NIH Peer Review

Peer Review

Application → Peer Review → Funding

Jaya Raman, Ph.D.
Scientific Review Officer (SRO)
NIDCR, NIH
NIH Grant Process

1. Great Idea
2. Consult With Others
3. Write an Organized Application
4. Peer Review

$$$$$$
Before you apply

What to apply for?

F Series: Fellowships
- Pre-doctoral (F30, F31...)
- Post-doctoral (F32, F33...)

K Series: Career development
- Mentored (K08, K23, K99-R00...)
- Independent Scientist (K02...)

R Series: Research grant
- Short or exploratory: (R03, R21...)
- Research Project Grants (R01...)
- Small Business (R41/R42, R43/R44...)
Before you apply

Identify Funding Opportunity Announcement (FOA)

Types of Funding Opportunity Announcements (FOA)

- Parent Announcements
  - PA-11-197
  - K99-R00 parent

- IC-Specific Program Announcements (PA)
  - PAR-13-348
  - NIDCR Small Grant Program for New Investigators (R03)

- Requests for Applications (RFA)
  - RFA-AI-12-056
  - Functional Glycomics in HIV Vaccine Design (R01)
Submitting your application

Submit via grants.gov

Received by NIH Commons

Validations

Errors?

Yes

No

Received by NIH
Division of Receipt and Referral (DRR) Center for Scientific Review
Division of Receipt and Referral (DRR) Center for Scientific Review

- Is application on time?
- IC (NIH Institute or Center) Assignment
- Study Section assignment
<table>
<thead>
<tr>
<th>Percentage</th>
<th>Location</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>80%</td>
<td>at the Center for Scientific Review (CSR)</td>
<td>R01 Research Projects, R21 Exploratory, R15 AREA</td>
</tr>
<tr>
<td>20%</td>
<td>at NIH Institutes or Centers (IC)</td>
<td>Clinical Trials, P01 Program Projects, T32 Institutional Training, K Career Development, R13 Conferences, R03 Small Research Pilot</td>
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</tbody>
</table>

**NIDCR Fellowships:** Institute review  
**NICHD Fellowships:** CSR Review
Disciplines involved (multidisciplinary)

- Requests
  - Institute
  - Study section
- List of individuals (e.g., competitors) who should not review your application and why
- Other FOA specifics (referees)
- Not all requests honored
Application number

Study Section Assignment Examples

DSR NIDCR Special Grants Review Committee

ZRG1 AARR-C (03)
Center for Scientific Review Special Emphasis Panel

ODCS Oral, Dental and Craniofacial Sciences Study Section
Center for Scientific Review
NIH Peer Review

- **Two-tiered system**
  - **Initial peer review**
    - Review of Scientific and Technical Merit Review
    - Recommendations for Appropriate Level of Support and Duration of Award
  - **National Advisory Council or Board**
    - Assesses Results of Initial Review
    - Makes Recommendation to Institute Staff on Funding
    - Evaluates Program Priorities and Relevance
    - Advises on Policy
The NIH Peer Review Process

Types of Scientific Review Groups (SRGs)

- **“Chartered” SRGs**
  - Multiyear terms
  - Formal appointment process
  - May include temporary members for special expertise

- **Special Emphasis Panels (SEP)**
  - Ad hoc membership
  - Often meet only once
Initial Peer Review

To see that NIH grant applications receive fair, independent, expert, and timely reviews – free from inappropriate influences – so NIH can fund the most promising research.

The Scientific Review Officer (SRO) oversees the review

- Doctoral level scientist
- Expertise generally complementary to science reviewed in the study section
- Bears legal responsibility for study section and management of review
- Provides written reports (summary statements) to ICs for secondary review.
Pre-Review Meeting

- Administrative Review
- Evaluate for Expertise
- Conflicts of Interest
- Recruits panel
Recruitment

- Expertise and Funding
- Career stage
- Review experience
- Publications
- Recommendations
What happens before the meeting?

