NSF CAREER: GETTING STARTED ON YOUR PROPOSAL

RESEARCH AND FACULTY DEVELOPMENT
FACULTY SUCCESS SEMINAR SERIES

Nancy Holmes, Proposal Development Specialist
Office of Research and Faculty Development

Expert Guest: Christine Parent, PhD
Associate Professor, Dept of Biological Sciences and
2018 NSF CAREER Awardee

Please note that this session is being recorded

Please keep your microphone muted until the Q&A session
OFFICE OF RESEARCH AND FACULTY DEVELOPMENT

We provide proposal development assistance across the spectrum

Meet goals in the UI strategic plan – grow research and creative efforts across all disciplines

Reach out to request service >>

All services are optional and are granted on a first-come, first-served basis
# Fall 2020

<table>
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<th>Date</th>
<th>Event</th>
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<tr>
<td>Sept. 9</td>
<td>NSF Research Traineeship (NRT) Program: Tips for Writing a Competitive Proposal</td>
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<td>Sept. 23</td>
<td>NSF CAREER All Year: Getting Ready to Apply</td>
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<tr>
<td>Sept. 30</td>
<td>NSF EPSCoR RII Track-2: Tips for Writing a Competitive Proposal</td>
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<td>Oct. 7</td>
<td>Find Funding Opportunities: Introduction to Pivot</td>
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<td>Oct. 21</td>
<td>NSF CAREER All Year: Getting Started on Your Proposal</td>
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<tr>
<td>Nov. 4</td>
<td>UPDATE: Mountain West Clinical and Translational Research-Infrastructure Network (MW CTR-IN) Funding Opportunities</td>
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<tr>
<td>Nov. 18</td>
<td>Myth-busting Department of Defense Funding Opportunities</td>
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<tr>
<td>Dec. 2</td>
<td>M. J. Murdock Trust’s Commercialization Initiation Program: Tips for Writing a Competitive Proposal</td>
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# Spring 2021

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<tr>
<td>Jan. 13</td>
<td>Find Funding Opportunities: Introduction to Pivot</td>
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<tr>
<td>Jan. 27</td>
<td>Funding Research and Scholarly Work in the Humanities</td>
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<tr>
<td>Feb. 3</td>
<td>Idaho is an EPSCoR State - What This Means for Supporting Your Research</td>
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<td>Feb. 17</td>
<td>How to Develop and Deliver an Effective Pitch</td>
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<td>Mar. 3</td>
<td>Assessing Your Grant Readiness</td>
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<td>Mar. 24</td>
<td>Early Career Faculty Research - Grant Programs</td>
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<tr>
<td>Apr. 7</td>
<td>USDA NIFA AFRI: Tips for Getting Started with Your Next Proposal</td>
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<tr>
<td>Apr. 14</td>
<td>Developing Data Management Plans - Best Practices and Resources</td>
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<td>Apr. 28</td>
<td>Equipment Grant Programs: An Overview</td>
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**Zoom ID**
uidaho.zoom.us/j/95865360877

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**We Guide the Development of Competitive External Grant Proposals**

**Office of Research and Faculty Development**
Email: orred-rfdteam@uidaho.edu
Website: uidaho.edu/orfd
NSF CAREER: ALL YEAR

Fall Semester
NSF CAREER All Year: Getting Ready to Apply - Presented September 21 (access recording here)
NSF CAREER All Year: Getting Started on Your Proposal (today)

Spring Semester
NSF CAREER: All Year – Proposal Conversation Groups (TBA)
TODAY’S DISCUSSION

Brief overview of the NSF CAREER Award program

Outline steps to get started on now

Q&A with Dr. Christine Parent, 2018 CAREER Awardee

Resources

Reminder: RFD support for proposal development
National Science Foundation Faculty Early Career Development Award

also known as

NSF CAREER

“...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.”
NSF CAREER Proposal =

Research Plan
  +
Education Plan
  +
Description of how these are integrated
Eligibility

1. Untenured (until Oct. 1 after due date)
2. Tenure track or equivalent
3. Assistant Professor or equivalent
4. Propose to conduct research in an area that NSF funds
5. Have not submitted a proposal to the NSF CAREER program more than twice before
Other details

- 5 years of funding
- *Minimum* $400K total; includes F&A
  ($500K for BIO, ENG and Polar Programs)
- Must apply to a particular program within a directorate
- Note: different NSF directorates and divisions use the CAREER program differently
To-do now

- Study the NSF CAREER solicitation
- Decide which NSF Directorate and Program to submit to
- Read funded CAREER proposals from that Program
- Identify your Program Officer
- Talk to your Department Head/Chair
- If you are unsure about any of the above: Contact RFD
Decide which NSF Directorate and Program are right for your project

https://www.nsf.gov/about/research_areas.jsp
Find and read funded CAREER proposals from your Program

https://www.nsf.gov/awardsearch/advancedSearch.jsp
Advanced Search Results

You Searched For:
- NSF Organization: Direct For Biological Sciences
- Keyword: CAREER
- Active Awards: true
- Refined by: State: Idaho

