

## RCA UPDATE

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July 24, 2023

### **Cindy Graffeo named NDSU Innovation and Economic Development Director**

Cindy Graffeo has been hired as the Innovation and Economic Development Director for the NDSU Office of Research and Creative Activity. In this role, she will design, lead, and manage economic development; leverage opportunities for industry partnerships; and develop and deliver programming that nurtures and grows the region's entrepreneurial startup ecosystem.



The Fargo community is host to a dynamic and energetic startup ecosystem thanks to efforts from organizations like Emerging Prairie and Grand Farm and NDSU alumni who have played a vibrant role in the state's economy through business creation, including the Microsoft Fargo campus, the presence of John Deere and AGCO in the NDSU Research & Technology Park (through acquisitions of Phoenix International and Appareo, respectively), and Aldevron, which was the single largest acquisition of a North Dakota-based company at \$9.6 billion by Danaher.

As a member of NDSU Vice President of Research Colleen Fitzgerald's leadership team, Graffeo will play a vital role in this ecosystem by strategically leveraging and aligning campus and regional resources, opportunities, and assets in order to foster and support economic development, startups, entrepreneurship, and innovative efforts campus- and state-wide.

Graffeo joins NDSU at the same time that other new leadership roles related to the local business ecosystem are occurring, including a new director for the NDSU Research Foundation and an upcoming search for new director NDSU Research & Technology Park.

The three individuals will collectively coordinate their distinct efforts in a complementary fashion to advance research, innovation, and economic development for NDSU, North Dakota and the entire Great Plains Region.

"I'm excited to explore the opportunities to bridge the gaps between industry and NDSU," said Graffeo. "I'm a big believer in the abilities of our local businesses and I know that when we bring them together with NDSU researchers, great things are going to happen."

In combination with the \$2.5 million in Economic Diversification Research funding support from the North Dakota Legislature this year, NDSU has strategically positioned itself to capitalize on opportunities for research commercialization, entrepreneurship, and university/industry partnerships in the region, according to NDSU Vice President of Research Colleen Fitzgerald.

"NDSU's Innovation Portfolio is already at a strong place but it's set to get even stronger," said Fitzgerald. "A solid connection to industry will provide researchers with an avenue to commercialize their inventions while providing people everywhere the opportunity to benefit from the results of their work."

Graffeo most recently served as Executive Director of the Downtown Community Partnership in Fargo, a role in which she was an advocate for businesses, residents, and community partners and was focused on driving economic growth, vibrancy,

and advocacy for Fargo. Previously, she served a similar role in Moorhead and as Chief of Staff for Dakota Medical Foundation.

“Cindy has built her reputation on creating partnerships and relationships with businesses and people across the region,” added Fitzgerald. “We are all excited to welcome her to NDSU, where she can leverage that ability to forge an even larger, more diverse, and impactful network.”

Graffeo will begin her new role on July 25.

## April 2023 Award Recipients

Congratulations to all award recipients from April 2023! The awards listed are for externally-funded projects.

- **April 2023:** [PDF](#) | [Excel](#)

[Previous Award Reports >>](#)



## Overview of Federal Artificial Intelligence Research and Policy Issues

This document from Lewis-Burke Associates, our federal relations consultant firm, provides an update on federal policies and funding opportunities in Artificial Intelligence and machine learning (AI/ML).

The release of ChatGPT and other generative AI technologies has significantly increased interest by the Biden Administration and Congress in this emerging technology. There is still a strong bipartisan consensus that the U.S. must maintain leadership in this technology and grow research and development investments, but there are growing concerns about negative impacts, such as misinformation/disinformation, bias, job disruptions and losses, and cyber and national security vulnerabilities, and discussions on potentially regulating the use of AI to minimize harm to the public.

[Download the report \(requires NDSU log-in\) >>](#)

## Research Development and Grant Writing News

The Research and Creative Activity office holds a subscription to Research Development and Grant Writing News, a monthly newsletter full of helpful tips and information about funding agencies and writing successful grant proposals.

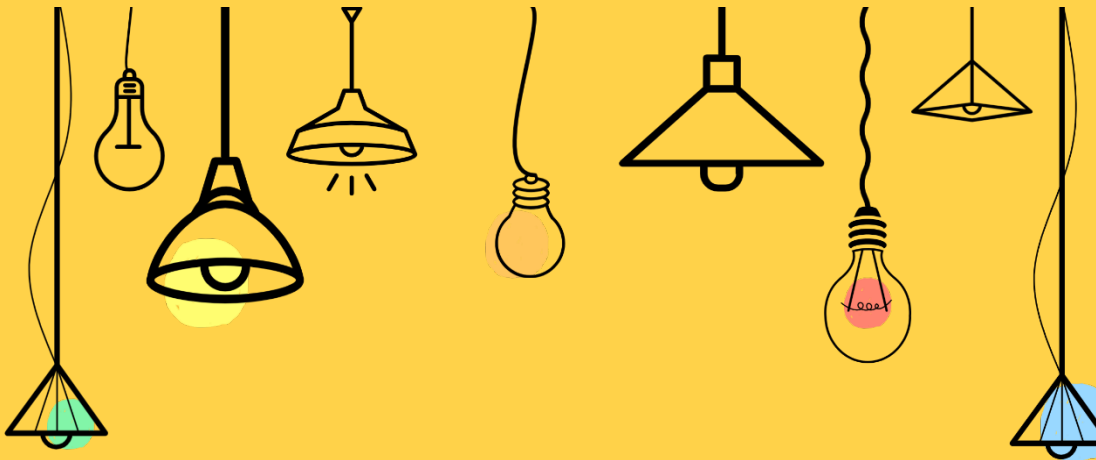
Here are some articles you will find in the July 2023 edition:

