




#### **Panelists**

#### Joseph Akkara

Program Director, Directorate for Mathematical & Physical Sciences, Division of Materials Research

**Jean Feldman**Head, Policy Office, Office of Budget, Finance & Award Management, Division of Institution & Award Support

#### **Deborah Lockhart**

Deputy Division Director; Directorate for Computer & Information Science & Engineering, Division of Information & Intelligent Systems

#### **Grace Wang**

Division Director; Directorate for Engineering, Division of Industrial Innovation & Partnerships

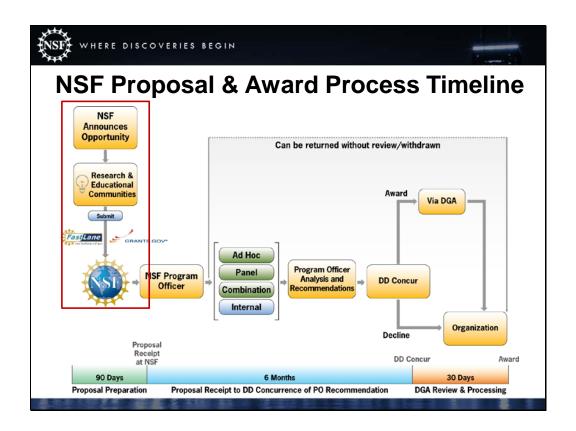
#### **Diane Witt**

Program Director; Directorate for Biological Sciences; Division of Integrative Organismal Systems




# **Topics Covered**

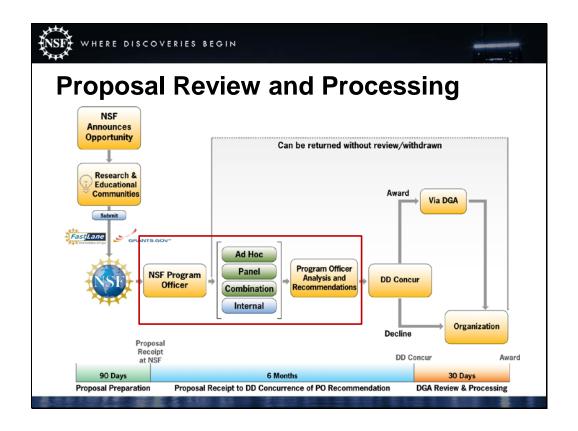
- Proposal and Award Timeline
- Proposal Preparation and Submission
  - Reminders When Preparing Proposals
- Proposal Review and Processing
  - Program Officer Review
  - Proposal Review Criteria
  - Types of Reviews
  - Becoming a Reviewer
  - Managing Conflicts of Interest
  - Funding Decisions
- Award Processing
  - Issuing the Award





# Reminders When Preparing Proposals

- Read the funding opportunity; ask a Program Officer for clarifications if needed
- Address all the proposal review criteria
- Understand the NSF merit review process
- Avoid omissions and mistakes
- Check your proposal to verify that it is complete!





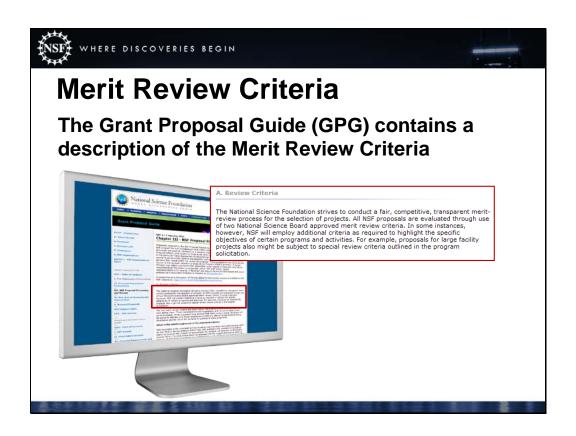

## **Program Officer Review**

- Upon receipt at NSF, the Proposal Processing Unit routes proposals to the correct program office.
- The Program Officer conducts a preliminary review to ensure they are:
  - Complete;
  - Timely; and
  - Conform to proposal preparation requirements.
- NSF may return a proposal without review if it does not meet the requirements above.
  - The return without review process will be discussed in greater detail later in the session.



