

November 13, 2023

Lab tours showcase NDSU researchers' work

NDSU Vice President for Research and Creative Activity Colleen Fitzgerald recently toured the NDSU labs of Ryan McGrath and Danling Wang. Thanks to both researchers and their students and staff for the kind welcome and information about the interesting studies occurring at NDSU.

HEALTHY AGING LAB

An assistant professor of exercise sciences and researcher, Ryan McGrath and his students work on the measurement and assessment of muscle-related problems to study how aging impacts our ability to perform simple functions.



[More photos from the Healthy Aging Lab>>](#)

NANOELECTRONIC SENSOR AND DEVICE LAB

Danling Wang is an associate professor of electrical engineering and optical physics. She and the students in her nanoelectronic sensor and device lab work on the development and design of electronic devices and sensors-based nanomaterials which are capable of detecting trace chemical gases with broad application of medicines, food safety and toxic gases in society and industry.



[More photos from the nanoelectronic sensor and device lab>>](#)



Rapid Pitch event - November 14

Calling all innovators! Whether you have a business and are ready to seek venture capital, or you are an aspiring entrepreneur with just the spark of an idea, you are invited to the Rapid Pitch Event on November 14.

Brought to you by NDSU and gener8tor North Dakota, Rapid Pitch will offer current students, faculty, staff, and researchers the opportunity to pitch a problem, idea or business concept to gener8tor North Dakota. Participants will receive coaching and advice to help take the next steps on their entrepreneurial journey.

Pitch participants will need to sign up for a 15-minute time slot at the NDSU Memorial Union. Time slots are available from 9 a.m. to noon, and 1 p.m. to 4 p.m. and registration is required. Each time slot will allow for approximately 10 minutes of pitch or presentation and 5 minutes for Q&A and dialogue.

Visit the [registration page](#) for more details and to sign up for a time slot.

FY2025 programmatic requests deadline

Each year, congressional delegations have the opportunity to submit programmatic funding requests for federal research programs. Programmatic requests are designed to add additional funding to federal agencies' budgets with the intent that a competitive funding opportunity will be released in connection with the funding increase.

NDSU's process for submitting requests for consideration is available on the [RCA website](#).

The deadline for FY2025 submissions to RCA is January 19, 2024.

If you have questions about the process or would like to discuss a potential idea, please contact ndsu.researchdev@ndsu.edu.



Elevate is a conference for our region's technology community.

Whether you're a software developer, product owner, designer, or entrepreneur working in the technology space, there's something for everyone!

Morning sessions will focus on creativity, innovation, and technology where we'll hear from folks who work in a range of creative enterprises and their reflections on the art of discovery, iterative thinking, and the creative process, and our afternoon workshops will give you a chance to dive deeper. We'll also discuss the merits and challenges of a career in technology from folks at different stages in their career.

- Thursday, November 16th
- 8:00 AM - 4:00 PM

- Four and Four (404 4th Ave N Suite #2, Fargo, ND 58102)

[Learn more and register>>](#)



National Science Foundation
WHERE DISCOVERIES BEGIN

Great opportunity: NSF to offer Virtual Grants Conference

The National Science Foundation is hosting the **Fall 2023 NSF Virtual Grants Conference** from December 4 – 7, 2023 and registration is now open.

The NSF Grants Conference is a must, especially for new faculty, researchers, and administrators.

Highlights include:

- New programs and initiatives
- Proposal preparation
- NSF's merit review process
- NSF directorate sessions
- Award management topics
- Conflict of interest policies
- NSF systems updates

For those who cannot attend the live conference, **all recorded conference sessions will be available on-demand** shortly after the event.

[Get more information and register >>](#)



Institutional access for UIDPVirtual 2023 December 5-7

UIDPVirtual 2023 brings the best practices and prized experience-based takeaways you rely on from UIDP directly to your desktop. We're leveraging the conversational capabilities of the online experience to facilitate robust idea exchange, empowering participants to share, collaborate, and solve in real time.

Expert speakers will set the stage each day with fresh insight into the day's theme. Then, participants will break out into powerfully interactive "deep dive" sessions to develop and amplify key learnings. With topics intentionally curated for professionals in contracting, partnership management and research administration, government engagement and economic development, and workforce management, everyone on your team has a voice and perspective to bring to UIDPVirtual.