- **July 2023 Select List of Humanities, HSS, and Arts Opportunities & News** – We list funding opportunities for scholars in the humanities, social sciences and the arts.
- **Support Opportunities for Post-Docs & Junior Faculty in the Humanities** – We discuss support opportunities in the humanities.
- **An Overview: U.S. Department of Justice Grants** – We discuss grant programs run by the Department of Justice.



- **Engineering Research Initiation: What Is It, For Who?** – We discuss a new NSF/DOE partnership to fund early-career academic investigators.
- **Last-Minute NSF CAREER Checklist** – NSF CAREER proposals are due July 26<sup>th</sup>. We provide a last-minute checklist for PIs.
- **NSF Dear Colleague Letters & Funding Mechanisms** – We discuss recent changes to RAISE and EAGER proposals, and the new requirements for Concept Outlines.
- **Narrative Space Is Limited – Use It Wisely** – We discuss the importance of editing to sharpen your message (reprinted from the July 2022 issue).
- **The Power of Faculty Writing Groups for Reviewing Proposals and Overall Writing Improvement** – Faculty writing groups can be powerful tools for grant proposals, just as they can be for other kinds of writing. We discuss how they can help you improve your proposal (reprinted from the March 2020 issue).
- **Strategies for Proposal Resubmissions** – A big part of getting funded is knowing how to interpret and respond to reviews. We discuss things to consider when trying to discern what the reviewers are trying to tell you (reprinted from the July 2021 issue).

[Access these and many more articles](#) (requires NDSU log-in).



## Have a big, bright idea about research at NDSU?

It's important that we continually challenge each other to come up with ambitious, big ideas in our research endeavors at NDSU. So we'd like to hear your ideas, and the bigger they are, the better.

While we can't promise all of them will succeed, we welcome you to share them - from an early concept or thought all the way to developed ideas that may just need some collaboration - send us an email ([bigideas@ndsu.edu](mailto:bigideas@ndsu.edu)) and get the process started.

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## ARIS Releases Evolution of BI Report

All proposals submitted to The National Science Foundation are evaluated on two criteria: **intellectual merit** (the potential for the research to contribute to the scientific discipline) and **broader impacts** (the societal benefits of the research). While intellectual merit has been clearly understood by the research community, BI continues to be challenging in definition and implementation.

The Center for Advancing Research Impact in Society (ARIS) convened more than 100 members of the impact community to discuss the current state and desired evolution of NSF's BI criterion. The results form the basis for an action plan and report which are designed to inform and engage the ARIS community, the NSF, and other federal agencies and organizations that support scientific research to generate solutions that positively benefit society.



[Download the report >>](#)

**NIH: RFI - Inviting Input Regarding National Institute on Deafness and Other Communication Disorder's Research Directions to Support Communication in Minimally Verbal/Non-Speaking People**

The NIDCD held a [workshop](#) on January 24-25, 2023. This workshop focused on new research needed to support communication by minimally verbal/non-speaking autistic people. The workshop produced many themes for further research including:

- increasing community engagement in research
- improving technology
- exploring the range of communication skills and needs
- using different research approaches to personalize interventions
- expanding the range of skills and outcomes that interventions focus on to improve communication
- expanding the range of evaluation and outcome measures that can reliably assess individual needs

NIDCD invites anyone with interests in communication in minimally verbal/non-speaking people to provide input on any or all of the following topics from a personal, service delivery, or research view:

- The biggest communication needs for minimally verbal/non-speaking people
- The greatest roadblocks to supporting and improving communication for minimally verbal/non-speaking people
- The highest priority research targets to advance communication for minimally verbal/non-speaking individuals
- The best ways to increase partnerships between researchers and minimally verbal/non-speaking people to guide research projects

*All responses to this RFI must be [submitted](#) by September 15, 2023.*



**National Institutes  
of Health**



## National Academies New Voices Cohort Application Now Open

The application for the next cohort of New Voices members is now open for U.S.-based emerging leaders in all disciplines of the sciences, engineering, and medicine with an established track record of professional excellence and demonstrated commitment to service beyond their immediate discipline and institution.



Individuals with under-represented backgrounds in STEM and/or demonstrated interest in science communication, international scientific collaboration, and science policy advice are encouraged to apply.