# **Proposal Review Criteria**

- Throughout the review process, proposals are evaluated against:
  - National Science Board approved merit review criteria:
    - What is the intellectual merit of the proposed activity?
    - What are the broader impacts of the proposed activity?
  - Program specific criteria (stated in the program solicitation).






### **Intellectual Merit Considerations**

- How important is the proposed activity to advancing knowledge and understanding within its own field or across different fields?
- How well-qualified is the proposer (individual or team) to conduct the project? (If appropriate, the reviewer will comment on the quality of prior work.)
- To what extent does the proposed activity suggest and explore creative, original, or potentially transformative concepts?
- How well-conceived and organized is the proposed activity?
- Is there sufficient access to resources?



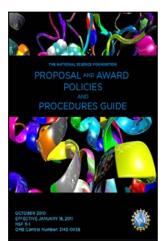
## **Broader Impacts Considerations**

- How well does the activity advance discovery and understanding while promoting teaching, training, and learning?
- How well does the activity broaden the participation of underrepresented groups (e.g., gender, ethnicity, disability, geographic)?
- To what extent will the activity enhance the infrastructure for research and education, such as facilities, instrumentation, networks, and partnerships?
- Will the results be disseminated broadly to enhance scientific and technological understanding?
- What may be the benefits of the proposed activity to society?

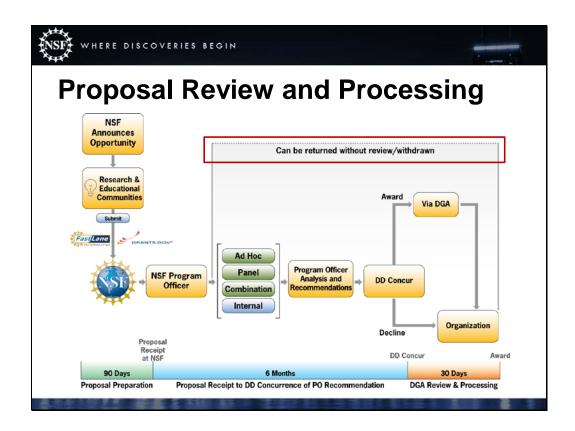


# **Examples of Broader Impacts**

The GPG contains examples of Broader Impacts. For further information, visit:



http://www.nsf.gov/pubs/gpg/broaderimpacts.pdf





#### **Return of Proposals Without Review**

- Per Important Notice 127, Implementation of new Grant Proposal Guide Requirements related to the Broader Impacts Criterion:
  - Proposals that do not separately address both criteria within the one-page Project Summary will be returned without review.
- Per the GPG postdoctoral researcher mentoring requirement:
  - Proposals that include postdoctoral researchers must include, as a supplementary document, a description of the mentoring activities that will be provided for such individuals.
  - The mentoring plan must not exceed one page per project.



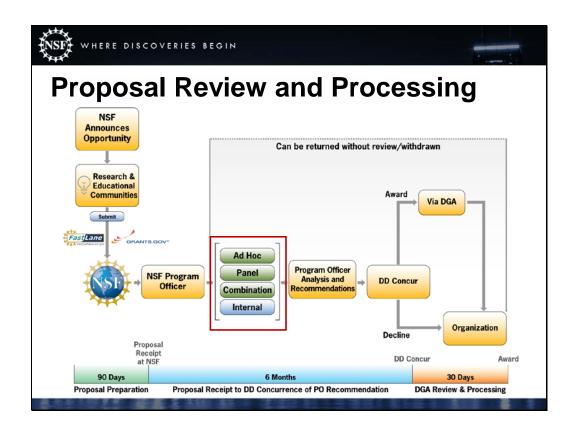
# Other Reasons for Return of Proposals Without Review

- It is inappropriate for funding by the National Science Foundation.
- It is submitted with insufficient lead time before the activity is scheduled to begin.
- It is a full proposal that was submitted by a proposer that has received a "not invited" response to the submission of a preliminary proposal.
- It is a duplicate of, or substantially similar to, a proposal already under consideration by NSF from the same submitter.



### Other Reasons for Return of Proposals Without Review

- It does not meet NSF proposal preparation requirements, such as page limitations, formatting instructions, and electronic submission, as specified in the GPG or program solicitation.
- It is not responsive to the GPG or program announcement/solicitation.
- It does not meet an announced proposal deadline date (and time, where specified).
- It was previously reviewed and declined and has not been substantially revised.
- It duplicates another proposal that was already awarded.