With institutional access, anyone with an @ndsu.edu email address will be able to register for access to all sessions.

- Voucher code: VIRTUALACCESS2023
- Direct registration link: <https://cvent.me/YL9EVz>

- To keep records consistent, please use "North Dakota State University" on the registration form.

Request for input for Sustainable Computing for Sustainability Workshop

The NSF-sponsored workshop on **Sustainable Computing for Sustainability** to be held in the Spring of 2024 has the dual goals of helping identify unaddressed sustainability challenges in the two areas below, as well as explore and offer guidance on how to build and sustain the interdisciplinary teams that those challenges typically require.

1. **Computing for sustainability:** How to harness computing to tackle sustainability problems such as climate change, or redesigning the power grid to better handle distributed renewable energy sources?
2. **Sustainable computing:** How do we ensure that computing does not itself contribute to creating sustainability problems and that it accounts for sustainability in its development and operation?

To that end, the organizers are soliciting input from the research community to help guide the selection of themes the workshop should focus on.

Inputs can be submitted [using this form](#) and you may submit multiple responses. Inputs will be accepted until November 20, 2023.

Request for input: Best Practices for Sharing NIH Supported Research Software

Robust research software is essential to the [NIH's vision](#) to establish a modernized and integrated biomedical and behavioral data and computing ecosystem. Sharing software in an “open” manner means that others can use, modify, and/or redistribute the code in accordance with an appropriate public license under which the software is released.

The NIH is interested in helping those engaged in biomedical and behavioral research software development and sharing, implement emerging best practices into their work [\[NOT-OD-24-005\]](#). Therefore, this RFI aims to identify existing research software sharing community best practices and learn where additional attention may be needed. It also seeks to determine the extent to which those developing research software share it, barriers to sharing, and how NIH can better support research software sharing.

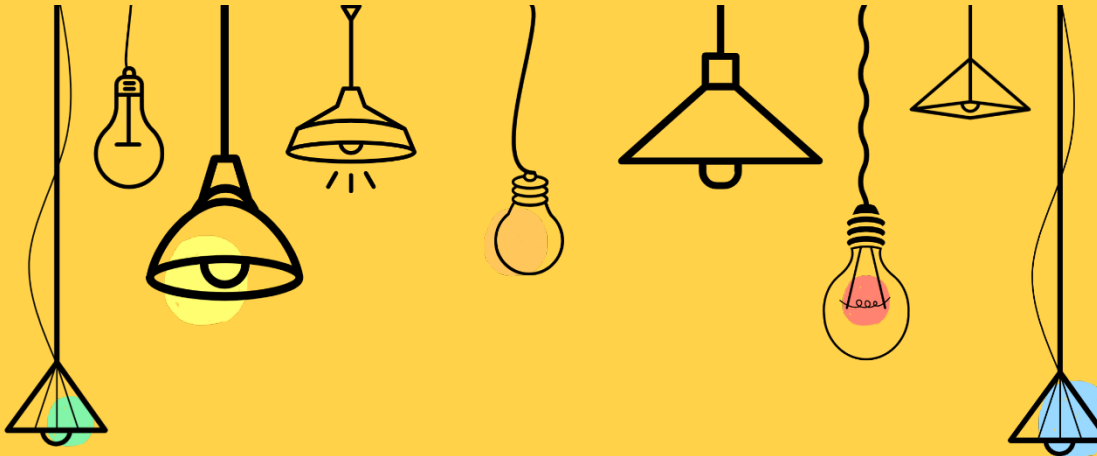
Responses must be received by 11pm on February 1, 2024.

Request for input: Inviting Comments and Suggestions on the National Cancer Institute's Support of Early Career, Mentored Cancer Researchers and Trainees

The National Cancer Institute (NCI) is committed to the training and development of the 21st century cancer research workforce. As the needs of this community and the opportunities for careers continue to evolve, it is crucial that NCI's support evolves as well [\[NOT-CA-24-007\]](#).

