

NSF CAREER Program FY20 NSF 20-025



*ENG CAREER Workshop
April 1, 2020
Panel Briefing Document*

Faculty Early Career Development (CAREER) Program (NSF 20-025): Goals

- “A Foundation-wide activity that offers the National Science Foundation’s most prestigious awards in support of early-career faculty who have the potential to serve as **academic role models in research and education and to lead advances in the mission of their department or organization.**”
- “Activities pursued by early-career faculty should **build a firm foundation for a lifetime of leadership in integrating education and research.**”



Departmental Letter (2 pages)

- Commitment to the PI's proposed CAREER research and education activities
- Description of how the PI's career goals and responsibilities mesh with that of the organization and department
- Description of how the department will contribute to the professional development of the PI with mentoring and whatever is needed to further the PI's efforts to integrate research and education
- Statement indicating the PI's eligibility for the CAREER program



Letter(s) of Collaboration

- Project Description or Facilities, Equipment, and Other Resources must document the nature of all project collaborations, such as:
 1. Intellectual contributions to the project
 2. Permission to access a site, use instrumentation or facility
 3. Offer to furnish samples / materials for research
 4. Logistical support / evaluation services
 5. Mentoring of U.S. students at a foreign site, if applicable
- Letter should consist of a single-sentence statement of collaboration:
 - *“If the proposal submitted by Dr. [name of the PI] entitled [proposal title] is selected for funding by the NSF, it is my intent to collaborate and/or commit resources as detailed in the Project Description.”*
 - Must NOT recommend or endorse PI or project



CAREER Personnel and Budgets

- Co-PIs on cover sheet are not allowed
- Request for support of other senior personnel, consultants, or sub-awards is allowed, commensurate with a limited role in the project
 - Intent is that they are involved in the project as a “helper”, not major intellectual contributor
- Programs may support buy-out of academic year time for teaching-intensive institutions (check with your Program Officer)
- ENG Minimum budget is \$500,000 for the 5-year project



CAREER: Compliance and Eligibility

- All proposals have been screened for CAREER/PAPPG compliance and eligibility
- Questions about a proposer's eligibility, proposal's compliance, budget, letters? Bring it to the attention of the Program Director (PD) and continue reviewing the proposal. The PD will look into the issue and quickly get a resolution for the panel



NSF Evaluation Criteria: Intellectual Merit

- Intellectual Merit
 - Advancement and contribution of knowledge in its own field or across different disciplines?
 - Creative and original concepts?
 - Well-conceived and organized proposal?
 - Qualification of the PI?
 - Sufficient access to resources?
- This proposal is potentially transformative because if successful it would
 - The research described in this proposal is novel in that, for the first time



NSF Evaluation Criteria: Broader Impacts

- The Broader Impacts focuses on the potential benefits of the research and the educational outcomes to society and achievement of desired societal outcomes
- **Means to benefit society include:**
 - Economic/environment/energy
 - Education and training
 - Providing opportunities for underrepresented groups
 - Improving research and education infrastructure
- **Broader impacts may be accomplished**
 - through the **research** itself,
 - through the **activities** that are **directly** related to specific research projects, or
 - through **activities** that are supported by, but are **complementary** to, the project.



Five Key Review Elements for both IM/BI

1. What is the potential for the proposed activity to:
 - **advance knowledge** and understanding within its own field or across different fields (Intellectual Merit); and
 - **benefit society** or advance desired societal outcomes (Broader Impacts)?
2. To what extent do the proposed activities suggest and explore **creative, original, or potentially transformative** concepts?
3. Is the plan for carrying out the proposed activities well-reasoned, well-organized, and based on a **sound rationale**? Does the plan incorporate a mechanism to **assess success**?
4. How well **qualified** is the individual, team, or institution to conduct the proposed activities?
5. Are there adequate **resources** available to the PI (either at the home institution or through collaborations) to carry out the proposed activities?