Refine Search
- Award Amount: Between $500,001 - $1,000,000: 3
- Award Instrument: Standard Grant: 1

Export up to 3,000 Awards:
- CSV | XML | Excel | Text

Sort By: Relevance

Export All Results

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<tr>
<th>Award Number</th>
<th>Principal Investigator(s)</th>
<th>Co-Principal Investigator(s)</th>
<th>Organization</th>
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<th>Award Amount</th>
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CAREER: Establishing Links between Musculoskeletal Morphology and the Biomechanics of Bipedal Hopping in Desert Environments

CAREER: Islands as Models to Study Effects of Multidimensional Selection

CAREER: Forest-atmosphere interactions in an era of fire and drought

CAREER: Ecosystem Processes in the Age of Antibiotics

Displaying 1 - 4 of 4
**ABSTRACT**

This project will study the question of what governs the diversity of species using the Galapagos Islands, where factors influencing diversity range in their complexity. The islands of the Galapagos vary in age from young (less than 50,000 years old) to old (more...
Identify your CAREER program officer

https://www.nsf.gov/crssprgm/career/contacts.jsp
Talk to:
- Your department chair/head - NSF CAREER requires a Departmental Letter

Contact:
- U of I Office of Sponsored Program (OSP) Pre-Award Office
  https://www.uidaho.edu/research/about/osp/pre-award-administration

Find and Contact:
- Your NSF Program Officer (more on this in a moment)
Begin developing your research idea

- What do you want you to do?
- Does it address important questions/gaps in your field?
- Is it novel? Cutting edge?
- Do you have the background and resources to accomplish your goals?
- Will it contribute to your long-term career goals?
- Can you do it as a single PI?
- Is the scope appropriate for CAREER?
Begin developing your education plan

▪ What are your interests? What types of education and outreach activities might you already be doing?

▪ Find existing programs with which to partner, e.g.
  ▪ Programs with/for teachers, and/or K-12 students
  ▪ Undergraduate research programs
  ▪ Science camps
  ▪ Community organizations
  ▪ Connections with industry

▪ University of Idaho list of Education and Outreach Partners
Begin formulating the Broader Impacts of your project

NSF uses two merit criteria to evaluate proposals:

1. Intellectual Merit – The potential to advance knowledge

2. Broader Impacts – The potential to benefit society and contribute to the achievement of specific, desired societal outcomes.

“Broader impacts may be accomplished through the research itself, through activities that are directly related to specific research projects, or through activities that are directly supported by, but are complementary to, the project.”

– NSF Proposal & Award Policies & Procedures Guide (PAPPG)
Questions to consider when formulating a BI plan

- What are the societally-beneficial impacts of my research?
- What are the societally-beneficial impacts of my education plan?
- Who is my audience(s)?
- What activities I will implement to achieve broader impacts?
- What resources will I need?
- How will I evaluate/assess/measure impact?
Visit RFD’s [Broader Impacts Resource page](#)

View a recording of an RFD Faculty Success Seminar: “Broader Impacts Really do Matter!”

**NSF Broader Impacts (BI)**

As part of its proposal review process, the National Science Foundation requires that all proposals substantially address the broader impact (BI) of the proposed research. The resources below can help you address this important merit review criterion.

- NSF Report: Perspectives on Broader Impacts
- National Alliance for Broader Impacts (NABI) Guiding Principles
- National Alliance for Broader Impacts (NABI) Current State of Broader Impacts
- A Scientist’s Guide to Achieving Broader Impacts
- Broader Impacts Activities Worksheet

**Web resources:**

- NSF Broader Impacts page
- NSF Advancing Research Impact in Society (ARIS)
- NSF Advancing Research Impact in Society (ARIS) BI 101 webinar
- Sample Broader Impact Statements
- BioScience article: Beyond the Deficit Model: The Ambassador Approach to Public Engagement
- CoSEE Broader Impact Wizard
- Broader Impact Wizard 7-minute video
Broader Impacts worksheet

First: Pick 2-3 NSF Broader Impacts/Outreach Criteria (below) that align with your research, teaching, professional service, and/or personal interests.

- Full participation of women, persons with disabilities, and underrepresented minorities in science, technology, engineering, and mathematics (STEM)
- Improved STEM education and educator development at any level
- Increased public scientific literacy and public engagement with science and technology
- Improved well-being of individuals in society
- Development of a diverse, globally competitive STEM workforce
- Increased partnerships between academia, industry, and others
- Improved national security
- Increased economic competitiveness of the United States
- Enhanced infrastructure for research and education
- Create your own:

Next: Design activities that relate to the outcomes you picked, following these steps:

1. Define the appropriate audience to receive your research results or understand your research topic (e.g., general public, citizen scientists, K-12 students, K-12 teachers, undergraduate students, policy makers, stakeholders, industry, etc.). Who needs to know?

2. Communicate the value of your research. In 1-2 sentences, explain the value of your research to your audience. (If you have trouble communicating the value of your research, try completing this sentence, “My research is important to <insert audience> because…”)

3. Determine what outcomes you want from the audience. Examples: to have a better attitude about science, to be more knowledgeable about your research or a particular scientific concept, etc.

