

FACULTY SUCCESS SEMINARS



**University
of Idaho**

*Please keep your microphone
muted until the Q&A session*

NSF CAREER: GETTING STARTED ON YOUR PROPOSAL

**RESEARCH AND FACULTY DEVELOPMENT
FACULTY SUCCESS SEMINAR SERIES**

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

Please note that this session is being recorded

OFFICE OF RESEARCH AND FACULTY DEVELOPMENT (RFD)



I Mission: To provide the resources and services to University of Idaho faculty that enhance their success and productivity in their field of scholarly efforts, with the ultimate goal of growing the U of I's research enterprise

- Alignment with U of I strategic plan
- Across all disciplines



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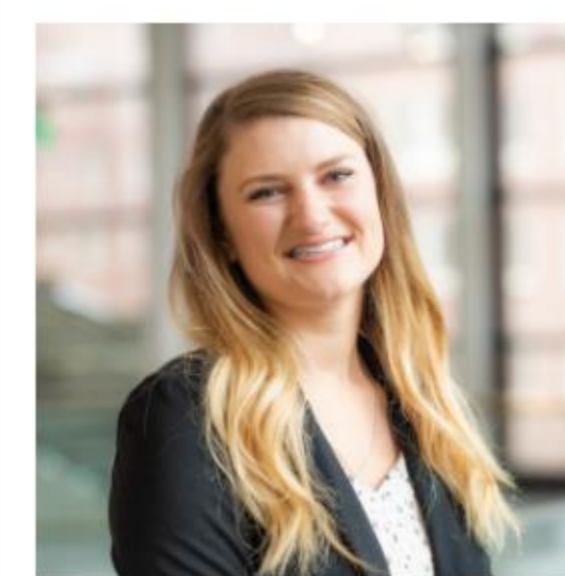


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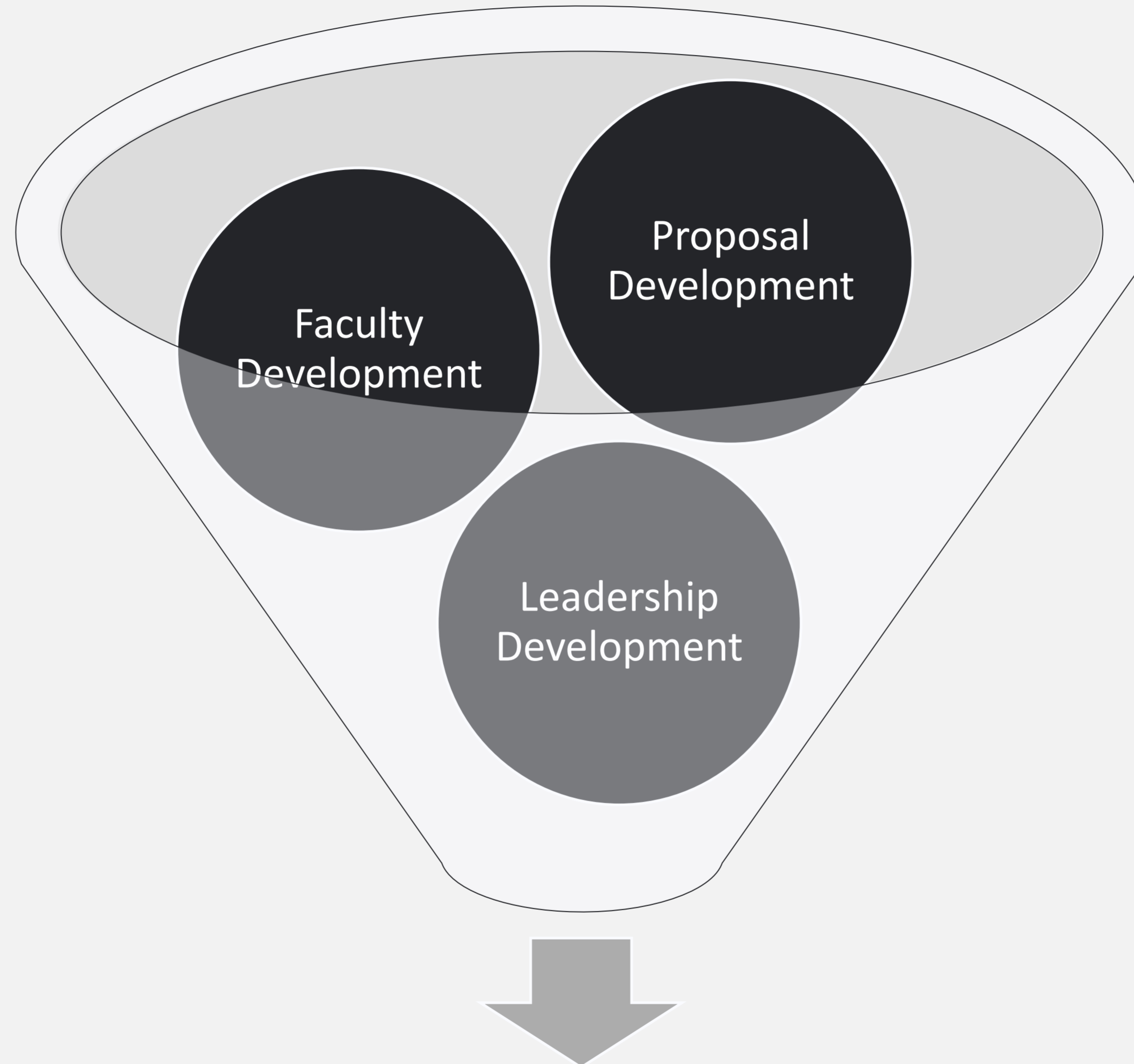
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WHAT DOES RFD DO?



Successful, funded research leaders

PROPOSAL DEVELOPMENT SERVICES



Level 0

- Brainstorming
- Strategic planning for submissions

Level 1

- Search for funding opportunities
- Training to use Pivot

Level 2

- Preparing to contact Program Officers
- Assessing “fit” of a proposed idea



Level 3

- Strategize for a resubmission
- Analyze reviews, develop responses

Level 4/5

- Ensuring proposal documents are clear, concise, cohesive, and responsive to the solicitation

Level 6

- Support for large, complex proposals
- Center grants, infrastructure, etc.



