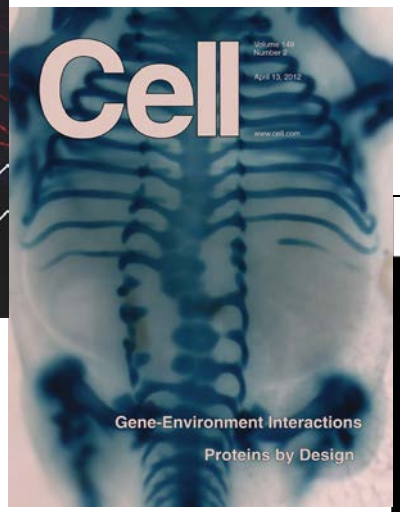
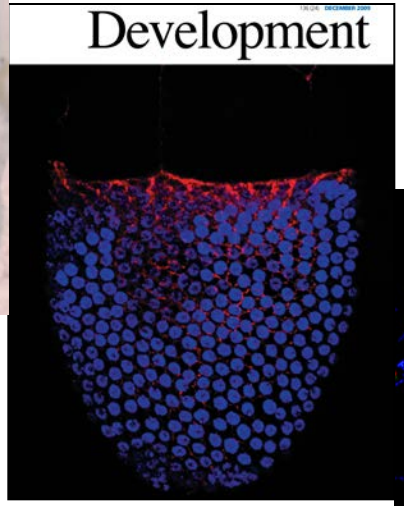
Funding Your Research





You have lots of ideas…


Now all you need is money
http://zastavkin.com/

Funding Your Research

Where should I send my grant?

How does the review process work?

What can I do to optimize my chances for funding?

Why should you listen to me?

Celeste Berg
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University of Washington
Seattle, WA 98195-5065
caberg@uw.edu

NSF Developmental Mechanisms Panel 1998-2006, 2010

NIH DEV2 Study Section *ad hoc* member 2006, 2009

NIH DEV1 Study Section Regular Member 2011-present

Where should I send my grant?

	NIH	NSF
Research Inst.	11-260 R01; 11-261 *R21*	11-572 Standard
Undergrad. Inst.	12-006 R15	11-572 RUI
Average $/year	$225,00 Direct costs	$150,000
Number Years	5_{R01}, 2_{R21}, 3_{R15}	3
Deadlines ★	New R01: Feb 5, June 5, Oct 5. R15: Feb 25, June 25, Oct 25.	Preproposal: Jan 12 Full: Aug 2
Resubmission?	Once	No

Funding Your Research

Where should I send my grant?

How does the review process work?

What can I do to optimize my chances for funding?

NSF reviews grants in two phases

Phase One

Jan 12
Preproposal
Due (4 pages)

NSF assigns to Integrative Organismal Systems

Program Officer chooses 3 reviewers

Peer Review
March 19-23

Program Officer Recommendation
May 15

If NO,
rewrite next year

If YES,
submit Full proposal

http://www.nsf.gov/bfa/dias/policy/meritreview/

NSF reviews grants in two phases

Phase Two

Aug 2
Full proposal
Due (15 pages)

NSF
assigns to
IOS

Steve Klein
chooses 3-8
reviewers

Peer Review
Oct 15-22
“Panel”

Program Officer
Recommendation
Dec 1

Business
Review

Award
Finalized

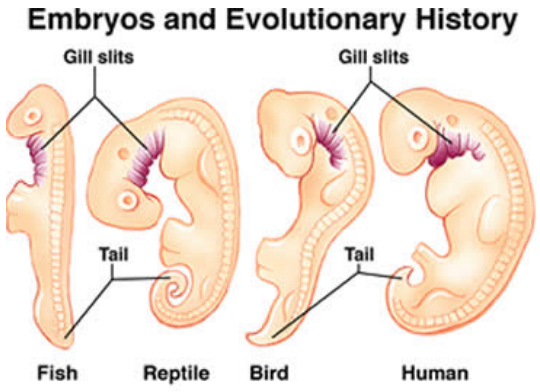
Start Date
Jan 1

What happens at panel?