Throughout all NCI programs, training must reflect the diversity of the population it serves. In response to the renewed concerns raised by early career, mentored cancer researchers including through the work of the NIH's Advisory Committee to the Director Working Group on Re-envisioning [NIH-Supported Postdoctoral Training](#), NCI is examining its own approaches. We are taking the concerns identified by the many community engagements as a starting point and are here seeking input on potential approaches and innovations that might be implemented within areas under the NCI's purview.

Responses must be received by December 29, 2023



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) and get the process started.

Upcoming Events at a Glance

- **gener8tor Rapid Pitch Event**
November 14, 9:00 am - noon and 1:00pm - 4:00 | [Learn More >>](#)

- **Elevate Tech Conference**
November 16, 8:00am - 4:00pm | [Learn More >>](#)
- **Partnerships for Innovation (PFI) Q&A Webinar**
December 2 | [Learn More >>](#)
- **Building Interdisciplinary Research Careers in Women's Health (BIRCWH) 2023 Annual Meeting**
December 5, 2023 | [Learn More >>](#)
- **I-Corps Updates Meeting**
December 7 | [Learn More >>](#)
- **NSF: Track 2 Office Hours**
December 20 at 1pm | [Learn More and Register >>](#)
**Note – the 2024 internal competition is closed. However, if you are interested in the program for 2025, it is highly encouraged that you attend this session*
- **NIH: Diverse Voices, Intersectionality and the Health of Women -- “Graphic Medicine.”**
January 25, 2024, 2:00PM | [Learn more >>](#)
- **NIH: Behavioral and Social Sciences Research Festival**
Tuesday, December 5, 10:00 am | [Learn more >>](#)

Funding Opportunities

- [American Federation for Aging Research: Funding Opportunities](#)
- [American Heart Association: Funding Opportunities](#)
- [BASF: Free in vivo testing: Unleash your molecule's potential as a crop protector](#)
- [BASF: The challenge of repairing polymers in recycling](#)
- [BIOMADE: Project Call 4.0](#)

- [DARPA: The DARPA Triage Challenge](#)
- [DARPA: Young Faculty Award](#)
- [Department of Interior: Great Lakes Fish and Wildlife Restoration Act FY24](#)
- [Department of State: U.S. Ambassadors Fund for Cultural Preservation Grants Program](#)
- [DoD: Defense University Research Instrumentation Program](#)
- [DOE: Buildings Energy Efficiency Frontiers & Innovation Technologies 2024](#)
- [General Mills: Solutions for frozen food packaging and transportation](#)
- [National Fish and Wildlife Foundation: Five Star and Urban Waters Restoration Grant Program 2024](#)
- [Neogen Corporation: Elimination of free nucleic acid from samples used in molecular tests](#)
- [NIH: Developing Novel Theory and Methods for Understanding the Genetic Architecture of Complex Human Traits](#)
- [NIH: NIAID Research Education Program Advancing the Careers of a Diverse Research Workforce](#)
- [NIH: Technology Development to Reduce Health Disparities](#)
- [NSF: Cognitive Neuroscience](#)
- [NSF: Cybersecurity Innovation for Cyberinfrastructure](#)
- [NSF: DCL - Exploring Task-based Interactions between Human and Synthetic Actors](#)
- [NSF: Designing Synthetic Cells Beyond the Bounds of the Evolution](#)
- [NSF: Environmental Sustainability](#)
- [NSF: Hydrologic Science](#)
- [NSF: Science of Learning and Augmented Intelligence](#)
- [NSF: Science of Organizations](#)
- [NSF: Trailblazer Engineering Impact Award](#)

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 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.

- [NSF: EPSCoR Research Infrastructure Improvement Track-4: EPSCoR Research](#)
Notification Deadline: November 16, 2023
- [NSF: Scholarships in STEM \(S-STEM\)](#)
Notification Deadline: December 18, 2023 Track 1
- [FFAR: New Innovator in Food and Agriculture Research](#)
Notification Deadline: December 21, 2023

The below limited submission grant programs did not receive notification of interest, so they are considered “**First to Notify**”. Those who notify are given approval to move forward with a full proposal submission on a first come, first serve basis.

