

November 21, 2022

Putting together the pieces – a new way to learn physics and chemistry

NDSU continues to build upon its national reputation as a leader in STEM education research with a recent award of \$804,191 from the National Science Foundation (NSF) Division of Undergraduate Education.

Mila Kryjevskaja, NDSU associate professor of physics, leads this five-year project that aims to provide better understanding and improvement of college students' reasoning skills in the context of chemistry and physics courses. Alexey Leontyev, NDSU assistant professor of chemistry and biochemistry, serves as co-principal investigator along with researchers from University of Maine, Penn State University - Greater Allegheny, and University of North Florida.



“Through their scientific investigation into the underpinnings of undergraduate STEM success in chemistry and physics, Drs. Kryjevskaja, Leontyev, and colleagues will be able to bring actionable solutions to student retention issues and create additional workforce pathways for NDSU to serve the state’s needs in high demand fields,” said NDSU President David Cook. “It is an exciting example of how our College of Science and Mathematics researchers truly contribute to our land-grant mission.”

Despite decades of work aimed at improving students' science learning by developing and implementing research-based instructional materials, the researchers have identified that students who can demonstrate correct conceptual understanding and reasoning on one task often fail to reason productively on tasks that require the same knowledge and skills.

"No matter how hard we try to get students to understand a concept, we seem to never be able to reach a certain percentage of them," said Kryjevskaja. "That made me consider the reasoning processes that prevent people from using the formal knowledge they possess in favor of intuitive ideas."

She found insight in dual process theory.

Originally developed in the field of psychology, dual process theory looks at how an answer to a problem can arise as a result of two different thought processes: automatic/unconscious/intuitive and explicit/conscious/effortful. While the explicit processes change as we gain experience and education, the implicit intuitive processes take longer to impact.

[CONTINUE >>](#)

MilTech to visit NDSU

The Office of Research and Creative Activity will be hosting a visit to NDSU by the Director of [MilTech](#) on December 6. MilTech



is a Partnership Intermediary established in 2004 as a collaboration between Montana State University and the Office of the Secretary of Defense. Partnership Intermediaries work with the Department of Defense and other federal agencies to facilitate technology transfer, transition, and commercialization activities. They can serve as a convenient and effective intermediary for the DoD to work with academia and non-traditional small business.

The visit will seek to convey detailed information about MilTech and explore opportunities where NDSU research might benefit in working with a Partnership Intermediary.

SCHEDULE: Tuesday, December 6

- Informational meeting: 9-10am Hidatsa, Memorial Union
- Individual meetings and lab tours: 10:30am-3:30pm (contact [Aaron Reinholz](#) if interested)

Spotlight on Research Integrity & Compliance

Institutional Biosafety Committee – ensuring the safe use of potential biohazards in research and teaching

The NDSU Institutional Biosafety Committee (IBC) - is committed to assuring the safe use of:

- recombinant or synthetic nucleic acids,
- infectious agents,
- human blood, bodily fluids, tissues and cell culture,
- and maintaining compliance with NIH Guidelines and other federal regulations.

Pathogens and recombinant or synthetic nucleic acids have the potential of endangering the health of people and animals in laboratories and in society. The federal guidelines require that all institutions that receive federal funding appoint a committee to review the proposed use of these agents by researchers associated with their institution. The National Institutes of Health (NIH) has established guidelines for institutions involved with recombinant or synthetic nucleic acids research, to assist in the protection of health and environment. It is the responsibility of each institution to ensure that all such activities conducted at, or sponsored by, the institution are in compliance with the National Institutes of Health guidelines.

In addition, the IBC, in collaboration with the Office of Safety and Environmental Health, approves and oversees all activities using infectious agents, human blood, bodily fluids and tissues.

Review processes

All research and teaching projects conducted at NDSU by an NDSU representative or affiliated member that involves recombinant or synthetic DNA, infectious agents, or human blood, bodily fluids, tissues or cell culture must be submitted for review in [Novelution](#). Protocol applications for proposed research projects are reviewed for adherence to federal regulations and NDSU policy. Once approved, protocols may be updated through amendments if alterations to approved research procedures are necessary.

