U.S. Department of Health & Human Services

NIH Center for Scientific Review

The NIH Peer Review Process

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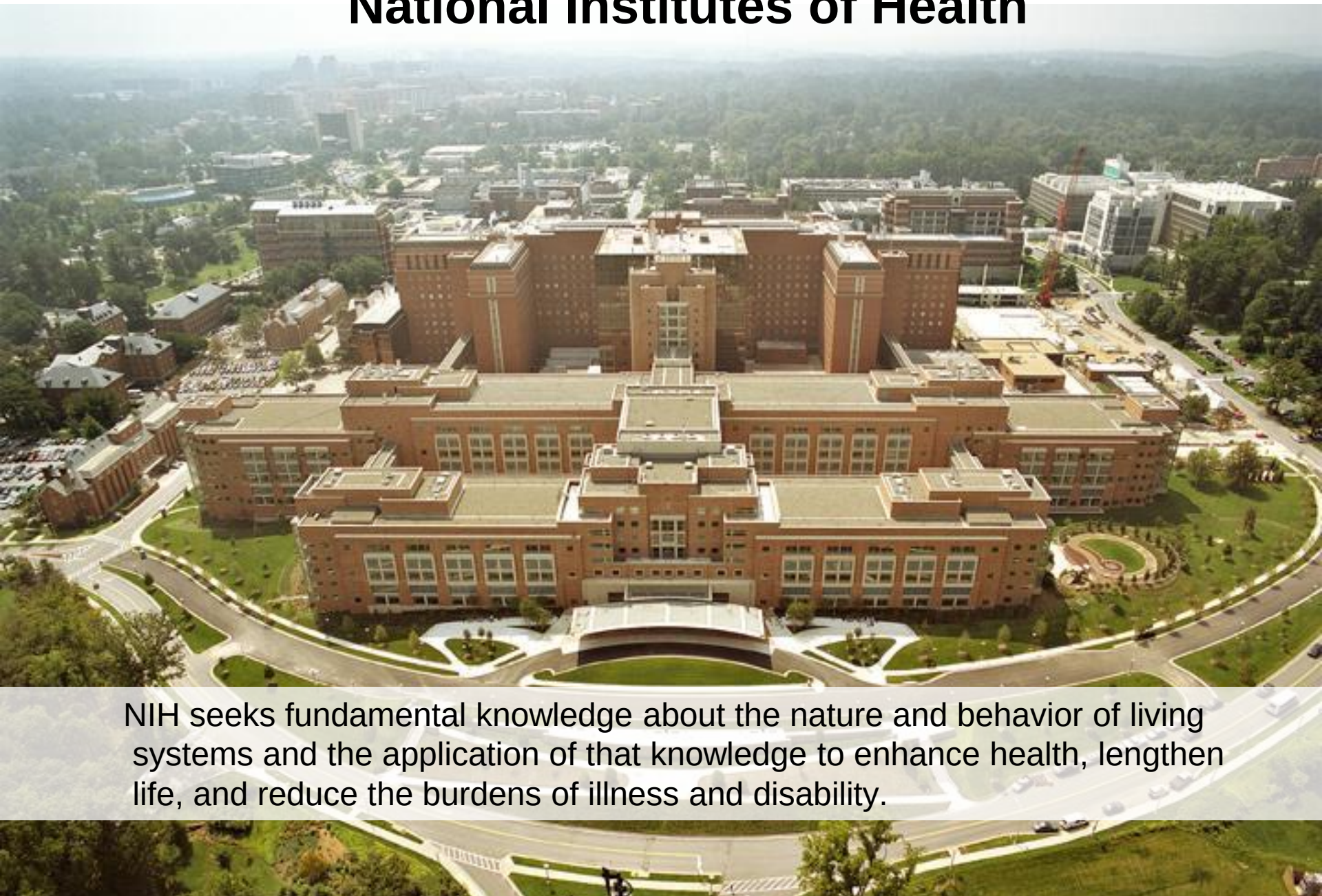
Scientific Review Officer

Epidemiology of Cancer (EPIC) Study Section
Cancer, Heart, and Sleep Epidemiology Panel A (CHSA) Study Section
Population Sciences and Epidemiology Integrated Review Group
Division of AIDS, Behavioral and Population Sciences