**Application Deadline:** August 10, 2023, 11:59 pm

[Learn More >>](#)

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### 2023 Summer Research Poster Session

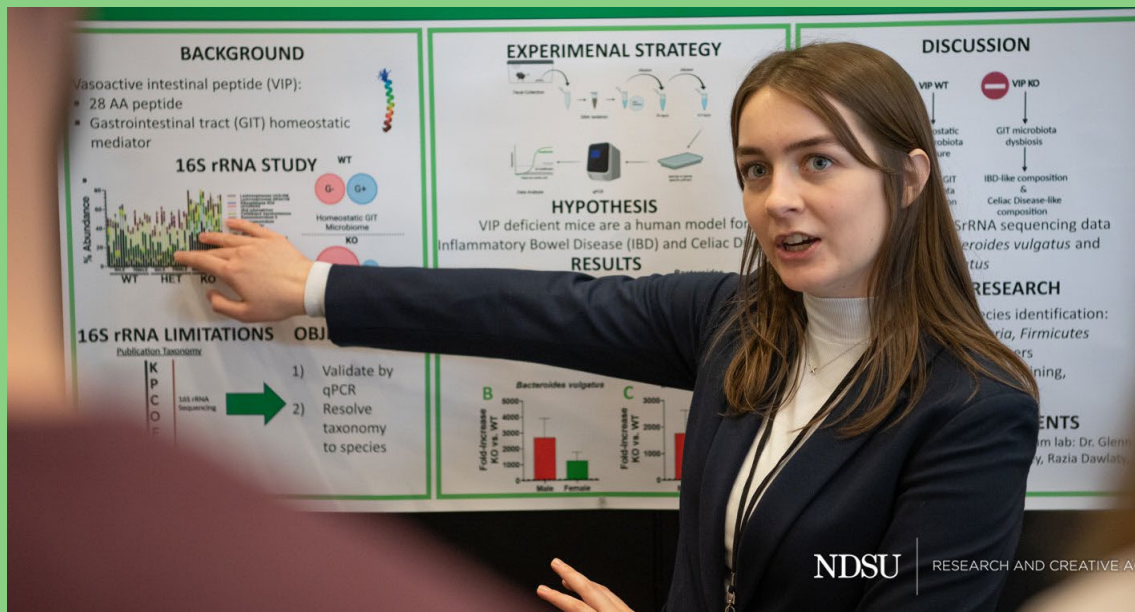
Friday, August 4 / 1:00 p.m. to 3:00 p.m.

A. Glenn Hill Center (STEM Building), Main Hallway

You are invited to attend a public poster session featuring more than 60 high school and undergraduate students who have been participating in summer research experiences at NDSU this summer.

Come and learn about their research and provide them a positive experience in

sharing their unique stories.



Students from the following programs will be participating in the poster session:

- [Green Chemistry](#)
- [Pollination Nation](#)
- [Collaborations in Discipline-based Education Research](#)
- [INBRE Summer Undergraduate Research Program](#)
- [USURE](#)
- [Center for Bioplastics and Biocomposites - CB2](#)
- IME (Industrial & Mechanical Engineering) REU (no website available)
- PICNICS (no website available)

## Upcoming Events at a Glance

- **Corteva**  
**Webinar for Scientists and Startups: Partner with Industry**  
August 7, 2023 | [Register >>](#)

- **Annual DaCCoTA and AICoRN Symposium**  
July 27, 2023 | [Register >>](#)
- **Specialized Centers of Research Excellence on Sex Differences (SCORE) 2023 Annual Meeting Keynote Address**  
November 3, 2023 | [Learn More >>](#)
- **Building Interdisciplinary Research Careers in Women's Health (BIRCWH) 2023 Annual Meeting**  
December 5, 2023 | [Learn More >>](#)

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## Funding Opportunities

- [American Philosophical Society: Franklin Research Grants](#)
- [DoD: National Defense Education Program STEM Open Notice](#)
- [DOE: NOSI - University Turbine Systems Research](#)
- [Institute of Education Sciences Research Grants](#)
- [Institute of Museum and Library Services Funding Opportunities](#)
- [Johnson and Johnson: The WiSTEM2D Scholars Award Program – LIMITED](#)
- [National Humanities Center: Residential Fellowships](#)
- [NIH: Cancer Prevention, Detection, Diagnosis, and Treatment Technologies for Global Health](#)
- [NIH: Development of Software for Data Science in Infectious and Immune-Mediated Diseases Research](#)
- [NIH: Fulbright U.S. Scholar Program](#)
- [NIH: NOSI - Stimulating Research to Understand and Address Hunger, Food and Nutrition Insecurity](#)
- [NIH: Pilot Interventions to Integrate Social Care and Medical Care to Improve Health Equity](#)
- [NSF: Division of Mathematical Sciences Funding Opportunities](#)
- [NSF: Computer and Information Science and Engineering - Core Programs](#)
- [NSF: DCL - Equitable and Transformative Approaches to Educating the Semiconductor Workforce](#)
- [NSF: Division of Molecular and Cellular Biosciences - Core Programs](#)

- [NSF: Mathematical Biology](#)
- [The Elsa U. Pardee Foundation: Cancer Research Grant](#)

## Upcoming Limited Submission Program Deadlines

[Limited submission grant programs](#) are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program. Email notifications of interest to [ndsu.researchdev@ndsu.edu](mailto:ndsu.researchdev@ndsu.edu) by **close of business** on the notification deadline date.