More information on IBC review policies and procedures can be found on the [IBC website](#).

Questions? Contact Amanda Wilkinson, IBC Administrator at Amanda.Wilkinson@ndsu.edu or 701-231-8908.

RCA Opportunities

The Office of Research and Creative Activity (RCA) is seeking applications for the following positions:

Undergraduate Research Director

RCA is looking for a faculty member to serve as an Undergraduate Research Director. The Undergraduate Research Director will develop campus-wide undergraduate research and creative initiatives as well as manage and serve as the project lead on an undergraduate research program funded by the NIH INBRE program. Activities and programs to be developed may include creating programs to grow and enhance undergraduate research experiences, increasing understanding of undergraduate research impacts on student learning and success, providing professional

development opportunities for undergraduate research students, and serving as a resource for faculty on student mentorship and proposal development to increase undergraduate research funding and broader impacts. RCA will work with the new Director and the successful candidate's unit head to provide modest support equivalent to a course release and one-month summer salary. **Applications are due November 30, 2022.**

[Learn more and apply >>](#)

Faculty Fellow: Broadening Participation

RCA is looking to appoint one to two Faculty Fellows with a term of up to two years to focus on Broadening Participation. The Fellow(s) will work closely with RCA to identify critical issues, gaps, as well as possibilities for broadening participation in NDSU research programs and in expanding partnerships. Fellow(s) will be expected to spend approximately four hours per week working on the development of the program, attending regular meetings, and implementing a focus area project.

Applications are due December 16, 2022.

[Learn more and apply >>](#)

FY2024 Programmatic Requests

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 on the [RCA website](#).

The deadline for FY2024 submissions to RCA is December 20, 2022.

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

SAVE THE DATE - APRIL 18, 2023

STUDENT RESEARCH DAY

NDSU Student Research Day is a collaboration among NDSU EXPLORE, Gamma Sigma Delta, and the Graduate Student Council. Join us for a one day celebration of undergraduate and graduate student research and creative projects.

Please plan to join us on April 18, 2023 in the Memorial Union

Watch for more information on registration and event details in early 2023.



Graduate Student Opportunity: ND Water Resources Research Institute Fellowships

The 2023 ND Water Resources Research Institute fellowships are open to NDSU and UND graduate students conducting or planning thesis / dissertation research in areas related to water resources. Applications will be accepted for proposed projects of between three and twelve months in length. The funding period is anticipated to be 09/01/2023 - 08/31/2024. Fellowship stipends will be \$800-\$1,000 per month for M.S. students and \$1,000-\$1,400 per month for Ph.D. students,

depending on funding availability.

[Learn more >>](#)

RCA Funding Opportunities

Research Development Travel and Conference Support Awards help defray expenses for faculty presenting at national conferences (virtual or on-site) or for supporting travel to visit archives or special collections. As this pool of funding is limited, please consider allowing individuals who do not have other sources of travel funding to apply for this opportunity.

Research Support Services Awards help defray the costs of support services required for research, creative, or scholarly activity. For example, funds may be used in one of the NDSU Core Facilities, another recharge / service center, or for transcription services.

Research Development Funding Agency Visit Travel Awards help defray expenses for faculty traveling to meeting with Program Officers / Program Directors at funding agencies. This program requires a 1:1 match from the applicant's department and / or college.

More information and application instructions are posted on the [RCA website](#).