- [DOE: Innovative Designs for High-Performance Low-Cost HVDC Converters](#)
Deadline: November 14, 2023; 4pm
- [HRSA: National Rural Health, Policy, Community and Collaboration Program](#)
Deadline: November 30, 2023
- [Mathers Foundation: Grant Program \(STEM\)](#)
Deadline: LOI December 1, 2023
- [HRSA: Supporting Healthy Start Performance Project](#)
Deadline: December 29, 2023

- [NIH: Leading Equity and Diversity in the Medical Scientist Training Program](#)

Deadline: January 25, 2024

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American Federation for Aging Research: Funding Opportunities

AFAR's vision has been to fund and nurture talented scientists and physicians and encourage them to pursue lifelong careers in research focused on aging processes and age-related diseases.

Glenn Foundation Discovery Award

The Glenn Foundation for Medical Research (GFMR) in collaboration with AFAR, has established the [Glenn Foundation Discovery Award](#). This Award was created to support research projects with strong potential to develop pioneering discoveries for understanding the underlying biological mechanisms that govern normal human aging and its related physiological decline.

Deadline: Letter of Intent February 15, 2024

Glenn Foundation for Medical Research and AFAR Grants for Junior Faculty

The major goal of [this program](#) is to assist in the development of the careers of junior investigators committed to pursuing careers in the field of aging research.

Deadline: Letter of Intent December 18, 2023

The Sagol Network GerOmic Award for Junior Faculty

The major goal of [this program](#) is to assist in the development of the careers of junior investigators committed to pursuing careers in the field of aging research and ger-omics, –omics research focused on aging and/or age-related disease research in particular.

Deadline: Letter of Intent December 18, 2023

Read the full list of [AFAR Funding Opportunities](#) >>



American Heart Association: Funding Opportunities

The American Heart Association is the largest non-profit, non-governmental funder of cardiovascular and cerebrovascular research in the U.S. Many research programs are offered annually and others are one-time grants. Some programs require pre-proposals, with full proposals by invitation only.

AHA offers:

- Investigator-Initiated Research: For this research, investigators initiate the research focus.
- Topic Focused Research: These programs support specific areas of science deemed critical to achieving AHA's mission and strategic objectives.
- Data Science grants: These opportunities fund researchers from anywhere in the world working in the field of data science. Grants support investigators in all career stages, from trainees to senior scientists.
- AHA Registry Research: AHA/ASA Quality Programs produce data from millions of patient records in vast databases for advancing scientific research. Investigators can submit proposals to conduct research using this data.

Note that AHA membership is required to submit a full proposal to these opportunities

Read the [full list of opportunities](#) >>



BASF: Free in vivo testing: Unleash your molecule's potential as a crop protector

You've already done all the hard work of synthesizing your molecule. Maybe it wasn't the blockbuster pharmaceutical you envisioned, but it still has potential! BASF is looking for novel compounds, such as organic molecules, natural products, and fragment-like molecules, which could be subjected to screening within our research facility, with the goal of developing [new crop protection products](#).

Solutions of interest include:

- Single chemical compounds (in a dry form)
- Small organic molecules
- Natural products
- Virtual compounds

The application takes about one hour to complete.

Deadline: January 17, 2024



BASF: The challenge of repairing polymers in recycling

The quality of recycled material is directly dependent on the quality and purity of input materials. Several approaches have been tried to improve the quality of recycled polyolefins and polyesters. For polyolefins, there has been success in preventing chain cleavage in reprocessing by adding fresh antioxidants as restabilization additives, but any damage to the chain is irreversible. For polyolefins, there is currently no solution available to restore molecular weight.

BASF is seeking a [solution for polyolefins](#) that will extend the chain of cleaved polyolefins in recycling.

Solutions of interest include:

- Novel additives/agents that can promote reactive chain extension of cleaved polyolefins

Must-have requirements are:

- Safe chemistry that does not introduce hazardous substances into recycled material

The application takes about one hour to complete.

Deadline: December 31, 2023



BIOMADE: Project Call 4.0

BioMADE is pleased to issue Project Call 4.0, Accelerating Biomanufacturing Innovation: Advancing Solutions for Greener Chemistry, Low-Resource Environments, and Process Intensification. White Paper submissions for projects that contribute to building a sustainable, domestic, end-to-end bioindustrial manufacturing ecosystem are now being accepted.

