

NDSU OFFICE OF  
RESEARCH AND CREATIVE ACTIVITY

# RCA UPDATE

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February 21, 2023

**NDSU Research community:**

Legislative season is upon us! While we are all collectively working hard on developing what NDSU will look like in the next few decades through the NDSU Transform process, we also need to be thinking about what we need to do to ensure our continued success as a R1 research university. President Cook is investing in research efforts and the current legislative session has a bill with a possible funding stream for research, House Bill 1379.



In addition to President Cook and others, I have been honored to represent NDSU research through both oral and written testimony at the North Dakota Legislature this year. My first time providing oral testimony was a bit daunting, but I found it so rewarding to share our collective accomplishments and strategy with the Legislators.

I am seeing how the many North Dakotans I have met over the last year and a half are becoming colleagues, allies, and even friends. Getting out in the state, especially during my time with President Cook on his North Dakota tour, has provided a great foundation in helping others understand our story as a R1 research university.

We have **many** points of excellence as a R1 research university.

You can watch my testimony recording [here](#) (or read the much longer written testimony [here](#)). I presented a cohesive research and commercialization framework, composed of six elements:

1. **Our R1 designation**
2. **Our research success in key areas: historical, current and future successes**
3. **The NDSU Research Foundation**
4. **Entrepreneurship**
5. **The NDSU Research and Tech Park**
6. **NDSU's Land Grant Mission**

At a very high level, the four areas where we currently have success and see opportunities for continued future success involving interdisciplinary research across campus are:

1. **Food, Energy and Water Security (FEWS)**
2. **Cybersecurity, Computer Science and Software Engineering**
3. **Life Sciences**
4. **Entrepreneurship and Innovation**

President Cook charged me with preparing the detailed "ask" for HB 1379, which appears on the NDSU legislative site [here](#). These areas of strength for NDSU are the basis for our future success. Given the industry in our state, the vital role agriculture plays in the state's economy and in generating research expenditures for NDSU, I also articulated two initiatives to stake out territory in the future of ag research and commercialization: the Cyber-Physical Systems Initiative and CyberFEWS Initiative (FEWS: Food-Energy-Water Security). In the dramatic changes in agriculture and rapid adoption of technology, I see wicked challenges calling for big ideas from all the disciplines for NDSU researchers.

As important as our big picture initiatives are to the overall success of NDSU, the accomplishments of our individual researchers are equally noteworthy. Congratulations to our three NSF CAREER awardees : Trung Le, Dali Sun, and Mohi Quadir. An NSF CAREER award recognizes individuals at the beginning stages of promising careers and it helps to open more doors that will keep their work progressing.

My thanks to all of you on campus whose efforts advance the research enterprise. I look forward to continuing to share the big ideas that you are tackling in your research and learning how you're making the lives of North Dakota citizens better by finding innovative solutions to the challenges our state is facing now and in the future.

Colleen

## **NDSU Coatings & Polymeric Materials Associate Professor Receives NSF CAREER Award**

NDSU Associate Professor of Coatings and Polymeric Materials Mohiuddin Quadir was awarded a National Science Foundation Faculty Early Career Development Program (NSF CAREER) award. The \$676,969 award will provide funding to investigate interactions occurring at the interface of nanoscale materials and an enzyme. To study these interactions, Quadir will develop polymeric nanocapsules that mimic intracellular organelles and proteins and respond to specific enzymes in the body. Quadir hopes that these smart nanomaterials will have potential applications in cancer drug delivery, manufacturing artificial cells, disease diagnosis, biosensing, and enzymatic control of environmental pollution.



Quadir's research expertise is centered around a special type of properties of molecules, known as self-assembly or self-organization. A key aspect of this process is how molecules recognize each other and form higher-order structures and patterns governed by the chemistry of their molecular backbones. "It's a simple and efficient way to create complex architecture from simple building blocks without any external intervention," he explains. "An example of self-assembly is when you see a rainbow at the edge of a puddle of water in your parking lot or on your computer screen. That's the result of a high concentration of amphiphilic molecules or liquid crystals self-assembled forming new nanometer-scale structures.

Quadir generates these structures in the form of nanoparticles from macromolecules of diversified topologies, such as linear block copolymers, dendrimers, and hyperbranched polymers, the latter two being his personal favorites to work with. “Synthetic macromolecules that self-assemble to nanoparticles and respond to particular physiological stimuli render them perfect building blocks for forming nanoparticles for studying enzyme interactions” he said.

