

Research Development & Grant Writing News

November 15, 2021

©Please do not post to open websites©

Table of Contents

- [Topics of Interest URLs](#)
- [Funding Opportunities in the Humanities](#)
- [New Funding Directions at Department of Energy](#)
- [Advice & Resources for Your NSF MRI Proposal](#)
- [The First Step to NSF STC Success Is to Learn the Language](#)
- [New Funding Directions at NOAA](#)
- [Editing the Proposal Introduction: the What, Why, How and So-What of a Preliminary Review \(Reprinted October 2020\)](#)
- [Research Grant Writing Web Resources](#)
- [Educational Grant Writing Web Resources](#)
- [Agency Research News](#)
- [Agency Reports, Workshops & Roadmaps](#)
- [New Funding Opportunities](#)
- [About Academic Research Funding Strategies](#)

Contact [Lucy Deckard](#) for Webinars & Workshops

[Katherine E. Kelly, PhD](#): Proposal Editing & Webinars in Humanities

Have You Hired New Faculty? 2nd edition *New Faculty Guide to Competing for Research Funding!!* [Order Here](#)

Our Large Team Grant eBook! [Strategies for Planning, Developing, and Writing Large Team Grants](#) [Order Here](#)

Research Development & Grant Writing News ©

Published monthly since 2010 for faculty and research professionals by

[Academic Research Funding Strategies, LLC](#)
[Mike Cronan](#) & [Lucy Deckard](#), co-Publishers;
[Katherine E. Kelly](#), Humanities Editor

Copyright 2021. All rights reserved.

[Subscribe Online \(Hotlink\)](#)

About the co-publishers & editor

[Mike Cronan](#), PE, has 23 years of experience developing and writing successful team proposals at Texas A&M University. He was named a [Texas A&M University System Regents Fellow](#) (2001-2010) for developing and writing A&M System-wide grants funded at over \$100 million by NSF and other funding agencies. He developed and directed two research development and grant writing offices, one for Texas A&M's VPR and the other for the Texas A&M Engineering Experiment Station (15 research divisions state-wide), including the Texas A&M College of Engineering.

[Lucy Deckard](#) (BS/MS Materials) worked in research development and grant writing at Texas A&M University and across the A&M System for nine years. She directed A&M's *New Faculty Research Initiative (2004-09)*, helping junior faculty System-wide jumpstart their research careers with federal agency funding. She served as associate director of two research development and grant writing offices. She founded [ARFS](#) in 2010.

[Katherine E. Kelly, Ph.D.](#), a retired English professor from Texas A&M University, is the author of several books and numerous articles supported by research grants and served as a contributing editor for an academic journal for five years. She provides ARFS clients editorial services on proposals, journal articles, and manuscripts and presents seminars on grant writing and funding in the humanities.

Research Development & Grant Writing News

Topics of Interest URLs

(Back to [Page 1](#))

User Note: URL links are active on date of publication, but if a URL link breaks or changes a Google search on the key words or titles, as below, will typically take you to a working link.

National Science Foundation & Related

- [Directorate for Biological Sciences \(BIO\), Fall 2021 Virtual Grants Conference](#)
- [Directorate for Computer, Information Science, Engineering, Fall 2021 Virtual Grants Conf](#)
- [Fall 2021 Virtual Grants Conference: Directorate for Mathematical and Physical Sciences \(MPS\)](#)
- [Fall 2021 Virtual Grants Conference: Directorate Social, Behavioral, Economic Sciences \(SBE\)](#)
- [Fall 2021 Virtual Grants Conference: Directorate for Education and Human Resources \(EHR\)](#)
- [Fall 2021 Virtual Grants Conference: Directorate for Geosciences \(GEO\)](#)
- [NSF Grants Development Resources](#)
- [2020 MPS Brochure now available](#)
- [FY22 Budget Outlook: National Science Foundation](#)
- [Survey of State Government Research and Development: FY 2020](#)
- [Federal Obligations for R&D to Private Nonprofit Institutions Totaled \\$8.3 Billion in FY 2019](#)
- [Nondisclosure Agreements, Trade Secrets, and Trademarks Considered Very Important to More U.S. Businesses than Were Patents or Copyrights in 2017](#)
- [Science and Technology Centers: Integrative Partnerships](#)
- [Internet Measurement Research: Methodologies, Tools, and Infrastructure \(IMR\)](#)
- [Broadening Participation in Engineering \(BPE\)](#)
- [Biodiversity on a Changing Planet \(BoCP\)](#)
- [OIG Semiannual Report to Congress](#)
- [NSF OIG Freedom of Information Requests](#)
- [MPS-Ascend External Mentoring \(MPS-Ascend EM\)](#)
- [Frequently Asked Questions \(FAQs\) On Proposal Preparation and Award Administration Related to NSF Proposal & Award Policies & Procedures Guide \(PAPPG\) \(NSF 22-1\)](#)

NIH Health Sciences & Related

- [All About Grants Podcast – To Resubmit or Not](#)
- [FY22 Budget Outlook: National Institutes of Health](#)
- [Notice Clarification Institutional Responsibilities Regarding NIH Grant Protocol Congruence Review](#)
- [Notice of Clarification of Research Objectives and Scope in RFA-AI-21-060, SUNBEAM - Analysis and Bioinformatics Center \(ABC\) \(UM1 Clinical Trial Not Allowed\)](#)
- [More Data on Applications Submitted During the Pandemic](#)
- [AHRQ Notice of Funding Opportunities](#)
- [Find Funding To Help Increase Understanding of Protozoan Pathogens](#)
- [Register for NIH Seminar on Determinants of Rural Health Disparities](#)
- [Provide Feedback To Inform HHS Five-Year Strategic Plan](#)
- [Know What Interim Paylines Mean for NIAID Awards](#)
- [Reminder: FORMS-G Grant Application Forms & Instructions Must be Used for Due Dates On or After January 25, 2022 - New Grant Application Instructions Now Available](#)
- [AHRQ Announces Interest in Research on Digital Healthcare Safety](#)

Research Development & Grant Writing News

- [Large Health Services Research Demonstration and Dissemination Projects for Combating Antibiotic-Resistant Bacteria \(CARB\) \(R18\)](#)
- [Large Research Projects for Combating Antibiotic-Resistant Bacteria \(CARB\) \(R01\)](#)
- [Should the next NIH director hold a medical degree?](#)
- [Request for Information \(RFI\) on the NINR 2022-2026 Strategic Plan Framework](#)
- [Keeping Track of the Latest NIH Policy Changes](#)

National Academies and Other Scientific Associations

- [Funding agency's reviewers were biased against scientists with novel ideas](#)
- [Evolutionary Medicine Needs Engineering Expertise](#)
- [Gulf Research Program Annual Report 2020](#)
- [Committee on Women in Science, Engineering and Medicine](#)
- [Investing in Resilient Infrastructure in the Gulf of Mexico: A Workshop - Part 1](#)
- [Enhancing Coordination Between Land-Grant Universities and Colleges](#)
- [Planting the Seeds for Ecosystem Restoration](#)
- [The Challenge of Feeding the World Sustainably](#)
- [FY22 Budget Outlook: National Oceanic and Atmospheric Administration](#)
- [New Infrastructure Law to Provide Billions to Energy Technology Projects](#)

Miscellaneous Federal Agency and Foundation News & Funding

- [DOE Office of Science Funding Opportunities](#)
- [FY22 Budget Outlook: National Institute of Standards and Technology](#)
- [FY22 Budget Outlook: NASA](#)
- [DOE Imposes Strict Domestic Manufacturing Requirements on R&D Funding Recipients](#)
- [New Solicitation: NIJ Multisite Impact and Cost-Efficiency Evaluation of Veterans Treatment Courts, Fiscal Year 2022](#)
- [Register for the 2022 Summit -- ARPA-E Summit Website](#)
- [NOAA Assistant Administrators Look at the Year Ahead 2022: First Annual NOAA Environmental Leadership Panel Discussion](#)
- [NOAA Environmental Leadership Seminar Series: Past Presentations](#)

Federal Agency Research Funding Links

- **AFRL:** <https://www.afrl.af.mil/AFOSR/>
- **ARL:** <https://www.arl.army.mil/opencampus/>
- **CDMRP:** <https://cdmrp.army.mil/funding/prgdefault>
- **DARPA:** <https://www.darpa.mil/work-with-us/opportunities>
- **IARPA:** <https://www.iarpa.gov/index.php/working-with-iarpa/open-solicitations>
- **ONR:** <https://www.onr.navy.mil/en/work-with-us/funding-opportunities>
- **DHS:** <https://www.dhs.gov/how-do-i/find-and-apply-grants>
- **DOJ:** <https://www.justice.gov/grants>
- **NASA:** <https://nspires.nasaprs.com/external/>
- **NEH:** <https://www.neh.gov/>
- **NEA:** <https://www.arts.gov/>
- **NIH:** <https://grants.nih.gov/funding/index.htm>
- **HHS:** <http://www.hhs.gov/asrt/og/aboutog/grantsnet.html>
- **NSF:** <https://www.nsf.gov/funding/index.jsp>

Research Development & Grant Writing News

- **DOC:** <https://www.commerce.gov/work-with-us/grants-and-contract-opportunities>
- **NIST:** <https://www.nist.gov/oaam/grants-management-division/nist-nofo-information>
- **NOAA:** <https://www.noaa.gov/organization/acquisition-grants>
- **DoED:** <https://www2.ed.gov/fund/grants-apply.html?src=go>
- **DOE/OS:** <https://www.energy.gov/science/office-science-funding/office-science-funding-opportunities>
- **EERE:** <https://www.energy.gov/eere/funding/eere-funding>
- **DOE:** <https://www.energy.gov/energy-economy/funding-financing>
- **USDA:** <https://www.nal.usda.gov/waic/funding>
- **NIFA:** <https://nifa.usda.gov/page/search-grant>
- **EPA:** http://www.epa.gov/ogd/competition/open_awards.htm
- **NCER:** <http://epa.gov/ncer/listserv/>
- **FBO/BETA SAM:** <https://fbohome.sam.gov/>
- **Federal Register:** <https://www.federalregister.gov/>
- **Grants.gov:** <https://www.grants.gov/web/grants/search-grants.html>
- **CFDA:** <https://www.investopedia.com/terms/c/catalog-of-federal-domestic-assistance-cfda.asp>

Research Development & Grant Writing News

Funding Opportunities in the Humanities

Copyright 2021 Academic Research Funding Strategies. All rights reserved.

by Katherine E. Kelly, PhD

(Back to [Page 1](#))

Humanities, Social Sciences, and Arts Funding Opportunities and News* 15 November 2021

*Applicants should visit agency websites to confirm deadlines, requirements, etc. Listings of funding opportunities by due dates are also included in earlier issues of this newsletter. The following list is not exhaustive.

- | Due Date | Award Name |
|----------|--|
| 12/1/21 | NEH Scholarly Editions and Scholarly Translations provides grants to organizations to support collaborative teams who are editing, annotating, and translating foundational humanities texts that are vital to learning and research but are currently inaccessible or are available only in inadequate editions or translations. Typically, the texts are significant literary, philosophical, and historical materials, but other types of work, such as musical notation, may also be the subject of an edition. https://www.neh.gov/grants/research/scholarly-editions-and-translations-grants |
| 12/1/21 | NEH Collaborative Research. This program aims to advance humanistic knowledge by supporting sustained collaboration between two or more scholars. Collaborators may be drawn from one or more institutions. International collaboration is encouraged, but the project director must be based at a U.S. institution, and project teams must include an equitable balance of scholars based at U.S. institutions and scholars based at non-U.S. institutions. https://www.neh.gov/grants/research/collaborative-research-grants |
| 12/1/21 | The Carter G. Woodson Institute Fellowship program is a two-year residential fellowship for pre-doctoral students *and* post-doctoral students whose work focuses on Africa and/or the African Diaspora. Selected scholars will relocate to the University of Virginia in Charlottesville, Virginia. Funding for two years (August 1, 2022-July 31, 2024) includes an annual stipend of \$24,000, plus health insurance. Direct inquiries to cgwi-fellowship-questions@collab.its.virginia.edu |
| 12/3/21 | ACLS African Humanities Program invites applications for postdoctoral fellowships from scholars who are within eight years of receiving the PhD degree, who are citizens of Sub-Saharan African countries, and who are currently working at universities in Ghana, Nigeria, South Africa, Tanzania, or Uganda. Women are especially encouraged to apply. https://www.acls.org/Competitions-and-Deadlines/African-Humanities-Program |
| 12/7/21 | Social Science Research Council & NEH "Sustaining Humanity & Infrastructure Program" (SHIP) will award grants of up to \$100,000 to humanities organizations seeking relief and planning for recovery in the wake of the Covid-19 pandemic, offering support to the full spectrum of humanities infrastructure—the people, projects, and resources—at the core of humanities scholarship and teaching. Contact: nehrescue@ssrc.org . https://www.ssrc.org/programs/ssrc-neh-sustaining-humanities-infrastructure-program-ship/ |
| 12/7/21 | NEH/American Council of Learned Societies (ACLS) Sustaining Public Engagement Grants support established publicly engaged humanities projects, initiatives, or programs in US colleges and universities. These grants are designed to repair the damage done to publicly engaged humanities projects and programs by the social and economic disruption of the Covid-19 pandemic. ACLS seeks |

Research Development & Grant Writing News

proposals for grants that will support established publicly engaged humanities projects, initiatives, or programs in accredited US colleges and universities. <https://www.acls.org/Competitions-and-Deadlines/ACLS-Sustaining-Public-Engagement-Grants>

12/14/21 **Institute of Museum & Library Services. “Save America's Treasures.”** The application for collections projects is available through **Grants.gov** under funding opportunity number P22AS00049. The application for preservation projects is available under funding opportunity number P22AS00048.

12/15/21 **NEH Public Scholars.** This program supports the creation of well-researched nonfiction books in the humanities written for the broad public. It does so by offering grants to individual authors for research, writing, travel, and other activities leading to publication. Writers with or without an academic affiliation may apply, and no advanced degree is required. <https://www.neh.gov/grants/research/public-scholar-program>

12/15/21 **NEH (American Rescue Plan, Humanities Grantmaking for Organizations)** This program will provide financial support to eligible organizations to preserve and interpret historic places across the nation that illuminate narratives of underrepresented groups of people including, but not limited to, women, immigrants, Asian Americans, Black Americans, Latinx Americans, Native Americans, Native Hawaiians, Pacific Islanders, and LGBTQ communities. <https://forum.savingplaces.org/build/funding/grant-seekers/specialprograms/tellingthefullhistoryfund>

12/15/21 **NEA/Mid-America Arts Alliance. The Creative Forces Community Engagement Grant** This grant program aims to improve the health, well-being, and quality of life for military service members and veterans exposed to trauma as well as their families and caregivers through experiences of art or art making. MAAA will award approximately thirty-five matching grants from \$10,000 to \$50,000 for arts-based community engagement projects that engage targeted military-connected communities. These Grants support non-clinical arts engagement programs taking place in healthcare, community, or virtual settings. <https://www.maaa.org/creativeforces/>

1/1/22 **American Society for Aesthetics (ASA)** will award up to one **Doctoral Dissertation Fellowship** each academic year. This fellowship is intended to support original and significant research in aesthetics by enabling the recipient to complete his or her dissertation in a timely manner. For the purpose of this fellowship, aesthetics is understood to include the philosophical study of art, criticism, each of the arts, and related phenomena. Applicants must be members of the American Society for Aesthetics. <https://aesthetics-online.org/page/dissfellowships>

1/12/22 **ACLS Emerging Voices Fellowships.** These awards allow recent PhDs in the humanities and interpretive social sciences to take up two-year positions at select institutions in ACLS’s Research University Consortium for the 2022-23 and 2023-24 academic years. Up to 45 fellowships will be available for a fall semester 2022 start date. Preference will be given to scholars of color, scholars from low-income and unconventional backgrounds, and scholars who have taken on extraordinary roles in graduate school. Applicants must have received their PhD in the humanities or humanistic social sciences from a US institution between January 1, 2018 and December 31, 2021. <https://www.acls.org/Programs/Fellowship-and-Grant-Programs/Competitions-Deadlines/ACLS-Emerging-Voices-Fellowships>

1/15/22 **American Society for Aesthetics (ASA) “Social Justice and the Arts Essay Prize” (\$1,000).** Provides travel support up to \$1000 to present the work at the 2022 Annual Meeting of the

Research Development & Grant Writing News

ASA. Funds for the prize will be drawn from the revenue from the Irene H. Chayes bequest. The essay should address social justice and the arts, broadly understood. The essay should be a maximum of 7,500 words. Entries will also be considered for publication in JAAC, unless the entrant requests otherwise.

<https://aesthetics-online.org/page/socialjusticeprize>

1/15/22 **The Bogliasco Foundation**, an American non-profit with a program in Italy, provides residential awards in literature, dance, art, poetry, etc. at its study center in Genoa. Fellowships are scheduled during the two semesters of the traditional academic year: September-December, and January-May. Regular deadlines for the submission of applications: January 15th for residencies during the subsequent fall semester, and April 15th for residences during the subsequent spring semester.
<https://bfny.org/en/home>

2/1/22 **Institute of Museum & Library Services, Museum Assessment Program (MAP)** MAP offers museums an opportunity to strengthen operations and plan for the future through a low-cost, year-long process of self-assessment and consultative peer review. Five MAP assessment types are available: Organizational, Collections Stewardship, Education & Interpretation, Community & Audience Engagement, and Board Leadership. <https://www.imls.gov/grants/available/museum-assessment-program-map>

News

11/1/21 H-Egypt is a digital space and resource dedicated to the study of Egypt from the early Islamic period to the present. H-Egypt is governed by and designed for scholars of Egypt affiliated with universities and research institutes around the globe, including in Egypt itself. It will serve as the locus of an academic community without a home, and provide scholars of Egypt with a natural home on H-Net. All H-Egypt content is freely accessible at: <https://networks.h-net.org/h-egypt>. To subscribe to H-Egypt go to: <https://networks.h-net.org/node/905/pages/965/subscribing-or-unsubscribing-network>

New Funding Directions at Department of Energy

Copyright 2021 Academic Research Funding Strategies. All rights reserved.

By Mike Cronan, PE, co-publisher

(Back to [Page 1](#))

The recent [announcement](#) by DOE/ [EESSD](#)/ [BER](#) to provide \$10 million (FY2022) for new grants to universities, academic institutions, federal research labs, and nonprofits, within the area of [Environmental System Science](#) research sends yet another signal of **major changes in the agency's funding landscape**. This is all part and parcel of DOE's new focus on the deployment of clean energy technologies and a commitment to build a clean energy economy. New funding opportunities range from energy technology and sustainable agriculture to atmospheric monitoring and carbon removal. For example, [DOE Announces \\$105 Million for Small Businesses to Invest in Clean Energy Research and Development](#); [DOE Announces up to \\$400 Million for Basic Research to Advance the Frontiers of Science](#).

This change in the DOE funding landscape has not been the typical incremental change that occurs from one administration to another, as in the past; it is much more dramatic. Moreover, changes at DOE over the past nine months **are not siloed changes in isolation from the research priorities of other federal agencies**, e.g., NSF, EPA, NOAA, but are more aligned changes wherein each specific agency's research priorities reflect an **overarching convergence** with topics of national importance to the economy and security, from climate change to AI to synthetic biology to breakthrough technologies, etc.

The bottom line here for researchers and research offices is that the NSF mantra of "**convergence science**" will increasingly play out in a federal environment whereby agency mission priorities will become increasingly aligned by new, common funding directions "**that rhyme**" and are **differentiated mainly by the unique aspects of each agency's mission capacities**. For universities, **this means funding opportunities across agencies in the future will be less siloed and competitiveness will be significantly advantaged by those best able to field university-wide, transdisciplinary teams**. Research offices can provide valuable assistance here by helping match possible research teams to funding opportunities across agencies.

Over 30 DOE open funding announcements are currently posted to Grants.gov along with the overarching 132-page BAA *FY 2022 Continuation of Solicitation for the Office of Science Financial Assistance Program Funding Opportunity Announcement* (FOA): [DE-FOA-0002562 open to September 30, 2022](#). This BAA supports **six core research areas of DOE**, as follows, and each below URL links to a specific programmatic area and information on open funding opportunities in that specific area, or agency wide, as appropriate, along with the application process.