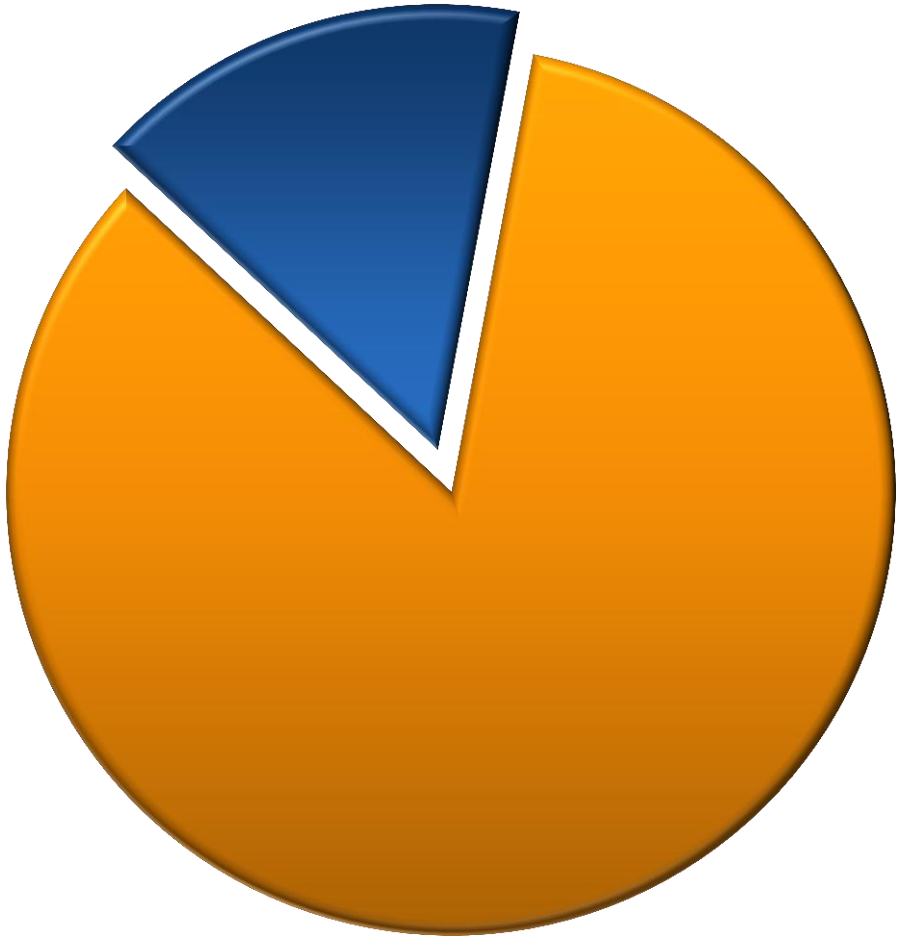
National Institutes of Health



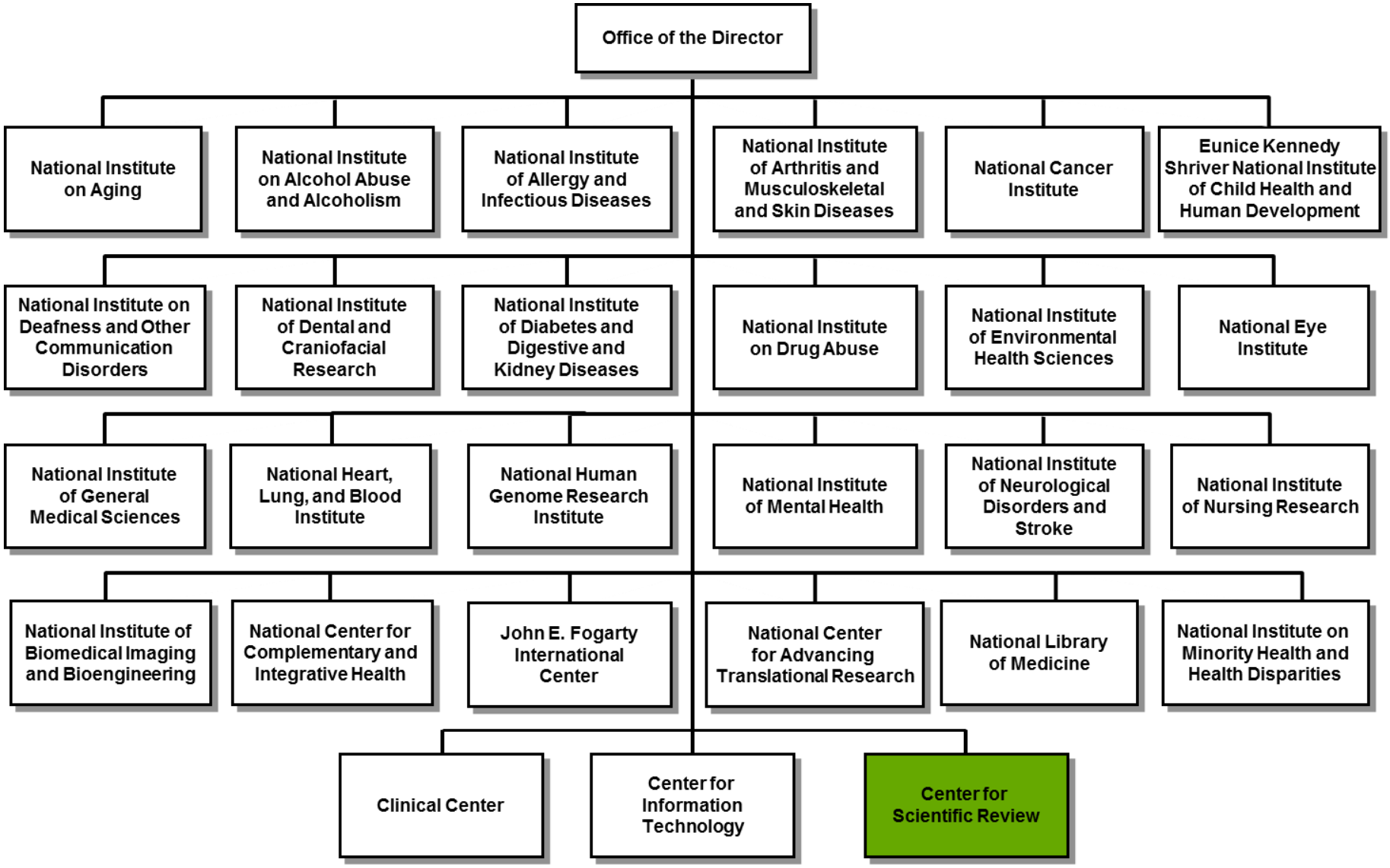
NIH seeks fundamental knowledge about the nature and behavior of living systems and the application of that knowledge to enhance health, lengthen life, and reduce the burdens of illness and disability.