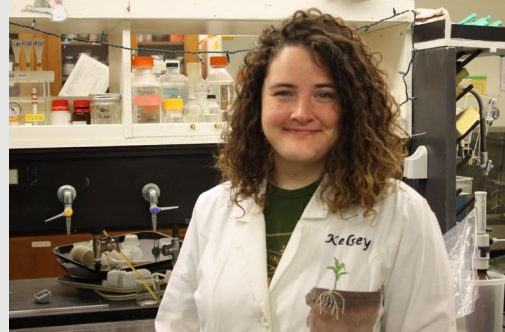
Quadir’s polymeric nanostructures are hollow capsules, surrounded by a membrane, that can contain other substances. Determining how the shell of these capsules interact with biological systems and break down to release their payload under multiple biochemical stimuli at the right time is a key question for him. “Finding the right combination of stimuli that breaks down nanocapsules is much like coding or creating a logic model on a chemical scale,” Quadir explains. “In order to ensure that nanocapsules respond to only the correct stimuli, a series of specific yes/no conditions must be first met.” This research has many possibilities for use, ranging from cancer drug delivery to chemical catalysis.

[CONTINUE>>](#)

**Meet one of NDSU's new faculty researchers:  
KELSEY GRIESHEIM, PhD  
School of Natural Resource Sciences**

**What are your primary research and scholarly interests?**

My research focus is identifying techniques for improving nitrogen (N) management in cropping systems. Using fertilizer N uptake efficiency as a means of identifying these techniques is advantageous for both environment and producer, as more fertilizer N sequestered in the crop means less remaining in the soil as a potential



source of pollution. With the use of  $^{15}\text{N}$ , I hope to continue work in answering the simple question of where inputs are going and how we might redirect them, which is undoubtedly tied to nutrient cycling in soil systems.

**Where are you from and where did you pursue your education?**

I grew up 10 miles away from the geographical center of Illinois in a town called Mt. Pulaski. I earned my B.Sc., M.Sc., and Ph.D. from the University of Illinois in Urbana, Champaign.

**What excites you about NDSU?**

I am most excited by the intent of land grant universities, which is to use research and outreach as a means of improving the lives of individuals, families, and communities within the state.

**What motivates you?**

My primary goal has always been and will always be to serve producers by conducting research that directly addresses issues they face in feeding the world.

**If you could have coffee / tea with anyone, who would it be?**

Cyril G. Hopkins, a pioneer in soil fertility. My favorite work of his was done on the

poorland farms that "would raise nothing besides poverty grass and mortgages". On that land he used things like lime and manure inputs to triple wheat yields.

**If you could time travel, where would you go?**

I would like to go back to 1917 to have my coffee with Hopkins.

**What was your first job?**

Detasseling corn

**What does your very best day include?**

My very best day would include being outside in some capacity with family and/or friends and learning something new.

**What's your favorite quote?**

"Permanent agriculture is the only structure upon which the future prosperity of the American Nation can be secured, and the absolutely essential foundation of permanent agriculture is the fertility of the soil." - Hopkins, 1908

Are you a new researcher at NDSU? [Submit your profile](#)

**A question about COI disclosure requirements**



**Q:** I'm applying for Federal Funding, what are the conflict-of-interest disclosure requirements?

**A:** Many federal and private funding agencies (including the NIH, NSF, DOE, and other [agencies and foundations](#) that follow Public Health Service COI disclosure requirements) require potential financial and other conflicts-of-interests to be disclosed to the investigator's institution prior to submitting a grant application.

As of January 20, 2023, NDSU began using the [Novelution COI module](#) for conflict-of-interest disclosures.

**Prior to submitting a proposal** PIs, co-PIs and other key personnel must have completed an **Annual Disclosure** within the last year.

Investigators must disclose any of the following:

- Domestic and foreign [significant financial interests](#) which may be related to the investigator's institutional responsibilities.
- Outside activities (e.g., consulting)
- Equity Interests
- Intellectual Property
- Travel which was reimbursed or paid for by an external entity
- Other gifts
- Familial or other supervisory relationships which may be perceived as a conflict.

**Upon Award**, completion of the CITI Conflict-of-Interest training module (within the last 4 years) must be verified AND investigators who have disclosed a potential conflict will be asked to complete a **Project Specific disclosure** to determine if any of the previously disclosed items are *related* to the recently awarded project. The institutional Conflict of Interest Committee may require a management plan to mitigate any potential conflict.