The key information on **how to apply for funding** under each of these six core topic areas is detailed in the BAA/FOA, but the bottom line is that (emphases added) "**Pre-applications may be SUBMITTED AT ANY TIME while this FOA is available**". A pre-application (**ALSO CALLED A WHITE PAPER**) is **RECOMMENDED** but optional. Before submitting a pre-application, read the information in Section I of this FOA carefully to **make sure your IDEA IS**

Research Development & Grant Writing News

RESPONSIVE and to **select the topical subprogram most relevant to your idea**. You will be **required to select a program manager** when you submit your pre-application using the DOE SC Portfolio Analysis and Management System (PAMS) website. Choose the subprogram contact for the topical area most relevant to your idea from those listed in Section I of this FOA. Feedback from DOE to the principal investigator is optional, but you are **ENCOURAGED to use your submitted pre-application/white paper to INITIATE A DISCUSSION with the listed program manager about the appropriateness of the proposed research for this solicitation**.

The above paragraph is critical to gaining an understanding about how to respond successfully to funding opportunities at DOE. Moreover, it gives great insight into the culture of this specific **mission agency** with respect to the relationship between the researcher/applicant and DOE program officers and to the application process works. Keep the above in mind as you look for funding opportunities at the below program sites or submit a pre-application to seek funding under this open BAA.

1. **[Advanced Scientific Computing Research \(ASCR\) Program Website](https://science.osti.gov/ascr):**

<https://science.osti.gov/ascr> The Advanced Scientific Computing Research (ASCR) program's mission is to advance applied mathematics and computer science; deliver the most sophisticated computational scientific applications in partnership with disciplinary science; advance computing and networking capabilities; and develop future generations of computing hardware and software tools for science and engineering in partnership with the research community, including U.S. industry. The strategy to accomplish this has two thrusts: developing and maintaining world-class computing and network facilities for science, and advancing research in applied mathematics, computer science, and advanced networking.

2. **[Basic Energy Sciences \(BES\) Program Website](https://science.osti.gov/bes/):** <https://science.osti.gov/bes/> The mission of the Basic Energy Sciences (BES) program is to support fundamental research to understand, predict, and ultimately control matter and energy at the electronic, atomic, and molecular levels. BES research provides the foundations to develop new energy technologies, to mitigate the environmental impacts of energy generation/use, and to support DOE missions in energy, environment, and national security. The portfolio supports work in the natural sciences by emphasizing fundamental research in materials sciences, chemistry, geosciences, and biosciences. BES-supported scientific user facilities provide specialized instrumentation and expertise that enable scientists to carry out experiments not possible at individual laboratories.

3. **[Biological and Environmental Research \(BER\) Program Website](https://science.osti.gov/ber):** <https://science.osti.gov/ber> The mission of the Biological and Environmental Research (BER) program is to support transformative science and scientific user facilities to achieve a predictive understanding of complex biological, Earth, and environmental systems for energy and infrastructure security, independence, and prosperity.

4. **[Fusion Energy Sciences \(FES\) Program Website](https://science.osti.gov/fes/):** <https://science.osti.gov/fes/> The mission of the Fusion Energy Sciences (FES) program is to expand the fundamental understanding of matter at very high temperatures and densities and to build the scientific foundation needed to

Research Development & Grant Writing News

develop a fusion energy source. This is accomplished through the study of plasma, the fourth state of matter, and how it interacts with its surroundings.

5. **High Energy Physics (HEP) Program Website:** <https://science.osti.gov/hep> Other Federal agencies and their FFRDCs may only submit applications as subawards under another organization's application to subject matters in High Energy Physics. Applications from other Federal agencies and their FFRDCs as a lead organization may not be submitted and are nonresponsive to these subjects. The mission of the High Energy Physics (HEP) program is to understand how the universe works at its most fundamental level by discovering the elementary constituents of matter and energy, probing the interactions between them, and exploring the basic nature of space and time. The scientific objectives and priorities for the field recommended by the High Energy Physics Advisory Panel (HEPAP) are detailed in its recent long-range strategic plan, developed by the Particle Physics Project Prioritization Panel (P5) and available at: https://science.osti.gov/~media/hep/hepap/pdf/May-2014/FINAL_P5_Report_053014.pdf

6. **Nuclear Physics (NP) Program Website:** <https://science.osti.gov/np/> The mission of the Nuclear Physics (NP) program is to discover, explore, and understand all forms of nuclear matter—not only the familiar forms of matter we see around us, but also exotic forms that existed in the first moments after the Big Bang and that may exist today inside neutron stars. One of the enduring mysteries of the universe is the nature of matter—what are its basic constituents and how do they interact to form the properties we observe? The largest contribution by far to the mass of the matter we are familiar with comes from protons, neutrons, and heavier nuclei. Although the fundamental particles that compose nuclear matter—quarks and gluons— are themselves relatively well understood, exactly how they interact and combine to form the different types of matter observed in the universe today and during its evolution remains largely unknown.

In conclusion, as you explore the above websites specific to your research interests, it will become quickly apparent that ***this is a very transformed DOE from what it was a year ago*** and it is clearly much more user friendly in terms of guiding the application process.

Advice & Resources for Your NSF MRI Proposal

Copyright 2021 Academic Research Funding Strategies. All rights reserved.

By Lucy Deckard, co-publisher

(Back to [Page 1](#))

It's NSF MRI proposal time again! We've updated our annual discussion of how to prepare a strong MRI proposal, below.

NSF's [Major Research Instrumentation \(MRI\) program](#) is a long-standing program that funds acquisition or development of instrumentation ranging from \$100K to \$4 million. (For non-PhD granting institutions and for researchers in the social, behavioral and economic sciences and in mathematics, requests less than \$100K are allowed.) This program provides an excellent opportunity for universities to enhance their research infrastructure by purchasing or developing instruments that can enable new research and education activities at their campuses and in their region. MRI proposals are typically due January 1 – 19th each year. The current solicitation is available [here](#) (if no new solicitation is issued, this one will still apply for the 2022 competition).

MRI Overview

MRI grants come in two “flavors” – an **instrumentation acquisition grant**, which funds the purchase of off-the-shelf instrumentation, and an **instrument development grant**, which funds development of an innovative, new instrument. NSF also designates **two tracks**: Track 1 proposal request **less than \$1M**, and Track 2 proposals request **\$1M - \$4M**. The number of proposals that can be submitted by an institution is limited; each institution can submit up to a total of three MRI proposals, no more than one of which can be a Track 2 proposal. If you're interested in submitting an MRI, be sure to check with your grants office to find out the procedure for selecting which proposals will be submitted from your institution. (Often, institutions run an internal competition to select who can submit.)

MRI instrument acquisition grants can be used to buy multiple pieces of equipment that are needed for a single purpose, such as a transmission electron microscope and a microwafering saw required to prepare the specimens, but it cannot be used to buy multiple pieces of equipment to outfit a lab (for example, a differential scanning calorimeter, a thermomechanical analyzer and a rheometer for a thermal analysis lab). It also cannot be used to buy general purpose equipment such as fume hoods, cryogenic storage systems, etc.

It's important to note that, unlike most NSF programs, **cost sharing is required for PhD-granting institutions and non-degree-granting institutions** at exactly 30% (more is not allowed) of the total project cost. Non-PhD-granting institutions are exempt from cost-share. For the MRI, a non-PhD-granting institution is defined as one that has awarded fewer than 21 PhD/D.Sci. degrees in NSF-supported disciplines over the last 2 years.

You must designate a division within NSF (not the Office of Integrative Activities) to review your proposal. If you feel that more than one division may support the research enabled by the

Research Development & Grant Writing News

instrument, you may designate a secondary division. If you feel specialized expertise is needed to review your proposal, be sure to suggest appropriate reviewers with the required knowledge using the designated form.

The project description for an MRI proposal is limited to 15 pages and must include the following sections (the solicitation includes suggested page counts for each section):

- **Instrument location and type** - see the solicitation for detailed instructions on this section
- **Research activities to be enabled** – detailed description of the researchers who will use the instrument, the students who will be involved, and the research that will be enabled
- **Description of research instrumentation and needs** - describe the instrument, its capabilities and the need for the instrument
- **Broader Impacts, including Impact on research and training infrastructure** – how the instrument will enhance training and broaden participation
- **Management plan** – for acquisition proposals, how will the instrument be managed (who decides who can use the instrument, how will it be maintained, do you have the expertise at the institution to run the instrument, etc.)? For development proposals, what is your plan for developing and constructing the instrument?

Be sure to structure your Project Description with the above sections *in the order requested* in the solicitation. It can be tempting to reorder these sections because it's a bit illogical to have to discuss the research enabled before you describe the instrument. Resist this temptation! Reviewers are expecting to see the sections in the order requested, and if you don't follow that order, you will confuse your reviewer. Remember that a confused reviewer is not a happy reviewer, and your reviews will likely suffer as a consequence.

At the end of this article, we provide detailed outlines for the Project Description (one for Acquisition proposals, and one for Development proposals) that breakdown the solicitation requirements (along with our comments and suggestions). Following that, we include a checklist to help you make sure you've included all the required components.

What are Reviewers Looking For?

When developing your MRI proposal, remember that NSF is looking for maximum impact for the funds it is investing. For **acquisition proposals**, this means the requested instrument will:

- enable important research of interest to NSF
- have multiple users (from multiple disciplines and institutions, if possible)
- significantly impact education
- improve the ability to broaden participation in STEM by women, underrepresented minorities, and other groups underrepresented in STEM)
- be well-used and well-maintained
- improve your institution's capabilities to conduct leading-edge research and provide leading-edge research experiences for undergraduate students.

Research Development & Grant Writing News

For development proposals:

- The instrument to be developed is needed and will provide significant improvements in capability or performance compared to existing instruments
- There is a larger user community that strongly needs the instrument
- Your plan for developing the instrument is well thought-out, detailed and realistic.
- Your team has the expertise and resources needed to construct the instrument.
- If you have students on your budget, their involvement is needed to construct the instrument, and the experience contributes to their training as the next generation of instrumentalists.
- The cost of the new technology appropriate

Avoid Common Mistakes

Inadequate discussion of the science the instrument will enable

A common mistake is not explicitly describing **what new research the instrument will enable that is not currently possible**. Often, PIs ask potential users to send a description of the research they will conduct with the instrument. The PI then collects these descriptions, which are often standard text that the researcher copied from other proposals or documents. These descriptions discuss each participating faculty's research but don't specifically describe how the new instrument will impact the research and what the expected new outcomes might be. This is not enough for an MRI proposal! Instead, each user should describe clearly in their research description specifically how access to the proposed instrument will enhance their research and enable results that would not otherwise be possible. What is it that the researcher can't do now that she could do if she had access to the instrument? Why is this research important? So, for example, instead of writing,

"Dr. x performs research on xyz. She has found[standard description of her research project(s)] and results...],

write,

"Dr. x performs research on xyz ... [description of her research and its significance]. Because there is no [requested instrument] at ABC University, her students must travel 2 hours each way to Big State University to conducted needed measurements This has resulted in ...[describe problems]. If the proposed instrument is acquired, this will enable them to accomplish..."

Or

"... because our current instrument has only X nanometer resolution, this has prevented Dr. X from ...[describe research she can't do or questions she can't answer]. If the requested instrument with 0.X nanometer resolution is acquired, this would enable her to ..."

In this way, your proposal will paint a clear picture for reviewers of how the requested instrument will impact research at your institution and for users at other institutions.

It is often a good idea to include in the *Description of Research Instrumentation and Needs* section sample measurements made using a similar instrument, showing the value of the instrument in terms of improved precision, resolution, etc. and perhaps comparing it to

Research Development & Grant Writing News

measurements taken using your current instrument. If there is already an instrument like the one you are requesting in your institution or at a nearby institution, be sure to explain why that instrument won't meet your needs (e.g., it is already fully subscribed, or travel to the other institution is impractical or too time-consuming).

While it isn't required that the research to be conducted with the instrument is funded by NSF, it is certainly helpful to show that the instrument will enhance NSF-funded projects. If that's not possible, you'll want to make the argument that the research is of interest to NSF, and some of it may be funded by NSF in the future.

For instrument development proposals, the proposal should make a strong argument that the newly-developed instrument **will enable exciting new science of interest to NSF**. Depending on the Directorate, it may also be important to discuss how the instrument might be commercialized.

Too few or inappropriate users of the Instrument

The kiss of death for an MRI acquisition proposal is to give the impression that an instrument will be used by a single faculty researcher or a small group of faculty within a department. NSF has a limited amount of funds to award, so they want each grant to impact a significant number of researchers in multiple departments and institutions, if possible (of course, this will depend in part on the type of instrument and your discipline). If you're in a research-intensive institution, it's especially important to reach out to smaller, non-research-intensive institutions in your region. If these institutions don't have active research that would require the instrument, they often can still be involved in educational activities involving the instrument. That said, this is not a numbers competition, and it is better to have 7 users with strong research credentials and a strong argument about how the instrument will enhance their research than to have 20 users with a weak argument.

Failure to address education and diversity

In order to be competitive, an acquisition MRI must have a strong education and outreach component. Example activities include involving undergraduates in using the instrument or in analyzing data from the instrument, integrating the instrument or data from the instrument in a course, involving high school teachers, K-12 students, community college students, and students from minority-serving, or predominantly undergraduate institutions in research with the instrument. **Many predominantly undergraduate institutions have been successful** in winning MRI grants by including a strong education component and describing how the new instrument will enhance their research infrastructure. However, it's important to keep in mind that the instrument should be needed primarily for research, not primarily as an educational instrument (for example, don't propose an instrument that will be used primarily for a lab course).

Requesting Extra Bells and Whistles

Be careful to request funds for the instrument that is needed to conduct the research described, but not more. Reviewers are quick to jump on extra "bells and whistles" on an

Research Development & Grant Writing News

instrument that add to the price tag and aren't justified by the research described in the "Research Enabled" section. If, for example, you want to add an attachment that provides a capability that only one of your instrument users will need, be sure the description of that research is particularly compelling and specifically discusses how that capability will enhance the research. If none of your major users has a current need for the extra capability, avoid the temptation to add the attachment on speculation that it will be needed in the future.

Inadequate Management Plan

Reviewers will want to know if you have a place for the instrument, funds to keep it maintained, a qualified operator, and plans for how to share the instrument with multiple users. All of this should be described in your management plan; be sure to spend time on this, as a poor management plan can sink an otherwise good MRI proposal.

Address details such as how access to the instrument will be managed, particularly access by researchers from other institutions. There are two things that you want to convince reviewers *will not* happen: 1) the instrument is not really shared but is instead dominated by the PI or by a small cadre of users; 2) there are not enough resources or expertise at the institution to keep the instrument running and maintained after the funding period, and the instrument ends up sitting unused. Predominantly undergraduate institutions should pay special attention to this section since reviewers may be more concerned about whether your institution has the space and resources to keep the instrument maintained.

Be careful to make it clear that you have a plan to fairly share the instrument. As PI, you may think you're doing everyone else a favor by volunteering to take sole responsibility of managing the instrument, but to a reviewer it may look like you plan to dominate the instrument, and other users won't get fair access to it. A typical successful approach is to form a committee composed of the PI and co-PIs that meets regularly to make decisions related to the distribution of instrument time, dealing with maintenance, etc.

You'll also want to discuss how you'll pay for consumables and other expenses. Will there be a user fee? If so, how much will it be? If you plan to accept guest users from other institutions (which is often a good idea), outline your procedure for doing that. Will potential guest users submit a short proposal describing how they will use the instrument? What will the criteria be for evaluating these proposals? Will you assess a higher user fee for guests? How will you publicize the fact that the instrument is available to outside users?

For instrument development proposals, be sure that you have a well-thought-out plan for developing the instrument. In many ways, an instrument development proposal is very much like a research proposal except that the result will be a novel instrument. Therefore, you'll need to describe your plan for developing the instrument in similar detail to that you'd use if you were describing a research plan.

Research Development & Grant Writing News

Other issues

More Expensive Instruments

It's important to be aware that the review process for MRI proposals varies depending on the amount requested. While smaller proposals are reviewed within the Directorate, larger proposals are generally subjected to additional review at higher levels across NSF. This means that larger proposals will be reviewed by reviewers from a variety of disciplines; therefore, you should make sure that the arguments you make and the description of the science enabled is compelling and accessible to reviewers who are outside your field. In addition, for instruments over \$1 million, NSF uses the additional review criterion, "What will the instrument's impact be at the National level and on the research community of interest?"

Institutional Commitment

NSF is emphasizing that voluntary cost share is not allowed. That means that if an institution is in the category where cost sharing is required (PhD-granting or non-degree granting), that institution must cost share **exactly** 30% of the project cost and no more. On the other hand, institutional commitment is a review criterion, and PIs often ask, what's the difference between cost share and institutional commitment? One important distinction is that cost share can only come from items that are legitimate project costs as defined by NSF, but there are a lot of other expenses that are required to ensure that an instrument will be installed and maintained over the long term. For example, a space must be provided, and that space may require refurbishment, enhanced electrical service and so on, but NSF will not pay for "bricks and mortar" on this grant. If your institution commits to providing that space, that would be considered institutional commitment, not cost share. The instrument will need to be maintained, and a technician may be needed to run it after the three-year NSF funding period; NSF will expect an institutional commitment to provide those resources to keep the instrument running and in good repair unless you have another source to cover those expenses.

Restrictions on Content of Letters

In recent years, NSF has become much more restrictive about what can be included in a letter from a collaborator who will use your instrument (probably to prevent PIs from using the letters as a way to work around the Project Description page limit). The solicitation (in the section covering supplementary documents) now includes the *exact text* that can be used, with blanks provided for the required information. Some collaborators may think they're doing you a favor by adding additional text to their letters. Don't allow them to do that; no other information is allowed in these letters.

Project Description outlines, based on solicitation instructions, are provided below.

Research Development & Grant Writing News

General MRI Project Description Outline (**Acquisition**) – 15 pages

(Be sure to check solicitation for full instructions)

a. Information about the Proposal

a1. Instrument Location and Type

- Instrument Location (fill in the blank)
- Concise description of instrument being acquired (1 separate line)

b. Research Activities (approx. 9 pages).

- (My suggestion) Provide a brief overview briefly describing the instrument, summarizing the need, and putting forward your most compelling arguments (e.g., the amount the funding your users have, or the impact on your institution's or region's research capabilities, etc.)
- Describe the research and research training activities and projects that will be enabled by the desired instrumentation, and sources of support, if any.
- In narrative or tabular form, list by **number** and **type** (e.g., senior personnel, postdoctoral fellows, graduate students, undergraduate students) the personnel who will use the instrumentation for research and research training on a regular basis.
- This section must include Results from Prior NSF Support if any of the PI/co-PIs have received NSF support for **shared research instrumentation** in the last 5 years. If not MRI support, then include any applicable Results from Prior NSF Support per [PAPPG guidelines](#))

c. Description of the Research Instrumentation and Needs (approx. 2 pages)

- Provide a technical description of the requested instrumentation, including manufacturer and model number. Proposers are strongly encouraged to submit manufacturers' quotes for instrument acquisition proposals (in supp docs).
- Explain why equipment is essential and appropriate
- A listing and/or description of related instrumentation currently available at or near the submitting organization and justification for instrument in this context; if a similar instrument is at or near the performing organization, explain why another instrument is needed
- Provide preliminary results from existing equipment, or appropriate calculations or models to show the performance (e.g., sensitivity, capacity, stability, resolution or signal-to-noise ratio) to be achieved by the new instrument.
- Justify the necessity and adequacy of the new instrumentation for the proposed research projects, with reference to existing instruments.

d. Broader Impacts, including *Impact on Research and Training Infrastructure* (Suggested length, 2 pages)

- Description of how the instrumentation will improve institution's capabilities to conduct leading-edge research.
- Describe the potential impact of the instrument on infrastructure goals of institution.
- How the instrumentation will attract researchers and students, particularly *underrepresented* groups and *women* pursuing advanced degrees in science and engineering, and improve the quality of their research training.
- How the instrument will be used by students, including how it can provide research experiences for undergrad students and how their education will be enhanced.
- **Proposals requesting over \$1M:**
 - Address potential impact of the instrument on the research community at the local and national level.
 - Discuss concrete plans for enabling access by external users, including those from non-PhD institutions and/or MSIs.
 - Describe the uniqueness of the instrument.

e. Management Plan (Suggested length, 2 pages)

Research Development & Grant Writing News

- Detailed business and management plans with information on space, technical staffing for operation.
 - Describe the facility in which the instrument will be housed.
 - Maintenance and operation projections (About how much of the time do you anticipate the instrument will be in use? What will the maintenance costs be?)
 - How and by whom the requested instrumentation will be operated and maintained over the project period of three years and long-term (a **letter** of commitment to operations and maintenance is required in Supp. Docs).
 - Technical expertise needed to maintain and operate the instrument with anticipated costs (if the expertise is not currently available, describe how it will be obtained).
 - Procedures for allocating instrument time, if appropriate, and describe plans for attracting new users. (Will there be a user fee? If so, about how much will it be? Will you set up a committee to review applications for use? Organizational commitments regarding housing and costs associated with instrument maintenance and operations.)
- f. **Intellectual Merit** (*My suggestion, 1 paragraph*)
- Summarize the new knowledge that is expected to be enabled by this instrument and how it will push disciplines forward (and/or answer important questions).

