NDSU OFFICE OF RESEARCH AND CREATIVE ACTIVITY

RCA UPDATE

September 27, 2021

Is there a better color in the whole world than a beautiful ND sky in September?

It's fall and our students are back, tailgating is back, and I will be back...back to my faculty post in just a few short days. This is my last RCA newsletter and, as I look out the windows in R1 on a gorgeous fall day, I'd like to take the opportunity to say thank you.

It has been an honor and a privilege to serve the university as the Vice President for Research and Creative Activity for the past three years, and I am grateful to the president and all three provosts that I've worked with for providing me with the opportunity.

The strength of NDSU research is the hundreds of brilliant minds who put their effort toward the common good with uncommon skill and expertise, and I am humbled that you let me be a part of your team. Thank you. I am so proud of the good that NDSU research does in this world! With over \$83M in awards last year, I'm looking for great things to be happening in research in the coming years.

To all of people who support our research endeavors behind the scenes; the animal caregivers, compliance committees, funders, administrators, and all of our ancillary support staff...thank you. You amaze me. We've done good work together, and I have

every confidence that NDSU research will continue to flourish through your continued dedication.

I'd like to also say thank you to my colleagues in agriculture. I feel very fortunate to be welcomed 'home' to my department and college. Your friendship and support have meant the world to me. I look forward to putting my skills to use to build agriculture in new ways.

Finally, thank you to Dr. Colleen Fitzgerald, who will join NDSU October 1, for her service as the new VPRCA. She has great ideas and a new perspective that will be wonderful for NDSU. Please join me in welcoming her to campus!

Kind regards,

Jane Schuh

Vice President Research and Creative Activity

NDSU receives grant for state-of-the-art biomedical and structural biology instrument

Researchers at NDSU have been awarded an S10 grant from the National Institutes of Health (NIH) that will provide a state-of-the-art instrument called an analytical ultracentrifuge (AUC). The AUC is a key analytical instrument that isolates, identifies, and measures the individual paths of molecules as they move within a solution. This AUC data can be analyzed to determine molecular properties such as size, shape, heterogeneity (or variability), structure, and assembly



Chris Colbert, PhD

dynamics of individual molecules, complexes of molecules, and nanomaterials. This data will provide researchers with important information about how these materials interact in solution.

"This instrument will provide us with the capability to perform experiments that have not previously been possible at NDSU," commented NDSU chemistry and biochemistry professor Christopher Colbert. "It will help us understand how molecules interact with each other and with the various solutions they're within, which will provide useful information for research activities involving drug delivery, virus assembly, and nanoparticles. Our AUC will truly support the expansion of biomedical and structural biology research at NDSU."

Colbert, who was instrumental in obtaining the NIH grant, is the PI on the award and will be a major user of the AUC. Previously, NDSU was not eligible for NIH S10 grants due to rules requiring a minimal number of highly funded NIH users at an institution. Colbert realized that the rules had changed and NDSU researchers could now apply for this funding mechanism. An added benefit of this funding mechanism was that the institution was not required to provide a match for buying the instrument. Colbert assembled a team of eight additional researchers with very diverse research interests who would be major users of the device, along with an additional four who would be minor users. Colbert and his team then wrote the successful proposal, which received a perfect score, for the nearly \$400,000 instrument.

Read More>>

Meet NDSU's New Faculty Members

Throughout the year, RCA will be highlighting new faculty in the weekly newsletter.

Full profiles are available on the RCA website.

Lei Jiang, PhD

Education

What are your primary research and scholarly interests?

My primary research interests focus on equitable and inclusive educational leadership, TESOL and bilingual education, and quantitative and qualitative research methods.

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

My educational backgrounds include a Ph.D. in Education & M.S. in Statistics, University of Georgia Master of Education,

Harvard University; a B.A. in English and Economics, Fudan University (Shanghai, China); visiting undergraduate student, University of California, Berkeley; visiting undergraduate student, University of Cambridge (UK).

What excites you about NDSU?

NDSU has a friendly and welcoming campus. I am excited about the student-centered and research-oriented environment.

What motivates you?

I am motivated by the opportunity to work with my colleagues and students and make our community a better place.

Learn more about Lei >>

Notice: Federal Program for Enhancement of Contractor Employee Protections

NDSU employees that work on federal awards are entitled to enhanced protections against reprisal for certain whistleblowing activities under the Federal "Program for Enhancement of Contractor Employee Protections" (41 U.S.C. 4712). In short this



means that when you are working on a federally funded award, if you disclose information you believe is evidence of gross mismanagement or gross waste of grant funds, an abuse of authority, a danger to the public, or a violation of law related to a federal program, you may not be discharged, demoted, or otherwise discriminated against because of that disclosure.