1. Grants reviewed CONFIDENTIALLY, by category
   - Regular and Collaborative
   - CAREER
   - RUI

How does this diversity affect your writing?

2. Applications encompass broad areas



What happens during review?

1

Primary Reviewer:

- Summarizes project
- States all scores
- Critiques grant

Intellectual Merit

Broader Impacts

Secondary Reviewer:

- Adds to strengths or notes other weaknesses
- Adds insight from mail reviewers

Reader: Weighs in with big picture

What criteria guide the reviewers ?

Phase One: Preproposals

Intellectual Merit

Broader Impact

General question, Innovation, Logic, PI qualifications

Phase Two: Full proposals

Intellectual Merit

Broader Impact

More emphasis on method and feasibility, Overall impact

http://www.nsf.gov/pubs/2011/nsf11079/nsf11079.jsp?org=N
cwp

What happens during review?

1. Primary Reviewer:
   - Summarizes project
   - States all scores
   - Critiques grant
   - Intellectual Merit
   - Broader Impacts

   Secondary Reviewer:
   - Adds to strengths or notes other weaknesses
   - Adds insight from mail reviewers

   Reader: Weighs in with big picture

2. Panel Discussion:
   - Clarify overall impact
   - Resolve differences

3. Place on board:
   - High, Medium, Low Priority

Steve Klein, NSF
Sat. July 21, 4:05

Any questions so far?

NIH reviews grants 3 times/year

Feb, June, Oct
Full proposal Due
(13 pages)

Center for Scientific Review assigns to 1) Institute (PO); and 2) Study section (SRO)

Scientific Review Officer chooses 3 reviewers

Peer Review
June, Oct, Feb
"Study section"

Institute and Council Review
Oct, Feb, June

Business Review

Award Finalized

Start Date
Jan, May, Sep

YouTube Videos & more:
http://public.csr.nih.gov/aboutcsr/contactcsr/pages/contactorvisitcsrpages/nih-grant-review-process-youtube-videos.aspx

How does Institute affect my grant?

Center for Scientific Review assigns to
1) Institute http://www.nih.gov/icd/

Sue Haynes, NIH, Sat. July 21, 4:45

Aging	Alcohol Abuse & Alcoholism	Allergy & Infectious Disease	Arthritis, Muscolu-skeletal, & Skin
Biomedical Imaging & Bioengineering	Cancer	Child Health & Human Development ~ 7%	Complementary & Alternative Medicine
Deafness & Other Communication Disorders	Dental & Craniofacial	Diabetes, Digestive, & Kidney	Drug Abuse
Environmental Health Sciences	Eye	Fogarty International Center	General Medical Sciences ~ 20%
Heart, Lung, & Blood	Human Genome Research	Library of Medicine	Mental Health
Minority Health & Health Disparities	Neurological & Stroke	Nursing Research	Research Resources

http://public.csr.nih.gov/ApplicantResources/ReceiptReferal/Pages/Submission-and-Assignment-Process.aspx

Which study section suits my grant?

Center for Scientific Review assigns to
2) Study Section

Five main divisions of scientific topics branch into
25 “Integrated Review Groups” with
240 “Study sections”

Some Likely IRGs for Developmental Biologists:
Cell Biology
Molecular, Cellular, & Developmental Neuroscience

http://public.csr.nih.gov/StudySections/IntegratedReviewGroups/Pages/default.aspx

Which study section suits my grant?

Example: Cell Biology IRG

Study Sections

Biology of the Visual System [BVS]
Nuclear and Cytoplasmic Structure/Function and Dynamics Study Section [NCSD]
Cellular Mechanisms in Aging and Development Study Section [CMAD]
Cellular Signaling and Regulatory Systems Study Section [CSRS]
Development-1 Study Section [DEV1]
Development-2 Study Section [DEV2]
Intercellular Interactions Study Section [ICI]
Membrane Biology and Protein Processing Study Section [MBPP]
Molecular and Integrative Signal Transduction study section [MIST]

http://public.csr.nih.gov/StudySections/IntegratedReviewGroups/CBIRG/Pages/default.aspx

What criteria guide the reviewers ?