REQUEST RFD SERVICES

All services are optional and are granted on a first come, first served basis

FACULTY DEVELOPMENT



FACULTY SUCCESS SEMINARS



FALL 2021

- Sept. 8** Find Funding with Pivot, a Database of Grant Opportunities and More
- Sept. 15** M.J. Murdock Charitable Trust's Partners in Science Program
- Sept. 29** Partnering with the U of I McClure Center on Your Research: Why and How
- Oct. 6** Working with the Research and Faculty Development Team to Enhance the Competitiveness of Your Next Proposal
- Oct. 13** NSF CAREER: Essential Steps Toward Developing a Competitive Proposal
- Oct. 20** Improving Your Grant Competitiveness: Strategies for Resubmission
- Nov. 3** UPDATE: Mountain West Clinical and Translational Research-Infrastructure Network (MW CTR-IN) Funding
- Nov. 10** NSF S-STEM: Strategies for Competitive Proposals

SPRING 2022

- Jan. 19** Find Funding with Pivot, a Database of Grant Opportunities and More
- Jan. 26** Idaho Higher Education Research Council (HERC) Funding Opportunities
- Feb. 9** Lessons Learned from Serving on Proposal Review Panels
- Feb. 23** NSF Research Traineeship (NRT) Program: Strategies for Competitive Proposals
- Mar. 2** NSF CAREER: Getting Started on Your Proposal - *Now is the Time!* ✓
- Mar. 30** First Impressions: Steps to Create a Captivating Proposal Title and First Page
- Apr. 6** Partnering with the U of I Project ECHO on Your Research: Why and How
- Apr. 13** Diversity, Equity, Inclusion, and Belonging: Broadening Participation in Funded Research



WE GUIDE THE DEVELOPMENT OF COMPETITIVE EXTERNAL GRANT PROPOSALS

ZOOM ID
uidaho.zoom.us/j/81586190096



scan this to zoom with us

Office of Research and Faculty Development

Email: ored-rfdteam@uidaho.edu
Website: uidaho.edu/orfd

LEADERSHIP DEVELOPMENT OFFERINGS



I Proposal Development Academy: *What You Need to Know Before You Write*

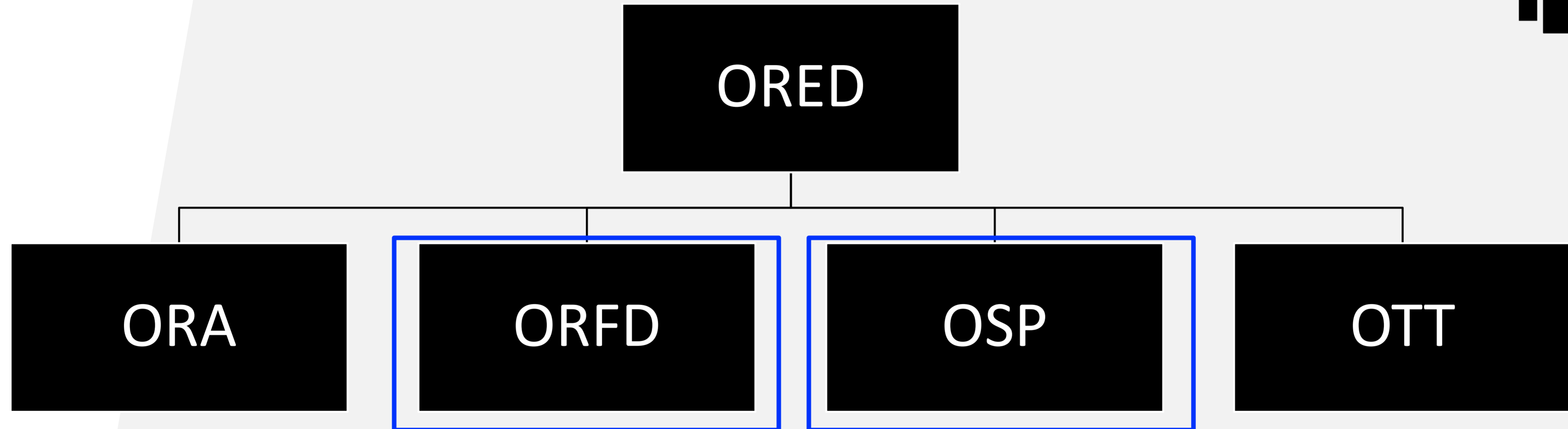
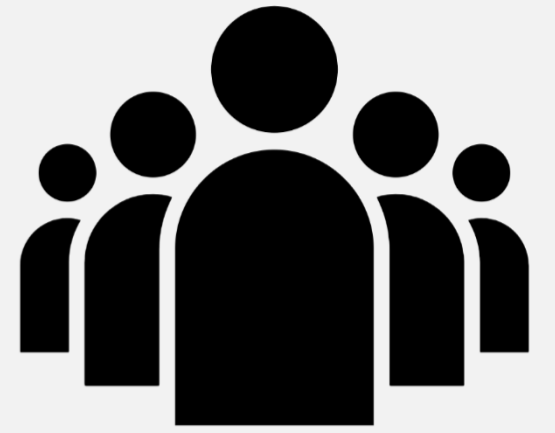
- Enhancing *grant readiness* of early-career faculty members

Topics
Developing a 5-year Research Funding Plan
Crafting A Research Funding Profile; Overview of Pivot
Uncovering Sponsors' Grant and Funding Data; Know your funder
Enhancing Your Grant Readiness: Contacting Program Officers; Institutional Resources
Dissecting Proposal Solicitations for Effective Proposal Writing
The Anatomy and Architecture of a Successful Proposal
Enhancing Your Grant Readiness: Collaborations, Colleagues, and Connections
Beyond the Narrative: Strategies for Supplementary Documents

- 9-week cohort program in Spring semesters
- Dean nomination to participate



OFFICE OF RESEARCH AND ECONOMIC DEVELOPMENT (ORED)

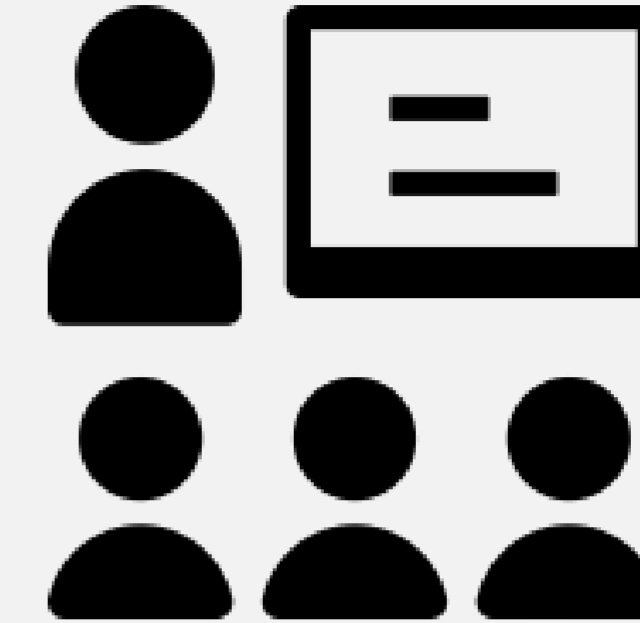


ORA: Office of Research Assurances

OSP: Office of Sponsored Programs






OTT: Office of Technology Transfer

NSF CAREER: *ALL YEAR*



- NSF CAREER: Essential First Steps toward Developing a Competitive Proposal – October 13, 2021 ([access recording here](#))
- NSF CAREER All Year: Getting Started on Your Proposal (today)
- NSF CAREER Workshop: Best Practices for Competitive Proposals – March 21, 2020 ([register here](#))
- NSF CAREER Proposal Conversation Groups ([see schedule here](#))

TODAY'S DISCUSSION

-  Brief overview of the NSF CAREER Award program
-  Steps to get started on now
-  Understanding the Education Plan and Broader Impacts
-  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 Program Officer Elizabeth Rom (during a CAREER seminar on Oct 13, 2021):

“A common tendency for PIs new to writing a CAREER proposal is to approach it as one would a standard research proposal with the addition of an education plan. However, a competitive CAREER is **not a research proposal**, rather, it describes:

- 1) the PI’s research activities and education plan,
- 2) the integration of these two, and
- 3) how the proposed 5-year project will build a foundation “for a lifetime of contributions to research and education.”