Project Call 4.0 will follow a unique format, focusing on a set of cross-disciplinary solutions that advances biomanufacturing innovation. The focus areas are topic-specific and should advance bioindustrial manufacturing to support diverse applications, including alternative proteins, cultivated meat, feedstocks, additives, specialty chemicals, ingredients, and other product categories. The focus areas are:

- **Accelerate the transition to greener chemistry**
- **Develop biomanufacturing solutions for low-resource environments**
- **Process integration and process intensification**

Successful proposals will describe in detail how the project aligns with the focus area(s). Projects must also align to a minimum of one BioMADE program area: Technology and Innovation, Education and Workforce Development, and/or Safety, Security, Sustainability, and Social Responsibility (4S). However, incorporating more than one program area into a project is highly encouraged and will be scored more favorably during the review process.

More information about [BioMADE Project Call 4.0 >>](#)



DARPA: The DARPA Triage Challenge

The Defense Advanced Research Projects Agency (DARPA), a research and development agency within the Department of Defense, is seeking competitors for a new medical response challenge. The [DARPA Triage Challenge](#) aims to drive breakthrough innovations that improve medical response time during mass casualty incidents in complex military and civilian settings, especially when medical resources are limited relative to the need.

The DARPA Triage Challenge includes a series of technical challenge events to drive breakthrough innovations in the identification of physiological features (signatures) of injury, and to help medical responders perform scalable, timely, and accurate triage. Competitors may join one or more of the three parallel competitions:

Faculty and students – such as those in data science, ML/AI, robotics, pre-med, and STEM – are invited to develop a self-funded team to support program goals and qualify for prize money. Qualifying teams will gain access to unique datasets that are not publicly available outside of the Challenge, a new virtual environment for mass casualty simulation, and computational resources. Join us by registering for the first of three years of competition on the Qualification Portal.

Prizes for year one:

- Systems Competition: Up to \$200K Prize pool
- Virtual Competition: Up to \$100K Prize pool
- Data Competition: Up to \$200K Prize pool

Deadline: Nov. 27, 2023



DARPA: Young Faculty Award

The Defense Advanced Research Projects Agency (DARPA) [Young Faculty Award](#) (YFA) program aims to identify and engage rising stars in junior research positions in academia and equivalent positions at non-profit research institutions, particularly those without prior DARPA funding, to expose them to Department of Defense (DoD) needs and DARPA's mission to create and prevent technological surprise. The YFA program will provide high-impact funding to elite researchers early in their careers to develop innovative new research that enables transformative DoD capabilities. Ultimately, the YFA program is developing the next generations of researchers focused on national security issues.

Executive Summary Deadline: December 13, 2023; 3pm



Department of Interior: Great Lakes Fish and Wildlife Restoration Act FY24

The U.S. Fish and Wildlife Service requests interested entities to submit research, restoration, and Regional Project proposals for the restoration of the Great Lakes Basin fish and wildlife resources, as authorized under the Great Lakes Fish and Wildlife Restoration Act. The purpose of the Great Lakes Fish and Wildlife Restoration Act ([GLFWRA](#)) is to provide assistance to States, Indian Tribes, and other interested entities to encourage cooperative conservation, restoration, research, and management of the fish and wildlife resources and their habitats in

the Great Lakes Basin. All proposals should focus on the restoration and or research of fish and/or wildlife resources in the Great Lakes Basin and should be consistent with the goals of the [Great Lakes Fish and Wildlife Restoration Act of 2022](#) and the recommendations of the Great Lakes Regional Collaboration's "[Strategy to Restore and Protect the Great Lakes.](#)"

There is a required 25% non-federal match.

Deadline: January 4, 2024

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Department of State: U.S. Ambassadors Fund for Cultural Preservation Grants Program

The Bureau of Educational and Cultural Affairs of the U.S. Department of State announces an open competition for organizations to submit applications to participating U.S. embassies for funding through the U.S. Ambassadors Fund for Cultural Preservation ([AFCP](#)) to carry out an individual project to preserve cultural heritage in a specific priority country. The AFCP Grants Program supports the preservation of archaeological sites, historic buildings and monuments, museum collections, and forms of traditional cultural expression, such as indigenous languages and crafts.