Upcoming Events

- **NIH Virtual Workshop: Human Subjects Research**
December 6-7, 2022; 11am-3pm Daily / [Learn more >>](#)
- **DOE Office of Science Webinar: Early Career Research Program, EPSCoR, Funding for Accelerated, Inclusive Research; and Reaching a New Energy**

Sciences Workforce

December 15; 3pm / [Learn more >>](#)

- **NIH Virtual Grants Conference**
February 1-2, 2023 / [Learn more >>](#)
- **Save the Date: Student Research Day**
April 18, 2023

FUNDING OPPORTUNITIES

- [CDC: Preventing Violence and Violence Related Injury](#)
- [DARPA: Strategic Technology Office BAA](#)
- [DoD: Extramural Medical Research](#)
- [DOE: AI and ML for Autonomous Optimization and Control of Accelerators and Detectors](#)
- [DOE: Early Career Research Program](#)
- [DOE: Bipartisan Infrastructure Law: Long-Duration Energy Storage Demonstrations Funding Opportunity Announcement](#)
- [NEH: Institutes and Workshops for Educators](#)
- [NIH NOI: Maximizing Investigators' Research Award for ESI](#)
- [NIH: Engineering Next-Gen Human Nervous System Microphysiological Systems](#)
- [NIH: John Lewis NIMHD Research Endowment Program – **LIMITED**](#)
- [NSF: Alliances for Graduate Education and the Professoriate](#)
- [NSF: Atmospheric Chemistry](#)
- [NSF: Directorate of Biological Sciences – Connecting to Societal Challenges](#)
- [NSF: Ethical and Responsible Research](#)
- [NSF: Paleoclimate](#)
- [Spencer Foundation: Large Research Grants on Education](#)
- [USDA: U.S. Dry Beans Processing, Promotion, and Marketing for Costa Rica, Guatemala, El Salvador, and Honduras](#)

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.

If you identify a limited submission opportunity that is not on the list below, please notify ndsu.researchdev@ndsu.edu.

- [NIH: Undergraduate Research Training Initiative for Student Enhancement \(U-RISE\)](#)

Notification: 01/26/2023

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.

- [CDC: Developing a Public Health Tool to Predict the Virality of Vaccine Misinformation Narratives](#)
Letter of Intent deadline: 12/01/2022
- [DOE: Environmental System Science](#)
Pre-application deadline: 12/01/2022; 4pm
- [NSF: Quantum Sensing Challenges for Transformational Advances in Quantum Systems \(QuSeC-TAQS\)](#)
Deadline: 12/16/2022
- [NSF: Partnerships for Innovation](#)
Deadline: 01/11/2023
- [NIH: John Lewis NIMHD Research Endowment Program](#)
Deadline: 01/17/2023
- [NSF: Training-based Workforce Development for Advanced Cyberinfrastructure](#)
Deadline: 01/19/2023
- [HRSA: Rural Communities Opioid Response Program-Evaluation](#)
Application deadline: January 27, 2023
- [NIH: Collaborative Program Grant for Multidisciplinary Teams](#)
Notification Deadline: 01/27/2023

- [Camille Dreyfus Teacher-Scholar Awards Program](#)

Deadline: February 1, 2023

- [NSF: Scholarships in STEM \(S-STEM\) Program](#)

Notification Deadline: 02/20/2023

CDC: Research Grants for Preventing Violence and Violence Related Injury (R01)

The Centers for Disease Control and Prevention's National Center for Injury Prevention and Control (NCIPC) is soliciting investigator-initiated research that will help expand and advance understanding of approaches to prevent community violence and eliminate racial and ethnic inequities in risk for community violence [[RFA-CE-23-004](#)]. This initiative is intended to support effectiveness research to evaluate innovative programs, practices, or policies among groups experiencing a high burden of community violence. Innovative approaches are those that have not been rigorously evaluated for effectiveness in reducing community violence. Funds are available to conduct studies focused on preventing all forms of community violence involving youth or young adults (ages 10-34 years), including assaults, homicides, violence between groups, and threats / use of weapons. The primary objectives of this initiative are:

- Objective One: Effectiveness research to evaluate innovative approaches with the potential for immediate or near immediate benefits (i.e., within 6 months) for reducing community violence and racial / ethnic inequities in risk for community violence.
- Objective Two: Effectiveness research to evaluate place-based prevention approaches for reducing community violence and racial / ethnic inequities in risk for community violence.
- Objective Three: Effectiveness research to evaluate approaches that improve the social or structural conditions that contribute to community violence and racial / ethnic inequities in risk for community violence.