Questions? Contact Kristy Shirley ([Kristy.shirley@ndsu.edu](mailto:Kristy.shirley@ndsu.edu) – 701.231.8995).

**We're Hiring: RCA Director of Innovation and Economic  
Development**



## WE ARE SEARCHING FOR OUR NEXT EXECUTIVE DIRECTOR OF INNOVATION & ECONOMIC DEVELOPMENT

The Director will design, lead, and manage economic development leverage opportunities for industry partnerships, and nurture and advance the entrepreneurial (pre-)startup ecosystem.

The successful candidate will be involved at a hands-on level in these efforts as well as design, lead and manage a vision to enhance NDSU's activity and contributions in these efforts.

Learn more and apply: <https://tinyurl.com/5hysykc2>

[Learn more and apply>>](#)

## We're Hiring: Research Integrity and Compliance Administrator

## WE ARE SEARCHING FOR OUR NEXT RESEARCH INTEGRITY & COMPLIANCE ADMINISTRATOR

The primary function of this position is to coordinate the work of the Institutional Review Board (IRB). This position also provides back-up support for other Research Integrity & Compliance needs including the Institutional Animal Care & Use Committee (IACUC), Institutional Biosafety Committee (IBC), and the Conflict of Interest Committee (COIC).

Learn more and apply: <https://tinyurl.com/2p9duzcx>

[Learn more and apply>>](#)



## 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 February 2023 edition:

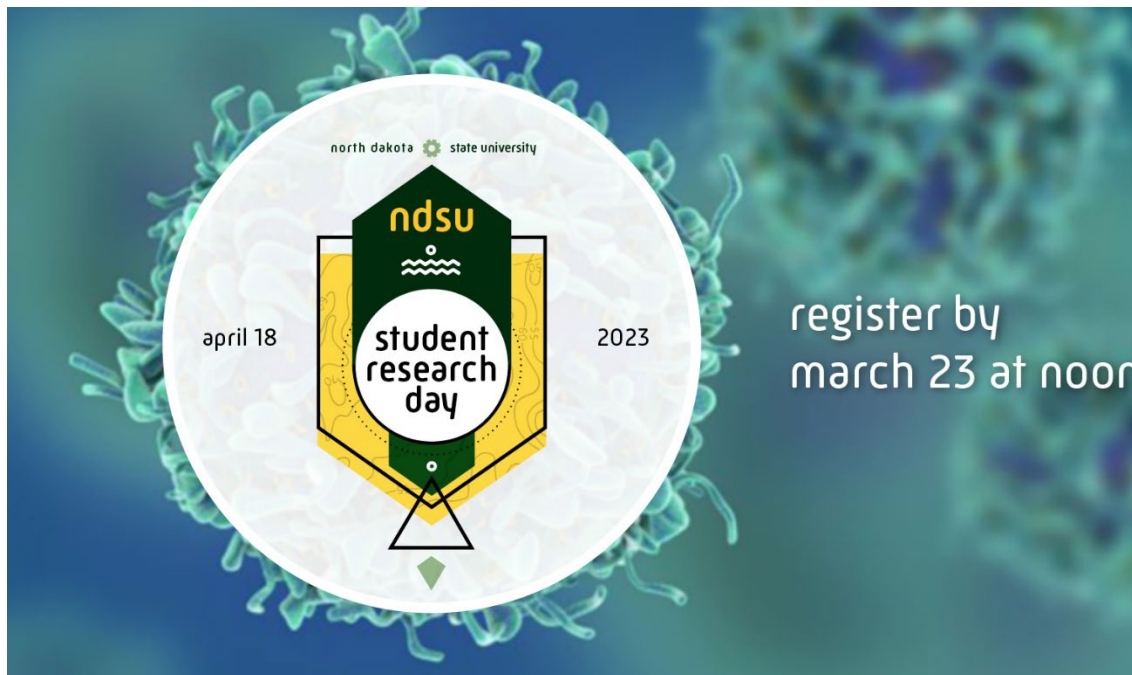
- Who is winning humanities funding and why?
- What exactly are societal challenges?
- NSF S-STEM webinar report.
- The context and significance of your research.
- Changes to the AFRI Foundational Program 2023.
- Too much to say? Strategies to meet the page limit.
- Cultivating grantsmanship among humanities and social science graduate students.
- The role of stakeholders in a competitive proposal.