If you identify a limited submission opportunity that is not on the list below, please notify [ndsu.researchdev@ndsu.edu](mailto:ndsu.researchdev@ndsu.edu).

- [Johnson and Johnson: The WiSTEM2D Scholars Award Program](#)

*Notification Deadline: 08/03/2023*

There are a number of limited submission grant programs with upcoming agency deadlines for which we did not receive any notifications of interest. For these programs, marked "**First to Notify**," approval to move forward with a full proposal submission to the funder will be given on a first come, first served basis.

- [USDA: Outreach and Assistance for Socially Disadvantaged Farmers and Ranchers and Veteran Farmers and Ranchers](#)  
Deadline: 07/25/2023
- [Mathers Foundation: Grant Program \(STEM\)](#)  
LOI deadline: 07/28/2023
- [DOJ: Immersive Employment Readiness Training for Justice-Involved Individuals](#)
- [NIH: Collaborative Partnership to Advance Global Health Research](#)  
LOI Deadline: 08/01/2023
- [HRSA: Health Center Program](#)  
Deadline: 08/21/2023
- [HRSA: Health Center Program - AA](#)  
Deadline: 08/21/2023

- [USDA: School FoodService Workforce Cooperative Agreement](#)  
Deadline: 08/21/2023
- [NIH: Neuroscience Development for Advancing the Careers of a Diverse Research Workforce](#)  
LOI Deadline: 08/26/2023

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## American Philosophical Society: Franklin Research Grants

The [Franklin Research Grants program](#) awards grants of up to \$6,000 to help meet the costs of travel to libraries and archives for research purposes; the purchase of microfilm, photocopies, or equivalent research materials; the costs associated with fieldwork; or laboratory research expenses. Franklin grants are made for noncommercial research. They are not intended to meet the expenses of attending conferences or the costs of publication.

*Upcoming Deadlines: October 2, December 1*

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## DoD: National Defense Education Program STEM Open Notice

The Department of Defense (DoD) Office of the Under Secretary of Defense for Research and Engineering (OUSD(R&E)) seeks innovative applications on mechanisms to implement and research the effectiveness of STEM education, outreach, and/or workforce initiative programs, here onto referred as STEM activities.

In response to this [NDEP STEM Funding Opportunity](#), the Department intends to release amendments and solicitations, such as Industry Days, Opportunity Days, etc., detailing funding opportunities through award(s) in STEM activities. These activities include, but are not limited to:

- STEM Education and Outreach
- Support for STEM Education at Two-Year Institutions/Community Colleges (2YI/CCs)
- Manufacturing Engineering Education Program
- Education and Workforce Development aligned to the DoD Critical Technology Areas

- Enhanced Civics Education
- STEM Scholarship Programs
- Strategic Partnerships
- Program Evaluations and Assessments
- Data Analytics and Visualizations
- Activities aligned to the DoD STEM Strategic Plan
- Other NDEP Congressional Initiatives and Programs

In response to this FO, applicants may be asked for a mandatory white paper submission, intended to determine which efforts are of merit preparatory to submission of a full application. Applicants will be selected from the white paper submissions to be invited by the Government via email to submit a full application for evaluation and possible award consideration. White papers that fail to address the areas listed in the Program Description of the NFO amendment or Industry Day/Opportunity Day announcement will not be evaluated and will not receive an invitation to submit a full technical application.

*Deadline: February 8, 2028*



## **DOE: NOSI - University Turbine Systems Research**

*Forecasted opportunity*

If issued, the objective of this [Funding Opportunity](#) will be to solicit and competitively award university-based R&D projects that address and resolve fundamental scientific challenges and applied engineering technology issues associated with thermal management of hot gas path gas turbine components and combustors. Specifically, R&D projects will conduct fundamental and applied research to develop advanced materials and advanced hot gas path components which utilize these advanced materials, advanced cooling architectures, and advanced manufacturing methods.

If issued, the FOA will seek to solicit and competitively award laboratory/bench-scale R&D in the following areas of interest (AOI):

AOI 1: Fundamental Materials Development for Hot Gas Path Hydrogen Turbine Components

AOI 2: Applied Materials Development for Hot Gas Path Hydrogen Turbine Components

Cost share is required.



## Institute of Education Sciences Research Grants

The National Center for Education Research and the National Center for Special Education Research released funding announcements for three fiscal year 2024 grant competitions.

- *Application packages will be available on **July 20, 2023**.*
- *Letters of intent (optional but encouraged) are **due August 10, 2023**.*
- *The application **deadline is September 21, 2023**.*

**Education Research Grants** (84.305A): This program seeks to expand the understanding of education programs, practices, and policies in the United States and how they are related to education outcomes for learners at all levels, including early childhood, elementary, secondary, postsecondary, and adult education. This program seeks to build high-quality evidence about what works for whom, in what context, and why. Grants support the development and validation of measurement tools, exploratory research, the development and pilot testing of new interventions, and impact studies to evaluate programs, practices, and policies. This research program invites applications across a wide range of substantive topic areas.