Deadline: January 26, 2023

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DARPA: Strategic Technology Office BAA

DARPA's Strategic Technology Office (STO) is seeking innovative ideas and disruptive technologies that provide the U.S. military and national security leaders trusted, disruptive capabilities to win in all physical domains (Air, Space, Sea, and Land) and across the spectrum of competition, from deterrence to high-end peer combat. STO seeks to carry out DARPA's mission of creating high-risk, high-reward "breakthrough" technologies with a focus on ambitious, difficult, and revolutionary projects that achieve significant changes or fundamental shifts in technical capabilities and give our warfighters new ways to fight. STO will develop and deliver solutions at a speed and scale to be operationally relevant in a relatively short time, just a few years, from the initiation of the project to proof of concept.

This solicitation [[HR001123S003](#)] seeks revolutionary research ideas for topics not being addressed by ongoing STO programs or other published solicitations. Topic areas of interest include:

- Advanced computing
- AI
- "Big data" analytics
- Communications and networking, virtual and adaptive
- Digital twins
- High voltage electric power systems and architecture
- Human behavior modeling
- Logistics
- Sensors and analytics
- Supply chain analytics

See the BAA for the full list.

This BAA is open through October 2023



DoD: Extramural Medical Research

This BAA [[HT9425-23-S-BAA1](#)] is intended to solicit extramural research and development ideas. Projects funded under this BAA must be for basic and applied research to support scientific study and experimentation directed toward advancing the state-of-the-art or increasing knowledge or understanding rather than focusing on development of a specific system or hardware solution. Research and development funded through this BAA are

intended and expected to benefit and inform both military and civilian medical practice and knowledge. Research areas of interest include:

- Prophylactics, treatments, and diagnostics for emerging infectious diseases
- Research and development of technologies to diagnose and limit the immediate, short-, and long-term impairments that follow TBI
- Autonomous Care and Evacuation / Medical Assist Support Technologies
- Regenerative Medicine
- Injury Prevention and Treatment
- Psychological Health and Resilience
- Environmental Health and Protection
- Identification, Diagnosis, and other Medical Interventions
- Biosurveillance

See the BAA for the full list of topics.

This BAA is open through September 2027



DOE: Artificial Intelligence and Machine Learning for Autonomous Optimization and Control of Accelerators and Detectors

The Department of Energy (DOE) Office of Science (SC) program in Nuclear Physics (NP) is soliciting applications for research and development efforts directed at artificial intelligence (AI) and machine learning (ML) for autonomous optimization and control of accelerators and detectors of relevance to current or next generation NP accelerator facilities and scientific instrumentation [[DE-FOA-0002875](#)].

Current and planned NP facilities and scientific instrumentation face a variety of technical challenges in simulations, control, data acquisition, and analysis. AI methods and techniques promise to address these challenges and shorten the timeline for experimental and computational discovery.

Deadline: January 11, 2023



DOE: Bipartisan Infrastructure Law: Long-Duration Energy Storage Demonstrations Funding Opportunity Announcement

The U.S. Department of Energy (DOE) is releasing this [Funding Opportunity Announcement \(FOA\)](#) to solicit emerging Long-Duration Energy Storage (LDES) demonstration projects capable of delivering electricity for 10-24 hours or longer to support a low-cost, reliable, carbon-free electric grid. This \$349 million effort seeks LDES demonstration projects that will validate new technologies, enhance the capabilities of customers and communities to integrate LDES more effectively, and sustain American global leadership in energy storage. LDES demonstration projects are encouraged to have substantial engagement with local and regional stakeholders to ensure that they generate local, regional, and national benefits. Demonstration projects will be expected to carry out meaningful community and labor engagement; invest in America's workforce by creating good-paying jobs with the free and fair choice to join a union; advance diversity, equity, inclusion, and accessibility; and contribute to the President's Justice40 Initiative goal that 40% of the overall benefits of certain federal investments, including those in climate change, clean energy and energy efficiency, flow to disadvantaged communities.