- Three or more assigned reviewers
- Preliminary Overall Impact Scores
- Criterion scores
  - Significance
  - Investigator
  - Innovation
  - Approach
  - Environment
The Review Criteria

**F32**
- Fellowship Applicant
- Sponsors, Collaborators, and Consultants
- Research Training Plan
- Training Potential
- Institutional Environment & Commitment to Training

**K99-R00**
- Candidate
- Career Development Plan
- Research Plan
- Mentor(s), Co-Mentor(s), Consultant(s), Collaborator(s)
- Environment Commitment to the Candidate
The Review Criteria

R01/R03

- Significance
- Investigator
- Innovation
- Approach
- Environment
Review Meeting

Prelim. Overall Impact Scores

Critiques and Discussion

Human Subjects, Vertebrate Animals, etc.

Final Score (Voting)

Budget, etc.

Non-discussed (ND) applications
New Investigator/Early Stage Investigators

R01 – Research Grant

- will be designated as a New Investigator (NI) application
- clustered for review with other NI R01 applications in the study section
  - ~½ of NI applications may be “not discussed”;
  - NI summary statements are prepared first
- Special considerations: If an Early Stage Investigator (ESI), reviewers are asked to evaluate based more on significance and impact and put less emphasis on track record for publications.
What does my score mean?

<table>
<thead>
<tr>
<th>Impact</th>
<th>Score</th>
<th>Descriptor</th>
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<tbody>
<tr>
<td>High Impact</td>
<td>1</td>
<td>Exceptional</td>
</tr>
<tr>
<td></td>
<td>2</td>
<td>Outstanding</td>
</tr>
<tr>
<td></td>
<td>3</td>
<td>Excellent</td>
</tr>
<tr>
<td>Moderate Impact</td>
<td>4</td>
<td>Very Good</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Good</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>Satisfactory</td>
</tr>
<tr>
<td>Low Impact</td>
<td>7</td>
<td>Fair</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Marginal</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>Poor</td>
</tr>
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</table>

- **Discussion**:
  - 2, 3, 5

- **Average 2.9**

- **Priority Score of 29**

- **15th Percentile**
What is in the summary statement?

**SUMMARY STATEMENT**

(Privileged Communication)

**Release Date:** 09/09/1997

**Application Number:** 1 R01 CA0000717-01

**DR. GARY J.**

301-400-0000

XXX@nih.gov

**MULDOON, THROCKMORTON P.**

UNIV PUNXATAWNEY MEDICAL CENTER

DEPT OF INTERNAL MEDICINE

100 SUNNYSIDE LANE

PUNXATAWNEY, PA 00109-0724

**Meeting Date:** JUNE 1997

**Council:** SEPT/OCT 1997

**Requested Start:** 09/01/1997

**Review Group:** ZCA RLB-7 (04)

NCI SPECIAL EMPHASIS PANEL

**Project Title:** CYCLOOXYGENASE-2 INHIBITORS & COLON CANCER

**SRG Action:** Priority Score: 250

**Human Subjects:** 44-Human subjects involved - SRG concerns

**Animal Subjects:** 10-No live vertebrate animals involved for competing appl.

**Gender:** 1A-Both genders, scientifically acceptable

**Minority:** 1A-Minorities and non-minorities, scientifically acceptable

**Children:** 3U-No children included, scientifically unacceptable

**Clinical Research - not NIH-defined Phase III Trial**

<table>
<thead>
<tr>
<th>Year</th>
<th>Requested</th>
<th>Direct Costs</th>
<th>Estimated Total Cost</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>879,994</td>
<td></td>
<td>3,691,222</td>
</tr>
<tr>
<td>2</td>
<td>909,293</td>
<td></td>
<td>3,760,239</td>
</tr>
<tr>
<td>3</td>
<td>630,174</td>
<td></td>
<td>2,998,335</td>
</tr>
<tr>
<td>4</td>
<td>886,182</td>
<td></td>
<td>4,160,815</td>
</tr>
<tr>
<td>5</td>
<td>871,616</td>
<td></td>
<td>4,268,360</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>4,177,259</strong></td>
<td><strong>20,818,971</strong></td>
<td></td>
</tr>
</tbody>
</table>

**ADMINISTRATIVE BUDGET NOTE:** The budget shown is the requested budget and has not been adjusted to reflect any recommendations made by reviewers. If an award is planned, the costs will be calculated by Institute grants management staff based on the recommendations outlined below in the COMMITTEE BUDGET RECOMMENDATIONS section.
What is in the summary statement?