**Special Education Research Grants** (84.324A): This program seeks to expand the knowledge base and understanding of learners with or at risk for disabilities from infancy through postsecondary education. Grants support the development and validation of measurement tools, exploratory research, the development and pilot testing of new interventions, and impact studies to evaluate programs, practices, and policies. This research program invites applications across a wide range of substantive topic areas.

**Research Training Programs in Special Education** (84.324B): These training programs seek to prepare individuals to conduct rigorous and relevant special education and early intervention research that advances knowledge within the field and addresses issues important to education policymakers and practitioners. For FY 2024, there is one training program in special education—early career development and mentoring.

*More information about the IES research programs, application process, and deadlines are*

available on the [IES Funding Opportunities web page](#). IES may announce additional competitions later in 2023.



## **Institute of Museum and Library Services Funding Opportunities**

### Laura Bush 21st Century Librarian Program

The Laura Bush 21st Century Librarian Program (LB21) supports the training and professional development of library and archives professionals; developing faculty and information leaders; and recruiting, educating, and retaining the next generation of library and archives professionals in order to develop a diverse library and archival workforce and meet the information needs of their communities.

Applications to IMLS should both advance knowledge and understanding and ensure that the federal investment made generates benefits to society. Specifically, the goals for this program are to generate projects of far-reaching impact that:

- Recruit, train, develop, and retain a diverse workforce of library and archives professionals.
- Develop faculty, library, and archives leaders by increasing the institutional capacity of libraries, archives, and graduate programs related to library and information science.
- Enhance the training and professional development of the library and archival workforce to meet the needs of their communities.

*Deadline: September 20, 2023*

### National Leadership Grants for Libraries

The National Leadership Grants for Libraries Program (NLG-L) supports projects that address critical needs of the library and archives fields and have the potential to advance practice and strengthen library and archival services for the American public. Successful proposals will generate results such as new models, tools, research findings, services, practices, and/or alliances that can be widely used, adapted, scaled, or replicated to extend and leverage the benefits of federal investment.

Applications to IMLS should both advance knowledge and understanding and ensure that the federal investment made generates benefits to society. Specifically, the goals for this program are to generate projects of far-reaching impact that:



- Build the workforce and institutional capacity for managing the national information infrastructure and serving the information and education needs of the public.
- Build the capacity of libraries and archives to lead and contribute to efforts that improve community well-being and strengthen civic engagement.
- Improve the ability of libraries and archives to provide broad access to and use of information and collections with emphasis on collaboration to avoid duplication and maximize reach.
- Strengthen the ability of libraries to provide services to affected communities in the event of an emergency or disaster.
- Strengthen the ability of libraries, archives, and museums to work collaboratively for the benefit of the communities they serve.

*Deadline: September 20, 2023*



## **Johnson and Johnson: The WiSTEM<sup>2</sup>D Scholars Award Program – LIMITED**

Limited submission grant programs are those that indicate a limit on the number of proposals that may be submitted by an institution for a particular deadline. A selection process becomes necessary if more applicants express interest in applying than NDSU is allowed to submit to the grant program.

**Notify RCA by August 3, 2023, 4pm, if you are interested in submitting to this program.**

The Johnson & Johnson Scholars Award Program aims to fuel development of female STEM<sup>2</sup>D leaders and feed the STEM<sup>2</sup>D talent pipeline by awarding and sponsoring women at critical points in their careers, in each of the STEM<sup>2</sup>D disciplines: **Science, Technology, Engineering, Math, Manufacturing and Design.**

The awards will fund early to mid-career women working within a STEM<sup>2</sup>D university department. The goal is to fuel the research passion of the awarded women and inspire career paths in their respective STEM<sup>2</sup>D fields. Johnson & Johnson is looking to identify global women leading in both their research fields and

leading as mentors, to be a vision for girls and other women in STEM<sup>2</sup>D.

**Each University can support one applicant per discipline.**



## **National Humanities Center: Residential Fellowships**

The National Humanities Center offers opportunities for a [Residential Fellowship](#) year in order to make significant progress on scholarly projects and share ideas with other scholars. Most proposals are for single-authored books, but other forms of written scholarly work are eligible. The National Humanities Center is open to new forms of humanities scholarship.

Applicants must have a doctorate or equivalent scholarly credentials. Mid-career and senior scholars are encouraged to apply. Emerging scholars with a strong record of peer-reviewed work may also apply. The Center does not support the revision of doctoral dissertations. In addition to all fields of the humanities, the Center accepts applications from scholars in the natural and social sciences, the arts, the professions, and public life who are engaged in humanistic projects.