Letter of Intent deadline: December 15, 2022

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DOE: Early Career Research Program (ECRP)

The Department of Energy (DOE) Office of Science (SC) invites applications for support under the ECRP [[DE-FOA-0002821](#)] in the following program areas:

- Advanced Scientific Computing Research (ASCR);
- Basic Energy Sciences (BES);
- Biological and Environmental Research (BER);
- Fusion Energy Sciences (FES);
- High Energy Physics (HEP);
- Nuclear Physics (NP);
- Isotope Research and Development (R&D) and Production (DOE IP); and
- Accelerator R&D and Production (ARDAP).

The purpose of this program is to support the development of individual research programs of outstanding scientists early in their careers and to stimulate research careers in the areas supported by SC.

Pre-application deadline: January 5, 2023; 4pm

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NEH: Institutes and Workshops for Educators

The National Endowment for the Humanities has a number of opportunities that fund institutes and workshops for K-12 Educators, Higher Education Faculty, and Humanities Professionals. Programs include:

- [Landmarks of American History and Culture program](#)
- [Institutes for K-12 Educators](#)
- [Institutes for Higher Education Faculty](#)

For all three programs, optional drafts are due December 15, 2022, and full proposals are due February 1, 2023.

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NIH NOI: Maximizing Investigators' Research Award (MIRA) for Early Stage Investigators (ESI) (R35 - Clinical Trial Optional)

The purpose of this [Notice of Intent \(NOI\)](#) is to inform the biomedical research community that NIGMS is planning to issue a Funding Opportunity Announcement (FOA) to continue the [Maximizing Investigators' Research Award for Early Stage Investigators \(MIRA-ESI\) \(R35\) program](#). The FOA is intended for new applications from [Early Stage Investigators](#).

This Notice is being provided to allow potential applicants sufficient time to develop responsive projects. The FOA is expected to be published in Spring 2023 with an expected first application due date in October 2023. This FOA will utilize the [R35](#) activity code.

The NIGMS MIRA-ESI FOA is intended to provide support for the program of research in an ESI's laboratory that falls within the mission of NIGMS. ESIs are encouraged to submit an application early in their independent research careers and to move into research areas that are distinct from those of their postdoctoral mentors. Applicants who have not yet received independent research funding are encouraged to apply, as are those who have not had sufficient time and / or resources to generate independent senior author publications. Preliminary data are neither required nor expected, but if provided will be evaluated during the review process. Because the MIRA is intended to support a

significant and ambitious program of research, the PD / PI is required to devote at least 51% of his / her total research effort to this award. MIRA-ESI applications are reviewed separately from established investigator MIRA applications.

Anticipated changes in this FOA reissuance include: (1) providing two application receipt dates per year - February and October; and (2) requiring a Plan for Enhancing Diverse Perspectives. Review criteria will be revised accordingly, and reviewers will be oriented to these new FOA goals.

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NIH: Engineering Next-Generation Human Nervous System Microphysiological Systems (R01 Clinical Trials Not Allowed)

This Funding Opportunity Announcement (FOA) [[PAR-23-046](#)] encourages research grant applications directed toward developing next-generation human cell-derived microphysiological systems (MPS) and related assays that replicate complex nervous system architectures and physiology with improved fidelity over current capabilities. Supported projects will be expected to enable future studies of complex nervous system development, function, and aging in healthy and disease states.

This FOA is intended to encourage the further development of projects with feasibility support for the line of investigation. Applicants proposing exploratory research at the early and conceptual stages of project development may instead wish to apply to the companion R21 FOA ([PAR-23-047](#)).

Upcoming deadlines: February 5, June 5, October 5

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NIH: John Lewis NIMHD Research Endowment Program (S21 Clinical Trial Not Allowed) – Limited Submission Program

[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.

NIH J. Lewis Endowment : Proposals are due to NIH January 17, 2023. [Notify RCA](#) if you are interested in submitting to this program. Approval to submit a full proposal will be given to the first team to notify.