ALL Proposals

Overall Impact

Areas

Significance
Investigator
Innovation
Approach
Environment

Possible Scores

High: 1-3 Extremely strong;
No or a few minor weaknesses

Medium: 4-6 Strong but…
Many minor or moderate weaknesses

Low: 7-9 Some strength but…
Major weaknesses

http://grants.nih.gov/grants/peer/guidelines_general/reviewer_orientation.pdf

See also: scoring_system_and_procedure.pdf

What happens at study section?

1. New Investigator R01s reviewed first
   Preliminary scores rank applications
   Top 50% discussed

2. Other R01s reviewed
   Top 50%

3. All R21s
   Top 50%

4. All R15s
   Top 50%

For each category, any participant can ask to review a grant that missed the 50% cut off.

What happens during review?

1

Primary Reviewer:

Summarizes project

Discusses: Significance, Investigator, Innovation, Approach, Environment

Secondary Reviewer:

Adds to strengths or notes other weaknesses

Tertiary Reviewer:

Weighs in with big picture

2

Panel Discussion:

Clarify overall impact

Resolve differences

Significance

Approach

3

All members vote a score:

Range 1-9: Based on reviewers' scores

Questions?

Funding Your Research

Where should I send my grant?

How does the review process work?

What can I do to optimize my chances for funding?

How can I improve my chances?

1. Start with your best idea.

2. Help the reviewer help you.

3. Write like you care.

1 Start with your best idea.

Ask yourself:

What is known and what are the big gaps in the field?

Why is this process interesting and important?

Why is your system a good model to address these questions? (How does it complement others' efforts?)

Talk to a senior colleague.

EARLY in the process

Get their perspective: ideas, methods, concerns.

Be realistic.

Create a time line and a real budget.

2 Help the reviewer help you.

Set the stage:

What is known and what are the big gaps in the field?

Why is this process interesting and important?

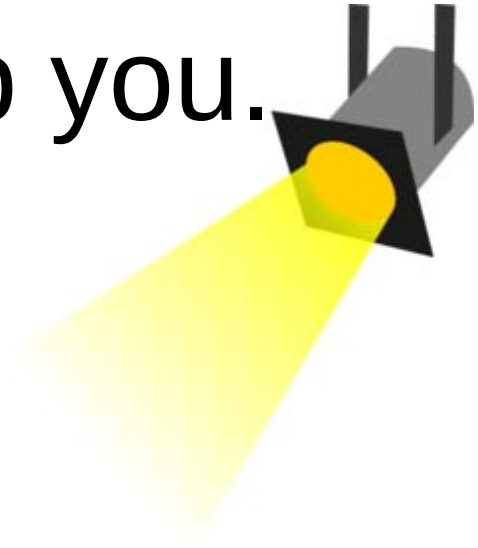
Why is your system a good model to address these questions? (How does it complement others' efforts?)

What have you learned so far?

What will be the impact of the proposed experiments?

Significance Innovation Investigator
Intellectual Merit Broader Impact

2 Help the reviewer help you.



Be explicit:

What is your central question?
What is your hypothesis?

Organize each aim with sub headings:

Logic and Rationale
Methods
Predicted Results and Interpretations
Potential Problems and Alternative Strategies

Address all the review criteria:

Significance, Innovation, Investigator, Approach, Environment
Intellectual Merit Broader Impacts

3 Write like you care.

Get help.

Ask a senior colleague for an example “good” grant.
Ask a colleague to critique a draft.

Demonstrate scholarship.

Show the key data, with stats.
Cite the papers that support your arguments.

Be clear and CONCISE.

Use active voice. (See also Fiske. 2010. *Nature* **464**: 312.)
Create schematics to illustrate concepts.
Spell check; grammar check; proofread your grant.

Questions?

Funding Your Research

Where should I send my grant?

Everywhere, targeting the right funding mechanism.

How does the review process work?

Learn the process so you can put it to work for you.

What can I do to optimize my chances for funding?

Best idea; help the reviewer; write like you care.