Deadline: January 31, 2024

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DoD: Defense University Research Instrumentation Program

The Department of Defense (DoD) announces the Fiscal Year 2025 Defense University Research Instrumentation Program ([DURIP](#)). DURIP is designed to improve the capabilities of accredited United States (U.S.) institutions of higher

education to conduct research and to educate scientists and engineers in areas important to national defense, by providing funds for the acquisition of research equipment or instrumentation.

Deadline: February 16, 2024



DOE: Buildings Energy Efficiency Frontiers & Innovation Technologies (BENEFIT) – 2024

This Funding Opportunity (FO) [[DE-FOA-0003158](#)] supports applied research, development, and demonstration activities in high-priority building technologies, including next-generation HVAC, envelope, and lighting retrofits, as well as technologies that enhance the resilience of buildings and allow them to be assets to the electrical grid. The technologies this FO supports are essential tools to ensuring deep decarbonization of the U.S. building stock is achieved equitably, with benefits to building.

There are 4 main topic areas:

1. Heating, Ventilation, and Air Conditioning and Water Heating
2. Innovative, Replicable, and Low-Cost Roof and Attic Retrofits
3. Building Resilience and Capacity Constraints
4. Commercial Lighting Retrofit Advancements

There is a required 20% non-federal match.

Deadline: Concept Paper December 18, 2023



General Mills: Solutions for frozen food packaging and transportation

General Mills is seeking technologies to [replace the use of expanded polystyrene](#) (EPS) delivery packaging for frozen food. Potential solutions include better infrastructure and refrigeration equipment, optimized logistics, and new or novel delivery packaging.

Solutions of interest include:

- Improvements to infrastructure / refrigeration equipment
- Optimized “cold chain” logistics
- Novel delivery packaging materials or designs

The application takes about one hour to complete.

Deadline: December 31, 2023



National Fish and Wildlife Foundation: Five Star and Urban Waters Restoration Grant Program 2024

The [Five Star and Urban Waters Restoration grant program](#) seeks to develop community capacity to sustain local natural resources for future generations by providing modest financial assistance to diverse local partnerships focused on improving water quality, watersheds and the species and habitats they support. Projects include a variety of ecological improvements along with targeted community outreach, education and stewardship. Ecological improvements may include one or more of the following: wetland, riparian, forest and coastal habitat restoration; wildlife conservation, community tree canopy enhancement, wildlife habitat, urban agriculture and community gardens, wildlife and water quality monitoring and green infrastructure best management practices for managing run-off.

Projects should increase access to the benefits of nature, reduce the impact of environmental hazards and engage local communities, particularly underserved

communities, in project planning, outreach and implementation.

Deadline: January 31, 2024; 11pm

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Neogen Corporation: Elimination of free nucleic acid from samples used in molecular tests

When conducting a molecular assay for the detection of microorganisms, there is often contaminating nucleic acid present in the sample. Neogen is seeking methodologies and/or equipment that eliminate the nucleic acids of non-living cells within a sample in a simple and timely workflow.

Must-have requirements are:

- The workflow must be simple, with minimal touchpoints
- Solution must be able to work with multiple sample matrices
- The cleanup reagents need to be compatible with downstream molecular assay chemistry
- Should not affect live cells or interfere with cell growth

Deadline: December 31, 2023

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NIH: Developing Novel Theory and Methods for Understanding the Genetic Architecture of Complex Human Traits (R21 Clinical Trial Not Allowed)

The goal of this Funding Opportunity [[PAR-23-301](#)] is to support applications for novel theory and methods development that enable better understanding of how genetic and non-genetic factors contribute to complex trait variation across individuals, families, and populations. Approaches should account for

interdependencies across scales of biological, social, and ecological organization, make extensive use of theory, modeling, and validation with available large-scale datasets, and may be interdisciplinary drawing from the natural and social sciences.