You can access [these and many more articles](#) on the RCA website (requires NDSU log-in).



## Student Research Day - April 18, 2023

Undergrad and graduate students in all disciplines are encouraged to register for Student Research Day to present either an oral or poster presentation. Prizes are available for top presenters. Registration closes on March 23.



register by  
march 23 at noon

NDSU Student Research Day is a collaboration among NDSU EXPLORE, Gamma Sigma Delta, and the Graduate Student Council.

[Learn more and register >>](#)

## Institute of Education Sciences Summer Training Opportunities

The Institute for Education Sciences (IES) is supporting training institutes during summer 2023 that have upcoming application deadlines:

**IES Institute of Education Sciences**

### [Meta-Analysis Training Institute](#)

- Workshop dates: July 24 – 29, 2023
- Workshop location: Chicago, IL

- Application deadline: March 31, 2023

#### Summer Research Training Institute on Cluster-Randomized Trials

- Workshop dates: July 17 - 27, 2023
- Workshop location: Northwestern University
- Application deadline: March 31, 2023

#### Evidence-Based Intervention Training for Education

- Workshop dates: June 20-23, 2023
- Workshop location: Ohio State University
- Application deadline: March 31, 2023

### Upcoming Events at a Glance

- **SBIR/STTR: Federal Funding for Your Innovative Idea (Rural Innovation Series)**  
February 21, 2023 / [Learn more >>](#)
- **Webinar: NSF CAREER – Educational Activities & Broader Impacts**  
February 23, 2023; 11am-12pm | [Learn more >>](#)
- **Virtual ORCID Workshop for Researchers**  
February 23, 2023; 11am / [Learn more >>](#)
- **NSF Workshops – CAREER and EPSCoR Programs**  
SAVE THE DATE: March 30, 2023
- **Student Research Day**  
April 18, 2023 | [Learn more >>](#)
- **Save the Date: Virtual Workshop: Pursuing Funding for Education Research**  
April 19, 2023; Noon-1:30pm | [Learn more >>](#)

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### Reminder: Updates to NIH and NSF proposal guides

- On January 25, 2023, the National Institutes of Health transitioned to the new **FORMS-H Grant Application Forms and Instructions**. [Learn more >>](#)

- On January 20, 2023, the National Science Foundation transitioned to a new **Proposal and Award Policies and Procedures Guide**, which includes mandatory changes to biosketches and current and pending support. [Learn more >>](#)

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## Funding Opportunities

- [DoD: Breast Cancer Research Program](#)
- [DoD: FY24 Defense University Research Instrumentation Program \(DURIP\) Army Submission](#)
- [DOD: Research Interests of the Air Force Office of Scientific Research \(AFOSR\)](#)
- [DOE: EXPRESS - 2023 Exploratory Research for Extreme-Scale Science – LIMITED](#)
- [DOE: Large Wind Turbine Materials and Manufacturing – LIMITED](#)
- [DOE: Reducing Agricultural Carbon Intensity and Protecting Algal Crops \(RACIPAC\)](#)
- [Ford Foundation: JustFilms](#)
- [HRSA: Advanced Nursing Education Workforce \(ANEW\)](#)
- [NIH: Addressing the Impact of Structural Racism and Discrimination on Minority Health and Health Disparities \(R01 – Clinical Trial Optional\)](#)
- [NIH: Collaborative Program Grant for Multidisciplinary Teams \(RM1 – Clinical Trial Optional\) – LIMITED](#)
- [NIH: Research on Bioethical Issues Related to Bionic and Robotic Device Development and Translation \(R21 Clinical Trial Optional\)](#)
- [NIJ: FY23 Research and Evaluation on Violence Against Women](#)
- [NIJ: Research and Evaluation on Domestic Radicalization and Violent Extremism](#)
- [NSF: Condensed Matter and Materials Theory \(CMMT\)](#)
- [NSF: Mathematical Biology](#)
- [Project Management Institute: Sponsored Research](#)
- [Spencer Foundation: Racial Equity Research Grants](#)
- [USDA: Integrated Research, Education, and Extension Competitive Grants Program - Organic Transitions](#)
- [USDA: Women and Minorities in STEM – LIMITED](#)

## 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).

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).