### **Types of Reviews**

- Ad hoc: proposals sent out for review
  - Ad hoc reviewers usually have specific expertise in a field related to the proposal.
  - Some proposals may undergo ad hoc review only.
- Panel: review conducted by peers at NSF
  - Panel reviewers usually have a broader scientific knowledge.
  - Some proposals may undergo only a panel review.
  - Some proposals may undergo reviews by multiple panels (especially for those proposals with cross-cutting themes).

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## **Types of Reviews**

- Combination: some proposals may undergo supplemental *ad hoc* reviews after a panel review.
- Internal: review by NSF Program Officers only
  - Examples of internally reviewed proposals:
    - Proposals submitted to Rapid Response Research Grants (RAPID)
    - Proposals submitted to EArly-concept Grants for Exploratory Research (EAGER)
    - Proposals for conferences or workshops



#### **How are Reviewers Selected?**

- Types of reviewers recruited:
  - Reviewers with specific content expertise
  - Reviewers with general science or education expertise
- Sources of Reviewers:
  - Program Officer's knowledge of the research area
  - References listed in proposal
  - Recent professional society programs
  - Computer searches of S&E journal articles related to the proposal
  - Former reviewers
  - Reviewer recommendations included in proposal or sent by email
- Three to ten external reviewers per award are selected.



#### How Do I Become a Reviewer?

- Contact the NSF Program Officer(s) of the program(s) that fit your expertise:
  - Introduce yourself and your research experience.
  - Tell them you want to become a reviewer for their program.
  - Ask them when the next panel will be held.
  - Offer to send a 2-page CV with current contact information.
  - Stay in touch if you don't hear back right away.



#### What is the Role of the Reviewer?

- Review all proposal material and consider:
  - The two NSF merit review criteria and any program specific criteria.
  - The adequacy of the proposed project plan including the budget, resources, and timeline.
  - The priorities of the scientific field and of the NSF program.
  - The potential risks and benefits of the project.
- Make independent written comments on the quality of the proposal content.



#### What is the Role of the Review Panel?

- Discuss the merits of the proposal with the other panelists
- Write a summary proposal review based on that discussion
- Provide some indication of the relative merits of different proposals considered



# Why Serve on an NSF Panel?

- Gain first-hand knowledge of the merit review process
- Learn about common problems with proposals
- Discover proposal writing strategies
- Meet colleagues and NSF Program Officers managing the programs related to your research




# Managing Conflicts of Interest in the Review Process

- The primary purpose is to remove or limit the influence of ties to an applicant institution or investigator that could affect reviewer advice.
- The secondary purpose is to preserve the trust of the scientific community, Congress, and the general public in the integrity, effectiveness, and evenhandedness of NSF's merit review process.



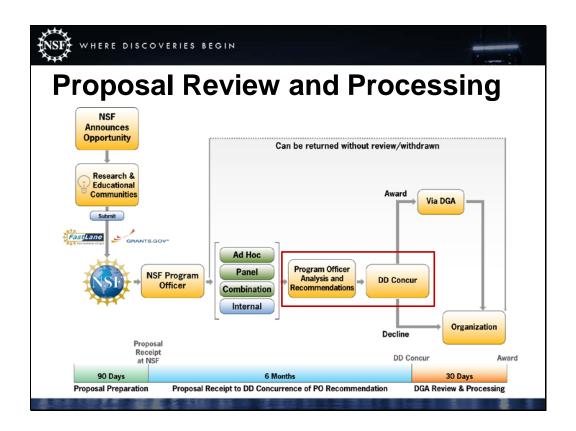
# **Examples of Affiliations with Applicant Institutions**

- Current employment at the institution
- Other association with the institution, such as being a consultant
- Being considered for employment or any formal or informal reemployment arrangement at the institution
- Any office, governing board membership, or relevant committee membership at the institution



# **Examples of Personal Relationships** with Investigator or Project Director

- Known family or marriage relationship
- Business partner
- Past or present thesis advisor or thesis student
- Collaboration on a project or book, article, or paper within the last 48 months
- Co-edited a journal, compendium, or conference proceedings within the last 24 months






# **Funding Decisions**

- The merit review panel summary provides:
  - Review of the proposal and a recommendation on funding.
  - Feedback (strengths and weaknesses) to the proposers.
- NSF Program Officers make funding recommendations guided by program goals and portfolio considerations.
- NSF Division Directors either concur or reject the Program Officer's funding recommendations.