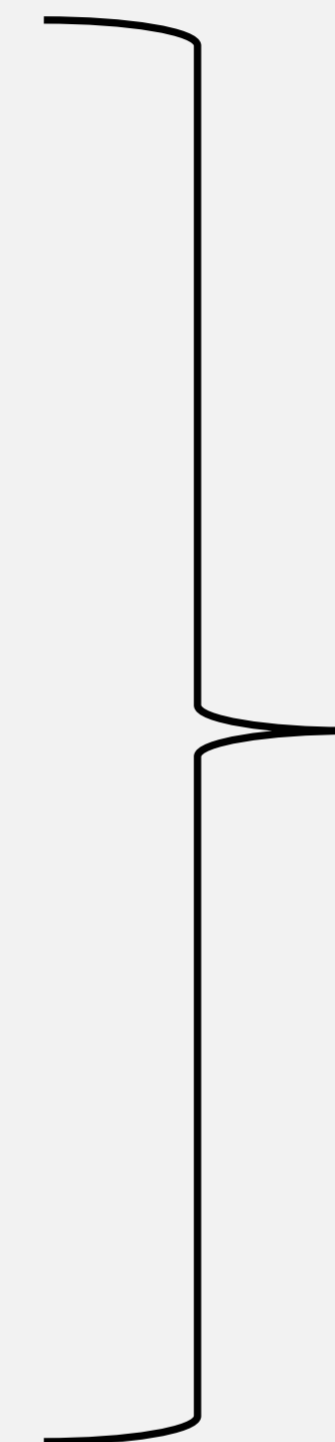
NSF CAREER Proposal =

Research Plan

+

Education Plan

+



5 years

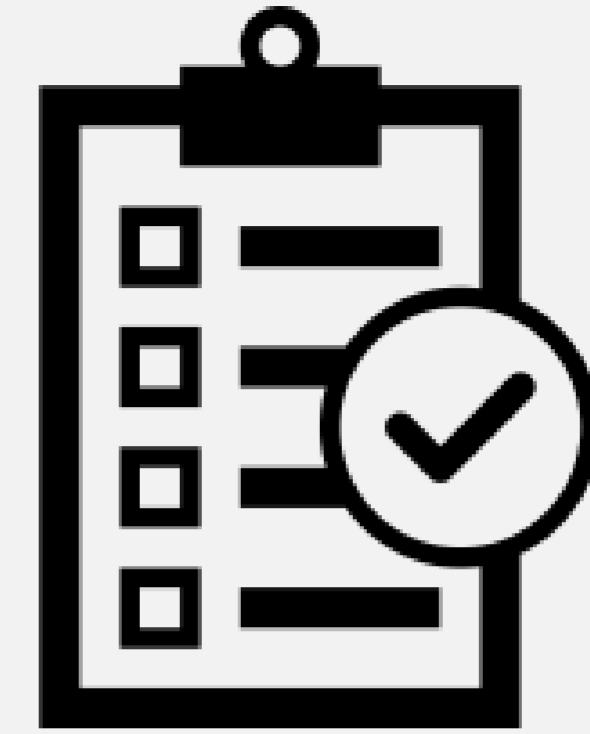
How these are integrated

Eligibility

- I** Untenured (until Oct. 1 after due date of July 25)
- I** Tenure track or equivalent
- I** Assistant Professor or equivalent
- I** Propose to conduct research in an area that NSF funds
- I** Have not submitted a proposal to the NSF CAREER program more than twice before

Other details

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



To-do now

- A. Study the [NSF CAREER solicitation](#)
- B. Determine which NSF Directorate and Program to submit to, i.e., are right for your project
- C. Read funded CAREER proposals from that Program
- D. Identify your Program Officer
- E. Talk to your Department Head/Chair

If you are unsure about any of the above: [Contact RFD](#)

B. Determine which NSF Directorate and Program are right for your project



https://www.nsf.gov/about/research_areas.jsp

The screenshot shows the NSF website's 'Research Areas' page. At the top, there is a navigation bar with 'NSB' on the left and 'Research Areas', 'Funding', 'Awards', and 'D...' on the right. Below the navigation bar is a 'Home' link. The main heading is 'Research Areas'. A paragraph explains that NSF is divided into seven directorates: Biological Sciences, Computer and Information Science and Engineering, Education and Human Resources, Engineering, Environmental Research and Education, Geosciences, and Integrative Activities. Each directorate is followed by a list of its constituent programs. The programs listed are: Biological Infrastructure (DBI), Environmental Biology (DEB), Emerging Frontiers (EF), Integrative Organismal Systems (IOS), and Molecular and Cellular Biosciences (MCB) under Biological Sciences; Office of Advanced Cyberinfrastructure (OAC), Computing and Communication Foundations (CCF), Computer and Network Systems (CNS), and Information and Intelligent Systems (IIS) under Computer and Information Science and Engineering; Graduate Education (DGE), Research on Learning in Formal and Informal Settings (DRL), Undergraduate Education (DUE), and Human Resource Development (HRD) under Education and Human Resources; Chemical, Bioengineering, Environmental and Transport Systems (CBET), Civil, Mechanical and Manufacturing Innovation (CMMI), Electrical, Communications and Cyber Systems (ECCS), Engineering Education and Centers (EEC), Emerging Frontiers and Multidisciplinary Activities (EFMA), and Industrial Innovation and Partnerships (IIP) under Engineering; Atmospheric and Geospace Sciences (AGS), Earth Sciences (EAR), Ocean Sciences (OCE), and Office of Polar Programs (OPP) under Geosciences; Integrative Activities (OIA) under Integrative Activities; International Science and Engineering (OISE) under International Science and Engineering; Astronomical Sciences (AST), Chemistry (CHE), Materials Research (DMR), Mathematical Sciences (DMS), Physics (PHY), and Office of Multidisciplinary Activities (OMA) under Mathematical and Physical Sciences; and Behavioral and Cognitive Sciences (BCS), National Center for Science and Engineering Statistics (NCSES), Social and Economic Sciences (SES), and SBE Office of Multidisciplinary Activities (SMA) under Social, Behavioral and Economic Sciences.