4. Design your outreach activities and prepare outputs that will give you the outcomes you identified above.

5. IMPORTANT – Link your activities back to the NSF BI Criteria and communicate this in your proposal. In the best case scenario, each audience, outcome, activity, and assessment should correspond to one of the Broader Impacts categories listed above.

6. Plan to evaluate whether you’ve made an impact. Have some way(s) to objectively evaluate/assess success.

“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.”
- NSF Proposals & Awards Policy & Procedures Guide
Talk to your program officer about your project

At least 6 months ahead of proposal deadline:

▪ Develop a one-page concept paper or quad chart describing your research, education plan, broader impact activities

▪ Send a brief email, with the concept paper or quad chart and your biosketch attached, requesting a phone conversation
Why talk to your NSF program officer?

- Make sure you’ve selected the right NSF program
- Get feedback on your planned project
- Understand who your audience (the panel) will be
- Gives the PO a heads-up to expect your CAREER proposal
- Develops a relationship with your PO
Questions to ask your program officer(s) about your project:

- Does it fit the program?
- Is it suitable for CAREER?
- How are CAREERs in this division reviewed?
- What will the reviewers’ backgrounds be?
- Does the PO have any recommendations?

*Listen carefully to PO’s advice and comments*
Common Mistake #1:
Not contacting the Program Officer

Common Mistake #2:
Contacting the Program Officer too late
THE CAREER PROPOSAL
PROJECT SUMMARY - 1 PAGE

- 3 sections:
  - Overview
  - Intellectual Merit
  - Broader Impacts

- Summarizes plans for integration of research and education activities

- The summary is the most important piece, but it is the last part of the proposal you’ll write
PROJECT DESCRIPTION - 15 PAGES
The Overview is the first page of your Project Description and must clearly present *what* you plan to do, *why* it’s important, and *how* you propose to do it.

- Presents your central idea and gets reviewers interested in the problem.
- Describes landscape of your field.
  - What is the knowledge gap you are looking to address?
  - Significance – what is not being done because of this gap?
- Argues how you are positioned to fill this gap, advance NSF’s mission, and propel your career.

**PROJECT OVERVIEW**
PROJECT DESCRIPTION

- Proposed research project
- Proposed educational plan, including plans to evaluate its impact
- Description of integration of research and education
- Broader Impacts
- Results of prior NSF support, if applicable
BIOGRAPHICAL SKETCH (2 PAGES)

- Should include BOTH research and educational activities and accomplishments
- Must use the new NSF-approved format
OTHER DOCUMENTS

- Budget
- Budget Justification
- Departmental Letter
- Current and Pending Support using new NSF-approved format
- Collaborators and Other Affiliations
- Facilities, Equipment and Other Resources
- Data Management Plan
- Letters of Collaboration
- List of Suggested Reviewers
RFD CAN PROVIDE:

- Brainstorming ideas
- Timeline of proposal development tasks
- Assistance finding and contacting a Program Officer
- Assistance finding partners of the education plan and broader impact activities
- Reviews of all documents (except the budget)
- Templates for Biosketch, Current & Pending Support, Collaborators & Other Affiliations, CAREER proposal checklist
- And more...
### NSF CAREER Proposal Checklist (NSF PAPPG 20-1) effective 6/1/2020

**Deadline:** July 26, 2021 at 5:00 p.m. local time for submitting organization

Blue hyperlinks lead to specific sections within NSF’s Proposal and Award Policies and Procedures Guide and/or to UI Research and Faculty Development resource page.

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<td>□ Font: Recommend Times New Roman or Computer Modern family (11 pt +)</td>
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<td>□ Margins: 1”+</td>
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<th>Single-Copy Documents</th>
<th>For NSF programmatic use only, not sent to reviewers</th>
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<tr>
<td>□ Collaborators &amp; Other Affiliations document for each senior personnel (<a href="#">Download template here</a>)</td>
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<tr>
<td>□ List of Suggested Reviewers, optional but highly recommended</td>
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<td>- In FastLane, list the names, email addresses, and institutional affiliation of possible reviewers</td>
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<td>□ Results from prior NSF support</td>
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<td>- Provide references in support of both the research and education aspects proposal</td>
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<td>- Each reference should include the names of all authors, in the sequence in which they appear in the publication</td>
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<td>A. Professional Preparation (Institution, Location, Major, Degree &amp; Year)</td>
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<tr>
<td>B. Appointments (reverse chronological order)</td>
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<tr>
<td>C. Products or Publications – choose 1 of these headings; list up to 5 most closely related and up to 5 other significant</td>
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<tr>
<td>D. Synergistic Activities (up to 5 examples of broader impact of professional/scholarly activities)</td>
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<td>- Should include BOTH research and educational activities and accomplishments</td>
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CAREER-Specific Resources from NSF

- NSF CAREER Program Page
- NSF CAREER solicitation (RFP)
- FAQs
- NSF contacts
- NSF CAREER Webinar presentation slides
Dr. Christine Parent, Dept of Biological Sciences
Awarded NSF CAREER in 2018: CAREER: Islands as Models to Study Effects of Multidimensional Selection
Thank you for coming!