Research Development & Grant Writing News

General MRI Project Description Outline (Development) – 15 pages

(Be sure to check solicitation for full instructions)

a1. Instrument Location and Type

- Instrument Location: _____
- Instrument Code: [see solicitation for codes]

a2. Justification for submission as a Development proposal - (Suggested length, 1 page)

- Describe how the end result will be a stable, shared-use instrument rather than technology development
- Describe the new capabilities this instrument will have that are not currently available from an instrument provided by a vendor
- Describe how the instrument development will require and benefit from the diverse skills of your team
- Briefly describe potential risks in achieving the required specifications and the need for a mitigation plan
- Address any other criteria (described in bullets as questions in the solicitation) that apply

b. Research Activities to be Enabled (Suggested length, ~4 pages)

- Overview of project (My suggestion)
 - Instrument to be developed, enhanced capabilities and exciting research these will enable, general approach, team that will accomplish this – Note: at high funding levels, the scientific impact has been very strong and exciting; **this is where we get the reviewers excited!** (~ 2 paragraphs)
 - Note: the solicitation does not require this, but I think it's important to lay the groundwork before going into detail, and we can sneak this overview in here.
- Intellectual Merit (this must be separately labeled but is a continuation of your argument above – what is the new knowledge that will be enabled by this instrument?)
- Table of potential users with columns something like: Name/Research Topic/# Senior Personnel/# Postdocs/# Grad students/ # Undergrads
- Major users of instrument and descriptions of their research and what new/improved research the instrument will enable. Each major user should contribute a narrative (less than 3/4 page each) following the general format:
 - **Section Heading:** Topic or title of research, Name of researcher, Department and Institution, Agency/ies from which they have received funding for this topic
 - Description of the research and why it is significant/exciting/of interest to NSF (even if it's not currently funded by NSF) – include here the details of the funding described in the heading (funding agency, title of project, \$ amount, funding period) – good also to cite publications coming out of this research. {Note: there is very little room for background/SOA/problem statement, so this should be very concise and kept to the minimum required for reviewers to understand the research.}
 - Description of what they can't do now that they could do if they had access to the proposed instrument with its new capabilities (this can be scientific and can also be logistical but I'd recommend emphasizing new science that's enabled). Note: this part is critical and needs to be concise and easy for the reviewers to find.
 - Description (in concise sentence or two) of what the impact of this new/improved research will be.
 - Results of Prior NSF Support
 - Include this if the PI or any of the co-PIs participated as PI or co-PIs in NSF MRI awards within the last 5 years. If the above doesn't apply, report on Results from Prior NSF Support per [PAPPG guidelines](#))

c. Description of the Research Instrumentation and Needs (NSF suggests up to 5 pages, but it may make sense to make this shorter and use the extra space in Section e if you anticipate a complex development project)

Research Development & Grant Writing News

Overview paragraph giving and overview of the general design concept and development strategy, steps to be accomplished and expertise available to make this work (a flow chart might be appropriate here)

- Rationale for the new instrument and design concept and why it is needed ([The need for development of a new instrument. Will the proposed instrument enable enhanced performance over existing instruments, or new types of measurement or information gathering? Is there a strong need for the new instrument in the larger user community?](#))
 - Limitations of currently available systems (imaging results from one of these systems demonstrating limitations might be appropriate here)
 - What is your new approach, challenges that will be addressed or questions that must be answered in order to develop the new system, and why do you think it will work?
 - Detailed description of expected capabilities of the new system with justification (calculations, etc.)
 - Preliminary results if available
- Likely availability of new instrument for shared use after award period
 - How functional will the instrument be at the end of the award period?
 - Do the logistics make it practical for shared use?
 - What will the cost of the new technology be? ([Review Criterion: The appropriateness of the cost of the new technology.](#))

d. Broader Impacts including Impact on Research and Training Infrastructure – NSF suggests up to 2 pages.

- How the instrument will attract researchers and improve the institution's ability to do leading-edge research
- Potential impact of the instrument on the research community of interest at the regional or national level (**Note: this is required for grants over \$1 million**)
- How instrument will improve the quality of student education, research and training
 - ⇒ **Note:** This section needs to have details in order to be effective: don't just say undergrads will be involved; say how many, what they will do, etc. Similarly, don't just say results will be incorporated into the curriculum; say what results, which classes, what level, how many students are in those classes, etc.
 - Discuss impact on students working directly on instrument development, operations, etc. (connect to any funding requested for student support if applicable), and how it will prepare them to be the next generation of instrumentalists (focus on skills they will learn here) ([Review Criterion: If direct support for student involvement in development efforts is requested, reviewers will be asked to evaluate the involvement in terms of both project needs and training the next generation of instrumentalists.](#))
 - Impact of availability of the instrument on education and research experiences of students (this should include undergrads as well as graduate students)
 - Will students use instrument as part of their research?
 - Will results obtained using the instrument be incorporated into the curriculum in some way?
 - Discuss outreach/diversity activities that will be undertaken and/or enhanced by the availability of the instrument **Note:** You need a strong argument about enhancing diversity (involvement of women, minorities, persons with disabilities in STEM) – don't just blow this off!
 - Any collaborations with Minority Serving Institution or Predominantly Undergrad Institution faculty and students? Note: if you have ongoing collaborations with faculty at MSIs or PUIs, you could leverage those.
 - Could this instrument or its results be used in any ongoing REUs?
 - Are there any K-12 outreach programs that might collaborate with you in some way to showcase the instrument or results (e.g., SWE's summer camps for girls or other STEM outreach activities)?

e. Management Plan – NSF suggests 5 pages for instrument development proposals

- Project plan organized by tasks, e.g., as follows

Research Development & Grant Writing News

- Task 1: Name of task and person(s) who will lead task
 - Objective of task and expertise need to accomplish the tasks (Review Criterion: The availability of appropriate technical expertise to design and construct the instrument.)
 - Detailed description of how task will be accomplished
 - Description of parts and materials
 - Estimated deliverables, associated timelines and anticipated costs
 - Any expected challenges, risks and how they will be addressed
- Task 2, etc. as above
- A discussion of risks and potential methods for mitigating the risks and for re-analyzing and modifying the project plan to keep it within scope, schedule and budget
- Schedule and milestone chart (maybe Gantt or similar) (Review criterion: Does the plan have a realistic, detailed schedule? Are mechanisms in place to deal with potential risks?)
- The organization of the project staff and methods of assessing performance
 - For each member of the team, include a description of the responsibilities and explain why a given position is necessary for the completion of the design and construction of the new equipment (Note: I think the intention here is to make sure that faculty are not just put on this when they aren't really doing the work of designing and building the instrument.)
- Plans for making the instrument design readily available to other researchers
- Plans for long-term operations and maintenance of the instrument
 - Who will manage the system? (Maybe a committee?)
 - How will expenses be covered? (refer to letter documenting TAMU's commitment to funding operations and maintenance)
 - How will you decide how to allocate time on the instrument?
 - How will you attract and support new users?
 - Information on anticipated usage and downtime if appropriate

f. Intellectual Merit (*My suggestion, 1 paragraph*)

Summarize the new knowledge that is expected to be enabled by this instrument and how it will push disciplines forward (and/or answer important questions).

NSF Major Research Instrumentation Checklist

Here are a few things you'll want to double check as work on your proposals.

- Are you following the rules of the current [PAPPG](#)?**
- Are you following the definitions for “tracks”?** For many years, MRI tracks were defined based on whether you were proposing to acquire or develop an instrument. While that distinction still exists, restrictions on the number of submissions from an organization are now based on the dollar amount **not** whether you're submitting a development or acquisition proposal. See page 2 of the [solicitation](#) for details.
- Are you following the Project Description section page-length guidelines provided by NSF in the solicitation?** In the MRI solicitation, NSF suggest page lengths for most of the sections (with suggested lengths differing depending on whether it's an acquisition or development proposal). These page lengths are voluntary, and you may have a legitimate reason not to follow them based on your specific situation, but remember that the page lengths are a strong indicator of how much detail reviewers will be looking for in each section. If your section lengths vary significantly from those suggested by NSF, you should consider whether you are addressing what the solicitation is asking for in each section.
- If you're proposing a development MRI, have you made a convincing argument that your project is, indeed, development?** Sometimes it's obvious that a project fits into the “development” category, but other times it can be a bit unclear (for example, when you are buying off-the-shelf items and assembling them). See the list of questions in the solicitation under “a2” and discuss all of the criteria that apply in this section of your proposal. Remember that if you don't convince NSF that your proposal is, indeed, development proposal, you will have lost the battle for funding before the reviewers read the rest of the proposal.
- In your Research Activities to be Enabled section, are you including **information about the personnel who will benefit** from the instrumentation by type (faculty, postdocs, grad students, undergrads), by number, and by research area?
- Are you including **information on the funding** for specific projects or users that will benefit from the instrument?
- In the descriptions of research that will benefit from the instrument, does the researcher **state explicitly what will be enabled or how the research will be improved** in comparison to what is possible now, rather than just describing research that uses the particular type of instrument that you plan to buy or develop?
- Did you include **Results of Prior NSF Support** in the Research Activities to be Enabled Section? Did the PI and co-PIs who have had NSF support discuss the results as required in the [PAPPG](#), focusing on previous MRIs if applicable, and on other NSF projects if not applicable (note that each PI/co-PI is only required to talk about one NSF-funded project)?
- In your Description of Research Instrument Needs section, if you are proposing to acquire an instrument, have you specified **a vendor and model number** as well as any additional attachments or options? Do you have a quote from the vendor that reflects these specifications exactly?

Research Development & Grant Writing News

- Are the **capacities of the instrument you are asking for clearly justified by the projects** you describe in your Research Activities to be Enabled, especially if a cheaper version of the instrument (or a version without certain options or attachments) is available? Expect reviewers to scrutinize options and attachments, so be extra careful about justifying them in terms of the projects that will use the instrument.
- In the **Broader Impacts** section, do you propose activities that will enhance undergraduate education, allow sharing outside your institution (if possible) and broaden participation in science and engineering? If your proposal requests more than \$1M, do you have a well-thought-out plan for sharing your instrument at the regional or national level, and for recruiting users from, for example, PUIs or MSIs? Lip service is not enough (including just putting up a website saying you will share the instrument); you need to have a clear process and proactive plan.
- If you're proposing to develop a new instrument, do you have a **clear and detailed work plan** that describes who will do what when, the expertise of the team members, and risks and mitigation strategies?
- If you're proposing to acquire an instrument, does your **management plan** state clearly the procedures for allocating time on the instrument, approving users from outside your institution, assessing user fees to cover consumables and maintenance (if applicable), and who will run the instrument? If your instrument will go into an existing core facility, this is relatively easy, but if not, be careful to provide enough detail to reassure reviewers that you will have the processes in place to ensure the instrument will be properly maintained, used and shared.
- If you're proposing an instrument development project, are you including plans to **disseminate the new design** to other researchers or commercially? Remember that the impact of the instrument development usually comes from making the new instrument design available to the research community, not just using it at your institution.
- In the **budget justification**, did you fill out the required cost share table provided in the solicitation? Give yourself plenty of time to do this and work with your pre-award staff to get this done.
- Did you get the required **institutional letters**, including a letter that 1) documents the performing institution's commitment to ensuring successful operations and maintenance over the expected lifetime of the instrument, 2) lists the **MRI awards made to the organization—regardless of whether the PI or co-PIs were involved**—with a start date in the previous five calendar years and briefly describe the status of the instrumentation obtained from each award?
- Did you get letters from individuals who will use the instrument, and do these letters **follow the form specified in the solicitation** without any changes or additions beyond filling in the blanks?
- Did you go through **the checklist in the solicitation** to make sure you remembers all required components?

Research Development & Grant Writing News

Other Resources

[Best Practices for Writing an MRI for an HPC Cluster](#)

[NSF MRI presentation](#)

The First Step to STC Success Is to Learn the Language

Copyright 2021 Academic Research Funding Strategies. All rights reserved.

By Mike Cronan, PE, co-publisher

(Back to [Page 1](#))

If you are planning to write a 12-page Project Description for a preliminary NSF Science and Technology Center ([STC](#)) proposal due February 1, and if you hope to be invited in late May to submit a 25-page Project Description for a full STC proposal due August 29, your STC team will need to become ***fluent in the language used by NSF to discuss the STC program***. Fluency in these NSF terms will be needed both by the team advancing what will be proposed and in the writing of the research narrative itself. The title of the funding opportunity--Science and Technology Centers: ***Integrative Partnerships (STC), Discovery and Innovation to Address Vexing Scientific and Societal Challenges***—points to several terms that are key to this program.

To respond effectively, applicants must ***know and understand the language NSF uses to discuss what it means to have “an integrative partnership,”*** what NSF means by “discovery and innovation,” what NSF means by “vexing scientific challenges,” and what NSF means by “societal challenges.” These are a few of the common touchstones that ***form the NSF lexicon*** used to characterize a major “*integrative partnership*” funded at \$6 million a year for five and possibly ten years. At this funding level, there should be no daylight between what NSF means by these terms and the way applicants describe how their proposal maps to these terms ***embedded in the overall STC objectives and review criteria*** described in the solicitation.

NSF has funded STCs and ERCs since the 1980s, during which time an entire universe of centers has been funded. Each new biennial funding solicitation represents a dramatic evolution in how NSF ***conceptualizes a center based on prior outcomes of best practices and a new vision for redefining the future***. STCs and ERCs are NSF’s magnum opus solicitations; to apply successfully, everything in the proposal must be on target and free of mistakes. There is no room for error if you want to catch the STC brass ring.

The foundation of an error-free STC proposal begins with the certainty that the applicant speaks NSF’s language, ***not a different dialect***, when describing the proposed project’s ***integrative activities***. Using ambiguous language and terms in the project description is the Achilles Heel of STC preliminary proposals that fail to receive an invitation to submit a full proposal. In 1965, the Wizard of Id famously noted that “Whoever Has the Gold Makes the Rules.” In the case of the STC solicitation, NSF “holds the gold” and defines the language. Take that to heart!

For example, when reviewing the STC program objectives below, team members should strive to be on the same page ***with each other and with NSF*** not only when formulating and discussing project activities but also when describing those activities. For instance, ask the question, as inserted below in parentheses, about how you will characterize NSF terms in your

Research Development & Grant Writing News

narrative and how what you propose maps tightly to NSF's use of those terms. The point here is not simply to "echo back" NSF terms but to ***explain what they mean in the context of your proposed project activities*** and ***how*** (showing as opposed to merely claiming) they will meet the **overarching STC objectives**.

Objectives of the STC Program are to:

- "Support potentially groundbreaking investigations (**explain what this means and HOW**) at the interfaces of disciplines (**explain what this means and HOW**) or highly innovative approaches within disciplines;
- Support research and education of the highest quality, in a center-based environment, where the whole is greater than the sum of its parts (**explain what this means and HOW**);
- Exploit opportunities in science, education, engineering and/or technology, where the complexity of the research agenda requires the advantages of scope, scale, flexibility, duration, equipment, and facilities that a Center can provide (**explain what this means and HOW**);
- Support the creation of new scientific paradigms (**explain what this means and HOW**), establishment of new scientific disciplines (**explain what this means and HOW**), and development of transformative technologies (**explain what this means and HOW**);
- Foster science and engineering in service to society (**explain what this means and HOW**);
- Engage and develop the Nation's intellectual talent, including groups underrepresented in the sciences, mathematics and engineering, in the conduct of research and education activities (**explain what this means and HOW**);
- Increase the participation of minority-serving institutions in center-scale science and engineering research (**explain what this means and HOW**);
- Promote organizational connections and linkages within and between campuses, K-12 educational institutions, and the world beyond (e.g., state, local, Federal agencies, national labs, industry, international collaborations), capitalizing upon cyberinfrastructure and modern communication technologies to facilitate these linkages (**explain what this means and HOW**);
- Focus on integrative learning and discovery (**explain what this means and HOW**) and the preparation of U.S. students for a broad set of career paths; and
- Support research collaborations that energize the Nation's economic competitiveness, sustain its global leadership in science and engineering, expand the geography of

Research Development & Grant Writing News

innovation, and improve the quality of life for everyone (**explain what this means and HOW**).”

NSF further notes “The Science and Technology Centers (STC): Integrative Partnerships program supports exceptionally innovative, complex research and education projects that require large-scale, long-term awards. STCs focus on creating new scientific paradigms, establishing entirely new scientific disciplines and developing transformative technologies which have the potential for broad scientific or societal impact (**explain what this means and HOW you will accomplish it**). STCs conduct world-class research through partnerships among institutions of higher education, national laboratories, industrial organizations, other public or private entities, and via international collaborations, as appropriate (**explain what this means and HOW you will accomplish it**). They provide a means to undertake potentially groundbreaking investigations at the **interfaces of disciplines and/or highly innovative approaches within disciplines (explain what this means and HOW you will accomplish it)**. STC investments support the NSF vision of creating and exploiting new concepts in science and engineering and providing global leadership in research and education (**explain what this means and HOW you will accomplish it**). Centers provide a rich environment for encouraging future scientists, engineers, and educators to take risks in pursuing discoveries and new knowledge (**explain what this means and HOW you will accomplish it**). STCs foster excellence in education by integrating education and research, and by creating bonds between learning and inquiry so that discovery and creativity fully support the learning process (**explain what this means and HOW you will accomplish it**).”

Additionally, NSF notes, “Centers may use either proven, or innovative mechanisms based on the relevant literature, to address issues such as recruitment, retention, success, and career progression of all individuals in the Center (**explain what this means and HOW you will accomplish it**). Centers must undertake activities that facilitate knowledge transfer, i.e., the exchange of scientific and technical information with the objective of disseminating and utilizing knowledge broadly in multiple sectors (**explain what this means and HOW you will accomplish it**). Examples of knowledge transfer include technology transfer, providing key information to public policy-makers, or dissemination of knowledge from one field of science to another (**explain what this means and HOW you will accomplish it**).

Preliminary proposals, full proposals, and site visits will be reviewed using the intellectual merit and broader impacts criteria. Reviewers will also be asked to address the following **STC-specific questions during the various stages of the competition**:

“(1) Preliminary Proposals. Reviewers will be asked to consider the vision and potential impact of the research proposed, along with the need for the center funding mechanism. Reviewers will be asked to evaluate and comment on the following:

- *Rationale for an STC*, including questions: Is the vision for the project compelling and would such a center have potential to transform our foundational scientific

Research Development & Grant Writing News

understanding? If so, is an STC the appropriate vehicle? Why is an STC investment warranted at this time? Are the anticipated scientific and societal legacies substantive?

- *Research plan*, including questions: Are the plans for research appropriately ambitious for an STC? Does the preliminary proposal make a case for the feasibility of significant progress over the next five years? Are technical challenges and potential bottlenecks addressed in the research plan?
- Partnerships and Participants, including questions: Is the team of partner organizations and personnel assembled for the proposed Center appropriate, essential and consistent with the solicitation? Is the role of each participant clear? Does the partnership have unique strengths?
- Integration Strategies, including questions: Are the leadership and management strategies promoting a Center culture? Do the education, knowledge transfer and broadening participation plans support the goals of the Center?"

In conclusion, a successful STC will be developed in the context of the above NSF descriptions of what characterizes a center and how it will be reviewed. Answering the ***what, why, and how in a way that responds fully to the STC solicitation first requires an understanding of NSF's language***. This understanding comes from a very careful, repeated reading of the solicitation, and from related NSF reports and publications that address issues put forward in the solicitation.