Deadline: February 16, 2023



NIH: NIAID Research Education Program Advancing the Careers of a Diverse Research Workforce (R25 Clinical Trial Not Allowed)

This National Institute of Allergy and Infectious Diseases (NIAID) Research Education Program Advancing the Careers of a Diverse Research Workforce [[PAR-23-282](#)] is a specialized program designed to foster the development of research scientists from different career stages and diverse backgrounds, including those from underrepresented groups. Thus, the NIAID encourages applications from applicant organizations that propose innovative courses for skills development, research experiences, and mentoring activities and that focus on factors that have been shown to affect retention of groups nationally underrepresented in biomedical research, including, but not limited to scientific networks, mentoring, and attention to structural and institutional environments regarding inclusion. Programs that target more than one career stage and/or career transitions for career progression and advancement are strongly encouraged. Programs in response to this FO should focus on asset models and leadership opportunities, rather than solely on deficit models of approach and remediation.

Deadline: Letter of Intent December 25, 2023



NIH: Technology Development to Reduce Health Disparities

The purpose of this funding opportunity [[RFA-EB-21-001](#)] is to reduce health disparities through the development and translation of appropriate medical technologies. This program seeks advances in medical technologies to reduce health disparities associated with diseases, illnesses, and conditions of public health importance. This announcement encourages applications to develop medical devices, imaging systems, robotic systems, biomaterial interfaces, synthetic biological systems, mathematical and modeling solutions, and other technologies to address the healthcare needs of populations that experience health disparities. Proposed medical technologies must have the following basic characteristics: effective, affordable, culturally acceptable, and easily accessible to those who need them. Responsive grant applications will involve a formal collaboration with a healthcare organization (including tribal health organizations) or public health agency serving one or more populations that experience health disparities.

Deadline: January 26, 2024



NSF: Cognitive Neuroscience

The Cognitive Neuroscience (CogNeuro) Program [[PD 24-1699](#)] seeks to fund proposals that can advance our understanding of the neural mechanisms underlying human cognition and behavior. Funded proposals typically advance theories in cognitive neuroscience by relating precise and rich quantifications of physiology, cognition and behavior with each other. Funded proposals also typically strengthen the field through outreach, mentoring the next generation of diverse cognitive neuroscientists and/or increasing awareness and utilization of the research the field produces.

Upcoming Deadlines: February 1 and August 15, 2024



NSF: Cybersecurity Innovation for Cyberinfrastructure (CICI)

The objective of the Cybersecurity Innovation for Cyberinfrastructure (CICI) program [[NSF 23-517](#)] is to advance scientific discovery and innovation by enhancing the security and privacy of cyberinfrastructure. CICI supports efforts to develop, deploy and integrate cybersecurity that will benefit the broader scientific community by securing science data, computation, collaborations workflows, and infrastructure. CICI recognizes the unique nature of modern, complex, data-driven, distributed, rapid, and collaborative science and the breadth of infrastructure and requirements across scientific disciplines, practitioners, researchers, and projects. CICI seeks proposals in three program areas:

- Usable and Collaborative Security for Science
- Reference Scientific Security Datasets
- Transition to Cyberinfrastructure Resilience

Deadline: February 1, 2024



NSF: DCL - Exploring Task-based Interactions between Human and Synthetic Actors

With this Dear Colleague letter (DCL) [[NSF 23-156](#)], the Division of Civil, Mechanical and Manufacturing Innovation (CMMI) of the Directorate for Engineering (ENG) invites the submission of EARly-concept Grants for Exploratory Research (EAGER) proposals, as well as supplemental funding requests to existing NSF awards, in support of research on the performance of novel and important tasks that require sensorimotor interaction between human and synthetic actors: that is, physical interaction that also involves sensing through one or more modalities.

The overarching goal of this effort is to diversify research in this area through the exploration of new ways in which humans can interact with synthetic agents to achieve important societal aims. EAGER proposals are expected to involve radically different approaches, to apply new expertise, or to engage novel disciplinary or interdisciplinary perspectives.

EAGER proposals and supplemental funding requests will be accepted at any time, but they should be submitted by May 1, 2024, for full consideration for FY 2024 funding.