Research Areas

NSF is divided into the following seven directorates that support science and engineering research and Engineering, Engineering, Geosciences, Mathematical and Physical Sciences, Social, Behavioral and Economic Sciences, and Integrative Activities. Each directorate is headed by an assistant director and each is further subdivided into divisions like materials research and engineering. NSF's Office of the Director, the Office of Integrative Activities also supports research and research award processing and monitoring, legal affairs, outreach and other functions.

Biological Sciences (BIO)

- Biological Infrastructure (DBI)
- Environmental Biology (DEB)
- Emerging Frontiers (EF)
- Integrative Organismal Systems (IOS)
- Molecular and Cellular Biosciences (MCB)

Computer and Information Science and Engineering (CISE)

- Office of Advanced Cyberinfrastructure (OAC)
- Computing and Communication Foundations (CCF)
- Computer and Network Systems (CNS)
- Information and Intelligent Systems (IIS)

Education and Human Resources (EHR)

- Graduate Education (DGE)
- Research on Learning in Formal and Informal Settings (DRL)
- Undergraduate Education (DUE)
- Human Resource Development (HRD)

Engineering (ENG)

- Chemical, Bioengineering, Environmental and Transport Systems (CBET)
- Civil, Mechanical and Manufacturing Innovation (CMMI)
- Electrical, Communications and Cyber Systems (ECCS)
- Engineering Education and Centers (EEC)
- Emerging Frontiers and Multidisciplinary Activities (EFMA)
- Industrial Innovation and Partnerships (IIP)

Environmental Research and Education (ERE)

Geosciences (GEO)

- Atmospheric and Geospace Sciences (AGS)
- Earth Sciences (EAR)
- Ocean Sciences (OCE)
- Office of Polar Programs (OPP)

Integrative Activities (OIA)

International Science and Engineering (OISE)

Mathematical and Physical Sciences (MPS)

- Astronomical Sciences (AST)
- Chemistry (CHE)
- Materials Research (DMR)
- Mathematical Sciences (DMS)
- Physics (PHY)
- Office of Multidisciplinary Activities (OMA)

Social, Behavioral and Economic Sciences (SBE)

- Behavioral and Cognitive Sciences (BCS)
- National Center for Science and Engineering Statistics (NCSES)
- Social and Economic Sciences (SES)
- SBE Office of Multidisciplinary Activities (SMA)

C. Find and read funded CAREER proposals from your Program



<https://www.nsf.gov/awardsearch/advancedSearch.jsp>

Awardee Information

Principal Investigator First Name

Principal Investigator Last Name

Include Co-Principal Investigator in name search

Organization

State (Select one)

Zip Code

Country (Select one)

Program Information

NSF Organization (DEB - Division Of Environmental Biolo)

Element Code

Any All

Reference Code

Any All

Program

Program Officer

Additional Information

Keyword (CAREER:)

Search Award Title Only

Award Number (Select one)

Award Amount (Select one)

Award Instrument (Select one)

Active Awards Expired Awards

Original Award Date (Select one) From To

Start Date (Select one) From To

End Date (Select one) From To

HINT: The "Program" box searches both program element and program reference names and codes.

HINT: The Keyword field searches on the title and abstract only.

HINT: Data prior to 1976 may be less complete.



Advanced Search Results

Export up to 3,000 Awards: [CSV](#) | [XML](#) | [Excel](#) | [Text](#)

Sort By: Results size: [Table](#) | [List](#) Page 1 of 1

You Searched For:

NSF Organization Direct For Biological Sciences

Keyword CAREER:

Active Awards true

Refined by

X State Idaho

Refine Search

Award Amount

[Between \\$100,001 - \\$500,000\(5\)](#)

[Between \\$500,001 - \\$1,000,000\(3\)](#)

Award Instrument

[Standard Grant\(5\)](#)

[Continuing Grant\(3\)](#)

Export up to 3,000 Awards:	CSV	XML	Excel	Text
Sort By: <input type="text" value="Relevance"/>	Results size: <input type="text" value="30 per page"/>	Table	List	Page 1 of 1
CAREER: Ecosystem Processes in the Age of Antibiotics				
Award Number:1845417; Principal Investigator:Michael Strickland; Co-Principal Investigator:; Organization:Regents of the University of Idaho;NSF Organization:DEB Start Date:03/01/2019; Award Amount:\$651,698.00; Relevance:51.85;				
CAREER: Cellular Mechanisms of Killer Toxin Resistance in Yeasts				
Award Number:2143405; Principal Investigator:Paul Rowley; Co-Principal Investigator:; Organization:Regents of the University of Idaho;NSF Organization:MCB Start Date:03/01/2022; Award Amount:\$346,686.00; Relevance:49.93;				
CAREER: Integrating Western Science and Traditional Ecological Knowledge (TEK) to Understand Aphonopelma Diversity Across the Madrean Sky Islands and Educate K-12 Tribal Students				
Award Number:2144339; Principal Investigator:Chris Hamilton; Co-Principal Investigator:; Organization:Regents of the University of Idaho;NSF Organization:DEB Start Date:01/15/2022; Award Amount:\$419,998.00; Relevance:49.93;				
CAREER: Islands as Models to Study Effects of Multidimensional Selection				
Award Number:1751157; Principal Investigator:Christine Parent; Co-Principal Investigator:; Organization:Regents of the University of Idaho;NSF Organization:DEB Start Date:05/15/2018; Award Amount:\$887,808.00; Relevance:49.93;				
Collaborative Research: Effects of top scavenger declines—from microbes to ecosystems				
Award Number:2054716; Principal Investigator:Laurel Lynch; Co-Principal Investigator:Michael Strickland, Tara Hudiburg; Organization:Regents of the University of Idaho;NSF Organization:DEB Start Date:09/01/2021; Award Amount:\$677,000.00; Relevance:48.15;				
RAPID: The effects of wildfire on an ecohydrological experiment and the role of abiotic drivers of resistance and resilience in sagebrush-steppe landscapes				
Award Number:2037660; Principal Investigator:Marie-Anne de Graaff; Co-Principal Investigator:; Organization:Boise State University;NSF Organization:DEB Start Date:07/15/2020; Award Amount:\$259,152.00; Relevance:48.15;				
REU Site: Raptor Research 'Soaring Higher'				
Award Number:1852133; Principal Investigator:James Belthoff; Co-Principal Investigator:; Organization:Boise State University;NSF Organization:DBI Start Date:04/01/2019; Award Amount:\$231,707.00; Relevance:48.15;				
Collaborative Research: Multidimensional single-cell phenotyping for elucidating genome to phenome relationships				
Award Number:2041523; Principal Investigator:Andreas Vasdekis; Co-Principal Investigator:; Organization:Regents of the University of Idaho;NSF Organization:MCB Start Date:03/01/2021; Award Amount:\$336,514.00; Relevance:40.89;				
Sort By: <input type="text" value="Relevance"/>	Page size: <input type="text" value="30 per page"/>	Table	List	Page 1 of 1
Export up to 3,000 Awards:	CSV	XML	Excel	Text

Award Abstract # 2143405
CAREER: Cellular Mechanisms of Killer Toxin Resistance in Yeasts



Reach out to CAREER awardees in your Directorate, to ask if you may read their proposals.