In this regard, NSF makes the following recommendation (emphases added): "The NSF website provides the most comprehensive source of information on NSF Directorates (including contact information), programs and funding opportunities. **Use of this website by potential proposers is strongly encouraged**. In addition, 'NSF Update' is an information-delivery system designed to **keep potential proposers and other interested parties apprised of new NSF funding opportunities and publications**, important changes in proposal and award policies and procedures, and upcoming NSF [Grants Conferences](#). Subscribers are informed through e-mail or the user's Web browser each time new publications are issued that match their identified interests. 'NSF Update' is also available on [NSF's website](#)."

New Funding Directions at NOAA

Copyright 2021 Academic Research Funding Strategies. All rights reserved.

By Mike Cronan, PE, co-publisher

(Back to [Page 1](#))

Since 1970 [NOAA](#) (National Oceanic and Atmospheric Administration) has been a part of the U.S. Department of Commerce. According to the story, perhaps apocryphal, NOAA's location happened simply because President Nixon was miffed with Wally Hickel, then Secretary of Interior, and put NOAA in Commerce under a reorganization plan rather than in the more logical Interior merely to spite Hickel. Regardless, NOAA has resided in Commerce for over 50 years.

A Grant.gov search on NOAA will show over 35 currently open funding opportunities, as listed in the table at the end of this article, including the currently open [FY 2021–2023: Broad Agency Announcement](#). This BAA encourages research, education, and outreach, along with innovative projects or sponsorships **not addressed through NOAA's competitive discretionary programs** (<https://www.grants.gov/web/grants/search-grants.html?keywords=NOAA%22>). Funding for activities described in this BAA notice is contingent upon the availability of Fiscal Year 2021, Fiscal Year 2022, and Fiscal Year 2023 appropriations.

When considering these opportunities, keep in mind the key point in all mission agency BAAs: if an **application falls within the scope of an existing NOAA competitive announcement** (above URL) **or duplicates an existing non-discretionary project announced or awarded** in FY17, FY18, FY19, or FY20, then it **cannot be funded under this BAA announcement**. That said, reading through this BAA, along with [NOAA web links](#), is an excellent starting point for understanding the NOAA mission and funding priorities of interest to universities.

As with other mission agencies, it is important to understand the distinction between a grant and a cooperative agreement, as noted below:

What is a NOAA Grant? A Grant is the legal instrument reflecting a relationship between NOAA and a recipient whenever: (a) the principal purpose of the relationship is to transfer anything of value in order to accomplish a public purpose of support or stimulation authorized by Federal statute, and (b) ***no substantial involvement is anticipated between NOAA and the recipient during the performance of the contemplated activity.***

For example, the currently open FY22 [Dr. Nancy Foster Scholarship Program](#) is a **grant** to support applicants for master's and doctoral degrees in oceanography, marine biology, maritime archaeology—these may include but are not limited to ocean and/or coastal: engineering, social science, marine education, marine stewardship, cultural anthropology, and resource management disciplines—and particularly encourages women and members of minority groups to apply.

Research Development & Grant Writing News

What is a NOAA Cooperative Agreement? A Cooperative Agreement is the legal instrument reflecting a relationship between NOAA and a recipient whenever: (1) the principal purpose of the relationship is to transfer anything of value to accomplish a public purpose of support or stimulation authorized by Federal statute, and (2) ***substantial involvement (e.g., collaboration, participation, or intervention by NOAA in the management of the project) is anticipated between NOAA and the recipient during performance of the contemplated activity.***

For example, NOAA's currently open [Competition for a Cooperative Institute to Support Water Resources](#) will be **funded under a cooperative agreement**. The Institute will conduct research under the following themes: (1) Expansion and improvement of water resources prediction capabilities; (2) Advancement and acceleration of water resources modeling; (3) Advancement and augmentation of hydroinformatics; and (4) Application of social, economic, and behavioral science to water resources.

As noted in the BAA, NOAA is an agency with "responsibilities for maintaining and improving the viability of marine and coastal ecosystems, for delivering valuable weather, climate, and water information and services, for understanding the science and consequences of climate change, and for supporting the global commerce and transportation upon which we all depend." NOAA's BAAs address extramural research, innovative projects, and sponsorships (e.g., conferences, newsletters, etc.) that address one or more of the following four mission goal descriptions contained in the [NOAA Strategic Plan](#). (In January 2021, NOAA released its [Blue Economy Strategic Plan](#) for 2021-2025, laying out a roadmap for new ways to advance America's Blue Economy and enhance the [global ocean economy](#).) The goals for this plan are listed below:

1. **“Long-term mission goal: Climate Adaptation and Mitigation.** An informed society anticipating and responding to climate and its impacts.
2. **Long-term mission goal: Weather-Ready Nation Society** is prepared for and responds to weather-related events.
3. **Long-term mission goal: Healthy Oceans, Marine fisheries, habitats, and biodiversity sustained within healthy and productive ecosystems.**
4. **Long-term mission goal: Resilient Coastal Communities and Economies, Coastal and Great Lakes communities are environmentally and economically sustainable.”**

NOAA BAA [applications](#) can be “submitted on a rolling basis starting from the publication date of this Broad Agency Announcement up to **September 30, 2024**. Applications shall be evaluated for funding generally within three to six months of receipt. An applicant can expect to receive either a rejection notice based on the initial prescreening review (if found ineligible), a rejection notice based on merit review or program restrictions, a request for additional information, and/or an award within that time frame.”

The core narratives of an application include:

Research Development & Grant Writing News

c. **“Project Synopsis** (1-page limit): It is critical that the project synopsis accurately describe the project being proposed and convey all essential elements of the activities. It is imperative that potential applicants tie their applications to one of the NOAA mission goals described in Section I.B. of this announcement and state it here in the synopsis.

d. **Project Description** (15-page limit): The applicant should describe and justify the project being proposed and address each of the evaluation criteria as described below in Section V. Project descriptions should include clear objectives and specific approaches to achieving those objectives, including methods, timelines, and expected outcomes.”

NOAA has standardized evaluation criteria for all competitive assistance announcements. The criteria for this BAA are listed below. Applicants are required to adhere to all the noted submission requirements and to provide a demonstrable link and/or to emphasize the manner in which study objectives results relate to NOAA's mission goals/priorities. Since applications responding to this BAA may vary significantly in their activities/objectives, assigning a set weight for each evaluation criterion is not feasible, but is based on a total possible score of 100.

The Program Office and/or Selection Official will determine “which of the following criteria and weights will be applied. Some applications, for example sponsorships, may not be able to address all the criteria such as technical/scientific merit. **However, it is in your best interest to prepare an application that can be easily evaluated against these five criteria” listed below.**

“1. Importance and/or relevance and applicability of proposed project to the mission goals: This ascertains whether there is intrinsic value in the proposed work and/or relevance to NOAA, Federal, regional, state, or local activities: i.e., How does the proposed activity enhance NOAA's strategic plan and mission goals? Applications should also address significance/possibilities of securing productive results, i.e., Does this study address an important problem? If the aims of the application are achieved, how will scientific knowledge be advanced? What will be the effect of these studies on the concepts or methods that drive this field? What effect will the project have on improving public understanding of the role of the ocean, coasts, and atmosphere in the global ecosystem? Applications may also be scored for innovation, i.e., Does the project employ novel concepts, approaches or methods? Are the aims original and innovative? Does the project challenge existing paradigms or develop new methodologies or technologies?

“2. Technical/scientific merit: This assesses whether the approach is technically sound and if the methods are appropriate, and whether there are clear project goals and objectives. Applications should address the approach/soundness of design: i.e., Are the conceptual framework, design, methods, and analyses adequately developed, well-integrated, and appropriate to the aims of the audiences to be engaged through the project? Does the applicant acknowledge potential problem areas and consider alternative tactics? This criterion

Research Development & Grant Writing News

should also address the applicant's proposed methods for monitoring, measuring, and evaluating the success or failure of the project, i.e., What are they? Are they appropriate? Additionally, if needed, a data sharing plan should include descriptions of the types of environmental data and information expected to be created during the course of the project; the tentative date by which data will be shared; the standards to be used for data/metadata format and content; methods for providing data access; approximate total volume of data to be collected; and prior experience in making such data accessible.

“3. Overall qualifications of applicants: This ascertains whether the applicant possesses the necessary education, experience, training, facilities, and administrative resources to accomplish the project. If appropriate, applications should also address the physical environment and collaboration, if any, i.e., Does the environment in which the work will be done contribute to the probability of success? Do the proposed experiments or activities take advantage of unique features of the intended environment or employ useful collaborative arrangements?

“4. Project cost. The budget is evaluated to determine if the cost is realistic and commensurate with the project needs and time-frame.

“5. Outreach and education: NOAA assesses whether this project provides a focused and effective education and outreach strategy regarding NOAA’s mission to protect the Nation’s natural resources. NOAA assesses whether this project aligns with NOAA's education vision, for an informed society that uses ocean, coastal, Great Lakes, weather, and climate science to make the best social, economic, and environmental decisions. Evaluation of these criteria will include if the project addresses any of the goals or employs any of the strategies of the NOAA Education Plan (<http://www.noaa.gov/explainers/noaaeducation-strategic-plan>), as well as how the outcomes of the project will be communicated to NOAA and the interested public.”

NOAA Current Open Funding Opportunities

1 - 25 OF 37 MATCHING RESULTS: « Previous 1 2 Next »					
Opportunity Number	Opportunity Title	Agency	Opportunity Status	Posted Date ↓	Close Date
NOAA-NMFS-HCPO-2022-2007109	NOAA Great Lakes Fish Habitat Restoration Partnership Grants	DOC	Posted	11/05/2021	01/12/2022
NOAA-NOS-OCM-2022-2007068	National Estuarine Research Reserve System (NERRS) Land Acquisition and Construction Program for Fiscal Year 2022	DOC	Posted	10/26/2021	02/11/2022
NOAA-OAR-OAP-2022-2007070	Pacific Islands Ocean Acidification	DOC	Posted	10/25/2021	03/10/2022

Research Development & Grant Writing News

	Masters Student Fellowship				
NOAA-NOS-OCM-2022-2007044	Coral Reef Conservation Program Domestic Capacity-Building Partnerships	DOC	Posted	10/20/2021	02/11/2022
NOAA-NOS-ONMS-2022-2007101	FY22 Dr. Nancy Foster Scholarship Program	DOC	Posted	10/19/2021	12/14/2021
NOAA-OAR-SG-2022-2007042	Fiscal Year 2022 NMFS-Sea Grant Fellowship in Population and Ecosystem Dynamics and Marine Resource Economics	DOC	Posted	10/13/2021	02/24/2022
NOAA-NMFS-HCPO-2022-2007086	FY 22-24 Fishery Management Council Coral Reef Conservation Cooperative Agreements	DOC	Posted	10/13/2021	01/20/2022
N00014-22-S-B003	NATIONAL OCEANOGRAPHIC PARTNERSHIP PROGRAM (NOPP) 2022 BROAD AGENCY ANNOUNCEMENT	DOD-ONR	Posted	10/06/2021	01/07/2022
NOAA-OAR-SG-2022-2007054	Marine Finfish Aquaculture: Juvenile Production Technologies	DOC	Posted	10/06/2021	01/27/2022
NOAA-OAR-SG-2022-2007053	Early Stage Propagation Strategies for Aquaculture Species	DOC	Posted	10/04/2021	02/03/2022
NOAA-NMFS-AK-2022-2006961	2022 Alaska Native Organization Co-Management Funding Program	DOC	Posted	09/30/2021	02/11/2022
NOAA-NWS-NWS-CIPO-2021-2007043	Competition for a Cooperative Institute to Support Water Resources	DOC	Posted	09/30/2021	11/29/2021
NOAA-NOS-IOOS-2022-2007005	FY 2022 US Marine Life Observations: Coordinated Marine Biodiversity Observation	DOC	Posted	09/22/2021	12/17/2021

Research Development & Grant Writing News

	Network (MBON) and Animal Telemetry Network (ATN) Activities to Ensure Resilient, Productive Ecosystems and Human Communities in the Face of Change				
NOAA-OAR-CPO-2022-2007019	Climate Program Office (CPO), Regional Integrated Science and Assessments (RISA) FY2022	DOC	Posted	09/21/2021	01/11/2022
NOAA-NOS-OCM-2022-2006993	FY22-23 CRCP International Coral Reef Conservation Grants and Cooperative Agreements	DOC	Posted	09/20/2021	12/01/2021
NOAA-OAR-SG-2023-2007040	National Sea Grant College Program Dean John A. Knauss Marine Policy Fellowship	DOC	Posted	09/20/2021	04/01/2022
NOAA-OAR-SG-2022-2007012	FY2022 National Sea Grant College Program Special Projects	DOC	Posted	09/20/2021	09/30/2022
NOAA-NOS-NCCOS-2022-2007023	Harmful Algal Bloom Control Technologies Incubator	DOC	Posted	09/15/2021	01/27/2022
NOAA-SEC-OED-2022-2006995	Environmental Literacy Program: Increasing community resilience to extreme weather & climate change	DOC	Posted	09/15/2021	03/17/2022
NOAA-NOS-ORR-2022-2007022	FY2022 Marine Debris Prevention	DOC	Posted	09/13/2021	02/11/2022
NOAA-NOS-OCM-2022-2007017	CZM Projects of Special Merit Competition - FY2022	DOC	Posted	09/07/2021	12/03/2021
NOAA-NWS-NWSPO-2022-2006968	Collaborative Science, Technology, and Applied Research (CSTAR) Program	DOC	Posted	09/07/2021	11/19/2021

« Previous **1** 2 Next »

Research Development & Grant Writing News

26 - 37 OF 37 MATCHING RESULTS:

« Previous 1 **2** Next »

Opportunity Number	Opportunity Title	Agency	Opportunity Status	Posted Date ↓	Close Date
NOAA-NOS-NCCOS-2022-2006992	Integrated Research on Coastal and Ocean Acidification and Harmful Algal Blooms	DOC	Posted	08/27/2021	01/19/2022
NOAA-OAR-WPO-2022-2006969	FY2022 Weather Program Office Research Programs	DOC	Posted	08/24/2021	11/17/2021
R22AS00026	WaterSMART Environmental Water Resources Projects for Fiscal Year (FY) 2022	DOI-BOR	Posted	08/03/2021	12/09/2021
NOAA-NOS-ORR-2022-2006974	FY2022 Marine Debris Removal	DOC	Posted	08/02/2021	01/14/2022
NOAA-NOS-NCCOS-2022-2006972	Understanding multi-stressor impacts on marine ecosystems under climate change	DOC	Posted	07/27/2021	01/18/2022
NOAA-NMFS-FHQ-2022-2006956	FY22 Saltonstall-Kennedy Competition	DOC	Posted	06/18/2021	11/29/2021
NOAA-NOS-OCM-2021-2006941	Fiscal Year 2022 - FY2023 Margaret A. Davidson Graduate Fellowships for the National Estuarine Research Reserve System	DOC	Posted	06/08/2021	12/10/2021
NOAA-NFA-NFAPO-2021-2006626	FY2021 to FY2024 NOAA Broad Agency Announcement (BAA)	DOC	Posted	09/29/2020	09/30/2024
USDA-NIFA-AFRI-007692	Agriculture and Food Research Initiative - Foundational and Applied Science	USDA-NIFA	Posted	07/17/2020	12/15/2021
FOA20AFRLRVKE0001	Future Scholars for Science, Technology, Engineering, and Mathematics (STEM) Workforce	DOD-AFRL-AFRLDET 8	Posted	06/17/2020	06/17/2025

Research Development & Grant Writing News

	Development Programs				
NOAA-OAR-CPO-2012-2003041	Climate Program Office for FY 2012	DOC	Posted	07/06/2011	

Editing the Proposal Introduction: the What, Why, How and So-What of a Preliminary Review

Copyright 2021 Academic Research Funding Strategies. All rights reserved.

Reprinted from October 15, 2020

By Mike Cronan, co-publisher

(Back to [Page 1](#))

The most important part of a medical school education, including residency, is the acquisition of clinical skills that, in most cases, allow an assessment of a patient's health based on a brief diagnostic discussion and subtle observations by the physician. Over time, many research office staff develop a similar "clinical skills" capacity to quickly assess the health, i.e., **competitiveness for funding**, of a proposal based on a reading of the first few pages.

But instead of the blood pressure cuff, stethoscope, thermometer, and pulse oximeter used by medical practitioners, proposal review practitioners check the **answers to four key diagnostic questions most closely predictive of funding success**: (1) What research is proposed? (2) Why is it proposed? (3) How will it be accomplished? and (4) So-what?!

In keeping with the World Series starting next week, you might consider the proposer as the batter and the reviewers as the pitchers of these questions: The "What research do you propose to do" question is a bit of a softball question, but the "Why did you chose to conduct this research" question is like a brush back fastball, often resulting in reviewers calling strike 1. The question "How will the proposed research, i.e., your research plan, be conducted to make success a likely outcome" is definitely a curve ball swung at and missed by most authors, resulting in reviewers calling strike two.

At this point, the "batter" is down in the count 1 ball and 2 strikes and the reviewers throw their best pitch, a **knuckleball "so-what" pitch, asking** why your research is significant to the agency mission and where does your research fit in the context of similar research current in the field? Most batters swing at and miss this pitch completely for a called strike 3, followed by "You're Outta Here!"

How well a proposal answers these four questions in its first few pages **largely determines its success, even before reviewers read its remaining pages**. At this early stage, the compelling conceptual framework of the proposal is set; the remainder of the project description expands this foundational base with more convincing detail and specifics.

Conversely, if the clear conceptual framework of the research narrative is not set in the first few pages, **the proposal will likely be declined for funding**. Specifically, it often means the author(s) of the proposal are--

- **not themselves entirely clear** as to whether and how well their proposed research maps to these four core questions in a convincing way,
- or it may mean the proposal authors **are not sufficiently skilled writers** to communicate clearly to reviewers the answers to these questions,
- or it may mean the **proposal was poorly organized**,

Research Development & Grant Writing News

- or it may mean **insufficient time was allocated for writing multiple drafts** of the proposal,
- or it may mean the proposal was submitted **without a thorough edit** by members of the research team or by an experienced editor in a research office,
- or it may mean, and this is most often the case, **the declined proposal's flaws result from a combination of the above.**

Moreover, if the core idea of the proposed research is not presented in these initial few pages and these four questions are left unanswered, partially answered, or vaguely answered, **reviewers will have little incentive to give a close reading to the remaining research narrative** in hopes of determining what the applicant actually proposes to do but fails to explain early in the narrative. **It is never the reviewer's job to search for reasons to fund an applicant's research**, whereas it is always the applicant's job to quickly make a compelling case for funding.

That said, the four questions noted above are always challenging to answer sufficiently well to result in a funding recommendation. Moreover, how well the remainder of the research narrative provides convincing details and specifics to result in a positive funding recommendation **depends entirely on the conceptual foundation underpinning the answers to these questions.**

The "**what you will do**" question is the easiest to write, and is often driven by the goals and objectives that motivate the funding solicitation, although there is often a lot of latitude in determining what you might do to respond fully to the project guidelines. However, because the **what question** is the easiest of the questions to answer, it is often overwritten and even belabored at the expense of the **why and how questions**. The **how question**, whose answer is expected to fully provide the specifics and details of the research plan and methodology, must convince reviewers that an investment in the proposed research is warranted based on the likelihood of success.

Failure to convincingly answer the final **so-what question**, however, is ultimately the **most common cause of a proposal declined for funding**. In many cases, the **so-what question** is answered vaguely, or, when it is addressed, is written as **generalized claims** made for the significance and novelty of the proposed research. Unfortunately, **entirely unsupported claims that fail to** describe how the research fits the agency's mission priorities or where the research fits in the current state of the field, will not demonstrate that the proposed research is cutting edge and impactful.

These are tough standards to meet for any funding request, but a review of the first few pages of a research proposal by an experienced member of a research office focused on how well these critical four questions are answered in the research narrative can significantly impact the quality of a proposal and, hence, its success.