- [NIH: Collaborative Program Grant for Multidisciplinary Teams](#)  
Notification deadline: 03/08/2023
- [DOE: Large Wind Turbines and Manufacturing](#)  
Notification deadline: 03/01/2023
- [NSF: IUSE/ Professional Formation of Engineers: Revolutionizing Engineering Departments](#)  
Notification deadline: 02/22/2023
- [USDA: Women and Minorities in STEM](#)  
Notification deadline: 03/08/2023

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.

- [Graham Foundation: Architecture and the Designed Environment](#)  
Deadline: 02/25/2023
- [DOE: Scientific Machine Learning for Complex Systems](#)  
Pre-application deadline: 03/01/2023
- [NSF: Scholarships in STEM \(S-STEM\) – New Solicitation](#)  
Deadline: 03/02/2023
- [DOE: EXPRESS - 2023 Exploratory Research for Extreme-Scale Science](#)  
Pre-application deadline: 03/08/2023
- [HRSA: Rural Communities Opioid Response Program-Neonatal Abstinence Syndrome](#)  
Deadline: 03/08/2023

- [DOE: Energy Innovation Hub Program: Research to Enable Next-Generation Batteries and Energy Storage](#)  
Pre-application deadline: 03/09/2023
- [NSF: Expanding Capacity in Quantum Information Science and Engineering](#)  
LOI deadline: 03/10/2023
- [Breast Cancer Alliance: Exceptional Projects Grants](#)  
LOI deadline: 03/31/2023
- [Breast Cancer Alliance: Young Investigator Grants](#)  
LOI deadline: 03/31/2023
- [NSF: Quantum Sensing Challenges for Transformational Advances in Quantum Systems \(QuSeC-TAQS\)](#)  
Deadline: 04/3/2023
- [DRL: Ensuring Freedom of Expression for Vulnerable and Marginalized Populations Responding to Anti-Rights Efforts and Targeted Attacks](#)  
Deadline: 04/05/2023
- [NSF: Partnerships for Innovation](#)  
Deadline: 05/02/2023
- [NIH: Alzheimer's Disease Research Centers](#)  
LOI deadline: 05/14/2023

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## DoD: Breast Cancer Research Program

There are a series of [funding opportunities](#) available through these Congressionally Directed Medical Research Programs.

**Breakthrough Award levels 1 and 2 ([BTA12](#))** – Level 1 funds Innovative, high-risk/high-reward research that is in the earliest stages of idea development or is an untested theory that addresses an important problem. Level 2 funds research that is already supported by substantial preliminary or published data. *Pre- applications are due: March 28, 2023 at 4pm*

**Era of Hope Scholar Award ([EOHS](#))** - supports individuals early in their careers who have demonstrated significant potential to effect meaningful change in breast cancer. These

individuals should be exceptionally talented scientists who have shown that they are the “best and brightest” in their field(s) through extraordinary creativity, vision, innovation, and productivity.

*Pre- applications are due: March 28, 2023 at 4pm*

**Clinical Research Extension Award ([CREA](#))** - aims to extend the data collection, followup, and analysis of breast cancer clinical research studies. The intent of this mechanism is to increase the clinically relevant impact of breast cancer patient participation in clinical research by addressing the knowledge lost due to limited or early termination of patient follow-up and sample collection and analysis.

*Pre- applications are due: March 28, 2023 at 4pm*

**Transformative Breast Cancer Consortium Development Award ([TBCCDA](#))** - is intended to provide successful applicants the time and resources needed to bring investigators and breast cancer

advocates together to establish a consortium framework and conduct preliminary research to support application to a future, full Transformative Breast Cancer Consortium Award (pending availability of funds).

*Pre- applications are due: March 28, 2023 at 4pm*

**Transformative Breast Cancer Consortium Award ([TBCCA](#))** - is designed to support collaborations and ideas that will transform the lives of individuals with, and/or at risk for, breast cancer and will significantly accelerate progress toward ending breast cancer.

*Pre- applications are due: March 29, 2023 at 4pm*

**Breakthrough Award Level 3 ([BTA3](#))** – the intent of this award is to support promising research that has high potential to lead or make breakthroughs in breast cancer. Funding level 3 – Advanced translational studies with a high degree of project readiness. Where relevant, proof of availability of and access to necessary data, human samples, cohort(s) and/or critical reagents must be provided.