NSF Org:	MCB Div Of Molecular and Cellular Bioscience
Awardee:	REGENTS OF THE UNIVERSITY OF IDAHO
Initial Amendment Date:	January 24, 2022
Latest Amendment Date:	January 24, 2022
Award Number:	2143405
Award Instrument:	Continuing Grant
Program Manager:	Steve Clouse sclouse@nsf.gov (703)292-8440 MCB Div Of Molecular and Cellular Bioscience BIO Direct For Biological Sciences
Start Date:	March 1, 2022
End Date:	February 28, 2027 (Estimated)
Total Intended Award Amount:	\$898,220.00
Total Awarded Amount to Date:	\$346,686.00
Funds Obligated to Date:	FY 2022 = \$346,686.00
History of Investigator:	Paul Rowley (Principal Investigator) prowley@uidaho.edu
Awardee Sponsored Research Office:	Regents of the University of Idaho Office of Sponsored Programs MOSCOW ID US 83844-3020 (208)885-6651
Sponsor Congressional District:	01
Primary Place of Performance:	Regents of the University of Idaho 875 Perimeter Drive, MS 3051 MOSCOW ID US 83844-3051

ABSTRACT

This award is funded in whole or in part under the American Rescue Plan Act of 2021 (Public Law 117-2).

Fungal cells separate themselves from their environment by constructing a robust cell wall made of carbohydrates and proteins with an underlying membrane. This enables the compartmentalization of metabolic processes and protects fungal cells from external stressors, including commercial fungicides that are used extensively to control unwanted fungal growth. Antifungal proteins produced by different species of fungi can attack the cell wall and membrane causing injury and the death of susceptible fungal cells. These antifungals have been cited as potentially being useful to control the growth of undesirable fungi. This research will explore the fundamental cellular mechanisms that are employed by fungi to resist intoxication by antifungal proteins. Specifically, the project will test how mutations in genes used for cell wall and membrane construction and stability result in resistance to antifungal proteins. Antifungal proteins are produced by a significant proportion of fungi, especially by yeasts that are associated with insects, fruits, and fermentation (e.g. brewing and baking). The general familiarity of the public with yeasts will enable schoolchildren and patrons of the local farmer's market to participate in the isolation of yeasts that produce novel antifungal proteins. These outreach activities will be enhanced by the participation of undergraduate research students to enable the identification of novel antifungal proteins and their application to further investigate the function and organization of the fungal membrane and cell wall. Students from underrepresented groups at the University of Idaho will also be included in research activities. The central goal of this approach is to increase retention of university students, enrollment in higher education of postsecondary and postbaccalaureate students, and to improve public STEM education.

The goal of this research is to discover the cellular mechanisms that are important for fungal resistance to antifungal "killer" toxins. This will uncover novel pathways that are important for cell surface function and resilience. The research hypotheses are that the Regulator of Ace2 and Cell Morphogenesis (RAM) signaling network plays an undescribed role in cell wall and membrane organization, and that the localization and diversity of the killer toxin receptor Kre1p is essential for intoxication by killer toxins. These hypotheses were formulated based on preliminary data that has identified mutations in the RAM network that result in killer toxin resistance and the loss of membrane and cell wall integrity. To test these hypotheses, it will be determined how mutations in the RAM network that cause killer toxin resistance alter the networks organization, localization, and function relating to cytokinesis and cell polarity. Specifically, the effect of these mutations on the localization of the killer toxin membrane receptor (Kre1p) will be tested. This approach will be complemented by an in-depth study of the effect of Kre1p diversity on killer toxin resistance and the immunity mechanisms of killer yeasts that prevent self-intoxication. The outcome of this research will be to confirm the novel role of the RAM network in cell surface organization. This will be complemented by the investigation of the RAM network and Kre1p and their role in killer toxin resistance.



Or click here:

[2021 CAREER Awards](#)

and browse...

D. Identify your CAREER program officer



<https://www.nsf.gov/crssprgm/career/contacts.jsp>

The screenshot shows the NSF website's CAREER program contacts page. At the top, the NSF logo and tagline "National Science Foundation WHERE DISCOVERIES BEGIN" are visible. A search bar and "Contact | Help" links are in the top right. A navigation menu includes "Research Areas", "Funding", "Awards", "Document Library", "News", and "About NSF". The left sidebar lists "National Science Foundation (NSF)", "CAREER Program Overview", "Contacts", "Career Awards", "Related", "PECASE Recipients", and "PECASE Press Releases". The main content area is titled "Contacts" and lists contact information for the Directorate for Biological Sciences (BIO) and the Directorate for Computer & Information Science and Engineering (CISE).

National Science Foundation (NSF)
CAREER Program Overview
Contacts
Career Awards
Related
PECASE Recipients
PECASE Press Releases

Home Email Print Share

Contacts

DIRECTORATE FOR BIOLOGICAL SCIENCES (BIO)

Directorate Contacts:
Engin Serpersu: 703-292-7124

Division of Environmental Biology (DEB): 703-292-8480
Chris Schneider: 703-292-7920

Division of Integrative Organismal Systems (IOS): 703-292-8420
Michael Mishkind: (703) 292-8413

Division of Molecular and Cellular Biosciences (MCB): 703-292-8440
Engin Serpersu: 703-292-7124

Division of Biological Infrastructure (DBI): 703-292-8470
Peter McCartney: 703-292-8470

DIRECTORATE FOR COMPUTER & INFORMATION SCIENCE AND ENGINEERING (CISE)

Directorate Contacts:
Almadena Chtchelkanova: 703-292-8910
Alan Sussman: 703-292-7563