Research Grant Writing Web Resources

([Back to Page 1](#))

- [AHRQ \(Agency for Healthcare Research and Quality\) Grants Process and Application Basics](#) Grant application process guidance and application basics.
- [Grant Application Basics](#) Provides links to guides on how to create grant applications to AHRQ to supporting research to improve the quality, effectiveness, accessibility, and cost effectiveness of health care.
- [Application Forms](#) Grant Application Forms
- [Application Deadlines & Important Dates](#) Information about RFA and non-RFA application submission dates.
- [AHRQ Tips for Grant Applicants](#)
- [Grant Mechanisms & Descriptions](#) Grant codes, application types and descriptions.
- [Application Receipt & Review](#) Grant applications submitted to AHRQ are evaluated by the AHRQ peer review process to ensure a fair, competent and objective assessment of their scientific and technical merit.
- [Study Sections for Scientific Peer Review](#) The Agency for Healthcare Research and Quality (AHRQ) has one chartered Health Services Research Initial Review Group (IRG) responsible for the peer review of grant applications submitted for study section review. This IRG is comprised of subcommittees or study sections, each with a particular emphasis around which peer reviewer expertise is assembled.
- [Award Process](#) Description of the process through which AHRQ funding decisions are made.

[Investing in Resilient Infrastructure in the Gulf of Mexico: A Workshop - Part 1](#)

Project: The Gulf Research Program (GRP) will host an interactive workshop to identify investment priorities that strengthen infrastructure resilience and improve the services from infrastructure in the Gulf of Mexico region. Without a vision to meet future infrastructure needs and plans to realize that vision, our nation will repeatedly repair obsolete infrastructure and still suffer the same deadly consequences of lost power, water, transportation, and other services in future disasters. The Gulf of Mexico region, with rising sea levels, climate change that produces more frequent and more intense hurricanes, and aging or abandoned infrastructure both on- and off-shore, faces particularly acute and very costly risks. Our nation needs to consider investments needed now to make our critical infrastructure more resilient and responsive to our needs in the future.

The workshop will employ interactive exercises using two scenarios of natural disasters that could result in major failures of current infrastructure. Rather than driving response exercises, the scenarios serve as starting points for discussions identifying both the investments that could prevent or mitigate the effects of future infrastructure failures and the obstacles to making those investments. Using their subject-matter expertise and their experience in the workshop, participants will provide input on evaluation criteria and obstacles to smart investments. Participants will join in person for 2 of 3 days.

Research Development & Grant Writing News

Building on this first step, the GRP aims to support efforts to prioritize investments in infrastructure in the Gulf of Mexico region. The project will address key policy questions:

1. What choices would maximize resilience return on federal investments in infrastructure and promote equity, fairness, economic effectiveness and other goals and requirements?
2. How can we overcome obstacles to making the best investments in infrastructure?
3. How can we mitigate private infrastructure assets from becoming public liabilities?

This activity will jumpstart a multiyear initiative of the National Academies of Sciences, Engineering, and Medicine (NASEM) to advise the federal government on infrastructure-investment priorities to make U.S. systems more responsive to modern needs and more resilient to environmental and social changes.

Key audiences will be federal and state trustees and regulators, NGOs, academia, industry, and broad community stakeholders. The GRP seeks to harness the collective experience and knowledge of these participants to set a shared agenda to enhance resilience of human and natural systems to a disaster.

Workshop on Institutional Barriers and Incentives for Engaged Research

There is an increasing interest in engaged research – collaborating with communities and drawing on multiple sources of knowledge in all aspects of the research process – to make academic research more relevant for and inclusive of policy, practice, and societal needs. To this end, the National Academies of Sciences, Engineering, and Medicine’s Standing Committee on Advancing Science Communication is hosting a virtual workshop focused on institutional barriers and incentives for engaged research at the intersection of science and society. The workshop will highlight representative models of engaged research that have been employed in different sectors (health, environment, etc.), including exploring the ways these models are designed to achieve specific goals, as well as the unique challenges involved. Additionally, the workshop will feature a discussion around barriers and opportunities for expanding and scaling these efforts through institutional-level incentives.

Below is a list of USDA/NIFA competitive RFAs. Use the [grant search page](#) to learn more about available grant opportunities.

- [1890 Facilities Grants Program](#)
- [1890 Institution Teaching, Research and Extension Capacity Building Grants \(CBG\) Program](#)
- [AgrAbility - Assistive Technology Program for Farmers with Disabilities](#)
- [Agricultural Genome to Phenome Initiative](#)
- [Agriculture and Food Research Initiative - Education and Workforce Development](#)
- [Agriculture and Food Research Initiative - Foundational and Applied Science Program](#)
- [Agriculture and Food Research Initiative - Sustainable Agricultural Systems](#)
- [Agriculture and Food Research Initiative - Water for Agriculture Challenge Area](#)
- [Agriculture and Food Research Initiative - Water for Food Production Systems Challenge Area](#)
- [Agriculture Business Innovation Center at an HBCU Institution](#)

Research Development & Grant Writing News

- [Agriculture Risk Management Education Partnerships Competitive Grants Program \(ARME\)](#)
- [Alaska Native-Serving and Native Hawaiian-Serving Institutions Education Competitive Grants Program \(ANNH\)](#)
- [Alfalfa Seed and Alfalfa Forage System Program](#)
- [Beginning Farmer and Rancher Development Program \(BFRDP\)](#)
- [Biotechnology Risk Assessment Research Grants Program \(BRAG\)](#)
- [Capacity Building Grants for Non-Land-Grant Colleges of Agriculture Program \(NLGCA\)](#)
- [Centers of Excellence at 1890 Institutions \(1890 COEs\)](#)
- [Children, Youth and Families at Risk Professional Development and Technical Assistance Program](#)
- [Children, Youth, and Families at Risk \(CYFAR\) Sustainable Community Projects](#)
- [Clearinghouse for Military Families Readiness](#)
- [Community Food Projects \(CFP\) Competitive Grants Program](#)
- [Comparative Genomics Research Program](#)
- [Crop Protection and Pest Management](#)
- [CYFAR 4-H Military Partnership Professional Development and Technical Assistance \(CMPC-PDTA\)](#)
- [Distance Education Grants for Institutions of Higher Education in Insular Areas \(DEG\)](#)
- [Emergency Citrus Disease Research and Extension Program \(ECDRE\) Pre-Application](#)
- [Enhancing Agricultural Opportunities for Military Veterans Competitive Grants Program](#)
- [Equipment Grant Program \(EGP\)](#)
- [Evaluation Plan for Army Community Service - Mobilization, Deployment and Stability Support Operations](#)
- [Expanded Food and Nutrition Education Program WebNEERS](#)
- [Farm and Ranch Stress Assistance Network \(FRSAN\)](#)
- [Farm Business Management and Benchmarking \(FBMB\) Competitive Grants Program](#)
- [Farm of the Future](#)
- [Federally Recognized Tribes Extension Program \(FRTEP\) \(formerly Extension Indian Reservation Program\)](#)
- [Food and Agricultural Sciences National Needs Graduate and Postgraduate Fellowship \(NNF\) Grants Program](#)
- [Food and Agriculture Service Learning Program](#)
- [Food Safety Outreach Program](#)
- [Global Change, Ultraviolet Radiation Monitoring and Research Program](#)
- [Higher Education Challenge \(HEC\) Grants Program](#)
- [Higher Education Multicultural Scholars Program \(MSP\)](#)
- [Hispanic-Serving Institutions Education Grants Program \(HSI\)](#)
- [Methyl Bromide Transition Program](#)
- [Military Families Learning Network](#)
- [Military REACH](#)
- [Minor Crop Pest Management Program Interregional Research Project #4 \(IR-4\)](#)
- [National Food and Agricultural Sciences Teaching Extension and Research Awards \(TERA\)](#)

Research Development & Grant Writing News

- [New Beginning for Tribal Students Programs \(NBTS\)](#)
- [New Technologies for Ag Extension \(NTAE\)](#)
- [Organic Agriculture Research and Extension Initiative](#)
- [Organic Transitions \(ORG\)](#)
- [Potato Breeding Research](#)
- [Renewable Resources Extension Act-National Focus Fund Projects \(RREA-NFF\)](#)
- [Resident Instruction Grants Program for Institutions of Higher Education in Insular Areas \(RIIA\) & Agriculture and Food Sciences Facilities and Equipment \(AGFEI\)](#)
- [Rural Health and Safety Education Competitive Grants Program \(RHSE\)](#)
- [Scholarships for Students at 1890 Institutions \(1890 Scholarships\)](#)
- [Secondary Education, Two-Year Postsecondary Education, and Agriculture in the K-12 Classroom Challenge Grants Program \(SPECAs\)](#)
- [Small Business Innovation Research Program - Phase I](#)
- [Small Business Innovation Research Program - Phase II](#)
- [Smith-Lever Special Needs Competitive Grants Program](#)
- [Special Research Grants Program Aquaculture Research](#)
- [Specialty Crop Research Initiative \(SCRI\)](#)
- [Sun Grant Program](#)
- [Supplemental and Alternative Crops \(SAC\)](#)
- [Sustainable Agriculture Research and Education \(SARE\) Regional Host Institution](#)
- [The Gus Schumacher Nutrition Incentive Program](#)
- [Tribal Colleges Extension Program - Special Emphasis \(TCEP-SE\)](#)
- [Tribal Colleges Extension Services Program - Capacity \(TCEP\)](#)
- [Tribal Colleges Research Grants Program \(TCRGP\)](#)
- [Veterinary Services Grant Program \(VSGP\)](#)
- [Women and Minorities in Science, Technology, Engineering, and Mathematics Fields Program \(WAMS\)](#)
- [Youth Farm Safety Education and Certification Program](#)
- [Youth Support and Internship Program \(YSIP\)](#)

Educational Grant Writing Web Resources

([Back to Page 1](#))

[Applications for New Awards; Fulbright-Hays Group Projects Abroad Program](#)

The Department of Education is issuing a notice inviting applications for fiscal year (FY) 2022 for the Fulbright-Hays Group Projects Abroad (GPA) Program, Assistance Listing Numbers 84.021A and 84.021B. This notice relates to the approved information collection under OMB control number 1840-0792. Deadline for Transmittal of Applications: January 11, 2022. Pre-Application Webinar Information: The Department will hold a pre-application meeting via webinar for prospective applicants. Detailed information regarding this webinar will be provided on the GPA website at www2.ed.gov/programs/iegpsgpa/index.html. Additionally, for prospective applicants that have never received a grant from the Department and those that are interested in learning more about the process, please review the grant funding basics resource at <https://www2.ed.gov/documents/funding-101/funding-101-basics.pdf>.

- [Decoding Science: How does science know what it knows? – National Academies of Sciences, Engineering, and Medicine](#)
- [10 Things to Know About Reproducibility and Replicability – National Academies of Sciences, Engineering, and Medicine](#)
- [Reproducibility and Replicability in Science with Committee Chair Harvey Fineberg – National Academies of Sciences, Engineering, and Medicine](#)

[Decoding Science](#)

[What if scientific studies disagree?](#)

Repetition is part of science. Science helps us learn about the world. For example, a study comparing two kinds of wheat can help us learn which one grows best in a particular place. Scientists use studies to answer all sorts of questions, such as whether a new medicine works, how our brains learn a language, or how the moon formed.

But studies can be wrong. How do scientists tell if they got the right answer? One way is to do the study again and see if the results are the same.

There are two main ways to redo a study:

- Examine the same question using the same methods and the same data. This is called reproducing the study.
- Examine the same question using the same methods and new data. This is called replicating the study.

If a study is done multiple times by different scientists with similar results, scientists become more confident that the studies are providing the correct answer.

There are many reasons why studies disagree.

Scientific studies often come to different conclusions about the same topic. Sometimes, studies have different results even when scientists try to use the same methods and data.

Research Development & Grant Writing News

Scientists try to share their methods and data so that others can redo their studies. But even a small change, like using a different brand of beaker, can cause the results to be different. It's easy to make a small change without even knowing it. Often, disagreements result from:

- Not writing down the methods fully or correctly.
- Not following the methods fully or correctly.

It's not always possible to redo a study exactly the same way. For example, some computer algorithms work in a way that gives slightly different results each time. Also, some types of data change or go away over time, making it hard to collect the same data twice. For example, if a comet whizzes by a telescope, you might only be able to get one picture before it flies away.

It is common for studies to disagree if they:

- Use methods that do not work the same way each time.
- Study something that is rare or that naturally changes.

Occasionally, disagreements result from fraud, bias, or mistakes. In these cases, it is important to hold those involved accountable and correct the record.

There is always some uncertainty in science. Scientific methods often have variability that can't be avoided. For example, devices like scales and thermometers can give slightly different results even when measuring the same thing. Data can change as well. If you measure the temperature outside today and measure it again tomorrow, you'll probably get different results. That's not because you measured wrong, but because temperature changes over time. Some differences are to be expected.

It is important to understand the level of uncertainty or error that is expected in a study. Just because all studies have uncertainty doesn't mean that they are wrong. Sometimes, results that are slightly different can still be considered close enough if the difference is within the expected range of uncertainty. When studies disagree, it is useful to try to find out why. This can help improve scientific methods and even lead to new discoveries.

Agency Research News

Page 1

Dear Colleagues:

FastLane is going away at the end of 2022. Be in the know on NSF's proposal preparation and submission modernization and other important NSF updates. You are invited to participate in the NSF Electronic Research Administration (ERA) Forum webinar on **November 16, 2021, from 1:30 - 3:00 PM Eastern Time**. To participate in this Forum, please [Register Now](#). The topics for this Forum webinar will cover:

- NSF Public Access Repository (NSF-PAR) 2.0
- Unique Entity Identifier (UEI)
- Development of the Research.gov Proposal Submission System
 - Where we are and what is planned for the future
 - Status of migration and adoption of Research.gov
 - Demo – NSF-PAR and how to prepare a proposal.

We encourage you to send questions ahead of the November 16, 2021 ERA Forum webinar to nsferaforum@nsf.gov. For more information about the NSF ERA Forum Webinar, please visit the DIAS/Policy Office website at https://www.nsf.gov/bfa/dias/policy/era_forum.jsp. Please share this information with your colleagues. They can also subscribe to our ERA Forum listserv to receive future ERA Forum notifications by simply sending a blank email to NSF-ERA-FORUM-subscribe-request@listserv.nsf.gov to be automatically enrolled.

When in Doubt, Reach Out!

Online resources are great. Many of your questions can be answered by checking out our [Grants & Funding](#) website, including our [Policy & Compliance](#) and [How to Apply – Application Guide](#) pages, and our [FAQs](#). Even so, whether you are new to the NIH grant process or a seasoned pro, at some point you'll need help from an actual person. Your institution's sponsored programs office or grants administrators are the best first step for getting that help. They are often able to help you navigate your institution's *and* NIH's processes and procedures. They can also help obtain additional guidance from NIH when needed.

Knowing when to reach out and who to contact at NIH is important. Earlier this month we restructured our [Need Help?](#) page based on feedback received from web page surveys. (Yes, we really do read them!)

The updated [Need Help?](#) page (note the new URL – <https://grants.nih.gov/help>) is accessible from the Help utility link in the upper right corner of the [Grants & Funding](#) website just beneath the Search bar. The page has four main sections.

1. [Understand Staff Roles](#). The majority of your interactions will be with Institute/Center staff, specifically program and grants management officials. You may also interact with receipt and referral staff after application submission and scientific review officers during application review. This page explains the main responsibilities of each staff role, when to contact them, and how to identify the correct staff at each stage of the process.

Research Development & Grant Writing News

2. [Institute and Center \(IC\) Contacts](#). Questions about a specific funding opportunity should be directed to the IC contacts in the Agency Contacts section of that opportunity. Questions about a specific application or grant award should be directed to the IC contacts listed in eRA Commons for that application/grant. If specific contacts can't be identified, use this page to find general contacts, staff directories, and opportunity listings for each IC.
3. [Central NIH Office Contacts](#). If you checked our online resources and have additional policy or grants administration questions not related to a specific opportunity or award, you can reach out to our central contacts. The page includes contacts for policy, compliance, human subjects, biosketch, other support, animal welfare, research training, and more.
4. [eRA Service Desk](#). We now have a dedicated page for eRA system support with easy access to system documentation, tutorials, FAQs, and support staff.

Our NIH Grants Virtual Assistant chatbot can also help identify online resources and contacts associated with your inquiry. It's still learning and we continuously make improvements based on your interactions. So, give it a try and take a moment to let us know what you think in the short survey. The bottom line is NIH staff is available to help. So, when in doubt, reach out!

[Notice of Intent to Issue Funding Opportunity Announcement No. DE-FOA-0002638](#) [Department of Energy](#)

The Office of Energy Efficiency and Renewable Energy (EERE) intends to issue, on behalf of the Bioenergy Technologies Office (BETO), a Funding Opportunity Announcement (FOA) entitled "Scale-Up of Integrated Biorefineries." The FOA will support the highest priority research and development (R&D) areas identified for funding in fiscal year 2022 (FY22) by BETO within biofuel and bioproduct technologies. The FOA will cover two BETO Programs: Advanced Algal Systems and Systems Development and Integration. All topic areas support the White House's priority for advancing the domestic bioeconomy and support BETO's Program Goal to achieve \$2.50/gasoline gallon equivalent (GGE) Minimum Fuel Selling Price (MSFP) and at least a 70% reduction in greenhouse gas (GHG) emissions (vs. petroleum baseline) by 2030. The R&D activities to be funded under this FOA will support the government-wide approach to the climate crisis by driving innovations that lead to the deployment of clean energy technologies. Specifically, this FOA will support high-impact R&D focusing on the production of low-GHG fuels for the aviation industry, the long-haul trucking sector, and marine industries by soliciting proposals to scale-up promising technologies. The FOA intends to provide a continuation of R&D priorities and strategies identified under BETO's FY21 Scale-up and Conversion FOA (DE-FOA-0002396). This Notice is issued so that interested parties are aware of the EERE's intention to issue this FOA in the near term. All of the information contained in this Notice is subject to change. EERE will not respond to questions concerning this Notice. Once the FOA has been released, EERE will provide an avenue for potential Applicants to submit questions. EERE plans to issue the FOA in or about December 2021 via the EERE Exchange website <https://eere-exchange.energy.gov/>. If Applicants wish to receive official notifications and information from EERE regarding this FOA, they should register in EERE Exchange. When the FOA is released, applications will be accepted only through EERE Exchange.

Research Development & Grant Writing News

Agency Reports, Workshops & Research Roadmaps

Page 1

Research Misconduct, NSF Office of Inspector General

Research misconduct damages the scientific enterprise, is a potential misuse of taxpayer dollars, and undermines the trust of citizens in government-funded research. Pursuing allegations of research misconduct — plagiarism, fabrication, and falsification — continues to be a focus of our investigative work.

What is research misconduct?

According to [NSF's Research Misconduct regulation](#) (45 C.F.R. part 689), it's "fabrication, falsification, or plagiarism in proposing or performing research funded by NSF, reviewing research proposals submitted to NSF, or in reporting research results funded by NSF." A finding of research misconduct requires proof by a preponderance of evidence that the act is a significant departure from accepted practices of the relevant research community and that the act be committed intentionally, knowingly, or recklessly.

How do you handle research misconduct allegations?

The following documents describe our procedures for handling allegations of research misconduct:

- [Dear Colleague Letter](#)
- [NSF's Research Misconduct Regulation](#)
- [Assessing Intent in Research Misconduct Investigations](#)
- [Assessing Intent in Verbatim Plagiarism Investigations](#)

What have you found?

- View our [By the Numbers](#) page for aggregate data.
- Our [Semiannual Reports to Congress](#) include summaries of selected research misconduct investigations (among others).
- Our [Case Closeout Memoranda](#) summarize the matter we investigated and the final outcome of the case.
- Read our report on [Institutions' Implementation of NSF's Responsible Conduct of Research Requirements](#).

Where can I find more information?

- View our [outreach](#) presentations and articles for educational institutions and the research community.
- [NSF's Proposal & Award Policies & Procedures Guide \(PAPPG\)](#) describes its policies about research misconduct, potential consequences of research misconduct, and grantee responsibilities.
- The [Online Ethics Center for Engineering and Science](#) contains resources for teaching and learning about ethics in engineering and science, as well as the responsible conduct of research. (Any opinions, conclusions or recommendations expressed in their material are those of the authors and do not necessarily reflect the views of the National Science Foundation Office of Inspector General.)