The purpose of the *John Lewis* NIMHD Research Endowment Program [[RFA-MD-22-010](#)] is to strengthen the research infrastructure and training capacity at eligible institutions of higher education to facilitate minority health and health disparities research and enhance the diversity of the scientific workforce. Specific strategic objectives include:

- improving the institutional physical infrastructure and research equipment acquisition;
- developing research-enabling technical expertise;
- expansion of academic programs; and
- recruitment of individuals from groups underrepresented in the scientific workforce as potential candidates for open faculty positions.

The *John Lewis* NIMHD Research Endowment Program does not directly support research projects.

LIMITED SUBMISSION: Only one application per institution is allowed.

NSF: Alliances for Graduate Education and the Professoriate (AGEP)

The NSF AGEP program [[NSF 21-576](#)] seeks to fund grants that advance and enhance the systemic factors that support equity and inclusion and, consequently, mitigate the systemic inequities in the academic profession and workplace. The AGEP program goal to increase the number of historically underrepresented minority faculty is bolstered by the National Science Board's Vision 2030: Vision for the Future.

All AGEP Alliances are expected to engage similar institutions of higher education (IHE) to work collaboratively and use intersectional approaches in the design, implementation, and evaluation of systemic change strategies. The collaborating IHEs must be similar to each other based on such variables as Carnegie classification, geographic location and student and/or faculty demographic characteristics.

This solicitation includes three funding tracks that all support the AGEP program goal. All tracks require collaborative IHE teams to use an intersectional lens as they address

systemic and institutional change strategies at IHEs to promote equity for AGEP populations.

- The **AGEP Institutional Transformation Alliance (ITA)** track is designed to support the development, implementation, and evaluation of *innovative* systemic and institutional change strategies that promote equity for AGEP populations, within similar IHEs.
- The **AGEP Faculty Career Pathways Alliance Model (FC-PAM)** track is intended to support the development, implementation, evaluation, and institutionalization of Alliance models that will advance AGEP populations, within similar IHEs.
- The **AGEP Catalyst Alliance (ACA)** track supports the design and implementation of one or more organizational self-assessment(s) to collect and analyze data that will identify inequities affecting the AGEP populations; pilot equity strategies as appropriate; and develop a five-year equity strategic plan for the AGEP populations.

Preproposal deadline: February 14, 2023

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NSF: Atmospheric Chemistry

The Atmospheric Chemistry program [[PD 23-1524](#)] supports research on the sources, sinks, transport, and transformation of gases and aerosols in the atmosphere through models, observations, and experiments, including homogeneous and heterogeneous chemical reactions, emissions, deposition, atmospheric oxidation and photochemistry, aqueous-phase chemistry and aerosol processes; the formation of new particles and secondary organic aerosols, the modeling of atmospheric chemical processes, the study of chemical mechanisms in the atmosphere, optical properties of gases and aerosols, and improved methods for measuring the concentrations of trace species and their fluxes into and out of the atmosphere. The Program encourages principal investigators from a wide variety of institutions and backgrounds to submit proposals.

Proposals accepted anytime

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NSF: Directorate of Biological Sciences – Connecting to Societal Challenges

Research funded by the National Science Foundation (NSF) Directorate for Biological Sciences (BIO) and other directorates at NSF have a long history of helping to address societal challenges. From the basic science that identified the enzymes critical to PCR to increased understanding of fire regimes that has helped mitigate the impacts of wildland fire on home, life, and the economy.

NSF has now launched new webpages to help the research community connect funding opportunities with the societal challenge the research they support can help address -- something like a translational lens through which to view solicitations and Dear Colleague Letters.

Three such topics are [Biotechnology to Advance the U.S. Bioeconomy](#), [Emerging Infectious Diseases](#) and [Life on a Warming Planet](#). These pages also help identify the connections between programs in different directorates and cross-cutting efforts.