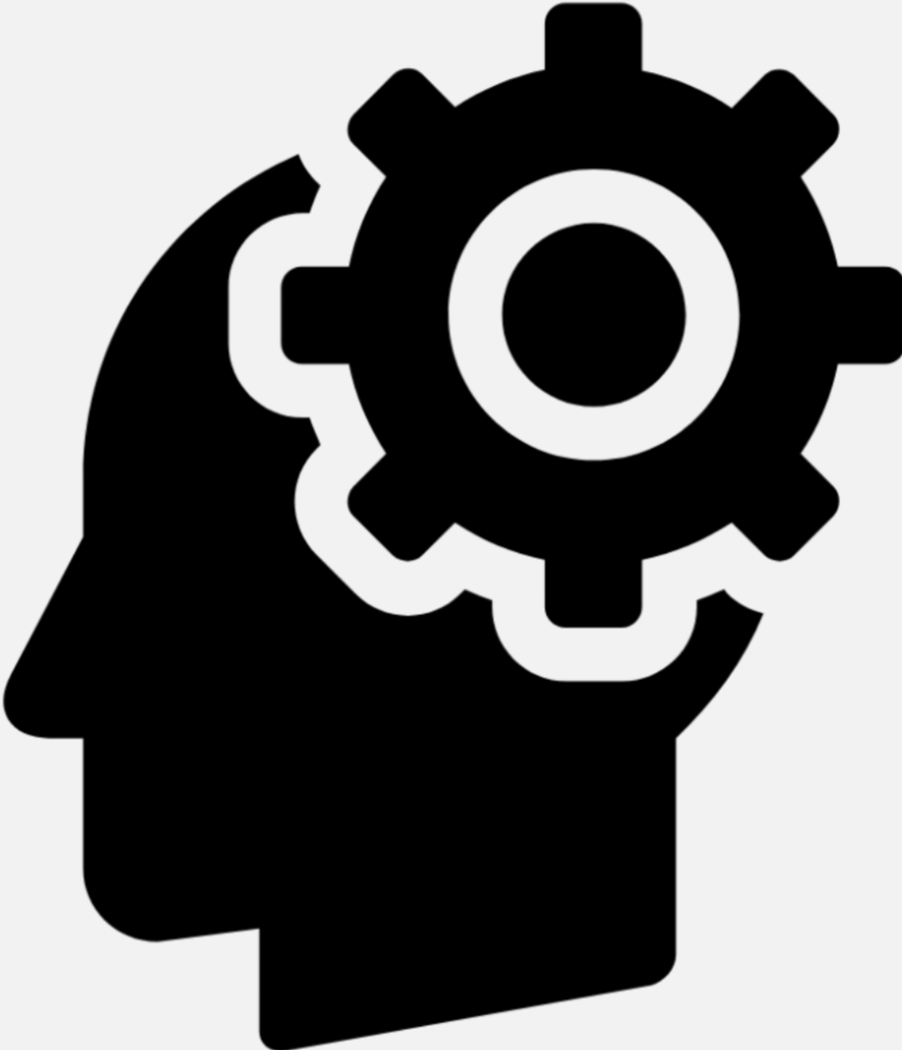
E. Talk to your department chair/head



CAREER proposals require a Departmental Letter that:

1. States that the PI is eligible for the CAREER program;
2. Indicates the PI's proposed CAREER research and education activities are supported by and advance the educational and research goals of the department and the organization, and that the department is committed to the support and professional development of the PI;
3. Describes a) the relationship between the CAREER project, the PI's career goals and job responsibilities, and the mission of his/her department, and b) the ways in which the department head will ensure the appropriate mentoring of the PI, in the context of the PI's career development and his/her efforts to integrate research and education throughout the period of the award and beyond.





Begin developing your research idea

Guiding questions:

- What do you *want* you to do?
- Does it address important questions/gaps in your field?
- Is it novel?
- Do you have the background and resources to do it?
- Will it contribute to your long-term career goals?
- Can you do it as a single PI? (No co-PIs allowed, but collaborators are okay)
- Is the scope appropriate for a CAREER proposal (5 years)?

Begin developing your education plan

Guiding questions:

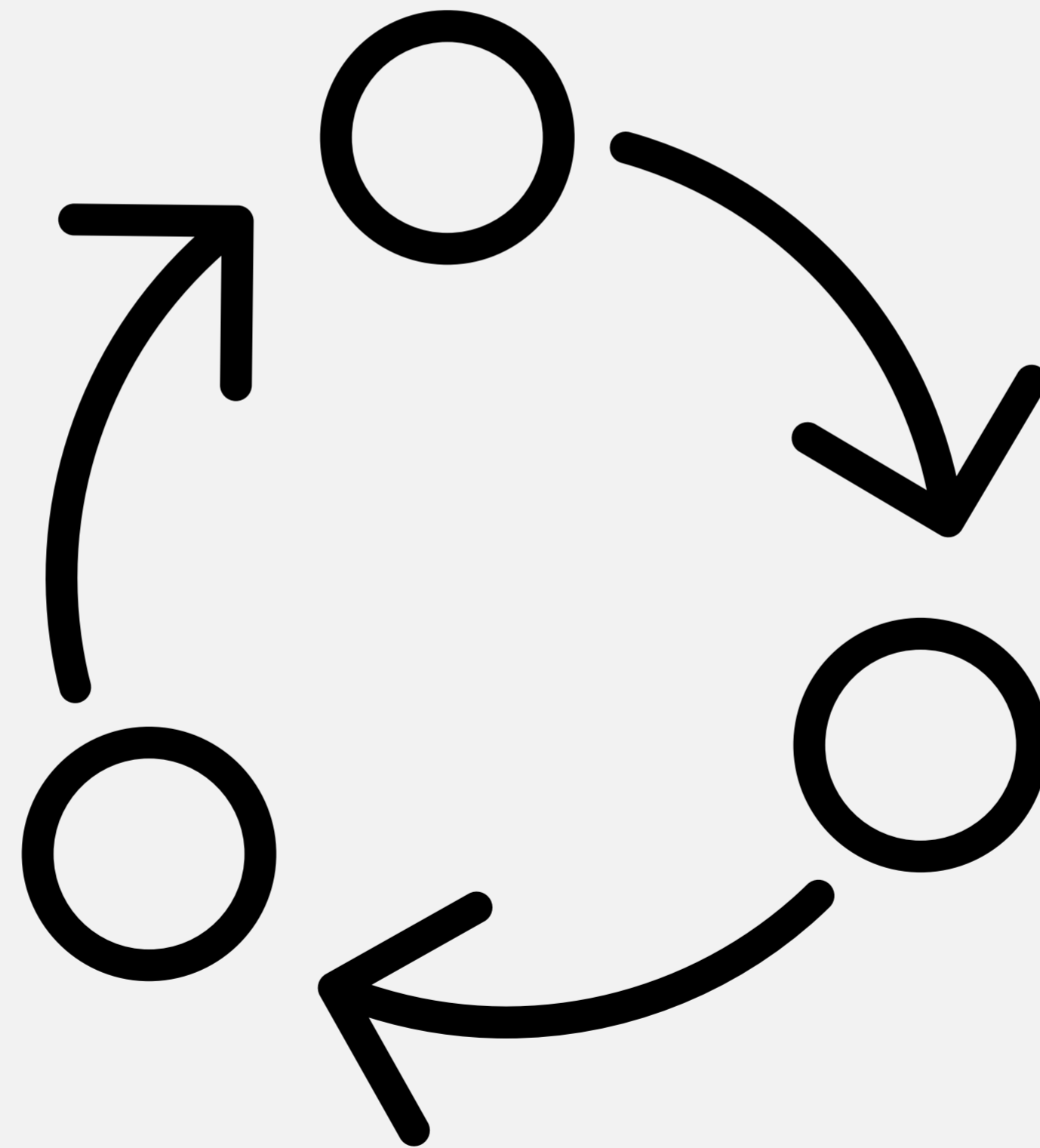
- What are your interests? What types of education and outreach activities might you already be doing?
- Do you need to partner with existing programs, e.g.
 - Programs with/for teachers, and/or K-12 students
 - Undergraduate research programs
 - Science camps
 - Community organizations
 - Connections with industry
- [Database of Education and Outreach Partners](#)