Research Development & Grant Writing News

Combating Antimicrobial Resistance Globally Requires Maintaining Safety of Available Antibiotics and a Robust Pipeline; Animal and Environmental Health Strategies Also Needed

Combating antimicrobial resistance — which kills about 36,000 people a year in the United States alone — not only requires a strong pipeline of new antimicrobial medicines and other products, but also preserving the effectiveness of those already in use, says a new congressionally mandated [report](#) from the National Academies of Sciences, Engineering, and Medicine. The report recommends ways to hold nursing homes, dialysis centers, and long-term care hospitals, in particular, accountable for appropriate use of antimicrobials.

Although antimicrobial resistance is most apparent in human medicine, the report says policymakers should consider the interconnectedness of human, animal, and environmental health — a One Health perspective. Safe, effective antimicrobials are cornerstones of modern medicine as well as pandemic preparedness and response. As microbes know no borders, the United States' program to counter resistant pathogens should be proportionate to the size and scope of the threat, says *Combating Antimicrobial Resistance and Protecting the Miracle of Modern Medicine*. A program modeled after the President's Emergency Plan for AIDS Relief may be best suited to addressing the global health challenge of antimicrobial resistance. Currently, nursing homes, dialysis centers, and long-term care hospitals are potential hotspots for the emergence and spread of resistance. The Centers for Medicare and Medicaid Services (CMS) should require these facilities to have antimicrobial stewardship programs, the report recommends. Antimicrobial stewardship — use of the right drug, dose, and duration — should be included in the quality measures on Care Compare, a CMS website that publicizes quality data for patients and their caregivers.

Antimicrobial resistance occurs when microorganisms such as fungi, parasites, and bacteria evolve to become immune to the medicines used to treat them. The overuse and misuse of antimicrobial medicines contributes to this process. By recent estimates, between 0.91 million and 1.71 million people worldwide die from resistant infections every year. These infections can cost society in terms of increased hospitalization and expensive and extensive treatment, and through illness, disability, and loss of life. “Numerous medical procedures — organ transplants, joint replacements, cancer treatment, and even safe childbirth — rely on effective antibiotics to prevent and treat infections in people's most vulnerable moments. If we don't make antimicrobial resistance a public health priority, we risk setting back gains in modern medicine,” said Guy Palmer, Regents Professor of Pathology and Infectious Diseases at Washington State University and chair of the committee that wrote the report. “As the ongoing COVID-19 pandemic has taught us, we must confront our vulnerability to pathogens in ways we haven't before.”

2019 National Academies report on the science of effective mentorship

Mentorship is a catalyst capable of unleashing one's potential for discovery, curiosity, and participation in STEMM and subsequently improving the training environment in which that STEMM potential is fostered. Mentoring relationships provide developmental spaces in which students' STEMM skills are honed and pathways into STEMM fields can be discovered. Because mentorship can be so influential in shaping the future STEMM workforce, its occurrence should not be left to chance or idiosyncratic implementation. There is a gap between what we know about effective mentoring and how it is practiced in higher education. The Science of Effective

Research Development & Grant Writing News

Mentorship in STEMM studies mentoring programs and practices at the undergraduate and graduate levels. It explores the importance of mentorship, the science of mentoring relationships, mentorship of underrepresented students in STEMM, mentorship structures and behaviors, and institutional cultures that support mentorship. This report and its complementary interactive guide present insights on effective programs and practices that can be adopted and adapted by institutions, departments, and individual faculty members.

New Funding Opportunities

[\(Back to Page 1\)](#)

Content Order

New Funding Posted Since October 15 Newsletter
URL Links to New & Open Funding Solicitations
Solicitations Remaining Open from Prior Issues of the Newsletter
Open Solicitations and BAAs

[User Note: URL links are active on date of publication, but if a URL link breaks or changes a Google search on the key words will typically take you to a working link. Also, entering a grant title and/or solicitation number in the Grants.gov search box will work as well.]

New Funding Solicitations Posted Since October 15 Newsletter

[Coastlines and People Hubs for Research and Broadening Participation \(CoPe\)](#)

Scientific research into complex coastal systems and the interplay with coastal hazards is vital for predicting, responding to, and mitigating threats in these regions. Understanding the risks associated with coastal hazards requires a holistic Earth Systems approach that integrates improved understanding of and, where possible, predictions about natural, social, and technological processes with efforts to increase the resilience of coastal systems. The Coastlines and People program supports diverse, innovative, multi-institution awards that are focused on critically important coastlines and people research that is integrated with broadening participation goals. The objective of this solicitation is to support Coastal Research Hubs, structured using a convergent science approach, at the nexus between coastal sustainability, human dimensions, and coastal processes to transform understanding of interactions among natural, human-built, and social systems in coastal, populated environments. **Due Dec. 6.**

[NOAA-NOS-ONMS-2022-2007101 FY22 Dr. Nancy Foster Scholarship Program](#)

The Dr. Nancy Foster Scholarship Program provides support for master's and doctoral degrees in oceanography, marine biology, maritime archaeology—these may include but are not limited to ocean and/or coastal: engineering, social science, marine education, marine stewardship, cultural anthropology, and resource management disciplines—and particularly encourages women and members of minority groups to apply. Individuals who are U.S. citizens or permanent residents, or citizens of U.S. territories, and are applying to or have been accepted to a graduate program at a U.S. accredited institution, may apply. Prospective scholars do not need to be enrolled in a graduate program at the time of application, but must be admitted to a graduate level program in order to be awarded this scholarship. Scholarship selections are based on academic excellence, letters of recommendations, research proposals, relevant experience, and financial need. Applicants must have a cumulative 3.30 grade point average (GPA) to be eligible to apply and maintain a minimum cumulative and term GPA of 3.30 for

Research Development & Grant Writing News

every term and for the duration of their award. Dr. Nancy Foster Scholarships may provide, subject to appropriations, yearly support of approximately \$42,000 per student (a 12-month stipend of \$30,000 in addition to an education allowance of \$12,000) and up to \$10,000 of support for a 4-6 week program collaboration at a NOAA facility. Applicants can only obtain funding for the number of years they have remaining in their graduate studies when they apply for the Dr. Nancy Foster Scholarship Program. For example, if you have already completed two (2) years of your PhD studies, and you become a Dr. Nancy Foster Scholarship recipient and indicate it will take you two additional years to complete your degree, you will only be able to obtain funds for the remaining two (2) years of your graduate studies. Note that scholars may request a one-time no cost extension for up to one (1) year that must be requested at least 60 days before the end of the award and will need to provide a justification and a current budget.

Due Dec. 14

[National Priorities: Innovative Sampling Designs For Public Health Surveillance Of Coronaviruses And Other Pathogens In Wastewater](#)

The COVID-19 pandemic has highlighted the need for effective tools to monitor the emergence and spread of infectious diseases. The U.S. Environmental Protection Agency (EPA) is seeking applications proposing innovative research to inform effective wastewater sampling network designs which allow for early detection and can provide evidence of spread of infection from national to local levels in a form that can be readily used by public health agencies nationwide to address current and future epidemics/pandemics. Wastewater sampling has been widely deployed during the pandemic as a cost-effective, screening-level approach to assess infection levels in the community. In addition to improved analytical detection methods and understanding of pathogen fate and transport in sewer systems, advancing wastewater-based monitoring will require well-designed sampling networks and public health data integration approaches. **Due December 15.**

[Food Safety Outreach Program](#)

The Food Safety Outreach Program will complement and expand the national infrastructure of the National Food Safety Training, Education, Extension, Outreach, and Technical Assistance Competitive Grants Program. The Food Safety Outreach Program will build upon that national infrastructure, with a sustained focus on delivery of customized training to members of the target audiences. Awardees will develop and implement food safety training, education, extension, outreach and technical assistance projects that address the needs of owners and operators of small to mid-sized farms, beginning farmers, socially-disadvantaged farmers, small processors, or small fresh fruit and vegetable merchant wholesalers. Grant applications will be solicited directly from those in local communities to include those from community-based organizations, non-governmental organizations, food hubs, farm cooperatives, extension, and other local groups.

[APPLY FOR GRANT\(LINK IS EXTERNAL\)VIEW RFA](#)

Relevant Documents:


 [FY 2022 FSOP Webinar Description.pdf](#) (81.53 KB)

Relevant Links:

Research Development & Grant Writing News

[Food Safety Outreach Program FY 2022 USDA NIFA Food Safety Outreach Program Webinar\(link is external\)](#)[Volunteer to serve as an FSOP Peer Review Panelist](#)

Previous fiscal year(s) RFA:

 [FY21-FSO-RFA-508-V3.pdf](#) (423.12 KB)

Due December 16.

[Innovative ways to provide education on antimicrobial stewardship practices in animals.](#)

The purpose of this Funding Opportunity is to solicit applications to develop innovative ways to disseminate information about **the health risks associated with antimicrobial resistance and the benefits of implementing good antimicrobial stewardship practices for managing diseases in food-producing animals.** Adopting good antimicrobial stewardship practices, including optimizing how antimicrobials are used as part of herd/flock disease management plans, can help slow the development of antimicrobial resistance while effectively managing animal disease. **Due January 3**

[Modulating Human Microbiome Function to Enhance Immune Responses Against Cancer \(R01 Clinical Trial Not Allowed\)](#)

The purpose of this Funding Opportunity Announcement (FOA) is to support basic research that elucidates mechanisms by which the human microbiome inhibits or enhances anti-tumor immune responses, and to identify potential novel molecular targets for cancer prevention strategies. Applications should be focused on delineating how host interactions with specific microbes (or consortia) or their metabolites target immune responses that enhance or prevent inflammation-associated or sporadic tumor formation. Concentration, timing, and duration of administered beneficial microbes may alter its effectiveness and thus those parameters should be rigorously addressed in the application. **Due January 5.**

[AgrAbility - Assistive Technology Program for Farmers with Disabilities](#)

The AgrAbility program increases the likelihood that farmers, ranchers, farm workers and farm family members with disabilities will experience success in agricultural production. The program supports projects between State Cooperative Extension System and private, non-profit disability organizations who work in partnership to provide agricultural education and assistance directed at accommodating disability in farm operations for individuals with disabilities, and their families, who engage in farming and farm-related occupations. **Due January 13.**

[Modulating Human Microbiome Function to Enhance Immune Responses Against Cancer \(R21 Clinical Trial Not Allowed\)](#)

The purpose of this Funding Opportunity Announcement (FOA) is to support basic research that elucidates mechanisms by which the human microbiome inhibits or enhances anti-tumor immune responses, and to identify potential novel molecular targets for cancer prevention strategies. Applications should be focused on delineating how host interactions with specific microbes (or consortia) or their metabolites target immune responses that enhance or prevent inflammation-associated or sporadic tumor formation. Concentration, timing, and duration of

Research Development & Grant Writing News

administered beneficial microbes may alter their effectiveness and thus those parameters should be rigorously addressed in the application. **Due January 16**

Specialty Crop Research Initiative (SCRI)

The purpose of the SCRI program is to address the critical needs of the specialty crop industry by awarding grants to support research and extension that address key challenges of national, regional, and multi-state importance in sustaining all components of food and agriculture, including conventional and organic food production systems. Projects must address at least one of five focus areas:

- Research in plant breeding, genetics, genomics, and other methods to improve crop characteristics
- Efforts to identify and address threats from pests and diseases, including threats to specialty crop pollinators
- Efforts to improve production efficiency, handling and processing, productivity, and profitability over the long term (including specialty crop policy and marketing)
- New innovations and technology, including improved mechanization and technologies that delay or inhibit ripening
- Methods to prevent, detect, monitor, control, and respond to potential food safety hazards in the production efficiency, handling and processing of specialty crops

APPLY FOR GRANT(LINK IS EXTERNAL)VIEW RFA

Who Is Eligible to Apply:

1862 Land-Grant Institutions, 1890 Land-Grant Institutions, 1994 Land-Grant Institutions, For-profit Organizations Other Than Small Businesses, Hispanic-Serving Institutions, Nonprofits with 501(c)(3) IRS status, other than Institutions of Higher Ed, Nonprofits without 501(c)(3) IRS status, other than Institutions of Higher Ed, Other or Additional Information (See below), Private Institutions of Higher Ed, Small Business, State Agricultural Experiment Stations, State Controlled Institutions of Higher Ed

More on Eligibility:

Pre-applications may only be submitted by Federal agencies, national laboratories, colleges and universities, research institutions and organizations, private organizations, foundations, or corporations, State Agricultural Experiment Stations, Cooperative Extension Services, individuals, or groups consisting of two or more of these entities.

Abstracts of Funded Projects:

[Read the Abstracts](#)

Previous fiscal year(s) RFA:

 [FY-2021-SCRI-Pre-App-Mod-RFA-508.pdf](#) (228.89 KB)

Estimated Total Program Funding:

\$80,000,000

Percent of Applications Funded:

20%

Cost Sharing or Matching Requirement:

Please see detailed information in the RFA.

Range of Awards:

\$50,000 - \$10,000,000

Research Development & Grant Writing News

Due January 21

[Glenn Foundation for Medical Research](#)

This program was developed to address the current concerns about an adequate funding base for postdoctoral fellows (MD, MD/PhD and PhD) who specifically direct their research towards **basic aging mechanisms and/or translational findings that have direct benefits to human aging**. Postdoctoral fellows at all levels of training are eligible. Up to ten one-year fellowships of \$60,000 will be awarded in 2021. The Glenn Foundation for Medical Research, in partnership with the American Federation for Aging Research (AFAR), created the Glenn Foundation for Medical Research Postdoctoral Fellowships in Aging Research to encourage and further the careers of postdoctoral fellows, who are conducting research in the **basic biology of aging, as well as translating advances in basic research from the laboratory to the clinic**. The award is intended to provide significant research and training support to permit these postdoctoral fellows to become established in the field of aging. The Glenn Foundation Postdoctoral Fellowship program supports research projects concerned with understanding the **basic mechanisms of aging as well as projects that have direct relevance to human aging** if they show the potential to lead to clinically relevant strategies that address human aging and healthspan. Projects investigating age-related diseases will be considered, but only if approached from the point of view of how basic aging processes may lead to these outcomes. Projects concerning mechanisms underlying common geriatric functional disorders such as frailty will also be considered. Projects that are strictly clinical in nature such as the diagnosis and treatment of disease, health outcomes, or the social context of aging are not eligible. It is anticipated that up to 10 one-year grants will be awarded in 2021. The grant is \$60,000, of which \$52,000 (*see note below) is to be used for salary and the remainder to be used for allowable expenses (research supplies, equipment, health insurance, travel to scientific meetings where the Fellow is presenting his/her biology of aging research, and relevant research and educational training). **LOI due January 25.**

[Research Coordination Networks in Undergraduate Biology Education \(RCN-UBE\)](#)

The goal of the RCN-UBE program is to link biological research discoveries with innovations in biology education to improve the learning environment in undergraduate biology classrooms. The program seeks to improve undergraduate education by leveraging the power of a collaborative network recognizing that new educational materials and pedagogies can simultaneously teach biological concepts while creating a supportive and engaging learning environment for all. The RCN-UBE program supports groups of investigators to communicate and coordinate their research, training, and education. The theme or focus of an RCN-UBE proposal can be on any topic likely to advance this goal, and activities across disciplinary, organizational, geographic, and international boundaries are encouraged. Acknowledging that students' educational pathways vary, networks that include under-resourced institutions as full, equitable partners are highly desired. Understanding that people from diverse backgrounds bring different experiences and viewpoints, the RCN-UBE program is interested in proposals that include individuals from traditionally underrepresented in biological research and education as members of the steering committee. Lastly, the RCN-UBE program is also interested in developing, testing, and sharing best practices that can transform the online

Research Development & Grant Writing News

learning environment. These efforts supported by RCN-UBE are responsive to the national movement to revolutionize undergraduate learning and teaching in the biological sciences as described in the 2009 "Vision and Change in Undergraduate Biology Education" report. Collectively, the RCN-UBE program has contributed to developing and disseminating educational research resources and modules, to forging new collaborations, and to sharing best practices and processes for scalability and sustainability of activities. These efforts have involved a large cadre of faculty, students, and other stakeholders. In accord with other RCN awards, RCN-UBE awards provide opportunities to address interdisciplinary topics, to explore innovative ideas for implementing novel networking strategies, to explore collaborative technologies, and to develop community standards. RCN-UBE awards do not support existing networks or the activities of established collaborations. Note: Because it addresses undergraduate biology education, the RCN-UBE program is offered in alignment with the NSF-wide undergraduate STEM education initiative, Improving Undergraduate STEM Education (IUSE). More information about IUSE can be found at the end of the Program Description section of this solicitation and the NSF IUSE solicitation ([NSF 21-579](#)). Depending on the scope and nature of the project, investigators should consider applying to IUSE or RCN-UBE. **Due January 25.**

[Dark Dimensions of the RNA Regulome \(D2R2\)](#)

This solicitation invites participation in an Ideas Lab whose focus will be the exploration of novel approaches to elucidate the evolutionary and functional significance of RNA transcripts that do not encode proteins as well as the technological innovations that may arise from the ability to harness the power of non-coding RNA to solve pressing societal problems. Ideas Labs are intensive, facilitated workshops to find innovative solutions to grand challenge problems. The overarching aim of this Ideas Lab is to bring together a diverse set of researchers from multiple disciplines spanning biology, chemistry, physics, mathematics, computer and information sciences, and engineering, to stimulate generation and execution of innovative research that advances our understanding of the origin, diversity, and functions of non-coding RNAs. Outcomes from this Ideas lab should lead to new theories and models for understanding non-coding RNAs, new approaches to manipulate and control non-coding RNA activity, and biotechnological innovations based on the expected research results that spur the bioeconomy and enhance our ability to predict and **mitigate the effects of changing environments on organisms and ecosystems**. Although our ability to sequence, analyze, and manipulate genomes has significantly advanced in the last two decades, we still have not solved the grand challenge of understanding how genomes produce phenotypic variation and give rise to taxonomic and functional diversity. Despite substantial investments and widespread implementation, genome-wide association studies have only succeeded in explaining a small fraction of the genetic variation in most organisms, and much of this variation maps onto poorly characterized non-protein-coding regions of genomes. Many of those "dark" regions of the genome are transcribed into RNAs that do not encode proteins but may show signatures of evolutionary conservation, unusual structural features, and/or non-random expression patterns that are suggestive of their functional roles. There has been a surge of interest in uncovering the cellular, physiological, and developmental roles of non-coding RNAs in recent years, and it is now clear that non-coding RNAs affect a wide range of cellular processes, including regulation

Research Development & Grant Writing News

of gene expression, developmental processes, metabolism, physiology, and even interactions with other organisms. Understanding the role of non-coding RNA in these cellular processes will be essential to enable the rational design of biological systems for biotechnology applications. Nevertheless, the vast majority of non-coding RNAs remain uncharacterized, and our understanding of their functional roles remains in its infancy. It is likely that the underlying rules governing the evolution and function of non-coding RNAs are different from those of protein-coding ones; hence fresh perspectives and novel approaches are needed to unveil the syntax and semantics of this hidden language. A wealth of new biology awaits discovery, along with hitherto unimagined **biotechnology innovations, powered by transformative technologies and approaches** to illuminate the dark dimensions of the RNA regulome, and decipher the role of non-coding RNAs in shaping the form and function of living organisms through evolution.

Preliminary Due January 31

Farm and Food Worker Relief Grant Program

The Farm and Food Worker Relief Grant Program provides approximately \$665 million in Consolidated Appropriations Act funds to provide grants to State agencies, Tribal entities, and nonprofit organizations with experience in providing support or relief services to farmworkers or meatpacking workers. Awards will generally range from \$5,000,000 to \$50,000,000. Applicants for farmworkers or meatpacking workers support may request more than the maximum amount when they demonstrate they are a national organization with capacity to deliver funds in excess of \$50,000,000 across multiple states and in partnership with smaller farmworker or meatpacking worker organizations. These applicants must justify the requested funding amounts within the Project Narrative, indicating the dollar amount requested, estimating the number of workers they expect to deliver relief payments to, and demonstrating their capacity to manage funds effectively. AMS reserves the right to negotiate budgets and final award amounts based on the number of applications received, available resources, and the need to equitably distribute funds across worker populations and Administration priorities. Entities receiving awards will then distribute relief payments to frontline farmworkers and meatpacking workers who incurred expenses preparing for, preventing exposure to, and responding to the COVID-19 pandemic. USDA strongly encourages small organizations to partner together or to partner with national organizations in submitting applications to ensure this support has the broadest reach and distribution possible to America's farm and food workers. AMS will set aside up to a total of \$20,000,000 of this amount for one or more grant agreements to benefit grocery store workers.