If you believe you have evidence of any mismanagement of Federal funding, you can report under <u>NDSU Policy Section 169</u> to a supervisor, department head, chief fiscal officer or other NDSU or NDUS officer designated with responsibility for receiving and investigating such reports. Other options are to report via the <u>NDSU Fraud Hotline</u> (866-912-5378) or through procedures outlined in <u>41 USC 4712</u>. If you experience any reprisal after a qualified disclosure, you should file a complaint through the Office of Inspector General hotline (1-877-499-7295). NDSU has an obligation to inform employees of these protections.

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Upcoming Limited Submission Program Deadlines

<u>Limited submission grant programs</u> 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.

NSF: Major Research Instrumentation (MRI)

Notification Deadline: 9/29/2021

Retirement Research Foundation
 Notification Deadline: 9/29/2021

• NSF: Innovations in Graduate Education

Notification Deadline: 09/30/2021

NSF: Partnerships for Innovation
 Notification Deadline: 10/20/2021

There are a number of limited submission grant programs with upcoming agency deadlines for which we did not receive any notifications of interest. A full list of those programs is available on the <u>Limited Submissions page</u>. 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. Email notifications of interest to <u>ndsu.researchdev@ndsu.edu</u>.

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 <u>SPIN page</u> on the RCA website. If you have questions, please contact ndsu.researchdev@ndsu.edu.

Dakota Cancer Collaborative on Translational Activity

The goal of the Dakota Cancer Collaborative on Translational Activity (DaCCoTA) is to stimulate growth of expertise and engagement in cancer-related clinical and translational research (CTR) in the Dakota region.

The <u>DacCota Pilot Projects Program</u> has released new requests for applications for the following pilot grant awards:

- **Feasibility Pilot Grants** These awards of up to \$60,000 (direct + indirect costs) are intended to provide support to allow a clinician / non-clinician team to form around a novel cancer-related hypothesis.
- Ready-to-Go Pilot Grants These awards of up to \$120,000 (direct + indirect costs) are intended for those projects with significant existing preliminary data in

- support of a novel clinical / translational cancer-related hypothesis. These projects should ideally be ready for extramural submission within a year and / or be able to demonstrably improve health outcomes.
- **Community Engagement Pilot Grants** These awards are intended for projects addressing priority areas determined by key stakeholder groups. Proposals should address cancer disparities in either:
 - o Colorectal cancer screening, stage and diagnosis, treatment, and mortality,
 - o Tobacco-related cancers (Lung, CRC, etc.), or
 - o Breast cancer screening, stage at diagnosis, and mortality.

The <u>Professional Development Core</u> is currently seeking proposals for the following funding mechanisms:

- DaCCoTA Scholars Program: The purpose of this award is to stimulate the development of new CTR investigators. Awardees will receive salary support (50% FTE plus fringe) that guarantees a minimum of 50% protected research time for the project and up to \$50,000 in annual research support for up to 5 years.
- Clinical Research Opportunities Program: This program provides 20% release time (up to NIH cap) to community-practicing, hospital-based clinicians to allow for participation in training activities and collaboration in cancer-focused CTR. The goal of the program is to begin to shift translational cancer research in the Upper Midwest to an enterprise informed by the patient.

Letter of Intent deadline: October 30, 2021 Full application deadline: January 17, 2022

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DoD: Young Investigator Program

The Office of Naval Research (ONR) is interested in receiving proposals for its Young Investigator Program (YIP) [N00014-21-S-F008]. ONR's Young Investigator Program seeks to identify and support academic scientists and engineers who are in their first or second full-time tenure-track or tenure-track-equivalent academic appointment, who have received their PhD or equivalent degree on or after January 1, 2014, and who show exceptional promise for doing creative research.

Proposals addressing research areas which are of interest to ONR Program Officers will be

considered. See a full list here.

Applicants are *strongly encouraged* to contact the appropriate Program Officer who is the point of contact for a specific technical area to discuss their research ideas before submitting a proposal. A list of most Program Officers and their contact information can be found here.

Please see full text of the <u>funding opportunity announcement</u> for more details.

Deadline: October 29, 2021

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DOE: Early Career Research Program

The U.S. Department of Energy (DOE) is accepting proposals for the 2022 DOE Office of Science Early Career Research Program [DE-FOA-0002563] to support the research of outstanding scientists early in their careers. The program will support over 60 early career researchers for five years at U.S. academic institutions and DOE National Laboratories.