NSF Evaluation Criteria

- According to NSF 20-025:
 - All CAREER proposals must have an integrated research and education plan at their core
- Integration of Research and Education
 - NSF encourages all applicants to think creatively about how their research will impact their education goals and, conversely, how their education activities will feed back into their research. These plans should reflect the proposer's own disciplinary and educational interests and goals, as well as the needs and context of his or her organization.



CAREER Proposal Review Considerations

- The **Intellectual Merit** is the potential that the research has to advance the knowledge base of the field of science or engineering.
- The **Broader Impacts** focus on the potential benefit to society and achievement of desired societal outcomes.
- The **Integration of Research and Education** describes the reciprocal relationship between the proposed research and education activities and how they may inform each other in the PI's career development as both an outstanding researcher and educator.



Avoid Unintended Bias

- Implicit bias toward a group
- Lack of critical mass a greater reliance on perceptions and generalizations
 - Few women and underrepresented minorities in sciences
- Accumulation of disadvantage
- Mitigate evaluation bias



Ways to Mitigate Evaluation Bias

1. Increase awareness of how implicit bias might affect evaluation
2. Decrease time pressure and distractions in evaluation process
3. Rate on explicit criteria rather than global judgments
4. Point to specific evidence supporting judgments

Please incorporate (3) & (4) in your reviews and discussions.



Conflicts of Interest

- Sign and turn in Conflict-of-Interest form
- Typical relationships that could lead to a conflict:

INSTITUTIONAL

- ♦ *current or previous employment (12 months) or seeking employment*
- ♦ *award, honorarium, or travel payment (12 months)*
- ♦ *officer or governing board*
- ♦ *any financial interest*

PERSONAL

- ♦ *co-author of paper or project collaborator (48 months)*
- ♦ *co-edited journal or proceedings (24 months)*
- ♦ *thesis advisor or student (life-long)*
- ♦ *family member or close friend*

- You must not participate in the discussion of any proposal for which you have a conflict. Please discuss any actual or perceived conflicts with your panel moderator.



Confidentiality

- NSF receives proposals in confidence and is responsible for protecting the confidentiality of their contents and their review.
 - Do not copy, quote, or otherwise use material from the proposals.
 - Proposals contain sensitive information and are not in the public domain.
 - Destroy all copies, including computer records, when you have completed your reviews. (You may leave your paper copies in the conference room.)
 - Do not discuss proposal content, results, recommendations, or membership of this panel outside the meeting room, even at NSF.
- Except for copies to the Principal Investigator (excluding identifying information), reviews will not be disclosed to non-Governmental personnel.
- NSF considers reviews to be exempt from disclosure under the Freedom of Information Act, but it cannot guarantee that it will not be forced to release reviews under the FOIA or other, and future laws.



Panelist Responsibilities

- For each proposal:
 - **Primary reviewer (lead)** summarizes and then initiates comments on the proposal. The lead also reviews the proposal.
 - After the Lead finishes, the **2 reviewers** add the key strengths and weaknesses they found that were not covered by the previous speaker
 - One reviewer will be the **scribe** for a panel summary, to which all assigned reviewers provide input. The scribe can also be the lead.
 - The **panel summary** generally reflects the panel's discussion and the individual reviews and basis for recommendation.
 - The summary should be written in 3rd-person.
 - Other reviewers concur and/or add their comments.
 - The floor is open for panel discussion.



Panelist Responsibilities

- Place each proposal into rating categories outlined by the Program Officer:
 - HC - Highly Competitive
 - C – Competitive
 - NC - Not Competitive
- Rank the proposals within the categories as outlined by the Program Officer, if applicable



A Good Panel Summary Leads to Better Research!

- Synopsis
- Intellectual merit
 - Strengths
 - “This proposal is potentially transformative because if successful it would
....
 - “The research described in this proposal is novel in that, for the first time
.....
 - Weaknesses
- Broader impact
 - Strengths
 - Weaknesses
- Data Management Plan
- PostDoc Mentoring Plan (if applicable)
- Integration of Research and Education
- Rationale for Recommendation
- The summary was read by/to the panel and the panel concurred that the summary accurately reflects the panel discussion.





QUESTIONS ?