Important Dates:

- Applications must be submitted on or before 11:59 pm Eastern Time on **February 8, 2022**.
- Note: In 2022, workers will apply to grant recipients to receive funds.

What are the application requirements?

Applications must be submitted through www.grants.gov. You can find the requirements for submitting an application in the most recently published Request for Applications.

- [2022 FFWR Request for Application \(pdf\)](#)

What are the required forms?

- [FFWR Narrative Form \(docx\)](#)

Research Development & Grant Writing News

- Forms SF-424 can be found with the www.grants.gov website application submission.
- [Partner Organization Letter Template \(docx\)](#)

Additional Information

- For more information, you may also contact us at FFWRGrants@usda.gov
- [USDA Invests \\$700 million in Grants to Provide Relief to Farm and Food Workers Impacted by COVID-19](#)
- [USDA Begins Accepting Applications for New Farm and Food Workers Relief Grant Program](#)
- [USDA Hosts Webinar on the New Farm and Food Workers Relief Grant Program](#)

Due Feb. 8

CVM Vet-LIRN Veterinary Diagnostic Laboratory Program (U18) Clinical Trials Not Allowed

The purpose of this Funding Opportunity Announcement (FOA) is to solicit applications from institutions/organizations for inclusion into FDA's Veterinary Laboratory Investigation and Response Network Cooperative Agreement Program for Veterinary Diagnostic Laboratories. These Cooperative agreements are intended to:

1. Strengthen coordination of veterinary diagnostic laboratory efforts as related to the national food safety system by supporting research and capacity building during case investigations, including chemical, microbiological, pathological, or other complex analyses to help determine cases of potential adulteration or contamination of animal foods or animal drugs.
2. Support validation and harmonization of analytical methods and equipment platforms, supporting research into questions arising during case investigations.
3. Strengthen coordination of veterinary diagnostic laboratory efforts as related to the national food safety system, as put forth in the FDA Food Safety Modernization Act (FSMA) by developing the Vet-LIRN laboratory Network's ability to investigate potential animal foodborne illness outbreaks.
4. Support training, quality assurance processes, proficiency exercises, and data sharing to support development of veterinary diagnostic laboratories.
5. Support laboratory efforts to obtain accreditation (AAVLD, ISO/IEC 17025 accreditation) or adopt a quality system comparable to international standards.

Application Due Date(s)

February 10, 2022, February 10, 2023, February 9, 2024.

Organismal Response to Climate Change (ORCC) Expanding Understanding and Improving Predictions of Life on a Warming Planet

This solicitation replaces the pair of Dear Colleague Letters (DCL) focused on Integrating **Mechanisms of Adaptation with Genes in Networks** and across Environments (**IMAGiNE**). DCL [NSF 20-044](#) (**IMAGiNE: 2020: Organisms in a Dynamic Environment**) was issued to encourage submission of proposals that addressed how organism-environment interactions determine the emergence of **complex traits**. A second DCL [NSF 21-034](#) (**IMAGiNE FG: Functional Genomics**) extended the **IMAGiNE** theme to encourage research on the organismal mechanisms, analytical frameworks, and biological theories that advance our understanding of the connection between an organism's genome and its phenotype. This solicitation replaces the two **IMAGiNE** DCLs and focuses on the synthetic integration of

Research Development & Grant Writing News

organismal mechanism and eco-evolutionary approaches and models in order to improve our understanding and ability to predict and manage organismal responses to changing climates. Innovating and migrating proposal preparation and submission capabilities from FastLane to Research.gov is part of the ongoing NSF information technology modernization efforts, as described in [Important Notice No. 147](#). In support of these efforts, proposals submitted in response to this program solicitation must be prepared and submitted via Research.gov or via Grants.gov and may not be prepared or submitted via FastLane. Proposals to the ORCC Solicitation are encouraged that build on NSF's investment in growing convergence research by developing integrative, cross-disciplinary approaches that examine the organismal mechanisms that underlie adaptive and maladaptive responses to environmental factors associated with climate change, how these responses affect fitness in changing and/or novel climates, and the genetic and evolutionary processes through which these traits originate, persist, and are transmitted across generations. Further, this solicitation encourages creative approaches to translate results of these investigations to better predict and manage effects of climate change on organisms across spatial and temporal scales and biological hierarchies. Proposals that do not bridge disciplinary components, that lack a specific focus on organismal responses to climate change, that do not relate mechanistic insights to eco-evolutionary consequences above the level of the individual, and that could normally be submitted to the "core" or special programs in IOS or DEB are not appropriate for submission to this solicitation. Please contact a cognizant program officer if you have questions about where your planned proposal fits. **Due March 1.**

[DOE SC program in Biological and Environmental Research \(BER\)](#)

The DOE SC program in Biological and Environmental Research (BER) announces its interest in receiving research applications for Earth and Environmental Systems Modeling (EESM). The goal of the EESM portfolio within the BER program is to develop and demonstrate advanced modeling and simulation capabilities in order to enhance the predictability of the Earth system over multiple temporal and spatial scales. The EESM vision is to provide the best possible information about the Earth's evolving system. While this information could have future uses, BER's interest in supporting this research is to advance our understanding of the natural world, its processes, and its phenomena. This FOA solicits research applications for: 1) Earth System Model Development (ESMD)- To advance the development of the Energy Exascale Earth System Model (E3SM) by enhancing its capability and accuracy toward an integrated earth system model including all earth system components and their interaction with human component; and 2) Regional and Global Model Analysis (RGMA)- To enhance understanding of predictability of the Earth system by simulating, evaluating, and analyzing modes of climate variability, water cycle, and extreme events. Innovative techniques such as machine learning, data assimilation and initialization are encouraged as part of this topic. Development of metrics to quantify and reduce the uncertainty in Earth System model projections will be an integral component of the model analysis part of a successful application. **Due March 9.**

[Research to support the development of alternatives to antimicrobials for use in food-producing animals](#)

DA announces the availability of fiscal year (FY) 2022 funds to support studies that identify the

Research Development & Grant Writing News

most common drivers for antimicrobial use in animal agriculture and identify potential alternatives to antimicrobials that may reduce the need for antimicrobial use. The funded studies are intended to 1) provide information about animal diseases that are the most significant drivers for antimicrobial use in various animal production settings (i.e., cattle, swine, turkeys, and chickens), and 2) provide information about alternative practices that may help reduce the reliance on such drugs while addressing animal health needs. Such alternatives can include changes in husbandry, biosecurity, vaccination, and other practices. This grant will support the continued advancement of FDA's initiatives related to supporting antimicrobial stewardship in veterinary settings and will support the National Action Plan objectives to engage the animal health community and relevant stakeholders to advance strategies intended to foster antimicrobial stewardship and to improve understanding of antimicrobial use practices in animal agriculture **Due March 31**

DARPA Information Innovation Office: Office-Wide Announcement

Sponsor Deadline: Oct 28, 2022; **Letter of Intent Deadline:** Sep 23, 2022

This Broad Agency Announcement (BAA) seeks revolutionary **research ideas for topics not being addressed by ongoing I2O programs** or other published solicitations. Potential proposers are highly encouraged to review the current I2O programs ([http://www.darpa.mil/about-us/offices/i2o\(link is external\)](http://www.darpa.mil/about-us/offices/i2o(link is external))) and solicitations ([http://www.darpa.mil/work-with-us/opportunities\(link is external\)](http://www.darpa.mil/work-with-us/opportunities(link is external))) to avoid proposing efforts that duplicate existing activities or that are responsive to other published I2O solicitations. I2O programs focus on overcoming technical challenges in bringing these technologies to the mission, addressing topics such as network security, cyber and multi-domain operations, human-system interaction, and assured autonomy. I2O programs are organized into four thrust areas: Proficient artificial intelligence (AI); Advantage in cyber operations; Confidence in the information domain; Resilient, adaptable, and secure systems. **Proposal deadline Oct. 28, 2022.**

ARMED FORCES PEST MANAGEMENT BOARD (AFPMB)

The Armed Forces Pest Management Board (AFPMB), an agency of the Department of Defense (DoD), is soliciting pre-proposals for original and innovative research designed to develop new interventions for protection of deployed military personnel from diseases caused by arthropod-borne pathogens and to improve control of bed bugs and filth flies. Diseases of significant concern include Lyme disease, malaria, dengue fever and other arboviruses. The program supports development of: (1) new toxicants or the adaptation of existing toxicants to medically relevant pests; (2) new insecticide application techniques; (3) new personal protection tools that prevent human-vector contact; (4) decision support tools and (5) novel vector surveillance tools that focus on improved control outcomes. Ideally the research would support **Advanced Technology Development** (see [DoD Financial Management Regulation Volume 2B, Chapter 5, DoD RDT&E Budget Activity 3](#)) of new insecticides or improved formulations of existing insecticides for vector control, new technology or enhanced modalities of personal protection from biting arthropods, or improved efficacy and sustainability of equipment for vector surveillance and application of pesticides for vector control in a military operational environment. Research should be product-oriented, consisting of advanced research related to a particular technology or new capability, evaluation of experimental products for military uses,

Research Development & Grant Writing News

or research directed towards development of an existing prototype product for commercial manufacture. Research should include semi-field or field evaluation of prototype products. Research should not include testing and evaluation of commercial products. Any pesticide end use products described in the proposed research should be destined for registration by the U. S. Environmental Protection Agency (EPA). The research must be primarily applicable to the military, products should be transferable to civilian uses. The program consists of competitive grants open to principal investigators (PIs) from academia, industry, and local or state government agencies. Federal Agencies (including DoD) may apply subject to appropriate regulations. This BAA is intended to solicit pre-proposals for AFPMB for those parts of development not related to a specific system or hardware procurement in accordance with Title 2, Subtitle A, Chapter II, Part 200 CFR. The purpose of this BAA is to identify the best available science, and as such, there are no set-asides associated with any awards resulting from this BAA. Specific areas of interest are described in the “Areas of Interest” section of this BAA. This Announcement provides a general description of project areas, including specific areas of interest, general information, evaluation and selection criteria, and proposal preparation instructions. All documentation and or attachments that are required with the submission of a full proposal, if requested, are described in the Mandatory Proposal Forms section of this announcement. Awards are typically made under grants; however, other funding opportunities may be considered. **Open to Oct. 31,2024.**

Solicitations Remaining Open from Last Newsletter

Facility and Instrumentation Request Process National Science Foundation

Original Closing Date for Applications: **Jan 17, 2022** Track 3 (Field Campaign) Proposals;
Track 3 (Field Campaign) Proposals; Track 1 (Education
& Outreach) & Track 2 (Single Facility Request)

Current Closing Date for Applications: **Jan 17, 2022** Track 3 (Field Campaign) Proposals;
Track 3 (Field Campaign) Proposals; Track 1 (Education
& Outreach) & Track 2 (Single Facility Request)

Archive Date: Oct 31, 2024

Estimated Total Program Funding: \$20,000,000

The Facility and Instrumentation Request Process (FIRP)solicitation describes the mechanism by which the research community can propose projects that require access to instrumentation and facilities sponsored by the [Facilities for Atmospheric Research and Education\(FARE\) Program](#) in the Division of Atmospheric and Geospace Sciences (AGS). FARE provides funding support to a variety of organizations to make specialized instrumentation and facilities available to the atmospheric science research community through the Lower Atmosphere Observing Facilities (LAOF) and the Community Instruments and Facilities (CIF) programs. FIRP allows for parallel evaluation of intellectual merit and broader impacts along with the feasibility of the proposed

Research Development & Grant Writing News

project. All research proposals and education and outreach proposals that require the use of FARE-sponsored assets must be submitted through this solicitation. PIs requesting the use of FARE-sponsored facilities for a scientific and/or educational project must follow the guidelines for submission in this solicitation. The FIRP solicitation offers three proposal submission tracks based on the type and purpose of the request:

- Track 1-Education and Outreach.
- Track 2-Single Facility Request.
- Track 3-Field Campaigns.

Preference for funding will be given to proposals submitted to programs in the Division of Atmospheric and Geospace Sciences in the Geosciences Directorate. If you are planning to submit a proposal to a program outside AGS, including NSF-wide or Directorate-wide solicitations and solicitations released under the NSF 10 Big Ideas, please contact the FARE program director to discuss the timelines, review process, and budget request for the use of FARE assets.

[NOAA-NOS-NCCOS-2022-2006972, Understanding multi-stressor impacts on marine ecosystems under climate change, Department of Commerce](#)

The purpose of this document is to advise the public that NOAA/NOS/National Centers for Coastal Ocean Science (NCCOS)/Competitive Research Program (CRP) [formerly Center for Sponsored Coastal Ocean Research (CSCOR)/Coastal Ocean Program (COP)], the NOAA Climate Program Office (CPO), and the NOAA Ocean Acidification Program (OAP), in partnership with the NOAA Office of National Marine Sanctuaries (ONMS) and the NOAA Integrated Ocean Observing System (IOOS), are soliciting proposals to understand the combined impacts of multiple stressors on the function and health of marine ecosystems within the context of climate change. This information will be used to improve place-based management of marine protected areas and enable the proactive protection of these critical ecosystems under future climate scenarios. **Due January 18.**

The purpose of this document is to advise the public that [NOAA/NOS/National Centers for Coastal Ocean Science](#) (NCCOS)/Competitive Research Program (CRP) and the NOAA Ocean Acidification Program (OAP) are soliciting proposals for research that must address the interaction between coastal and ocean acidification and harmful algal blooms.

Funding is contingent upon the availability of Fiscal Year 2022 Federal appropriations. It is anticipated that up to approximately \$1,500,000 may be available in Fiscal Year 2022 for the first year for all projects combined. If funds become available for this program, 3-5 targeted projects are expected to be funded at the level of \$300,00 to \$500,000 per year per proposal (including ship time). Projects are expected not to exceed 3 years in duration. NCCOS/CRP will not accept any proposals submitted with an annual budget that is greater than \$500,000 for any year. It is anticipated that projects funded under this announcement will have a September 1, 2022 start date. **Due January 21.**

[Building Research Capacity of New Faculty in Biology \(BRC-BIO\)](#)

With a focus on enhancing research capacity and broadening participation of new faculty of biology at minority-serving institutions (MSIs), predominantly undergraduate institutions (PUIs),

Research Development & Grant Writing News

and other universities and colleges that are not among the nation's most research-intensive institutions, the Directorate for Biological Sciences (BIO) offers the Building Research Capacity of New Faculty in Biology (BRC-BIO) program. The BRC-BIO program aims to a) broaden participation by expanding the types of institutions that submit proposals to BIO, and b) expand opportunities to groups underrepresented in the biological sciences, including Blacks and African Americans, Hispanics, Latinos, Native Americans, Alaska Natives, Native Hawaiians and other Pacific Islanders, and persons with disabilities, especially those serving at under-resourced institutions. Awards will provide the means for new faculty to initiate and build independent research programs by enhancing their research capacity. These projects might also include biology-focused research collaborations among faculty within the same institution, across peer-, or research-intensive institutions, or partnerships with industry or other non-academic partners that advance the candidate's research program. By providing this funding opportunity, BIO recognizes the national urgency to broaden, strengthen, and diversify the science, technology, engineering, and mathematics (STEM) workforce. In particular, these awards will build capacity for research at institutions that have a primary focus on teaching and undergraduate education, or that have limited capacity for research. Projects should enable the establishment of sustainable research programs for faculty and also enrich undergraduate research experiences and thereby grow the STEM workforce. BRC-BIO welcomes proposals from principal investigators who share NSF's commitment to diversity, equity, and inclusion. **Due January 3-31.**

Biology Integration Institutes

The Biology Integration Institutes (BII) program supports collaborative teams of researchers investigating questions that span multiple disciplines within and beyond biology. Integration across biological disciplines is essential if we hope to understand the diverse and ever-increasing data streams of modern biology and tackle emergent questions about living organisms and the environment. Of equal importance is the need for groundbreaking and sustainable training programs that prepare the next generations of scientists to navigate the breadth of biological sciences, training in multiple disciplines without sacrificing depth of learning or innovation. In addition, the biology community must continue to develop practices and adopt strategies that leverage rapid advances in cyberinfrastructure and other technologies to bridge and integrate across subdisciplines and make resources accessible, re-usable, and adaptable for unanticipated purposes. In these ways, Biology Integration Institutes will focus on biological themes that enable the discoveries of life's innovations. The outcomes from biological integration will inspire new biotechnologies and applications to drive our bioeconomy and provide solutions to societal challenges. While this solicitation focuses on the integration of biological subdisciplines, any field beyond biology may be included as needed to address the overarching biological theme. **Deadline, January 12.**

NIA Career Transition Award (K22 Independent Clinical Trial Not Allowed)

The purpose of the NIA Career Transition Award (CTA) is to facilitate the transition of mentored researchers to tenure-track faculty positions conducting research that advances the mission of NIA. This award will provide three years of protected time through salary and research support to conduct biomedical research at an extramural sponsoring institution/organization to which

Research Development & Grant Writing News

the individual has been recruited, been offered, and has accepted a tenure-track full-time assistant professor position (or equivalent). This Funding Opportunity Announcement (FOA) is designed specifically for candidates proposing research that does not involve leading an independent clinical trial, a clinical trial feasibility study, or an ancillary clinical trial. **Due January 12.**

[Systems Biology for Infectious Diseases \(U19 Clinical Trial Not Allowed\)](#)

The purpose of the Funding Opportunity Announcement (FOA) is to support research that employs systems biology approaches to human pathogens. The approach will generate and integrate large datasets into models that guide in vitro, in vivo and clinical studies, with the goals of predicting disease severity, predicting responses to vaccines and therapeutics, and identifying candidate targets for interventions. **Due January 14.**

[Research and Mentoring for Postbaccalaureates in Biological Sciences](#)

The Research and Mentoring for Postbaccalaureates (RaMP) in Biological Sciences program invites the submission of proposals to establish networks to support full-time research, mentoring, and training for recent college graduates who have had few or no research or training opportunities during college in research fields typically supported by the Directorate of Biological Sciences (BIO). Fostering the growth of a globally competitive and diverse research workforce and advancing the innovative scientific skills of the U.S. is a strategic objective of the National Science Foundation (NSF). To that end, proposals submitted to this program are expected to create strong evidence-based and inclusive mentorship programs that will advance the goal of creating a competitive and highly representative science, technology, engineering, and mathematics (STEM) workforce in the U.S. Transitions into the STEM workforce could include pathways into research-focused M.S. or Ph.D. programs, industry, federal or state agencies, education and research centers, and other STEM careers. Individuals from groups underrepresented in STEM, first generation college students, and students at under-resourced institutions frequently have limited opportunities to participate in the undergraduate research experiences that are necessary to be competitive for graduate programs or other STEM career pathways. This situation has been exacerbated by the COVID-19 pandemic, further slowing efforts to ensure diversity and inclusion in STEM fields. This program will provide postbaccalaureate research experiences for cohorts of trainees, either in ongoing research programs, existing networks, or in new research projects designed specifically for the RaMP networks. Studies of capacity building and training across diverse disciplines have emphasized the importance of inclusive training via cohort mentoring and networks of individuals working together towards a common purpose. Cohorts promote the development of long-term relationships, and networks foster the exchange of ideas and resources to pursue common goals and to address shared challenges. Proposals will use a network structure that generates a supportive and strong collaborative mentoring environment centered around a cohesive biological research theme. The network will facilitate the recruitment and selection of postbaccalaureate research participants (hereafter, mentees) and mentors, and will provide professional development and additional mentoring and training opportunities to all network members, including mentees, mentors, co-mentors, and other STEM professionals. Networks are expected to involve and facilitate communication and training among mentors and mentees

Research Development & Grant Writing News

from different organizations, institutions, and/or departments. Proposals submitted under this solicitation should focus on research-based inquiry projects that include analytical and technical training and professional development opportunities. **Due January 20.**