*Pre- applications are due: March 29, 2023 at 4pm*

**Breakthrough Award Level 4 ([BTA4](#))** - e intent of this award is to support promising research that has high potential to lead or make breakthroughs in breast cancer. Funding level 4 – Large scale projects that will transform and revolutionize the clinical management and/or prevention of breast cancer. Human clinical trials are required.



*Pre- applications are due: March 29, 2023 at 4pm*

**Innovator Award ([INNOV](#))** - supports visionary individuals who have demonstrated exceptional creativity, innovative work, and paradigm-shifting leadership in any field including, but not limited to, breast cancer. The Innovator Award will provide these individuals with the funding and freedom to pursue their most novel, visionary, high-risk ideas that could accelerate progress to ending breast cancer.

*Pre- applications are due: March 29, 2023 at 4pm*

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## **DoD: FY24 Defense University Research Instrumentation Program (DURIP) Army Submission**

[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.

A central purpose of the DURIP is to provide equipment and instrumentation to enhance research related education in areas of interest and priority to the DoD. Therefore, your proposal must address the impact of the equipment or instrumentation on your institution's ability to educate students through research in disciplines important to DoD missions.

*Deadline: May 12, 2023*

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## **DOD: Research Interests of the Air Force Office of Scientific Research (AFOSR)**

[AFOSR](#) plans, coordinates, and executes the Air Force Research Laboratory's (AFRL) basic research program in response to technical guidance from AFRL and requirements of the Air Force. Additionally, the office fosters, supports, and conducts research within Air Force, university, and industry laboratories; and ensures transition of research results to

support U.S. Air Force needs.

The focus of AFOSR is on research areas that offer significant and comprehensive benefits to our national war fighting and peacekeeping capabilities. These areas are organized and managed in two scientific Departments: Engineering and Information Science (RTA), Physical and Biological Sciences (RTB), and our international offices (EAORD, SOARD, and AOARD).

*Deadline: Open until closed*

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## **DOE: EXPRESS - 2023 Exploratory Research for Extreme-Scale Science - 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.

**DOE EXPRESS: Brief pre-applications are due to DOE March 8. Notify RCA if you are interested in submitting to this program. Approval to submit to this program will be given to the first to notify.**

Extreme-scale science recognizes that disruptive technology changes are occurring across science applications, algorithms, computer architectures and ecosystems. Recent reports point to emerging trends and advances in high-end computing, massive datasets, scientific machine learning, artificial intelligence (AI) on increasingly heterogeneous architectures, including neuromorphic and quantum systems.

Significant innovation will be required in the development of effective paradigms and approaches for realizing the full potential of scientific computing from emerging technologies. Proposed research should not focus strictly on a specific science use case, but rather on creating the body of knowledge and understanding that will

inform future advances in extreme-scale science.

**LIMITED SUBMISSION:** No more than a total of four pre-applications or applications as the lead institution in a single- or multi-institutional team.

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## **DOE: Large Wind Turbine Materials and Manufacturing – 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.

**DOE: Large Wind Turbines and Manufacturing: Notify RCA by March 1, 2023 at 5pm if you are interested in submitting to this program. Notifications of interest should include the topic area to which you plan to submit.**

The goals of this Funding Opportunity are to:

- Further develop broad, foundational, manufacturing “platform” technologies and address gaps and barriers that are currently limiting use of composite materials in clean energy and decarbonization-related applications with wind energy applications as the primary FOA focus;
- Enable additive manufacturing processes for rapid prototyping, tooling, fabrication, and testing of large wind blades;
- Apply additive manufacturing to non-blade wind turbine components; and
- Mature nascent technologies, processes, and methods that improve one or more aspects of advanced composites manufacturing, including automation, and sustainability (including recycling) of these materials.

**LIMITED SUBMISSION:** No more than a total of four pre-applications or applications as the lead institution in a single- or multi-institutional team.

## **DOE: Reducing Agricultural Carbon Intensity and Protecting Algal Crops (RACIPAC)**

The Bioenergy Technologies Office's (BETO's) Renewable Carbon Resources (RCR) program develops science-based strategies and technologies to cost-effectively transform renewable carbon resources such as agricultural waste and algae into high-quality, environmentally sustainable, conversion-ready feedstocks for biofuels and bioproducts. This [funding opportunity](#) announcement (FOA), through two distinct topic areas – the [first](#) focused on climate-smart agricultural practices and the [second](#) on algae crop protection – supports BETO's RCR Program's strategies for the development of conversion-ready feedstocks for biofuels and bioproducts and supports the Biden Administration's goal to produce sustainable aviation fuels.

