes links to 'FNS Home', 'FNSC Home', 'USA.gov', 'FOIA & Accession Statement', 'Privacy Policy', 'Non-Discrimination Statement', 'Information Quality', 'USA.gov', and 'White House'.

## Study section and scoring

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## Before the meeting

- Reviewers contacted about possible conflicts with applications to be reviewed
- Receive invitation from IAR (internet-assisted review)
- Receive assignments: 5-15 grants
  - Mix of 1°, 2°, and 3°
  - CD with all grants to be reviewed
- Location, time, dates for meeting
- Travel arrangements

## Before the meeting – review phase

- Read grants assigned (and others)
- Write critiques
- Decide on preliminary scores
- My strategy:
  - 1 grant per day: read in AM, write critique and score in PM
  - Review over the course of ~ 1 month

## Scoring system

Impact	Score	Descriptor	Additional Guidance on Strengths/Weaknesses
High	1	Exceptional	Exceptionally strong with essentially no weaknesses
	2	Outstanding	Extremely strong with negligible weaknesses
	3	Excellent	Very strong with only some minor weaknesses
Medium	4	Very Good	Strong but with numerous minor weaknesses
	5	Good	Strong but with at least one moderate weakness
	6	Satisfactory	Some strengths but also some moderate weaknesses
Low	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

Same scale used for criterion scores and priority score

## Critiques – Strengths/weaknesses

Application #  
 Principal Investigator(s)

**OVERALL IMPACT**

Reviewers will provide an overall impact score to reflect their assessment of the likelihood for the project to exert a sustained, powerful influence on the research field(s) involved, in consideration of the following five scored review criteria, and additional review criteria. An application does not need to be strong in all categories to be judged likely to have major scientific impact.

Overall Impact Write a paragraph summarizing the factors that informed your Overall Impact score:

**SCORED REVIEW CRITERIA**

Reviewers will consider each of the five review criteria below in the determination of scientific and technical merit, and give a separate score for each.

1. Significance

**Strengths**

- 

**Weaknesses**

-

2. Investigator(s)

## Requirements for each review

- Paragraph describing overall impact
- Priority score
- Bulleted lists for each of the review criteria – strengths/weaknesses
  - Significance, Investigator, Innovation, Approach, Environment
- Criterion scores for each category

### Before the meeting – read phase

- A few days before the meeting
- Upload to IAR all scores and critiques for assigned applications
- Will immediately see scores and critiques from the other reviewers
- Also see scores/critiques of other applications – not in conflict
- Consider the other reviewers critiques

### Meeting day – who's in the room?

- SRO and a technical assistant (CSR)
- Program officers (in person or listening via phone connection)
- 20-30 reviewers
  - Chartered members – 4 year term
  - Ad hoc members – special expertise
- Study section chair – runs the meeting

### Meeting called to order by SRO

- Confidentiality of everything said at the meeting
- Confidentiality of grants and PI names
- If reviewer at the meeting is in conflict, must leave when application is discussed
  - Same institution, collaborator, competitor

### Ranked list of application scores

- List of applications ranked by avg preliminary score
- Top 50(or 40)% will be discussed at meeting
- Bottom ~half will be “not discussed” or “unscored”
- Can be discussed if someone who has read it thinks the grant is worthy of discussion

### Order of review

- Best to worst – preliminary score
- Stop at ~50% cutoff
- Usually applications from senior or experienced PIs are discussed 1<sup>st</sup>
- Then applications from new PIs
- Best to worst – preliminary score
- NIH mandates that at least 50% of applications from new PIs are discussed

### The review process – Mock review

- Reviewers (1°, 2°, 3°) state their preliminary impact scores
- 1°: brief description, then review (S/W)
- 2°: review – focus on differences with 1°
- 3°: review – differences
- Animals, humans, biohazards
- Discussion by reviewers & panel
- Final scores from reviewers (can differ from preliminary scores)
- Budget (doesn't affect scoring)

### Meeting lasts 1-2 days

- ~30 min per grant – controlled by chair
  - More if scores are discrepant
  - Less if there is more agreement
- Reviewers state their final scores
- Each panel member writes down their score based upon the discussion
- Score is limited to range set by reviewers: 1, 2, 3: vote between 1,3
- If vote outside the range, must say so

### After the meeting – edit phase

- Reviewers have few days to edit critiques
- Scores are calculated and posted for PI to see on NIH commons
- Calculated score: Avg of panel scores X10
  - 1,1,1: avg = 1: score = 10
  - 1,3,5: avg = 1.5: score = 15
  - avg = 4.5: score = 45
- Percentiled against last 3 cycles of same SS
- Critiques posted within 10 days for new PIs and within 30 days for experienced PIs