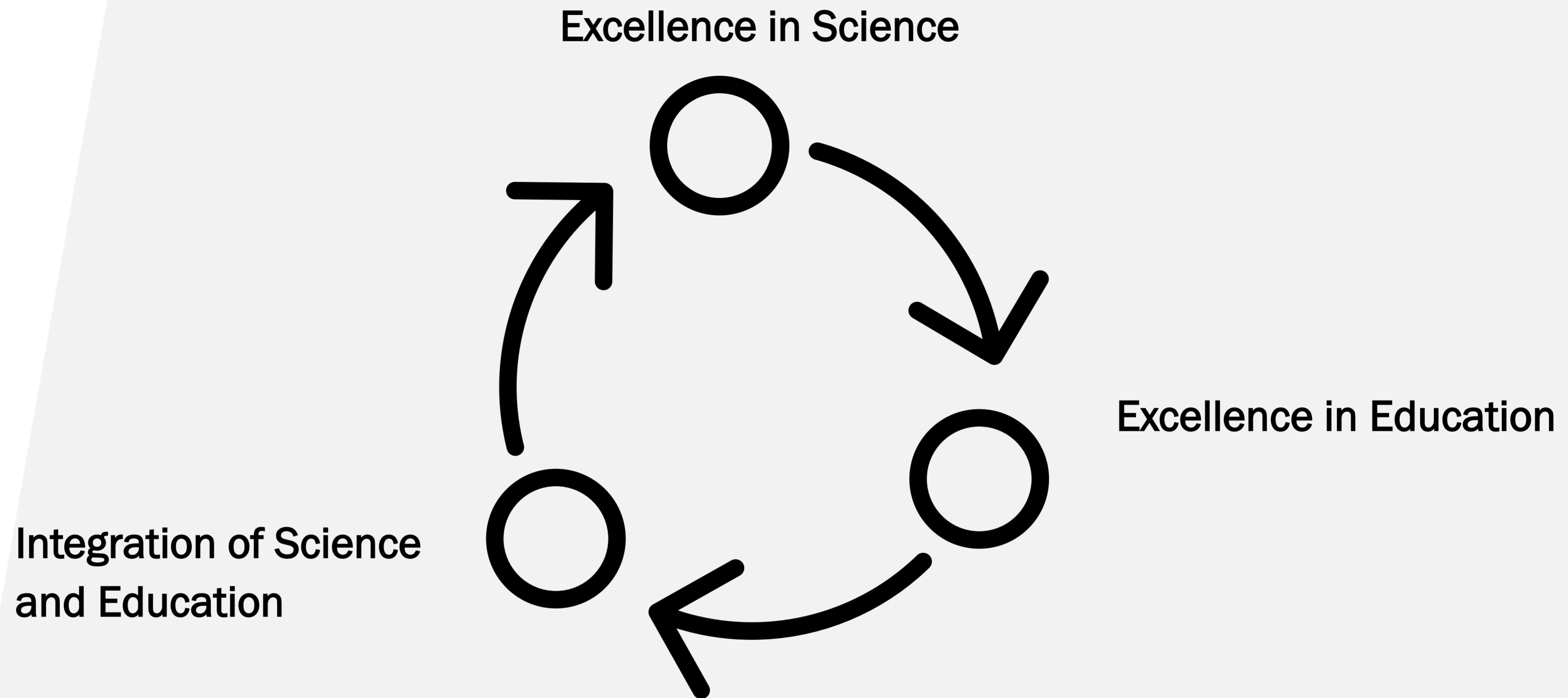


“The **education component** of the proposal may be in a broad range of areas and may be directed to any level: K-12 students, undergraduates, graduate students, and/or the general public, but should be related to the proposed research and consistent with the career goals of the PI.”

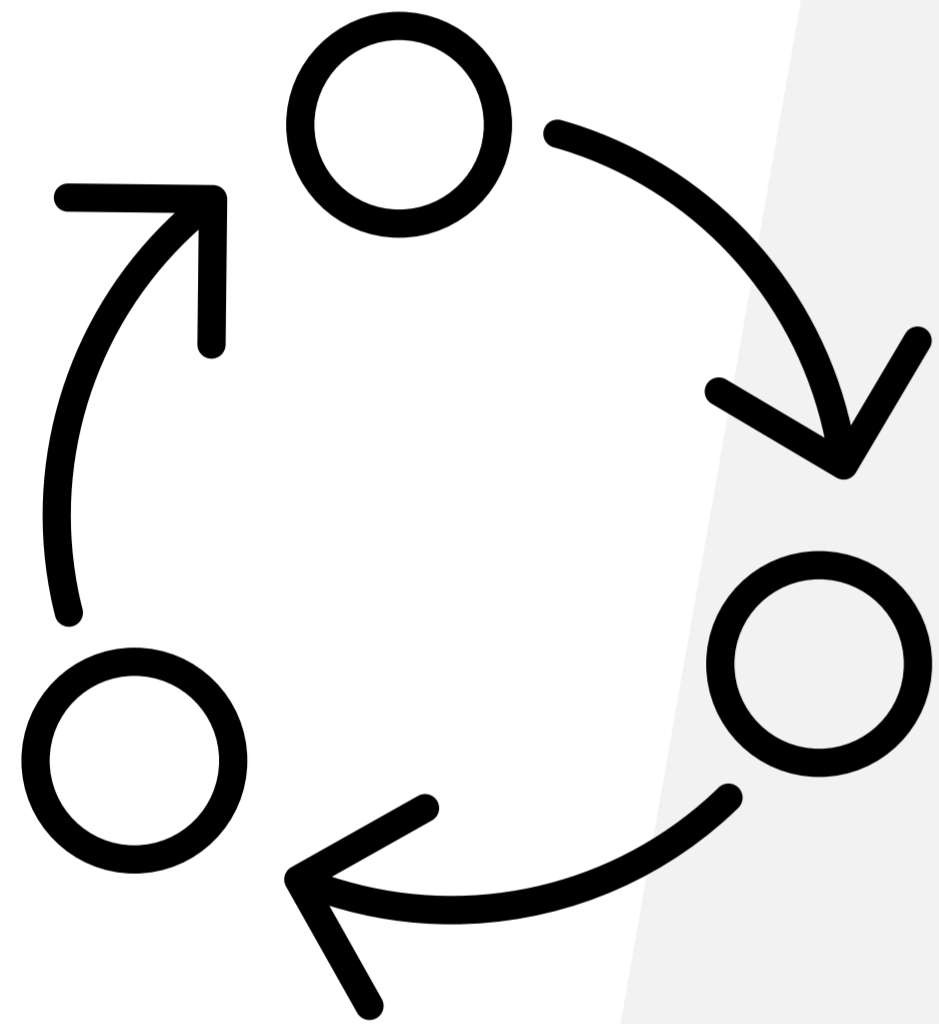
(From the CAREER program solicitation)

Integration of Science and Education





“Proposals should describe an integrated path that will lead to a successful career as an outstanding researcher and educator.”