*Deadline: Concept Paper March 20, 2023 4PM*

## **Ford Foundation: JustFilms**

This program supports artist-driven film and new media storytelling projects that explore aspects of inequality, as well as the organizations and networks that support these projects. The Ford Foundation accepts inquiries for grants year-around that help push forward their mission to provide a world “in which all individuals, communities, and peoples work toward the protection and full expression of their human rights; are active participants in the decisions that affect them; share equitably in the knowledge, wealth, and resources of society; and are free to achieve their full potential.”

This [project submission](#) will be based on the following criteria: artistic excellence, contemporary relevance, alignment with Ford priorities, potential for strategic impact, potential to transform stereotypes – beliefs – and value systems, creativity and innovation in form and the potential to build cultural power and voice in marginalized communities.

*Deadline: Proposal accepted ANYTIME*

## **HRSA: Advanced Nursing Education Workforce (ANEW)**

The purpose of the [Advanced Nursing Education Workforce](#) (ANEW) Program is to increase the number of primary care nurse practitioners, clinical nurse specialists, and certified nurse midwives trained and prepared to provide primary care services, mental health, and substance use disorder care, and/or maternal health care. Grants will support the training and graduation of advanced practice registered nursing (APRN) students/trainees in these disciplines. Awardees will provide tuition and other eligible supports to trainees, build academic-clinical partnerships to facilitate clinical training, and continue to develop and sustain clinical faculty and preceptors as needed. Applicants are strongly encouraged to recruit students/trainees and faculty from diverse populations. Funding preference will be given to eligible entities that train APRNs students to practice in underserved and rural communities or state and local health departments.

*Deadline: April 7, 2023*



## **NIH: Addressing the Impact of Structural Racism and Discrimination on Minority Health and Health Disparities (R01 – Clinical Trial Optional)**

This [initiative](#) [PAR-23-112] will support intervention research that addresses structural racism and discrimination (SRD) in order to improve minority health or reduce health disparities.

Research projects must address SRD in one or more NIH-designated populations with health disparities in the US and should address documented disparities in health outcomes. Applications are expected to provide a justification for why the specific types of SRD included constitute SRD, such as how the racism or discrimination is structural rather than reflecting individual-level behavior and how the SRD results in differential treatment or outcomes for less advantaged individuals, groups or populations.

*Upcoming Deadlines: March 24, October 10*



## **NIH: Collaborative Program Grant for Multidisciplinary Teams (RM1 – Clinical Trial Optional) – 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.

**NIH Collaborative Program Grant for Multidisciplinary Teams: [Notify RCA](#) by March 8, 2023 5pm if you are interested in submitting to this program.**

This [Funding Opportunity Announcement](#) (FOA) [PAR-23-077] is designed to support highly integrated research teams of three to six Program Directors/Principal Investigators (PDs/PIs) to address ambitious and challenging research questions that are within the mission of NIGMS – National Institute of General Medical Sciences. Project goals should not be achievable with a collection of individual efforts or projects. Collaborative program teams are expected to accomplish goals that require considerable synergy and managed team interactions. Teams are encouraged to consider far-reaching objectives that will produce major advances in their fields.

Applications may address any area of science within the [NIGMS mission](#). NIGMS supports generalizable, foundational basic research that increases understanding of biological processes at a range of levels, from molecules and cells, to tissues, whole organisms, and populations.

**LIMITED SUBMISSION:** No more than a total of four pre-applications or applications as the lead institution in a single- or multi-institutional team.

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## **NIH: Research on Bioethical Issues Related to Bionic and Robotic Device Development and Translation (R21 Clinical Trial Optional)**

This opportunity [[RFA-EB-23-001](#)] invites applications that propose research on ethical questions associated with the design, testing, and implementation of bionic and robotic devices (e.g., study design, participant selection, data analysis). Proposed approaches may include but are not limited to data-generating qualitative and quantitative approaches, normative analyses, and other types of analytic and conceptual research methodologies.

*Upcoming Deadlines: April 21, October 2*

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## **NIJ: FY23 Research and Evaluation on Violence Against Women**

The National Institute of Justice (NIJ) strives to support the development of objective and independent knowledge and validated tools to reduce violence against women (VAW), promote justice for victims of crime, and enhance criminal justice responses. For that reason, this [solicitation](#) seeks applications for grant funding to conduct research and evaluation projects examining a broad range of topics on Violence Against Women.