*Deadline: October 5, 2023*



## **NIH: Cancer Prevention, Detection, Diagnosis, and Treatment Technologies for Global Health (U01 Clinical Trial Optional)**

This Funding Opportunity [[RFA-CA-24-005](#)] supports the development of cancer-relevant technologies suitable for use in low- and middle-income countries (LMICs). Specifically, the FO solicits applications for projects to adapt, apply, and validate existing or emerging technologies into a new generation of user-friendly, low-cost technologies for preventing, detecting, diagnosing, and/or treating cancers in people living in LMICs.

Applicants should have a working assay or device prototype (not necessarily already capable of cancer applications). The U01 project includes studies to both adapt this technology as well as demonstrate technical functionality and clinical performance for use

of the device or assay in specific LMIC settings by meeting objective performance milestones followed by improvements and validations of the technologies in the LMIC settings. Projects proposed in response to this FO will require **multidisciplinary efforts** to succeed; therefore, all applicant teams must include expertise in engineering/assay/treatment development, oncology, and global healthcare delivery. Investigators responding to this FO must consider affordability and cost-effectiveness as well as usability at the point-of-need as part of their design criteria.

*Letter of Intent Deadline: September 13, 2023*

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## **NIH: Development of Software for Data Science in Infectious and Immune-Mediated Diseases Research (U01 Clinical Trial Not Allowed)**

The purpose of this Funding Opportunity [[RFA-AI-23-038](#)] is to solicit applications for the development of software to improve the acquisition, management, analysis, visualization, and dissemination of data and knowledge for data science research on infectious and immune-mediated diseases (IID). Relevant IID data science research comprises, but is not limited to, computational methods to better understand disease mechanism, risk prediction, epidemiology, detection and diagnosis, treatment, and vaccines, aligned with the research mission of National Institute of Allergy and Infectious Diseases (NIAID).

Development of software in various stages of maturity will be in scope for this FO, ranging from early-stage prototyping to later-stage hardening. Early-stage prototyping will enable others to use new computational algorithms, tools, or technologies through easy-to-use software products while hardening of existing software could improve usability and enable a broader user base to use the software for their research. Regardless of the development stage, the proposed work should result in a software product that can be re-used by the IID research community and that can be easily discovered through FAIR (Findable, Accessible, Interoperable and Reusable) compliant metadata.

*Letter of Intent Deadline: September 11, 2023*

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## **NIH: Fulbright U.S. Scholar Program**

The [Fulbright U.S. Scholar Program](#) offers over 400 awards in more than 135 countries for U.S. citizens to teach, conduct research and carry out professional projects around the world. College and university faculty, as well as artists and professionals from a wide range of fields can join over 400,000 Fulbrighters who have come away with enhanced skills, new connections, and greater mutual understanding.

There are 4 types of activities that can be carried out under the program:

- Teaching
- Research
- Teaching/Research
- Professional Project

For Fulbright Opportunities for students please visit [here >>](#)

*Deadline: September 15, 2023*

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## **NIH: NOSI - Stimulating Research to Understand and Address Hunger, Food and Nutrition Insecurity**

The purpose of this NOSI [[NOT-OD-22-135](#)] is to encourage research on the efficacy of interventions that address nutrition security and the mechanisms of food insecurity on a variety of health outcomes. It also calls for the development of new measures for nutrition security and assessment of food insecurity that are broadly applicable. It was developed by the [Office of Nutrition Research](#) (ONR) Implementation Working Group on [Nutrition and Health Disparities](#) in collaboration with NIH Institutes and Centers (ICs) and Offices in support of the goals and objectives of the [Strategic Plan for NIH Nutrition Research](#).

Nutrition security and equitable access to healthy and affordable food in the U.S. are public health concerns. Research shows higher diet quality is associated with proximity to and density of food stores, neighborhood socioeconomic status (SES), and perception of healthy food environments, especially for racial and ethnic minority populations. Food environments, such as lack of access to grocery stores and the presence of fast food restaurants at the neighborhood level, are associated with increased risk of hypertension, cardiovascular disease, diabetes, and cancer survival. Elucidating the role of these social and environmental conditions on diet and nutritional status could help to prevent and

manage diet-related health disparities and promote health equity. This is therefore an opportunity for future research to advance nutrition equity, including the broad categories below:

1. Development and testing of interventions, innovative programs, and natural experiments to address food insecurity and neighborhood-level access to healthy and affordable foods;
2. Research to understand the mechanisms and pathways between food insecurity and neighborhood food environments on wellbeing and health and various health outcomes; and
3. Studies to develop and validate tools to measure nutrition insecurity and food insecurity.

*This notice applies to due dates on or after October 5, 2022 and subsequent receipt dates through November 29, 2024.*

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## **NIH: Pilot Interventions to Integrate Social Care and Medical Care to Improve Health Equity (R01- Clinical Trial Required)**

This Funding Opportunity Announcement [[RGA-DK-22-038](#)] will support pilot and feasibility trials to test interventions that involve screening for and addressing adverse social determinants of health, also called social risks, during a health care visit. Patients' endorsed social needs could be addressed by appropriately referring/navigating patients or caregivers to resources that address these issues at social service organizations located externally or co-located in the healthcare system.