To be eligible for the program, a researcher must be an untenured, tenure-track assistant or associate professor at a U.S. academic institution or a full-time employee at a DOE national laboratory. The applicant must also have received a Ph.D. within the past ten years. University awards average around \$750,000 for five years.

The DOE Office of Science is the Nation's largest supporter of basic research in the physical sciences. Early career researchers may apply to one of eight Office of Science program offices:

- 1. Advanced Scientific Computing Research;
- 2. Biological and Environmental Research;
- 3. Basic Energy Sciences;
- 4. Fusion Energy Sciences;
- 5. High Energy Physics;
- 6. Nuclear Physics;
- 7. Accelerator R&D and Production; and
- 8. Isotope R&D and Production.

Proposed research topics must fall within the programmatic priorities of DOE's Office of Science, which are provided in the program announcements.

Pre-Application deadline: October 21, 2021; 4pm

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ND Soybean Council: Agronomy Research

The North Dakota Soybean Council (NDSC) is seeking Agronomy Research Funding Requests for FY 2023. The NDSC invites creative funding requests to address agronomy soybean research priorities. While NDSC will undoubtedly continue to fund many of the traditional programs that have supported the NDSC mission, emphasis will be given to proposals which creatively address the following priorities:

- Herbicide Resistance
 - Kochia and pigweed family
- Alternative Weed Control Methods
 - Mechanical
 - Other
- Soil Health Concerns
 - Salinity
 - Low pH soils
- Soybean diseases
 - o Management of SCN, SDS, & White Mold
 - Identification of new soybean diseases

For more information, download the full request for proposals (RFP) and associated documents:

- RFP
- Appendix A
- Appendix B

For questions, please contact Kendall at 701-566-9300 or 701-566-3619. You can also email Kendall at knichols@ndsoybean.org.

Deadline: November 4, 2021; 4pm

NEH: Public Scholars

The <u>Public Scholars program</u> supports the creation of well-researched nonfiction books in the humanities written for the broad public. It does so by offering grants to individual authors for research, writing, travel, and other activities leading to publication. Writers with or without an academic affiliation may apply, and no advanced degree is required. The program is intended both to encourage non-academic writers to deepen their engagement with the humanities by strengthening the research underlying their books and to encourage academic writers in the humanities to communicate the significance of their research to the broadest possible range of readers.

Deadline: December 15, 2021

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NIH: Effectiveness of Implementing Sustainable Evidence-Based Mental Health Practices in Low-Resource Settings to Achieve Mental Health Equity for Traditionally Underserved Populations (R01 Clinical Trial Optional)

This Funding Opportunity Announcement (FOA) [PAR-21-284] encourages studies that develop and test the effectiveness of strategies for implementation and sustainable delivery of evidence-based mental health treatments and services to improve mental health outcomes for underserved populations in low-resourced settings in the United States. Studies should identify and use innovative approaches to remediate barriers to provision, receipt, and/or benefit from evidence-based practices (EBPs) and generate new information about factors integral to achieving equity in mental health outcomes for underserved populations. Research generating new information about factors causing/reducing disparities are strongly encouraged, including due consideration of the needs of individuals across the life span.

This FOA is published in parallel to a companion R34, <u>PAR-21-283</u>, that supports pilot studies in preparation for the larger-scale studies described here.

NIH: Innovative Mental Health Services Research Not Involving Clinical Trials (R01 Clinical Trials Not Allowed)

The purpose of this Funding Opportunity Announcement (FOA) [PAR-21-316] is to encourage innovative research that will inform and support the delivery of high-quality, continuously improving mental health services to benefit the greatest number of individuals with, or at risk for developing, a mental illness. This announcement invites applications for non-clinical trial R01-level projects that address NIMH strategic priorities that strengthen the public health impact of NIMH-supported research as described in Goal 4 of the NIMH Strategic Plan.

Proposed research should seek to:

- Identify mutable factors that impact access, continuity, utilization, quality, value, and outcomes, including disparities in outcomes, or scalability of mental health services, which may serve as targets in future service delivery intervention development;
- 2. Develop and test new research tools, technologies, measures, or methods and statistical approaches to study these issues;
- Integrate and analyze large data sets to understand factors affecting mental health services outcomes using advanced computational and predictive analytic approaches;
- 4. Wherever possible, leverage existing infrastructure and partnerships to accomplish these goals.

Standard R01 deadlines apply; upcoming deadline dates are October 5, 2021 and February 5, 2022.