*Deadline: April 26, 2023*

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## **NIJ: Research and Evaluation on Domestic Radicalization and Violent Extremism**

With this [solicitation](#), the National Institute of Justice (NIJ) seeks proposals for rigorous research and evaluation projects targeted toward developing a better understanding of the domestic radicalization phenomenon, and advancing evidence-based strategies for effective intervention and prevention.

NIJ seeks proposals in four topics as they relate to radicalization and violent extremism under this solicitation:

1. Research to inform terrorism prevention efforts.
2. Research on the role of communications in promoting and countering extremist content and information.
3. Research on disengagement, deradicalization and the reintegration into society of individuals incarcerated for terrorism related offenses.
4. Evaluations of programs and practices to prevent acts of terrorism.



*Deadline: Grants.gov April 24, 2023; JustGrants May 8, 2023*



## **NSF: Condensed Matter and Materials Theory (CMMT)**

The CMMT program [[NSF 22-610](#)] supports fundamental research that advances conceptual understanding of hard and soft materials, and materials-related phenomena; the development of associated analytical, computational, and data-centric techniques; and predictive materials-specific theory, simulation, and modeling for materials research. First-principles electronic structure, quantum many-body and field theories, statistical mechanics, classical and quantum Monte Carlo, and molecular dynamics, are among the methods used in the broad spectrum of research supported in CMMT. Research may encompass the advance of new paradigms in materials research, including emerging data-centric approaches utilizing data-analytics or machine learning.

*Deadline: Proposal 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.

*Deadline: Proposal accepted ANYTIME*



## **Project Management Institute: Sponsored Research**

The [Project Management Institute](#) research grants support new academic research with the intent to advance knowledge in project, program and portfolio management. Proposed research must have direct application to some aspect of the project

management body of knowledge or its practice.

While this is an open call for research in the field of project management, special consideration will be given to proposals that address Diversity, Equity, and Inclusion (DE&I) and Sustainability topics:

1. Cross-Cultural, Intercultural, and Gender Diversity in the context of Product Management and Product Development
2. Sustainability in Product Management and Product Development

*Deadline: Window – February 13- April 13, 2023*

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## **Spencer Foundation: Racial Equity Research Grants**

The [Racial Equity Research Grants](#) program supports education research projects that will contribute to understanding and ameliorating racial inequality in education. The Foundation is interested in funding studies that aim to understand and disrupt the reproduction and deepening of inequality in education, and which seek to (re)imagine and make new forms of equitable education. Their goal is for this program to support rigorous, intellectually ambitious, and technically sound research that is relevant to the most pressing questions and compelling opportunities in relation to racial equity in education.

*Deadline: Intent to apply Mid-May 2023*

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## **USDA: Integrated Research, Education, and Extension Competitive Grants Program - Organic Transitions**

The ORG program is aligned with the following [USDA Strategic Plan Fiscal Year 2022-2026](#) and specifically addresses the following Strategic Goals:

1. Combat climate change to support America's working lands, natural resources and communities
2. Ensure America's agricultural system is equitable, resilient and prosperous.
3. Foster an equitable and competitive marketplace for all agricultural producers.
4. Provide all Americans safe, and nutritious food.
5. Expand opportunities for economic development and improve quality of life in rural and tribal communities.

6. Attract, inspire and retain an engaged and motivated workforce that's proud to represent USDA.

**Cost-sharing is required for this program.**

*Deadline: April 27, 2023*



## **USDA: Women and Minorities in STEM – 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.

**USDA WAMS : Notify RCA by March 8, 5pm if you are interested in submitting to this program.**

The purpose of this program is to support research, education/teaching, and extension projects that increase participation by women and underrepresented minorities from rural areas in STEM. NIFA intends this program to address educational needs within broadly defined areas of food and agricultural sciences. Applications recommended for funding must highlight and emphasize the development of a competent and qualified workforce in the food and agricultural sciences. WAMS-funded projects improve the economic health and viability of rural communities by developing research and extension initiatives that focus on new and emerging employment opportunities in STEM occupations. Projects that contribute to the economic viability of rural communities are also encouraged.

**LIMITED SUBMISSION:** Eligible institutions may not submit more than two applications to this program as a lead institution / applicant.



## 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 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.*