“Effective integration of research and education generates a synergy in which the process of discovery stimulates learning and assures that the findings and methods of research and education are quickly and effectively communicated in a broader context and to a large audience.”

-NSF CAREER Solicitation

Example 1

Heayoung Yoon, University of Utah, Dept of Electrical and Computer Engineering

CAREER: Optoelectronic Local Probes Measuring Microstructural Degradation and Recovery Under Accelerated Environmental Stressors

The PI's research vision is **integrated with an educational plan** that aims to generate curiosity and excitement for solar energy and electron microscopy for a broad range of students, **with a particular focus on young women students in Utah**. The PI will involve undergraduate and graduate students in research and promote the participation of students from underrepresented groups in STEM. An interactive website with streaming videos and educational resources will assist in **disseminating the research findings to the general public** in the US and abroad.

Example 2

Paul Rowley, University of Idaho, Dept of Biological Sciences

CAREER: Cellular mechanisms of killer toxin resistance in yeasts

With the current design of our objectives, we are ideally placed to assay **novel toxins identified from educational activities** to test generalities of the RAM complex and Kre1p in killer toxin function. We also see the **opportunity for synergy** by having students begin their research careers in the killer yeast discovery laboratory and learning key techniques and developing good working practices. With these skills in place, we can predict that motivated and talented students would be able to embark on more advanced studies **directly related to the research objectives presented in this proposal.**

Broader Impacts



Begin formulating the Broader Impacts of your project

NSF uses two merit criteria to evaluate *all* 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.”

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)? Or, to whom are these important?
- 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](#)

[Register for the BI 101 Workshop](#)
April 1, 2022

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](#)

Talk to your program officer



Talk to your program officer about your project

4-6 months ahead of proposal deadline (now):

- 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 or Zoom meeting

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

PAGE 1 OF THE PROJECT DESCRIPTION:

- Clearly presents what you plan to do, why it's important, and how you propose to do it
 - Both for the research and the education plan
- 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

PAGES 2 – 15 OF THE 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 (3 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
- 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...

REQUEST RFD SERVICES

NSF CAREER Proposal Checklist

NSF CAREER 2022 Proposal Checklist

Based on [PAPPG 22-1](#) effective 10/4/2021

PI:

Title:

Deadline: July 25, [2022](#) 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.

Deadline	<p>General Formatting</p> <ul style="list-style-type: none"> <input type="checkbox"/> Page numbers: Each section individually paginated <input type="checkbox"/> Font: Recommend Times New Roman or Computer Modern family (11 pt +) <input type="checkbox"/> Margins: 1"+ <input type="checkbox"/> Title must begin with "CAREER:___" and follow with an informative title
	<p>Single-Copy Documents <i>For NSF programmatic use only, not sent to reviewers</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Collaborators & Other Affiliations document for each senior personnel (Download template here) <input type="checkbox"/> List of Suggested Reviewers, optional but highly recommended <ul style="list-style-type: none"> -In FastLane, list the names, email addresses, and institutional affiliation of possible reviewers -May also list names of persons who should not be asked to review your proposal
	<ul style="list-style-type: none"> <input type="checkbox"/> Cover Sheet: input information directly into FastLane or Research.gov <p>If international travel is included, indicate the name(s) of the country(ies) or "Worldwide" if not known</p>
	<p>Project Summary limit 1 page</p> <p>-Summarizes plans for integration of research and education activities. <i>Required sections:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Project Overview <input type="checkbox"/> Intellectual Merit <input type="checkbox"/> Broader Impacts
	<ul style="list-style-type: none"> <input type="checkbox"/> Project Description: limit 15 pages, <i>no URLs allowed</i> <p>-Proposed research project; proposed educational activities; description of integration of research and education</p> <p>-<i>Required sections:</i></p> <ul style="list-style-type: none"> <input type="checkbox"/> Broader Impacts section, with heading: "Broader Impacts of the Proposed Work" <input type="checkbox"/> Results from prior NSF support
	<ul style="list-style-type: none"> <input type="checkbox"/> References Cited: no page limit; full reference required (use of "et al." is not allowed) <p>-Provide references in support of both the research and education aspects proposal</p> <p>-Each reference should include the names of all authors, in the sequence in which they appear in the publication</p>
	<ul style="list-style-type: none"> <input type="checkbox"/> Biographical Sketch: limit 2 pages, using NSF-Approved Format <p>A. Professional Preparation (Institution, Location, Major, Degree & Year)</p> <p>B. Appointments (reverse chronological order)</p> <p>C. Products or Publications – choose 1 of these headings; list up to 5 most closely related and up to 5 other significant</p> <p>D. Synergistic Activities (up to 5 examples of broader impact of professional/scholarly activities)</p> <p>- <i>Should include BOTH research and educational activities and accomplishments</i></p>

CAREER-Specific Resources from NSF

I [NSF CAREER Program Page](#)

I [NSF CAREER solicitation \(RFP\)](#)

I [FAQs 2020- 2025](#)

I [Webinars](#)

I [NSF contacts](#)

I [NSF CAREER Webinar presentation slides](#)

THANK YOU FOR COMING!



QUESTIONS?



FACULTY SUCCESS SEMINARS



FALL 2021

- Sept. 8** Find Funding with Pivot, a Database of Grant Opportunities and More
- Sept. 15** M.J. Murdock Charitable Trust's Partners in Science Program
- Sept. 29** Partnering with the U of I McClure Center on Your Research: Why and How
- Oct. 6** Working with the Research and Faculty Development Team to Enhance the Competitiveness of Your Next Proposal
- Oct. 13** NSF CAREER: Essential Steps Toward Developing a Competitive Proposal
- Oct. 20** Improving Your Grant Competitiveness: Strategies for Resubmission
- Nov. 3** UPDATE: Mountain West Clinical and Translational Research-Infrastructure Network (MW CTR-IN) Funding
- Nov. 10** NSF S-STEM: Strategies for Competitive Proposals

SPRING 2022

- Jan. 19** Find Funding with Pivot, a Database of Grant Opportunities and More
- Jan. 26** Idaho Higher Education Research Council (HERC) Funding Opportunities
- Feb. 9** Lessons Learned from Serving on Proposal Review Panels
- Feb. 23** NSF Research Traineeship (NRT) Program: Strategies for Competitive Proposals
- Mar. 2** NSF CAREER: Getting Started on Your Proposal - *Now is the Time!*
- Mar. 30** First Impressions: Steps to Create a Captivating Proposal Title and First Page
- Apr. 6** Partnering with the U of I Project ECHO on Your Research: Why and How
- Apr. 13** Diversity, Equity, Inclusion, and Belonging: Broadening Participation in Funded Research



scan this to zoom with us

ZOOM ID

uidaho.zoom.us/j/81586190096



**WE GUIDE THE DEVELOPMENT
OF COMPETITIVE EXTERNAL
GRANT PROPOSALS**

**Office of Research and
Faculty Development**

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