#### **Feedback from Merit Review**

- Reviewer ratings (such as: E, VG, G, F, P)
- Analysis of how well proposal addresses both review criteria: Intellectual Merit and Broader Impacts
- Proposal strengths and weaknesses
- Reasons for a declination (if applicable)

If you have any questions, contact the cognizant Program Officer.



#### **Documentation from Merit Review**

- Verbatim copies of individual reviews, excluding reviewer identities
- Panel Summary or Summaries (if panel review was used)
- Context Statement (usually)
- PO to PI comments (written or verbal) as necessary to explain a declination (if applicable)



### **Reasons for Declines**

- The proposal was not considered to be competitive based on the merit review criteria and the program office concurred.
- The proposal had flaws or issues identified by the program office.
- The program funds were not adequate to fund all competitive proposals.



### **Revisions and Resubmissions**

- Points to consider:
  - Do the reviewers and the NSF Program Officer identify significant strengths in your proposal?
  - Can you address the weaknesses that reviewers and the Program Officer identified?
  - Are there other ways you or your colleagues think you can strengthen a resubmission?

As always, if you have questions, contact the cognizant Program Officer.




## **NSF** Reconsideration Process

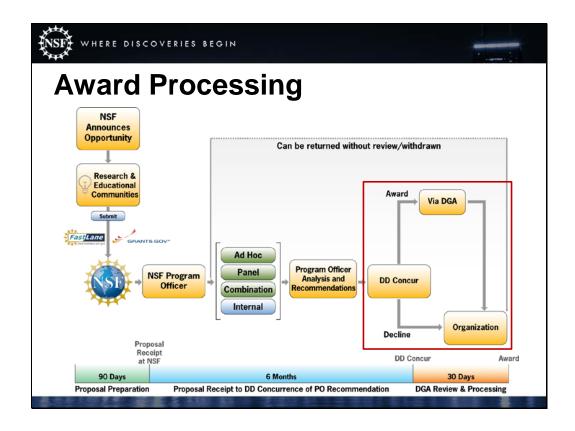
- Explanation from Program Officer and/or Division Director
- Written request for reconsideration to Assistant Director within 90 days of the decision
- Request from organization to Deputy Director of NSF



# Possible Considerations for Funding a Competitive Proposal

- Addresses all review criteria
- Likely high impact
- Broadening participation
- Educational impact
- Impact on institution/state

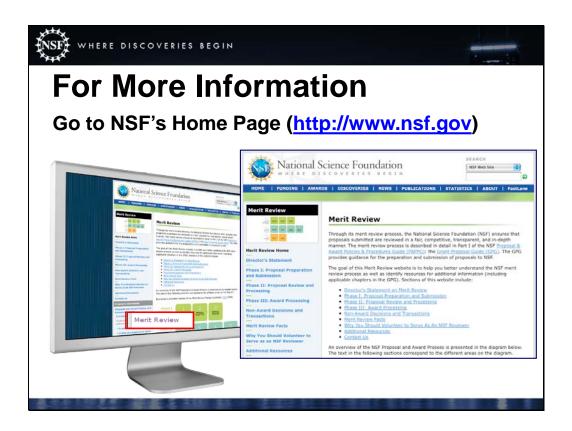
- Special programmatic considerations (e.g. CAREER/RUI/EPSCoR)
- Other support for PI
- "Launching" versus "Maintaining"
- Portfolio balance





# **Issuing the Award**

- NSF's Division of Grants and Agreements (DGA) reviews the recommendation from the program office for business, financial, and policy implications.
- NSF's grants and agreements officers make the official award as long as:
  - The institution has an adequate grants management capacity.
  - The PI/Co-PIs do not have overdue annual or final reports.
  - There are no other outstanding issues with the institution or PI.






#### For More Information

# Ask Early, Ask Often!

nsf.gov/staff nsf.gov/staff/orglist.jsp nsf.gov/about/career\_opps/rotators/index.jsp