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NSF: Computer and Information Science and Engineering (CISE)

– Core Programs

The NSF CISE Directorate supports research and education projects that develop new knowledge in all aspects of computing, communications, and information science and engineering, as well as advanced cyberinfrastructure, through the following core programs:

Division of Computing and Communication Foundations (CCF):

- Algorithmic Foundations (AF) program;
- Communications and Information Foundations (CIF) program;
- Foundations of Emerging Technologies (FET) program; and
- Software and Hardware Foundations (SHF) program.

Division of Computer and Network Systems (CNS):

• CNS Core (CNS Core) program.

Division of Information and Intelligent Systems (IIS):

- Human-Centered Computing (HCC) program;
- Information Integration and Informatics (III) program; and
- Robust Intelligence (RI) program.

Office of Advanced Cyberinfrastructure (OAC):

OAC Core Research (OAC Core) program;

Proposers are invited to submit proposals in several project classes, which are defined as follows:

- Small Projects -- up to \$600,000 total budget with durations up to three years: projects in this class may be submitted to CCF, CNS, and IIS only;
- Medium Projects -- \$600,001 to \$1,200,000 total budget with durations up to four years: projects in this class may be submitted to CCF, CNS, and IIS only; and
- OAC Core Projects -- up to \$600,000 total budget with durations up to three years: projects in this class may be submitted to OAC only.

A more complete description of these project classes can be found in Section *II. Program Description* of the solicitation [NSF 21-616].

Deadline for Medium Projects and OAC Core Projects: December 22, 2022. Proposals for Small Projects are accepted anytime.

NSF: Environmental Sustainability

The goal of the Environmental Sustainability program [PD 21-7643] 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.

There are four principal general research areas that are supported:

- industrial ecology,
- green engineering,
- · ecological engineering, and
- Earth systems engineering.

All proposed research should be driven by engineering principles, and be presented explicitly in an environmental sustainability context. Proposals should include involvement in engineering research of at least one graduate student, as well as undergraduates. Incorporation of aspects of social, behavioral, and economic sciences is welcomed.

Full Proposals Accepted Anytime

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NSF: Plant Genome Research Program

The Plant Genome Research Program (PGRP) [NSF 21-507] supports genome-scale research that addresses challenging questions of biological, societal and economic importance. PGRP encourages the development of innovative tools, technologies and resources that empower a broad plant research community to answer scientific questions on a genome-wide scale. Emphasis is placed on the scale and depth of the question being addressed and the creativity of the approach. Data produced by plant genomics should be usable, accessible, integrated across scales, and of high impact across biology. Training, broadening participation, and career development are essential to scientific progress and

should be integrated in all PGRP-funded projects.

Two funding tracks are currently available:

- 1. **RESEARCH-PGR TRACK**: Genome-scale plant research to address fundamental questions in biology, including processes of economic and / or societal importance.
- 2. **TRTech-PGR TRACK**: Tools, resources and technology breakthroughs that further enable functional plant genomics.

Proposals are accepted at anytime.

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Open Technology Fund

The Open Technology Fund (OTF) is an independent non-profit organization committed to advancing global Internet freedom. OTF supports projects focused on counteracting repressive censorship and surveillance, enabling citizens worldwide to exercise their fundamental human rights online. Through the research, development, implementation, and sustainability of technologies that facilitate the free flow of information, increase atrisk users' digital security, and enable free expression, the OTF community is working to shape the Internet as a platform that fosters unimpeded connection and collaboration facilitating positive social progress and reinforcing core democratic values.

OTF supports both individuals and projects through several different funding mechanisms:

- Projects
 - Internet Freedom Fund
 - o Rapid Response Fund
 - Labs

Deadlines are rolling.

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Sanford Center for Biobehavioral Research: COBRE Pilot Projects

The Sanford Center for Biobehavioral Research recently received a Center of Biomedical Research Excellence Grant (CoBRE) from the National Institutes of Health focused on eating disorders and obesity. North Dakota State University (NDSU) and the University of

North Dakota (UND) are partners in this program.

As part of this award, the CoBRE is sponsoring a <u>Pilot Projects Program</u>. This program is open to staff and faculty from Sanford, NDSU, and UND. The goal is to provide scientists and clinicians with the opportunity to conduct pilot studies which can ultimately lead to broader scientific investigations in the areas of eating disorders and obesity. Topics of interest include, but are not limited to:

- risk factors or predictors of eating disorder behavior;
- illness-related mechanisms for onset and maintenance of eating disorders;
- intervention-related mechanisms regarding treatment or prevention of eating disorders;
- factors that moderate the influence of risk factors or mechanism of eating disorder behavior:
- the prevalence of eating disordered behaviors in different populations; and
- the association between eating disordered behaviors and other health-related behaviors.