NIH Extramural & Intramural Funding

Total FY 2014 Budget: $30.1 Billion



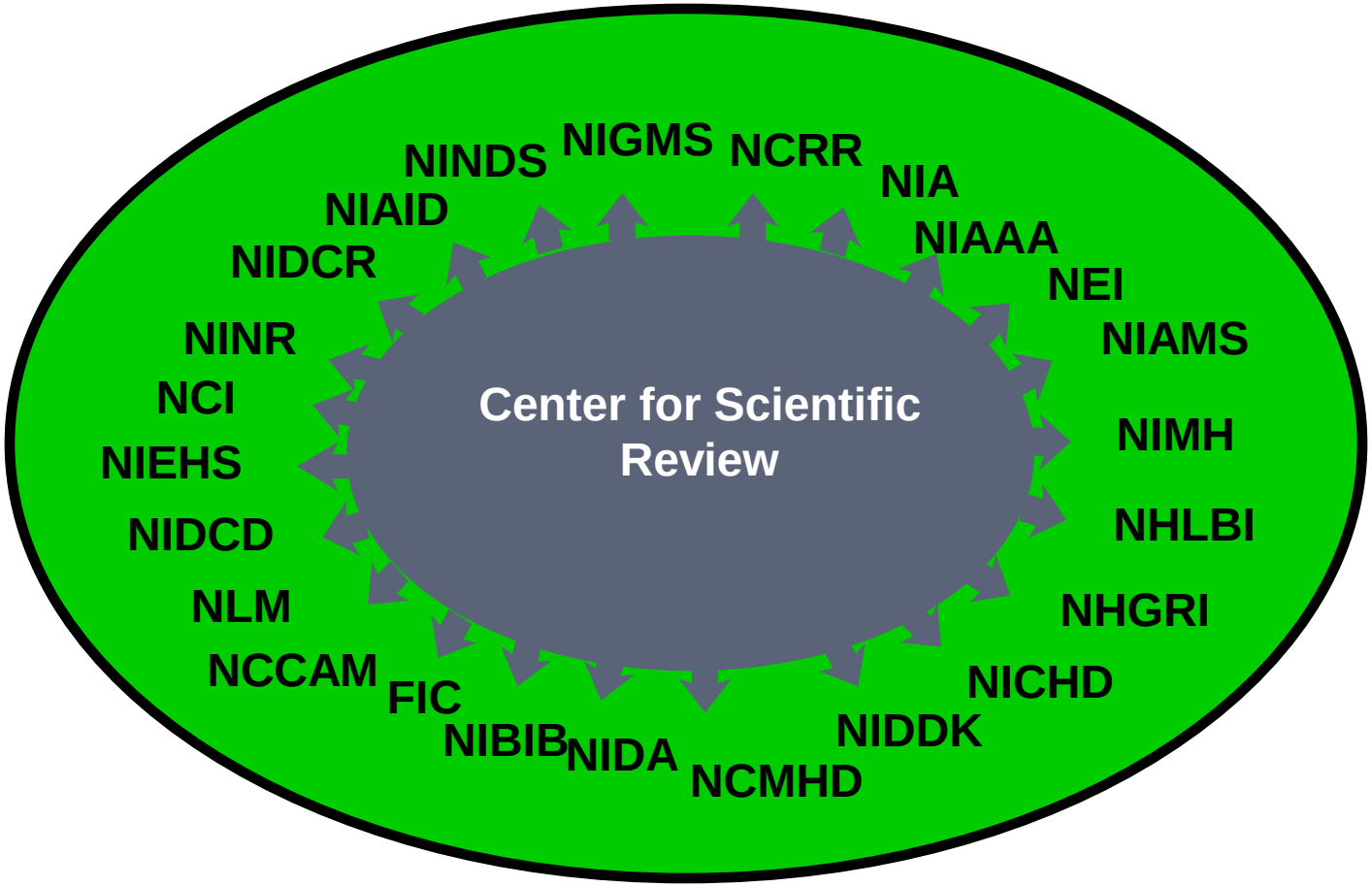
National Institutes of Health



CSR Mission

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.

24 NIH Institutes and Centers Fund Grants



CSR Referral

Applications Are Assigned to:

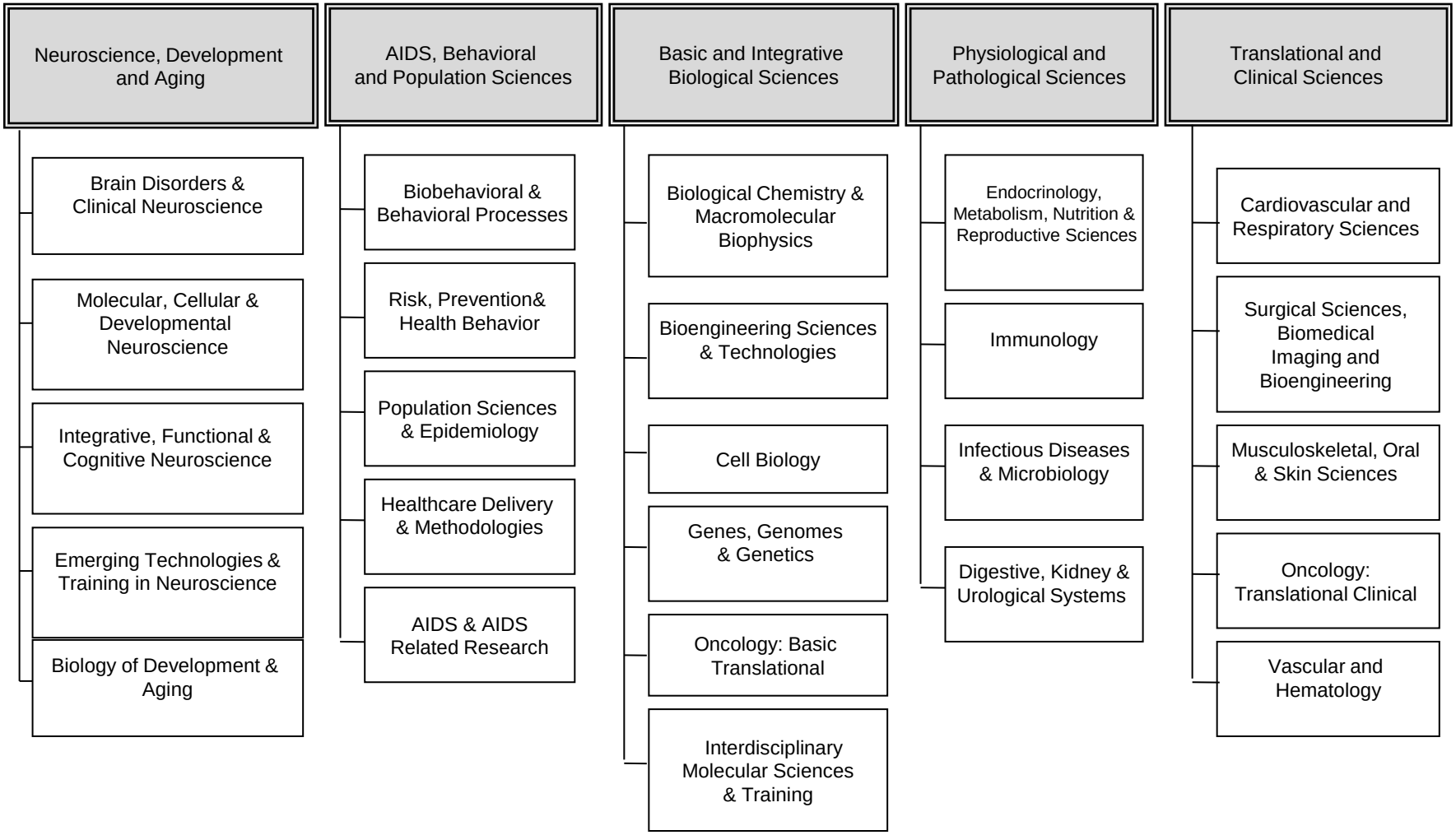
- **Scientific Review Groups for review** based on:
  - Specific referral guidelines for each scientific review group
- **NIH Institutes or Centers for funding** based on:
  - Overall mission of the Institute or Center
  - Referral guidelines for each funding IC
  - Specific programmatic mandates and interests of the Institute or Center

