



Broader Impacts: A Program Director's Perspective

**Karen Cone - Program Director
Genetic Mechanisms Cluster**

**DIVISION OF MOLECULAR & CELLULAR BIOSCIENCES
BIOLOGICAL SCIENCES DIRECTORATE**

**NABI Summit
April 22, 2016**





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Obama →

Director



Assistant Director of a Directorate



Division Director
Deputy Division Director



Program Director



The Proposal Cycle

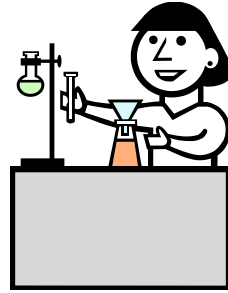
From the PI's Perspective



The IDEA



A Decline



Preliminary Results

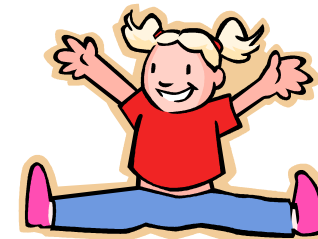


Merit Review

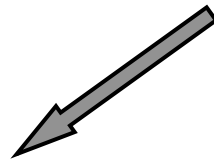
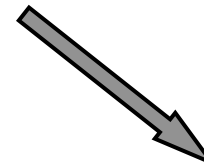
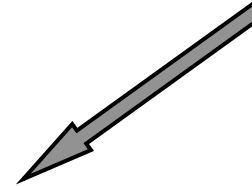
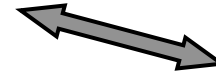
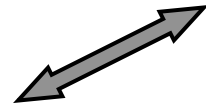
- Intellectual Merit
- Broader Impacts



Proposal
Preparation and Submission



An AWARD!





The Proposal Cycle

From the Program Director's Perspective

- ✓ • **Advise PIs before proposal submission**
- **Manage review of proposals**
 - ✓ • **Recruit and train reviewers (*ad hoc*s and panelists)**
 - **Set up and manage panel meetings**
 - ✓ • **Oversee discussion and ranking of proposals**
 - ✓ • **Oversee preparation of panel summaries**
- ✓ • **Make funding decisions**
 - ✓ • **Prepare review analysis for each proposal (awards and declines)**
 - ✓ • **Prepare a funding plan and present to Division leadership for approval**
- ✓ • **Discuss decisions with PIs**



Due Diligence to Broader Impacts

Best Practices from BIO/MCB

- Training guidelines and video for panelists
- Explicit definitions for panel ranking
- Template for panel summaries
- Funding decisions must consider broader impacts plans
 - Review Analysis Template
 - Funding Plan for Division Director approval
- Discussion with PIs about funding decisions

DIVISION OF
MOLECULAR & CELLULAR BIOSCIENCES

Predictive Biology through Interdisciplinary Research





Panel Ranking Categories

• High Priority

- Strongest in both intellectual merit and **broader impacts**
- Most likely to contain transformative ideas

WOW!

• Medium Priority

- Strong in both intellectual merit and **broader impacts**

• Low Priority

- Weaknesses in intellectual merit or **broader impacts** or both *and/or*
- Likely to have incremental impact

• Non-competitive

- Seriously flawed in some fundamental way *and/or*
- Missing some crucial element or idea (**missing broader impacts is a flaw**)

Fundable

Rarely Funded





Panel Summary Template

Panel Name

Panel #

Dates

RESULTS OF PRIOR SUPPORT (IF APPLICABLE)

CRITERION I: INTELLECTUAL MERIT

STRENGTHS:

WEAKNESSES:

CRITERION II: BROADER IMPACT

STRENGTHS:

WEAKNESSES:

POSTDOC MENTORING PLAN

DATA MANAGEMENT PLAN

SYNTHESIS:

CRITERION II: BROADER IMPACT

STRENGTHS:

WEAKNESSES:

Must comment on assessment plans

**Must include a summary of the
broader impacts**

DIVISION OF
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Predictive Biology through Interdisciplinary Research





Review Analysis Template

Proposal Number and PI Name

Reviewer Ratings

Panel Rating

Outlying Reviews

Intellectual Merit

(Strengths and Weaknesses)

Broader Impacts

(Strengths and Weaknesses)

Data Management

Postdoctoral Mentoring PI

Synthesis and Recommendation

Budget Details (for Awards)

Specific Concerns (for Declines)

Broader Impacts: Describes reviewer comments on both strengths and weaknesses

Recommendation must consider Broader Impacts

DIVISION OF
MOLECULAR & CELLULAR BIOSCIENCES

Predictive Biology through Interdisciplinary Research





Due Diligence to Broader Impacts: *Best Practices from BIO/MCB*

- Training guidelines and video for panelists
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My Advice to PIs for Writing an Excellent Proposal

- Identify your audience
- Frame a big picture
- Identify significant needs, gaps, and hypotheses
- Describe the plan to address the needs, gaps, and hypotheses
- Emphasize creative or innovative aspects
- Provide proof-of-concept
- Describe the expected outcomes
- Relate the outcomes to what you set out to do





What I Hear from PIs (and Panelists) About Broader Impacts

- **The concept is confusing**
 - What's the formula?
 - Pick two from a smorgasbord?
 - How much time should I devote?
 - Can I use existing programs at my institution?
 - How do I pay for this?
 - What if my institution won't support this concept?
 - How do I assess broader impacts?





More Advice to PIs

- **It's not a formula**
 - Do something that interests you, has measurable outcomes, and matches the time you are willing to devote
 - Go above and beyond what you are already paid to do
- **Ask for money if you need it**
- **Use existing infrastructure, as appropriate**
 - But...Give, as well as take
 - Realize that institutions certify to support your efforts
- **Ask for help with assessment**



NSF Needs You!