### **The trials will determine:**

- Feasibility and acceptability of screening for social risks, identifying social needs and implementing referral service linkages within the context of a healthcare visit
- Preliminary signals of the intervention's impact on both the social risk/need(s) and NIDDK disease outcomes.

The proposed pilot and feasibility clinical trials should lay the foundation for larger clinical trials to integrate social care and medical care and improve health outcomes related to the prevention and/or treatment of diseases. It is expected that these pilot studies will begin to delineate promising practices for future equitable and effective "real world" implementation of social and medical care integration. The overarching goal of this FO is to develop pragmatic approaches that can be used in health care settings to reduce health

disparities in diseases and achieve health equity, especially among individuals from racial and ethnic minority groups, rural populations, sexual and gender minority groups, and other socioeconomically disadvantaged and medically underserved communities.

*Letter of Intent Deadline: September 19, 2023*

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## **NSF: Mathematic Funding Opportunities**

### **Combinatorics** [[PD 18-7970](#)]

The Combinatorics program supports research on discrete structures and includes algebraic, enumerative, existential, extremal, geometric, and probabilistic combinatorics, including graph theory.

*Deadline: September 26, 2023*

### **Foundations** [[PD 18-1268](#)]

The program in Foundations supports research in mathematical logic and the foundations of mathematics, including proof theory, recursion theory, model theory, set theory, and infinitary combinatorics.

*Deadline: September 26, 2023*

### **Probability** [[PD 18-1263](#)]

The Probability Program supports research on the theory and applications of probability. Subfields include discrete probability, stochastic processes, limit theory, interacting particle systems, stochastic differential and partial differential equations, and Markov processes. Research in probability which involves applications to other areas of science and engineering is especially encouraged.

*Deadline: September 19, 2023*

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## **NSF: Computer and Information Science and Engineering (CISE) - Core Programs**

This solicitation covers submission to the following CISE core programs [[NSF 23-561](#)]. Please see the individual program webpages below for more information on what is within scope for these programs:

**Division of Computing and Communication Foundations:**

- Algorithmic Foundations (AF) program [[Program Webpage](#)] supports potentially transformative projects in the theory of algorithms and computational complexity, characterized by algorithmic innovation and rigorous analysis.
- Communications and Information Foundations (CIF) program [[Program Webpage](#)] supports foundational research that addresses the theoretical underpinnings of information acquisition, transmission, and processing in communications and information processing systems.
- Foundations of Emerging Technologies (FET) program [[Program Webpage](#)] supports foundational research at the intersection of computing and biological systems, nanoscale science and engineering, quantum information science, and other promising disruptive technologies supporting novel computing/communication models.
- Software and Hardware Foundations (SHF) program [[Program Webpage](#)] supports foundational research in the design, verification, operation, and evaluation of computer hardware and software through novel approaches, robust theories, high-leverage tools, and lasting principles.

**Division of Computer and Network Systems:**

- Computer Systems Research (CSR) [[Program Webpage](#)] supports the advancement and holistic design and development of integrated software and hardware computing systems; and
- Networking Technology and Systems (NeTS) [[Program Webpage](#)] supports research that advances wired and wireless networking systems, develops a better understanding of the fundamental properties and tradeoffs involved, as well as the abstractions and tools used in designing, building, measuring and managing them.

**Division of Information and Intelligent Systems:**

- Human-Centered Computing (HCC) program [[Program Webpage](#)] supports research in human-computer interaction, integrating across fields including computing, information, social, and behavioral sciences, to (re)design technologies that amplify human capabilities, and understand how human, technical, and contextual aspects of computing and communication systems shape their benefits, effects, and risks.

- Information Integration and Informatics (III) program [[Program Webpage](#)] supports research on computational approaches to the full data lifecycle to maximize the utility of information resources.
- Robust Intelligence (RI) program [[Program Webpage](#)] supports computational research to understand and enable intelligent systems in complex, realistic contexts.

**Office of Advanced Cyberinfrastructure:**

- OAC Core Research (OAC Core) program [[Program Webpage](#)] supports translational research on the design, development, deployment, experimentation, and application of advanced research cyberinfrastructure (CI) to enable new frontiers of discovery and innovation.

**There are 3 Project Classes for this Solicitation**

- Small Projects: with total budgets up to \$600,000 for up to 3 years  
*Deadline: Proposals Accepted ANYTIME*
- Medium Projects: with total budgets ranging \$600,001 to \$1,200,000 for up to 4 years  
*Deadline: October 23, 2023*
- OAC Core Projects: with total budgets up to \$600,000 for up to 3 years  
*Deadline: October 23, 2023*

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## **NSF: DCL - Equitable and Transformative Approaches to Educating the Semiconductor Workforce (ETA-ESW)**

The 2022-2026 Strategic Plan highlights the importance of U.S. global competitiveness and its critical dependence on the readiness of the Nation's STEM workforce. To achieve this goal, NSF invests in programs that directly advance this workforce. As part of this effort, this DCL [[NSF 23-118](#)] announces a cooperative activity between NSF and the Micron Foundation to stimulate transformative approaches to: (a) improve and impact education and training of the advanced memory manufacturing, microelectronics, and semiconductor workforce of the future; and (b) expand equitable opportunities and access to experiential learning programs in cleanrooms and other teaching laboratories.