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NSF: Ethical and Responsible Research

Ethical and Responsible Research (ER2) research projects [[NSF 22-526](#)] use fundamental research to produce knowledge about what constitutes or promotes responsible or irresponsible conduct of research and why, as well as how to best instill responsible conduct of research into researchers, practitioners, and educators at all career stages. In some cases, projects will include the development of interventions or applications to ensure ethical and responsible research conduct.

The program funds research projects that identify:

1. factors that are effective in the formation of ethical science, technology, engineering, and mathematics (STEM) researchers;
2. approaches to developing those factors in all STEM fields that NSF supports; and
3. why and how those factors and approaches increase responsibly conducted research.

Deadline: January 21, 2023

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NSF: Paleoclimate

The goals of the paleoclimate program [[PD 22-1530](#)] are to:

- provide a baseline for present climate variability and future climate trends, and

- improve the understanding of the physical, chemical, and biological processes that influence climate variability and trends over the long-term.

Research topics include observational and modeling studies of past climate variability and its drivers and studies that develop new paleoclimate proxies and records. Competitive proposals will address specific aspects of scientific uncertainty for their proposed research.

Proposals accepted anytime.

The Paleoclimate program of the Division of the Atmospheric and Geospace Sciences together with other Divisions in the Geoscience Directorate have joined in coordinating and supporting the annual Paleo Perspectives on Present and Projected Climate ([P4CLIMATE](#)) competition with the objectives to support studies within two research themes:

- Past Regional and Seasonal Climate; and
- Past Climate Forcing, Sensitivity, and Feedbacks.

Researchers are encouraged to consider the P4CLIMATE competition as a possible source of support for their global change research. Since proposals eligible for funding in the P4CLIMATE competition are not eligible for funding in the Paleoclimate Program, researchers are strongly advised to contact the Directors of the Paleoclimate Program for guidance as to the suitability of their proposed research for either program.

Proposal deadline: October 20, 2023

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Spencer Foundation: Large Research Grants on Education

The [Large Research Grants on Education Program](#) supports education research projects that will contribute to the improvement of education, broadly conceived, with budgets ranging from \$125,000 to \$500,000 for projects ranging from one to five years. Spencer anticipates awarding grants with budgets across each of the following funding tiers -- \$125,000 to 250,000; \$250,001 to \$375,000; and \$375,001 to \$500,000.

This program is “field-initiated” in that proposal submissions are not in response to a specific request for a particular research topic, discipline, design, method, or location. The goal for this program is to support rigorous, intellectually ambitious and technically sound research that is relevant to the most pressing questions and compelling opportunities in

education.

Intent to Apply deadline: January 12, 2023; Noon



USDA: Cochran Fellowship Program – U.S. Dry Beans Processing, Promotion, and Marketing for Costa Rica, Guatemala, El Salvador, and Honduras

The Cochran Fellowship Program Latin America and Caribbean Region is requesting the design and delivery of a training program for a cohort of up to seven Fellows from Costa Rica and seven Fellows from Guatemala, El Salvador, and Honduras for a total of 14 Fellows [[USDA-FAS-10962-0700-10-23-0001](#)]. The program should provide the Fellows an overview of the U.S. dry bean industry showcasing the quality, nutritional value, and versatility of U.S. dry beans. Topics should provide an overview of U.S. dry beans including variety and quality. The program should expose Fellows to the dry bean supply chain, farming practices and technology, storage, processing, grading, and inspection procedures. Additional topics should include U.S. dry bean market trends and practices, use of dry beans, and ingredients for processed products. The training program should include visits to farms, processing facilities, and retailers as well as a meeting with the U.S. Dry Bean Export Council. The program should occur in the Spring in time for Fellows to observe the dry bean planting season. The objective of the program is to educate the Fellows on U.S. dry beans, their varieties, and their uses. The goal of the program is to increase the Fellows' capacity for understanding applications of agricultural research, extension, and teaching; and to increase trade linkages between Costa Rica, Guatemala, El Salvador, Honduras, and the United States.

Deadline: January 18, 2023



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 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.