Two \$50,000 awards will be made this year. If you have any questions about the pilot project program, please reach out to Kathryn Bentley, RN, the Research Project Manager for Pilot Projects at Kathryn.Bentley@SanfordHealth.org or (701) 365-4916.

Letter of Intent Deadline: October 15, 2021

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U.S. Customs and Border Protection: Pembina Virtual Biologic Workshop

September 28, 2021

U.S. Customs and Border Protection is hosting <u>this event</u> to explore the requirements for international importation and exportation of biological shipments for testing and research purposes. Presenting will be representatives from several federal government agencies sharing their responsibilities and discussing regulatory requirements that must be met to import and export biologic materials.

U.S. Customs and Border Protection mission is to prevent entry and mitigate risks of biological threats to American agriculture, public health and natural resources. These

threats include infectious pathogenic organisms; select agents and toxins; and living and non-living vectors that have the potential to pose a threat to public health and introduce foreign animal diseases and plant pests.

Participating Government Agencies include:

Federal Bureau of Investigation, US Food and Drug Administration, Centers for Disease Control, Customs and Border Protection, US Department of Agriculture, ND Department of Agriculture, US Fish and Wildlife Service, Federal Select Agents Program, and US Department of Transportation.

To register, contact <u>neil.halley@cbp.dhs.gov</u>.

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Alan Alda Center for Communicating Science: Creating Connections Virtual Workshop

September 28, 2021 | 2:00pm

The ND EPSCOR State Office is sponsoring a "Creating Connections" workshop by the Alan Alda Center for Communicating Science. "Creating Connections" is a two-hour live, online workshop. The Alda Method is a unique approach to science communication training that combines improvisational theatre-based techniques with message design strategies, including analogies and narrative. This immersive method emphasizes two-way communication to build trust and invite others to share in the wonder and joy of science. The process incorporates research and best practices from science communication, journalism, ethics, and other relevant fields. Contact Shireen Alemadi with questions about this workshop.

Register to attend >>

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NSF Virtual Grants Conference

October 4-8, 2021

The National Science Foundation (NSF) Fall 2021 NSF Virtual Grants Conference will be held during the week of October 4-8, 2021.

Registration is now open. Sessions include:

- New programs and initiatives;
- NSF directorate sessions;
- Future directions and strategies for national science policy;
- Proposal preparation;
- NSF's merit review process; and
- Conflict of interest policies.

For more information and to register, visit https://nsfpolicyoutreach.com/. If you have any logistical questions about this virtual conference, please contact: grants conference@nsf.gov.

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Virtual Workshop: University-Industry Partnerships in the Social Sciences

October 14, 2021 | 10:00am-1:00pm

The University of Maryland, College Park, in collaboration with <u>UIDP</u> and with support from the <u>National Science Foundation</u>, <u>MITRE</u>, and the <u>Consortium of Social Science</u>
<u>Associations</u>, will host a two-part workshop, convening a diverse group of experts and leaders from academia, industry, and government to consider how academic-corporate partnerships can advance social, behavioral, and organizational science research to positively impact science and society.

With the rapid growth of social networks over the last two decades and the corresponding availability of big data, the behavioral and social sciences have become increasingly important to the development and growth of organizations' capacity to understand and address global challenges. The COVID-19 pandemic has underscored the importance of social science research during societal crises. Social, behavioral, and organizational science can help institutions address societal needs, and these contributions can be magnified through collaborations between academia and industry.

Note: While the October 14, 2021 workshop will be held virtually, the second part will be in-person at the University of Maryland, College Park, on April 20-21, 2022.

This virtual workshop is free, but <u>registration</u> is required.

NIH Virtual Grants Seminar

November 1-4, 2021

The National Institutes of Health Virtual Seminar on Grants Administration and Program Funding will be held November 1-4, 2021.

Registration is now open. The seminar will include opportunities to:

- learn about NIH grant processes, policies, and programs;
- interact with NIH program, grants management, review, and policy staff;
- gather resources to use and share with colleagues;
- engage and network with your peers; and
- meet 1:1 with NIH experts.

For more information and to register, visit https://nihvirtualseminar2021.vfairs.com/. If you have questions about this virtual conference, please contact: NIHRegionalSeminars@nih.gov.

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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.

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