As part of this effort, this DCL announces new award opportunities for FY 2023 and FY 2024 in two programs: the [Improving Undergraduate STEM Education \(IUSE\)](#) program and the [Experiential Learning for Emerging and Novel Technologies \(ExLENT\)](#) program that



build on or leverage strong industry-academic partnerships to strengthen the semiconductor manufacturing workforce. Efforts are intended to advance and support the development of a skilled STEM workforce in advanced memory manufacturing and/or semiconductor manufacturing and design.

This DCL will support efforts to: create new and broaden access to existing programs, experiential learning activities, courses, curricula, and/or certificates; adapt and implement evidence-based instructional and inclusive practices; develop and/or integrate industry standards into programs of study and courses; foster skilled educators; and investigate activities and factors associated with student performance. Therefore, this DCL also aims to encourage partnerships among companies; state, local, and tribal government offices; non-profits; schools; professional organizations; and/or institutions of higher education.

*Proposals to be submitted to the IUSE or ExLENT programs through the regular proposal submission process should be discussed with the cognizant Program Officer prior to formal submission.*

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## **NSF: Division of Molecular and Cellular Biosciences - Core Programs**

Molecular and Cellular Biosciences [[NSF 23-548](#)] is organized into four broad scientific areas represented by core programs (clusters) that welcome proposals in the following topic areas:

- [Cellular Dynamics and Function](#) (CDF)
- [Genetic Mechanisms](#) (GM)
- [Molecular Biophysics](#) (MB)
- [Systems and Synthetic Biology](#) (SSB)

Prospective PIs are *strongly encouraged* to consult with a Program Director most closely related to their research area for help with any questions, for example, about the potential fit of a project to a cluster.

MCB welcomes projects that bridge the intellectual edges of more than one cluster within the division. MCB also seeks to foster cross-disciplinary research with the other BIO divisions—Integrative Organismal Systems, Environmental Biology, and Biological

Infrastructure—and with programs in other directorates, such as in the Division of Chemical, Bioengineering, Environmental, and Transport Systems in the Directorate for Engineering and the Chemistry of Life Processes, Mathematical Biology, and Physics of Living Systems programs in the Directorate for Mathematical and Physical Sciences, among others.

*Deadline: Proposals accepted ANYTIME*



## **NSF: Mathematical Biology**

The Mathematical Biology Program [[PD 22-7334](#)] supports research in areas of applied and computational mathematics with relevance to the biological sciences. Successful proposals must demonstrate mathematical innovation, biological relevance and significance, and strong integration between mathematics and biology.

Some projects of interest to the Mathematical Biology Program may include development of mathematical concepts and tools traditionally seen in other disciplinary programs within the Division of Mathematical Sciences, e.g., topology, probability, statistics, computational mathematics, etc. In general, if a proposal is appropriate for review by more than one NSF program, it is advisable to contact the program officers handling each program to determine when and where the proposal should be submitted and to facilitate the review process.

*Deadline: Proposals accepted ANYTIME*



## **The Elsa U. Pardee Foundation: Cancer Research Grant**

The [Elsa U. Pardee Foundation](#) funds research to investigators in United States non-profit institutions proposing research directed toward identifying new treatments or cures for cancer. The Foundation funds projects for a one-year period which will allow the establishment of capabilities of new cancer researchers or new cancer approaches by established cancer researchers. It is anticipated that this early-stage funding by the Foundation may lead to subsequent and expanded support using government agency funding. Project relevance to cancer detection, treatment, or cure should be clearly identified. By design, there are no limits set on the grant amount that can be requested. It

must be reasonable and clearly supported by the scope of the project outlined in the application.

*Upcoming Deadlines: August 31, December 15*



## Looking for more funding opportunities?



RCA subscribes to SPIN by InfoEd Global, a database of more than 40,000 funding opportunities. Through this subscription, SPIN is free for current NDSU faculty, staff, and students.

For more information and to access this database, visit the [SPIN page](#) on the RCA website. If you have questions, please contact [ndsu.researchdev@ndsu.edu](mailto:ndsu.researchdev@ndsu.edu).

Have questions, ideas, or suggestions for the RCA Update?

[Contact Us](#)



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*The Office of Research and Creative Activity (RCA) sends bi-weekly emails to NDSU faculty and staff to provide current information on various topics including funding opportunities, grant program changes, research resources, deadlines, notices, and training.*

*You are receiving this notification through the NDSU official employee listserv or sub-list. The official listserv refreshes after each pay period.*

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*We collectively acknowledge that we gather at NDSU, a land grant institution, on the traditional lands of the Oceti Sakowin (Dakota, Lakota, Nakoda) and Anishinaabe Peoples in addition to many diverse Indigenous Peoples still connected to these lands. We honor with gratitude Mother Earth and the Indigenous Peoples who have walked with her throughout generations. We will continue to learn how to live in unity with Mother Earth and build strong, mutually beneficial, trusting relationships with Indigenous Peoples of our region.*