CSR Peer Review – Fiscal Year 2014

- 86,000 applications receive
- CSR study sections review 75%
- 16,000 reviewers
- 237 Scientific Review Officers
- 1,500 review meetings

CSR

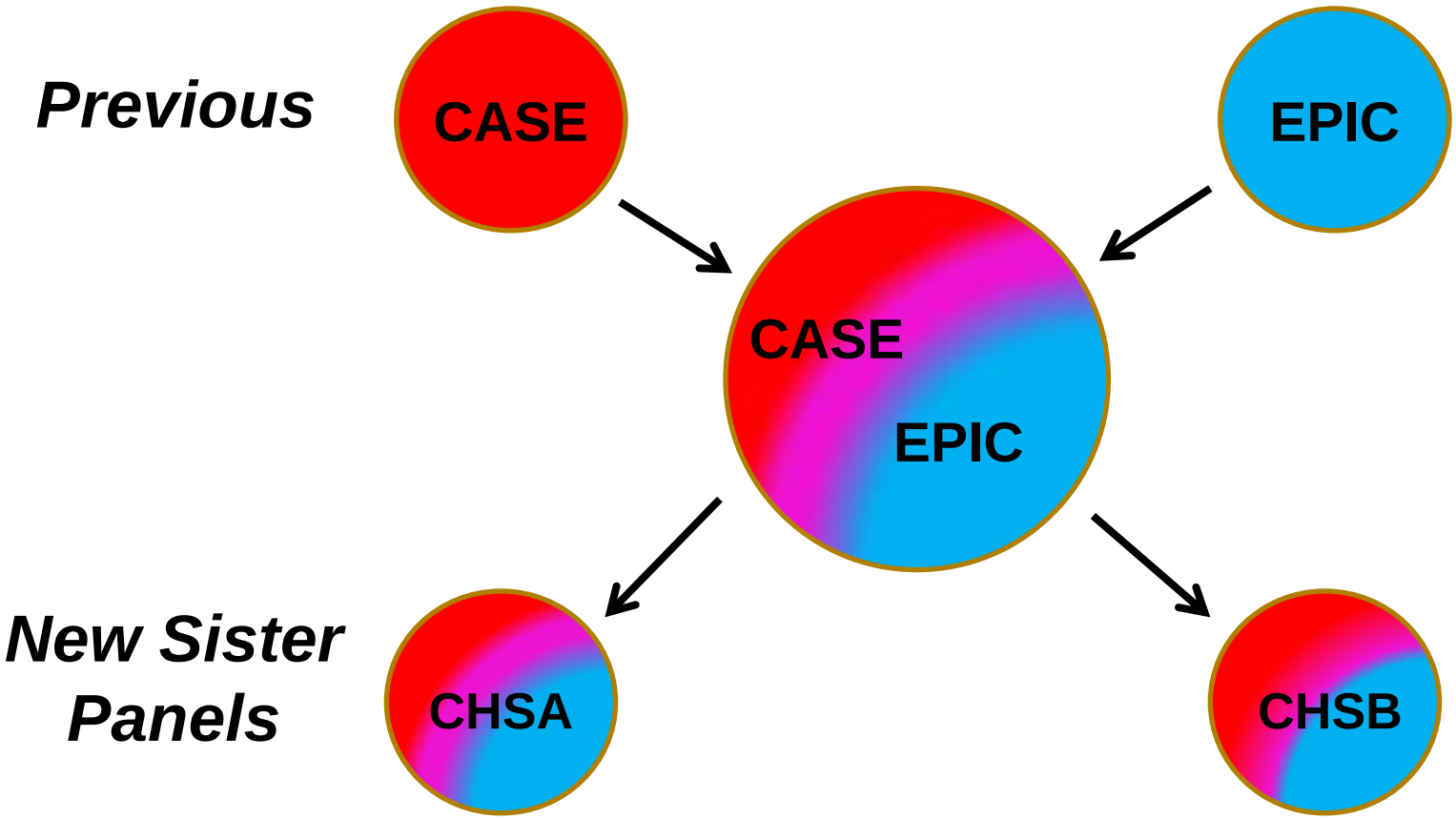
Divisions and Integrated Review Groups (IRGs)



Division of AIDS, Behavioral and Population Sciences

- Biobehavioral & Behavioral Processes
- Risk, Prevention & Health Behavior
- **Population Sciences and Epidemiology**
  - Social Sciences and Population Studies
  - Behavioral Genetics and Epidemiology
  - Cardiovascular and Sleep Epidemiology
  - Epidemiology of Cancer
  - Kidney, Nutrition, Obesity, & Diabetes Epidemiology
  - Infectious Diseases, Reproductive Health, Asthma and Pulmonary Epidemiology
  - Neurological, Aging and Musculoskeletal Epi
- Healthcare Delivery and Methodologies
- AIDS and Related Research

New Merged CASE-EPIC Sister Panels



- New sister panels each review cancer, heart, and sleep epidemiology apps
- Scientifically equivalent expertise on each sister panel
- Expecting final approval for new sister panels soon

Help Get Your Application to the Right Study Section

- Look at CSR Integrated Review Group and Scientific Review Group (Study Section) guidelines to identify a home for your application http://www.csr.nih.gov

- Submit a Cover Letter!