Principles and Practice of Scalable Systems

A key focus of the design of modern computing systems is performance and scalability, particularly in light of the limits of Moore's Law and Dennard scaling. To this end, systems are increasingly being implemented by composing heterogeneous computing components and continually changing memory systems as novel, performant hardware surfaces. Applications fueled by rapid strides in machine learning, data analysis, and extreme-scale simulation are becoming more domain-specific and highly distributed. In this scenario, traditional boundaries between hardware-oriented and software-oriented disciplines are increasingly blurred. Achieving scalability of systems and applications will therefore require coordinated progress in multiple disciplines such as computer architecture, high-performance computing (HPC), machine programming, programming languages and compilers, security and privacy, systems, and theory and algorithms. Cross-cutting concerns such as performance, correctness and accuracy, and heterogeneity must be taken into account from the outset in all aspects of systems and application design and implementation. The aim of the Principles and Practice of Scalable Systems (PPoSS) program is to support a community of researchers who will work symbiotically across the multiple disciplines above to perform basic research on scalability and correctness and accuracy of modern applications, systems, and toolchains built on heterogeneous architectures. The intent is that these efforts will foster the development of principles that lead to rigorous and reproducible artifacts for the design and implementation of large-scale systems and applications spanning the full hardware/software stack. Importantly, as described below, PPoSS specifically seeks to fund projects that span the entire hardware/software stack and that lay the foundations for sustainable approaches for implementing performant, scalable, and correct and accurate computing applications that run on heterogeneous platforms. **Due January 24.**

Integrative Research in Biology (IntBIO)

This solicitation invites submission of collaborative proposals that tackle bold questions in biology and require an integrated approach to make substantive progress. Integrative biological research spans subdisciplines and incorporates cutting-edge methods, tools, and concepts from each to produce groundbreaking biological discovery. The research should be synergistic and produce novel, holistic understanding of how biological systems function and interact across different scales of organization, e.g., from molecules to cells, tissues to organisms, species to ecosystems and the entire Earth. Such knowledge is critical to inform solutions to societal challenges, including natural resource management, resilience to environmental change, and global food security. Outcomes from integrative research will also inform and guide the development of new technologies that drive the nation's bioeconomy. **Deadline, January 25.**

Early Stage Propagation Strategies for Aquaculture Species

The following entities are eligible to submit to this opportunity: Sea Grant College Programs, Sea Grant Institutional Programs, and Sea Grant Coherent Area Programs. A Sea Grant program

Research Development & Grant Writing News

may submit or participate in more than one proposal. Other interested entities must submit proposals in partnership with and through a relevant Sea Grant program. Please note that it is not a requirement that investigators, including the PI, are part of a Sea Grant program, however proposals must be submitted with and through a Sea Grant program. Contact information for Sea Grant programs can be found at: <https://seagrants.noaa.gov/About>. If you need further assistance in identifying a program to partner with please contact one of the Sea Grant Aquaculture Managers listed below in Section VII. Agency Contacts. Federal agencies and their personnel are not permitted to receive federal funding under this competition; however, federal scientists and other employees can serve as uncompensated partners or co-Principal Investigators on applications. Federal labs and offices can also make available specialized expertise, facilities, or equipment to applicants but cannot be compensated under this competition for their use, nor can the value of such assets be used as match. The National Sea Grant College Program champions diversity, equity, and inclusion (DEI) by recruiting, retaining and preparing a diverse workforce, and proactively engaging and serving the diverse populations of coastal communities. Sea Grant is committed to building inclusive research, extension, communication and education programs that serve people with unique backgrounds, circumstances, needs, perspectives and ways of thinking. We encourage applicants of all ages, races, ethnicities, national origins, gender identities, sexual orientations, disabilities, cultures, religions, citizenship types, marital statuses, education levels, job classifications, veteran status types, income, and socioeconomic status types to apply for this opportunity. **Due January 27.**

NOAA-NOS-NCCOS-2022-2007023 Harmful Algal Bloom Control Technologies Incubator

The purpose of this document is to advise the public that NOAA/NOS/National Centers for Coastal Ocean Science (NCCOS)/Competitive Research Program (CRP) [formerly Center for Sponsored Coastal Ocean Research (CSCOR)/Coastal Ocean Program (COP)] is soliciting proposals from the Cooperative Ecosystems Studies Units (CESU) to implement a 5-year Harmful Algal Bloom (HAB) Control Technologies Incubator (HCTI) under the auspices of the NCCOS/CRP Prevention, Control and Mitigation of HAB Program (PCM HAB). This funding opportunity will provide support for one award to develop and administer a national program that accelerates the development and application of HAB control approaches. To accomplish this, the main objective of the HCTI will be to fund extramural proof of concept, innovative HAB control technology projects to assess their feasibility. Promising technologies will then be encouraged to apply to relevant future PCM HAB competitive funding announcements independent from the HCTI. In addition, the other objective of the HCTI will be to provide guidance to end users and stakeholders on navigating the relevant licensing and permitting processes (e.g., National Environmental Protection Act and Federal Insecticide, Fungicide, and Rodenticide Act requirements) relevant to the applicability of proven control methods during responses to ongoing HAB events. The proposals must address how the HCTI will accomplish these two objectives. This funding opportunity is intended to support the administration of the HCTI and is not intended to directly support individual research projects or short term activities on specific local coastal HAB issues. Funding is contingent upon the availability of Fiscal Year 2022 Federal appropriations. If funds become available for this program, one project for a HCTI will be funded for approximately \$1.5M/year for 5 years, not to exceed \$7.5M over that period.

Research Development & Grant Writing News

If successful, the selected project may receive an additional \$7.5M for a second and final 5 year period of performance. It is anticipated that projects funded under this announcement will have a September 1, 2022 start date. **Due January 27.**

Building Research Capacity of New Faculty in Biology

With a focus on enhancing research capacity and broadening participation of new faculty of biology at minority-serving institutions (MSIs), predominantly undergraduate institutions (PUIs), and other universities and colleges that are not among the nation's most research-intensive institutions, the Directorate for Biological Sciences (BIO) offers the Building Research Capacity of New Faculty in Biology(BRC-BIO) program. The BRC-BIO program aims to a) broaden participation by expanding the types of institutions that submit proposals to BIO, and b) expand opportunities to groups underrepresented in the biological sciences, including Blacks and African Americans, Hispanics, Latinos, Native Americans, Alaska Natives, Native Hawaiians and other Pacific Islanders, and persons with disabilities, especially those serving at under-resourced institutions. Awards will provide the means for new faculty to initiate and build independent research programs by enhancing their research capacity. These projects might also include biology-focused research collaborations among faculty within the same institution, across peer-, or research-intensive institutions, or partnerships with industry or other non-academic partners that advance the candidate's research program. By providing this funding opportunity, BIO recognizes the national urgency to broaden, strengthen, and diversify the science, technology, engineering, and mathematics (STEM) workforce. In particular, these awards will build capacity for research at institutions that have a primary focus on teaching and undergraduate education, or that have limited capacity for research. Projects should enable the establishment of sustainable research programs for faculty and also enrich undergraduate research experiences and thereby grow the STEM workforce. BRC-BIO welcomes proposals from principal investigators who share NSF's commitment to diversity, equity, and inclusion. **Due January 31.**

Human Networks and Data Science

The Human Networks and Data Science program (HNDS) supports research that enhances understanding of human behavior by leveraging data and network science research across a broad range of topics. HNDS research will identify ways in which dynamic, distributed, and heterogeneous data can provide novel answers to fundamental questions about individual and group behavior. HNDS is especially interested in proposals that provide data-rich insights about human networks to support improved health, prosperity, and security. HNDS has two tracks: (1)Human Networks and Data Science – Infrastructure (HNDS-I).Infrastructure proposals will address the development of data resources and relevant analytic techniques that support fundamental Social, Behavioral and Economic(SBE)research. Successful proposals will, within the financial resources provided by the award, construct user-friendly large-scale next-generation data resources and relevant analytic techniques and produce a finished product that will enable new types of data-intensive research. The databases or techniques should have significant impacts, either across multiple fields or within broad disciplinary areas, by enabling new types of data-intensive research in the SBE sciences.

Research Development & Grant Writing News

(2)Human Networks and Data Science –Core Research (HNDS-R).Core research proposals will advance theory in a core SBE discipline by the application of data and network science methods. This includes the leveraging of large data sets with diverse spatio-temporal scales of measurement and linked qualitative and quantitative approaches, as well as multi-scale, multi-level network data and techniques of network analysis. Supported projects are expected to yield results that will enhance, expand, and transform theory and methods, and that generate novel understandings of human behavior – particularly understandings that can improve the outcomes of significant societal opportunities and challenges. HNDS-R encourages core research proposals that make innovative use of NSF-supported data networks, data bases, centers, and other forms of scientific infrastructure including those developed by HNDS-I(formerly RIDIR)projects. **Due February 3.**

The purpose of the [Research on Emerging Technologies for Teaching and Learning \(RETTL\)](#) program is to fund exploratory and synergistic research in emerging technologies (to include, but not limited to, artificial intelligence (AI), robotics, and immersive or augmenting technologies) for teaching and learning in the future. The program accepts proposals that focus on learning, teaching, or a combination of both. The scope of the program is broad, with special interest in diverse learner/educator populations, contexts, and content, including teaching and learning in science, technology, engineering, and mathematics (STEM) and in foundational areas that enable STEM (e.g., self-regulation, literacy, communication, collaboration, creativity, and socio-emotional skills). Research in this program should be informed by the convergence (synthesis) of multiple disciplines: e.g., learning sciences; discipline-based education research; computer and information science and engineering; design; and cognitive, behavioral, and social sciences. Within this broad scope, the program also encourages projects that investigate teaching and learning related to futuristic and highly technological work environments. This program solicits projects that are **exploratory and experimental** in nature. The program serves as an incubator to support frontier research in advanced learning and teaching technologies. Projects should be theory-driven and apply human-centered design methods to explore proof-of-concept or feasibility of innovative learning technologies in the support of new learning and/or teaching experiences. We encourage projects that explore new ideas, especially those where outcomes may be uncertain and involve risk. **Due January 25.**

Open Solicitations and BAAs

[BAA's remain open for one or more years. During the open period, agency research priorities may change or other **modifications are made to a published BAA**. If you are submitting a proposal in response to an open solicitation, as below, check for modifications to the BAA at Grants.gov or by utilizing [Modified Opportunities by Agency](#) to receive a Grants.gov notification of recently modified opportunities by agency name.]

[FA9453-17-S-0005 Research Options for Space Enterprise Technologies \(ROSET\)](#)

The Air Force Research Laboratory (AFRL) Space Vehicle Directorate (RV) is interested in receiving proposals from all offerors to advance state of the art technology and scientific

Research Development & Grant Writing News

knowledge supporting all aspects of space systems including payload adapters, on-orbit systems, communications links, ground systems, and user equipment. Efforts will include basic and advanced research, advanced component and technology development, prototyping, and system development and demonstration and will span the range from concept and laboratory experimentation to testing/demonstration in a relevant environment. Specific tasks include design, development, analysis, fabrication, integration, characterization, testing/experimentation, and demonstration of hardware and software products. **Open to September 22, 2022.**

FY 2022 Continuation of Solicitation for the Office of Science Financial Assistance Program Department of Energy - Office of Science

The Office of Science (SC) of the Department of Energy (DOE) hereby announces its continuing interest in receiving grant applications for support of work in the following program areas: Advanced Scientific Computing Research, Basic Energy Sciences, Biological and Environmental Research, Fusion Energy Sciences, High Energy Physics, Nuclear Physics, Isotope R&D and Production, and Accelerator R&D and Production. On September 3, 1992, DOE published in the Federal Register the Office of Energy Research Financial Assistance Program (now called the Office of Science Financial Assistance Program), 10 CFR 605, as a Final Rule, which contained a solicitation for this program. Information about submission of applications, eligibility, limitations, evaluation and selection processes and other policies and procedures are specified in 10 CFR 605. This FOA is our annual, broad, open solicitation that covers all research areas in SC and is open throughout the Fiscal Year. Any research within SC's Congressionally-authorized mission may be proposed under this FOA. Open until Sept. 30, 2022.

W912HZ-21-BAA-01 2021 ERDC Broad Agency Announcement, Department of Defense Engineer Research and Development Center

The U.S. Army Engineer Research and Development Center (ERDC) has issued a Broad Agency Announcement (BAA) for various research and development topic areas. The ERDC consists of the Coastal and Hydraulics Lab (CHL), the Geotechnical and Structures Lab (GSL), the Reachback Operations Center (UROC), the Environmental Lab (EL) and the Information Technology Lab (ITL) in Vicksburg, Mississippi, the Cold Regions Research and Engineering Lab (CRREL) in Hanover, New Hampshire, the Construction Engineering Research Lab (CERL) in Champaign, Illinois, and the Geospatial Research Laboratory (GRL) in Alexandria, Virginia. The ERDC is responsible for conducting research in the broad fields of hydraulics, dredging, coastal engineering, instrumentation, oceanography, remote sensing, geotechnical engineering, earthquake engineering, soil effects, vehicle mobility, self-contained munitions, military engineering, geophysics, pavements, protective structures, aquatic plants, water quality, dredged material, treatment of hazardous waste, wetlands, physical/mechanical/ chemical properties of snow and other frozen precipitation, infrastructure and environmental issues for installations, computer science, telecommunications management, energy, facilities maintenance, materials and structures, engineering processes, environmental processes, land and heritage conservation, and ecological processes. The BAA is available as an attachment to this posting and is also available at <http://erdc.usace.army.mil>. The BAA is open until

Research Development & Grant Writing News

superseded by another announcement. Proposals may be accepted at any time. **Open to Feb. 28, 2022.**

Broad Agency Announcement for the Army Rapid Capabilities Office

This Broad Agency Announcement (BAA), W56JSR-18-S-0001, is sponsored by the Army Rapid Capabilities Office (RCO). The RCO serves to expedite critical capabilities to the field to meet Combatant Commanders' needs. The Office enables the Army to experiment, evolve, and deliver technologies in real time to address both urgent and emerging threats while supporting acquisition reform efforts. The RCO executes rapid prototyping and initial equipping of capabilities, particularly in the areas of cyber, electronic warfare, survivability and positioning, navigation and timing (PNT), as well as other priority projects that will enable Soldiers to operate and win in contested environments decisively. This BAA is an expression of interest only and does not commit the Government to make an award or pay proposal preparation costs generated in response to this announcement.

Questions concerning the receipt of your submission should be directed:

<http://rapidcapabilitiesoffice.army.mil/eto/>

Technical questions will be sent to the appropriate Technical Points of Contact (TPOC), topic authors, and/or Subject Matter Experts (SMEs) to request clarification of their areas of interest. No discussions are to be held with offerors by the technical staff after proposal submission without permission of the Army Contracting Command-Aberdeen Proving Ground (ACC-APG) Contracting Officer. **Open to March 23, 2023.**

W911NF-18-S-0005 U.S. Army Research Institute for the Behavioral and Social Sciences Broad Agency Announcement for Basic, Applied, and Advanced Research (Fiscal Years 2018-2023)

The U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) announces the ARI FY18-23 Broad Agency Announcement for Basic, Applied, and Advanced Scientific Research. This Broad Agency Announcement, which sets forth research areas of interest to the United States Army Research Institute for the Behavioral and Social Sciences, is issued under the provisions of paragraph 6.102(d)(2) of the Federal Acquisition Regulation (FAR), which provides for the competitive selection of proposals. Proposals submitted in response to this BAA and selected for award are considered to be the result of full and open competition and in full compliance with the provisions of Public Law 98-369 (The Competition in Contracting Act of 1984) and subsequent amendments. The U.S. Army Research Institute for the Behavioral and Social Sciences is the Army's lead agency for the conduct of research, development, and analyses for the improvement of Army readiness and performance via research advances and applications of the behavioral and social sciences that address personnel, organization, training, and leader development issues. Programs funded under this BAA include basic research, applied research, and advanced technology development that can improve human performance and Army readiness.

Those contemplating submissions of a proposal are encouraged to contact the ARI Technical Point of Contact (TPOC) for the respective topic area cited in the BAA. If the R&D warrants further inquiry and funding is available, submission of a proposal will be entertained. The recommended three-step sequence is (1) telephone call to the ARI TPOC or responsible ARI

Research Development & Grant Writing News

Manager, (2) white paper submission, (3) full proposal submission. Awards may be made in the form of contracts, grants, or cooperative agreements. Proposals are sought from educational institutions, non-profit/not-for-profit organizations, and commercial organizations, domestic or foreign, for research and development (R&D) in those areas specified in the BAA. The U.S. Army Research Institute for the Behavioral and Social Sciences encourages Historically Black Colleges and Universities/Minority Serving Institutions (HBCU/MSI) and small businesses to submit proposals for consideration. Foreign owned, controlled, or influenced organizations are advised that security restrictions may apply that could preclude their participation in these efforts. Government laboratories, Federal Funded Research and Development Centers (FFRDCs), and US Service Academies are not eligible to participate as prime contractors or recipients. However, they may be able to participate as subcontractors or Subrecipients (eligibility will be determined on a case-by-case basis). **Open to April 29, 2023.**

FA8650-17-S-6001 Science and Technology for Autonomous Teammates (STAT)

The objective of Science and Technology for Autonomous Teammates (STAT) program is to develop and demonstrate autonomy technologies that will enable various AF mission sets. This research will be part of Experimentation Campaigns in: 1 -Multi-domain Command and Control; 2-Intelligence, Surveillance, Recognizance (ISR) Processing Exploitation and Dissemination (PED); and 3- Manned-Unmanned combat Teaming to demonstrate autonomy capabilities to develop and demonstrate autonomy technologies that will improve Air Force operations through human-machine teaming and autonomous decision-making. The technology demonstrations that result from this BAA will substantially improve the Air Force's capability to conduct missions in a variety of environments while minimizing the risks to Airmen. The overall impact of integration of autonomous systems into the mission space will enable the Air Force to operate inside of the enemy's decision loop.

STAT will develop and apply autonomy technologies to enhance the full mission cycle, including mission planning, mission execution, and post-mission analysis. Particular areas of interest include multi-domain command and control, manned-unmanned teaming, and information analytics. The technology demonstrations that result from this BAA will substantially improve the Air Force's capability to conduct missions in a variety of environments while minimizing the risks to Airmen. The overall impact of integration of autonomous systems into the mission space will enable the Air Force to operate inside of the enemy's decision loop. This effort plans to demonstrate modular, transferable, open system architectures, and deliver autonomy technologies applicable to a spectrum of multi-domain applications. Development efforts will mature a set of technologies that enable airmen to plan, command, control, and execute missions with manageable workloads. The software algorithms and supporting architectures shall:

- Ingest and understand mission taskings and commander's intent
- Respond appropriately to human direction and orders
- Respond intelligently to dynamic threats and unplanned events

Chosen technologies will be open, reusable, adaptable, platform agnostic, secure, credible, affordable, enduring, and able to be integrated into autonomous systems. The program will be comprised of various technologies developed by AFRL and Industry, integrated into technology demonstrations and deliverables with all the necessary software, hardware, and documentation to support AFRL-owned modeling and simulation environments for future

Research Development & Grant Writing News

capability developments. Thus, all technology development efforts must adhere to interface designs and standards. **Open to July 23, 2023.**

Academic Research Funding Strategies, LLC ([Page 1](#))

<http://academicresearchgrants.com/home>

ph: 979-201-5520

LDeckard@academicresearchgrants.com

mjcronan@gmail.com

katherinekel@gmail.com

What We Do--

We provide consulting for colleges and universities on a wide range of topics related to research development and grant writing, including:

- Strategic Planning - Assistance in [formulating research development strategies and building institutional infrastructure](#) for research development (including special strategies for Emerging Research Institutions, Predominantly Undergraduate Institutions and Minority Serving Institutions)
- Training for Faculty - Workshops, seminars and webinars on [how to find and compete for research funding](#) from NSF, NIH, DoE and other government agencies as well as foundations. Proposal development retreats for new faculty.
- Large proposals - Assistance in [planning, developing and writing institutional and center-level proposals](#) (e.g., NSF ERC, STC, NRT, ADVANCE, IUSE, Dept of Ed GAANN, DoD MURI, etc.)
- Assistance for [new and junior faculty](#) - help in identifying funding opportunities and developing competitive research proposals, particularly to NSF CAREER, DoD Young Investigator and other junior investigator programs
- Assistance on your project narrative: in-depth reviews, rewrites, and edits
- Editing and proof reading of journal articles, book manuscripts, proposals, etc.
- Facilities and Instrumentation - Assistance in identifying and competing for [grants to fund facilities and instrumentation](#)
- Training for Staff - [Professional Development](#) for research office and sponsored projects staff

Workshops by Academic Research Funding Strategies

We offer workshops on research development and grant writing for faculty and research professionals based on all published articles.

[\(View Index of Articles\)](#)

Copyright 2021 Academic Research Funding Strategies. All rights reserved.