**All applications:**
- Three or more critiques
- Criterion scores
- Roster

**Discussed applications:**
- Resume and Summary of Discussion
- Summary of other review criteria and considerations
  - Human Subjects, Vertebrate Animals, etc.
  - Budget
# Where to find information?

## Part 1. Overview Information

<table>
<thead>
<tr>
<th>Participating Organization(s)</th>
<th>National Institutes of Health (NIH)</th>
</tr>
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<tbody>
<tr>
<td><strong>Components of Participating Organizations</strong></td>
<td>National Cancer Institute <em>(NCI)</em>&lt;br&gt;National Eye Institute <em>(NEI)</em>&lt;br&gt;National Heart, Lung, and Blood Institute <em>(NHGRI)</em>&lt;br&gt;National Institute on Aging <em>(NIA)</em>&lt;br&gt;National Institute on Alcohol Abuse and Alcoholism <em>(NIAAA)</em>&lt;br&gt;National Institute of Allergy and Infectious Diseases <em>(NIAID)</em>&lt;br&gt;National Institute of Arthritis and Musculoskeletal and Skin Diseases <em>(NIAMS)</em>&lt;br&gt;National Institute of Dental and Craniofacial Research <em>(NIDCR)</em></td>
</tr>
</tbody>
</table>

Where to find information?

Section VII. Agency Contacts

Scientific/Research Contact(s)
Table of IC-Specific Information Requirements and Staff Contacts

Peer Review Contact(s)
Examine your eRA commons account for review assignment and contact information.

Scientific/Research Contact(s)
Leslie A Frieden, PhD
National Institute of Dental and Craniofacial Research (NIDCR)
Telephone: 301-496-4263
Email leslie.frieden@nih.gov

Peer Review Contact(s)
Yasaman Shiarazi, PhD
National Institute of Dental and Craniofacial Research (NIDCR)
Telephone: 301-594-5593
Email: yasamain.shirazi@nih.gov
The Review Criteria

Section V. Application Review Information

- **Criteria**
  - Only the review criteria described below will be considered in the review process. As part of the NIH mission, all applications are submitted to the review system.

- **Overall Impact**
  - Reviewers should provide their assessment of the likelihood for the candidate to maintain a strong research program.

- **Scored Review Criteria**
Peer Review Cycle

Timeline

Application deadline
February 5, 2014

Review meeting
June/July 2014

Council (oversight)
September 2014

Funding
October 2014 through September 2015
Tips

- Read all sections of the FOA carefully
- Know the review criteria (detailed in FOA)
- Follow instructions
- Start and Submit early
- Talk to your NIH Program Official(s)
- Show you draft application to colleagues
- Tailor biosketch to application
- Include cover letter
- Check application on NIH eRA commons after submission
- Address all errors and consider warnings
CSR Early Career Reviewer (ECR) Program

PURPOSE
- Train qualified scientists without CSR review experience
- Help emerging researchers advance careers by exposing them to peer review
- Enrich pool of reviewers – include scientists in less research-intensive institutions

ELIGIBILITY
- Full time faculty or equivalent
- Post docs with active independent program of research
- Recent publications in peer-reviewed journals
- No previous review experience (other than as mail reviewer)
- NIH funding not necessary

Send your up-to-date CV and a list of terms that describe your scientific expertise to CSREarlyCareerReviewer@mail.nih.gov.