Sample Cover Letter

Please assign this application “Immunology of Kidney Transplant Rejection” to the following:

Institutes/Centers

National Institute of Diabetes, Digestive and Kidney Diseases (primary)

National Institute of Allergy and Infectious Diseases (dual)

Scientific Review Group

Digestive, Kidney, and Urological Systems

Please do not assign this application to the following:

Scientific Review Group

Immunology IRG

This study focuses on improving outcomes specifically for kidney transplant, <u>not</u> general immunological aspects.

Peer Review and Funding of NIH Grant Applications

National Institutes of Health

Center for Scientific Review
Assigns to NIH Institute and Peer Review Group

Study Section
Reviews for Scientific Merit

Institute
Evaluates for Relevance to Research Priorities

Advisory Council or Board
Recommends Action

Institute Director
Takes Final Action

NIH Peer Review System for Grant Applications

First Level of Review

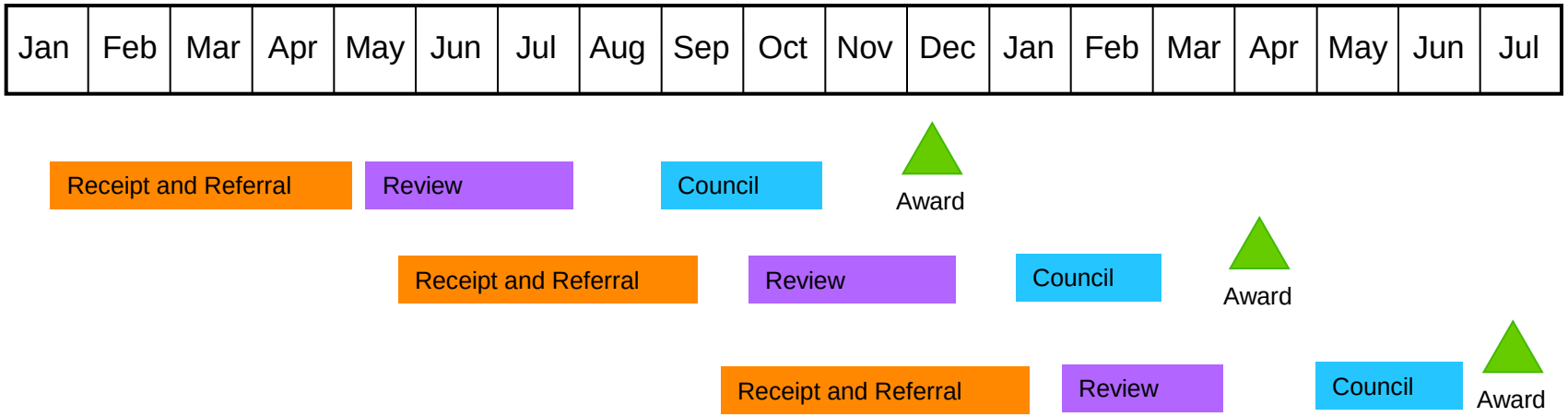
Scientific Review Group
(Study Section)

Second Level of Review

NIH Institute/Center Council

Overall Timeframe from Submission to Award

There are three main overlapping cycles per year



CSR Study Sections: The Meeting

- Each CSR standing Study Section has ~12-25 regular members plus temporary reviewers from the scientific community
- CSR standing study sections typically convene in face-to-face meetings
- About 60-100 applications are usually reviewed by each study section in 1-2 day meetings

How Reviewers Are Selected for Study Section Service

- Demonstrated scientific expertise/research support
- Doctoral degree or equivalent
- Mature judgment
- Work effectively in a group context
- Breadth of perspective
- Impartiality
- Representation of women and minority scientists
- Geographic distribution

Pre-Meeting Activities - Reviewers

- Reviewers receive applications and assignments 6-8 weeks prior to meeting
  - Identify conflicts of interest
  - Generally assigned between 8-12 applications
  - Write critiques prior to the meeting
- Post preliminary scores and critiques on secure meeting website
- Read written critiques of other reviewers a few days before the meeting