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NSF: Designing Synthetic Cells Beyond the Bounds of the Evolution (Designer Cells)

Because of recent technological advances in synthetic biology and bioengineering, researchers are now able to tailor cells and cell-like systems for a variety of basic and applied research purposes. The goal of this solicitation [[NSF 24-505](#)] is to support research that (1) develops cell-like systems to identify the minimal requirements for the processes of life, (2) designs synthetically-modified cells to address fundamental questions in the evolution of life or to explore biological diversity beyond that which currently exists in nature, and (3) leverages basic research in cell design to build novel synthetic cell-like systems and cells for innovative biotechnology applications.

Deadline: February 1, 2024

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NSF: Environmental Sustainability

The goal of the Environmental Sustainability program [[PD 23-7643](#)] is to promote sustainable engineered systems that support human well-being and that are also compatible with sustaining natural (environmental) systems. These systems

provide ecological services vital for human survival. Research efforts supported by the program typically consider long time horizons and may incorporate contributions from the social sciences and ethics. The program supports engineering research that seeks to balance society's need to provide ecological protection and maintain stable economic conditions.

Five general research areas are supported:

- Circular Bioeconomy Engineering
- Industrial Ecology
- Green Engineering
- Ecological Engineering
- Earth systems Engineering

Deadline: Proposals accepted ANYTIME



NSF: Hydrologic Science

The Hydrologic Sciences Program [[NSF 22-540](#)] is a disciplinary program within the Division of Earth Sciences. Hydrologic science has a distinct focus on continental water processes at all scales, and the program supports research with a primary focus on these processes. The program supports fundamental research about water on and beneath the Earth's surface, as well as relationships of water with material and living components of the environment. A major focus is the study of hydrologic processes, as well as fluxes of water. Many projects involve the study of hydrologic transport, coupling of hydrological processes with other systems, or hydrologic responses to change. Observational, experimental, theoretical, and modeling approaches are supported.

Deadline: Proposals accepted ANYTIME



NSF: Science of Learning and Augmented Intelligence

Science of Learning and Augmented Intelligence (SL) [[PD 19-127Y](#)] supports potentially transformative research that develops basic theoretical insights and fundamental knowledge about principles, processes and mechanisms of learning, and about augmented intelligence — how human cognitive function can be augmented through interactions with others or with technology, or through variations in context.

The program supports research addressing learning in individuals and in groups, across a wide range of domains at one or more levels of analysis, including molecular and cellular mechanisms; brain systems; cognitive, affective and behavioral processes; and social and cultural influences.

Upcoming Deadlines: February 14 and August 7, 2024



NSF: Science of Organizations

The Science of Organizations (SoO) program [[PD 11-8031](#)] funds basic research that yields a scientific evidence base for improving the design and emergence, development and deployment, and management and ultimate effectiveness of organizations of all kinds.

SoO funds research that advances our fundamental understanding of how organizations develop, form and operate. Successful SoO research proposals use scientific methods to develop and refine theories, to empirically test theories and frameworks, and to develop new measures and methods. Funded research is aimed at yielding generalizable insights that are of value to the business practitioner, policy-maker and research communities. SoO welcomes any and all rigorous, scientific approaches that illuminate aspects of organizations as systems of coordination, management and governance.

Upcoming Deadlines: February 14 and September 7, 2024

NSF: Trailblazer Engineering Impact Award (Trailblazer)

The NSF Trailblazer Engineering Impact Award (TRAILBLAZER) program [[NSF 23-629](#)] supports individual engineers and scientists who propose novel research projects with the potential to innovatively and creatively address major societal challenges, advance US leadership, and catalyze the convergence of engineering and science domains. The TRAILBLAZER program emphasizes the qualities of the investigator that illustrate they can conceive of and support transformative research projects and make major contributions toward solving significant research problems. TRAILBLAZER will support engineers and scientists with excellent records of innovation and creativity with successful outcomes to pursue new research directions.

Upcoming Deadlines: February 2 and September 3, 2024

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.

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

[Contact Us](#)



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.

North Dakota State University does not discriminate on the basis of age, color, disability, gender expression/identity, genetic information, marital status, national origin, public assistance status, race, religion, sex, sexual orientation, or status as a U.S. veteran. Direct inquiries to: Equal Opportunity Specialist, Old Main 201, 701-231-7708 or Title IX/ADA Coordinator, Old Main 102, 701-231-6409.

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.