At the Meeting

- **Order of Review**
  - The average of the preliminary Overall Impact score from the assigned reviewers determines the review order
  - Discussions start with the application with the best average preliminary Overall Impact score
- **Clustering of Review**
  - New Investigator R01 applications are clustered
  - Other grant mechanisms may be clustered
- **Not Discussed Applications**
  - About half the applications will be discussed (best half)
  - Applications unanimously judged by the review committee to be in the lower half are not discussed

Scoring

9-point score scale is used to provide:

- Criterion Scores for each of the 5 core review criteria
- Overall Impact/Priority Score based on, but not an average of, the core criterion scores plus additional criteria

All applications receive scores:

- Not discussed applications will receive only initial criterion scores from the three assigned reviewers.
- Discussed applications also receive an averaged overall impact score from eligible (i.e., without conflicts of interest) panel members.

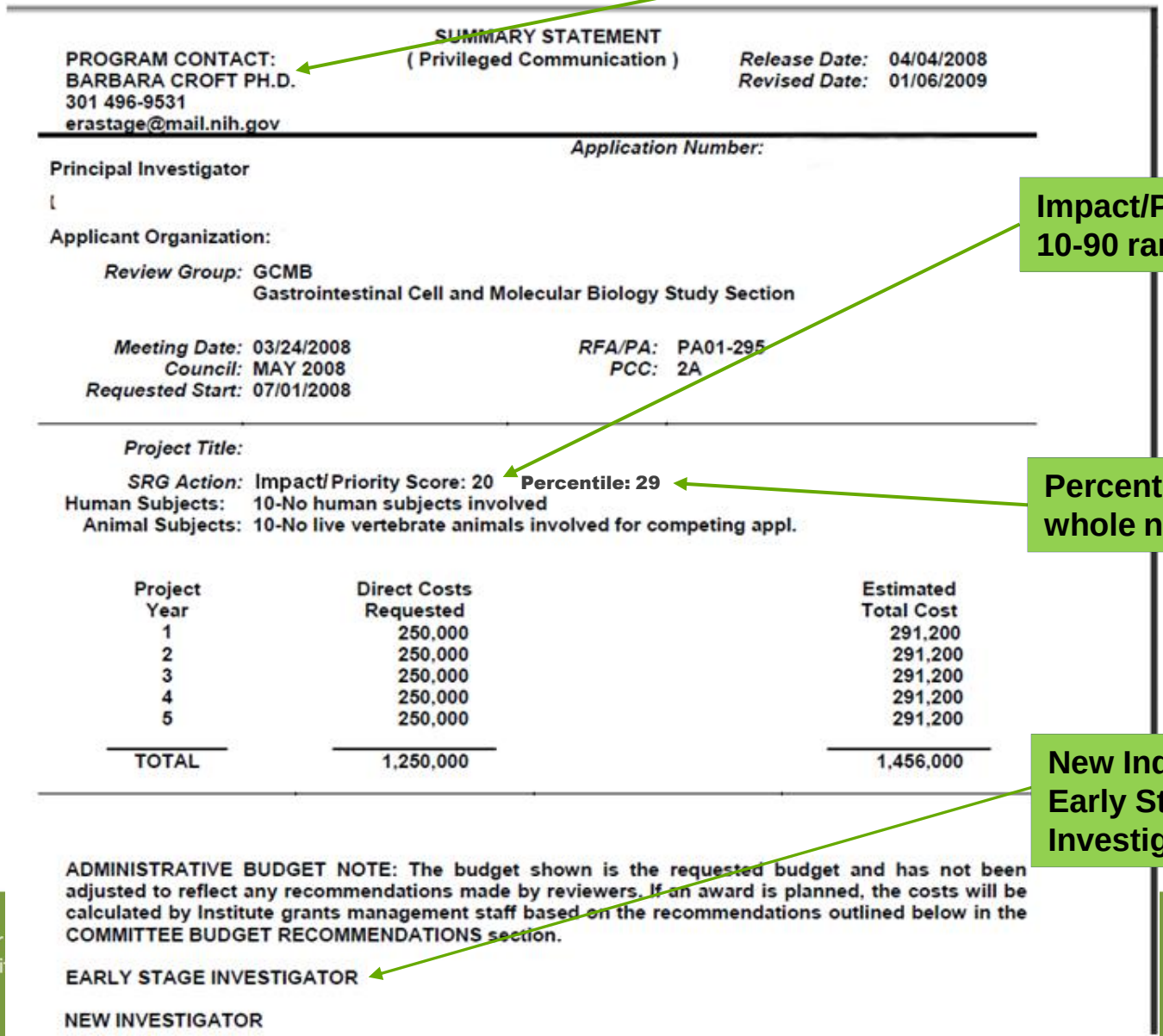
9-Point Scoring Scale

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

Review of Each Application

- Reviewers with conflicts leave room
- Assigned reviewers state preliminary scores
- Discussion of scientific and technical merit
  - Based on the 5 review criteria
  - Assigned reviewers first then open discussion to whole committee
- Discussion of Protection of Human Subjects and Inclusion criteria
- Assigned reviewers state final score – range of scores is set
- Every eligible member scores each application
- Budget and Administrative concerns
- Ideal time for each application - 15 to 20 minutes

Summary Statement



SUMMARY STATEMENT
(Privileged Communication)

PROGRAM CONTACT:
BARBARA CROFT PH.D.
301 496-9531
erastage@mail.nih.gov

Release Date: 04/04/2008
Revised Date: 01/06/2009

Application Number:

Principal Investigator

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Applicant Organization:

Review Group: GCMB
Gastrointestinal Cell and Molecular Biology Study Section

Meeting Date: 03/24/2008
Council: MAY 2008
Requested Start: 07/01/2008

RFA/PA: PA01-295
PCC: 2A

Project Title:

SRG Action: Impact/Priority Score: 20 **Percentile: 29**
Human Subjects: 10-No human subjects involved
Animal Subjects: 10-No live vertebrate animals involved for competing appl.

Project Year	Direct Costs Requested	Estimated Total Cost
1	250,000	291,200
2	250,000	291,200
3	250,000	291,200
4	250,000	291,200
5	250,000	291,200
TOTAL	1,250,000	1,456,000

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.

EARLY STAGE INVESTIGATOR

NEW INVESTIGATOR

View the Videos

- NIH Peer Review Revealed
- NIH Tips for Applicants

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

Know the Review Criteria!

- Review Criteria at a Glance http://grants.nih.gov/grants/peer/guidelines_general/Review_Criteria_at_a_glance.pdf
- Criteria are different for R01s, Fellowships, K awards
- Check Funding Opportunity Annoucement (FOA) for specific criteria
- Scores are based on the reviewers' evaluation of your response to the review criteria

Review Criteria

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

- Core Review Criteria
  - Significance
  - Investigator(s)
  - Innovation
  - Approach
  - Environment

Review criteria each scored from 1-9

http://grants.nih.gov/grants/guide/notice-files/NOT-OD-09-025.html

When Preparing an Application

- Read instructions
- Clearly state rationale and design of proposed investigation
- Provide sufficient detail so reviewers will know what you mean
- Refer to pertinent literature
- Include well-designed tables and figures
- Present an organized, lucid write-up
- Obtain pre-review from faculty at your institution

NIH Grant Writing Tips

http://grants.nih.gov/grants/grant_tips.htm

What Reviewers Look for in Applications

- Impact
- Exciting ideas
- Clarity
- Realistic aims and timelines -- Don’t be overly ambitious
- Brevity with things that everybody knows
- Noted limitations of the study
- A clean, well-written application

Get More Advice

Insider's Guide to Peer Review for Applicants

NIH Center for Scientific Review

To help new and established applicants submit better applications, CSR asked current and recent study section chairs to share their personal insights on producing a highly competitive NIH grant application. They responded with great enthusiasm.

Don't jump too fast into writing your application: Since the most critical parts are the summary and specific aims sections, write a one-page summary page with specific aims first and share it with someone who is experienced, has their own funding or—ideally—someone who has served on a study section. If you can't wow them, start again and use the time you saved to come up with some fresh ideas.

Propose something significant: It is a real turn-off to read an application that is basically a re-hash of a previous project with a new issue. The same goes for "me too" research. Identify an area of current controversy and importance within your field. Make it something that would interest more people than you and your coworkers. Will it be important to clinicians or other investigators? Are you dealing with key questions or controversies in the field?

Good ideas don't always sell themselves: Tell me why it's important up front in the background section, and I'll be ready to roll. Tell me what's known and what isn't known and how, after you complete your studies, you'll move the field forward or answer important questions. A lot of people really are unaware of how absolutely important it is to tell the reviewer from the beginning why it's worth doing. If you're seeking an incremental advance over what's known, it's essential to justify it.

Insider's Guide to Peer Review for Applicants

Advice from CSR Study Section Chairs

http://www.csr.nih.gov/applicantResources/Insider

Who at NIH Can Answer Your Questions?

Before You Submit Your Application

- A Program Officer at an NIH Institute or Center
- Scientific Review Officer

After You Submit

- Your Scientific Review Officer

After Your Review

- Your Assigned Program Officer

Separation of
Funding and Review

Program Staff:

-Identify and promote research priorities

-Recommend projects for funding (based on score, budget, priorities)

-Manage portfolio of projects

-Work with applicants up to review and after review

Review Staff:

-Manage study section meetings to evaluate scientific and technical merit

-Provide a fair, thorough and competent review for each application

-Work with applicants before review

Key NIH Review and Grants Web Sites

NIH Center for Scientific Review

http://www.csr.nih.gov

NIH Office of Extramural Research

http://grants.nih.gov/