

NDSU OFFICE OF
RESEARCH AND CREATIVE ACTIVITY

RCA UPDATE

September 4, 2018



Jane Schuh

*Vice President, Office of
Research and Creative
Activity*

Welcome to the RCA Update

The Research and Creative Activity office has been working on updating the weekly newsletter and we are pleased to send this first new edition. Changes include a new format and added information on research resources and proposal tips. The first newsletter of each month will also feature an RCA Researcher of the Month and acknowledgment of externally sponsored awards.

I also want to send a warm welcome to our new faculty members. The Office of Research and Creative Activity is your partner in growing and nurturing your research activities. We are glad you have joined NDSU and I look forward to meeting all of you.

Julia Bowsher

September 2018 RCA Researcher of the Month

Julia Bowsher absolutely loves insects. That is, except cockroaches. But otherwise, she finds all insects fascinating and she's been studying them since she was five, when she first decided to become a scientist. And her fascination shows—whether it's the giant antique poster in her office detailing the molting process of the desert locust or how much she gets energized when she's talking about her work with the black scavenger fly.



Bowsher is being recognized as the inaugural RCA Researcher of the Month. As an NDSU Associate Professor, she received her PhD in evolution from Duke University and has taught and conducted research in evolutionary and developmental biology at NDSU since 2010. Bowsher recalls always wanting to be a scientist and at Duke, she found an inspirational mentor and kindred spirit in her adviser, Frederik Nijhout. She credits Nijhout with showing her the value of being brave enough to fail and for following the ever-changing path of curiosity that has led both to learn about a variety of insects.

Recently returning from a collaborative research study at the National University of Singapore with world-renowned black scavenger fly expert Rudolf Meier, Bowsher is excited about learning and bringing CRISPR technology to NDSU. A revolutionary technology, CRISPR allows for gene editing and quicker mutations, which speeds up her research.

Bowsher has recently been awarded a \$2.85 million NSF EPSCoR Track-2 grant, studying Insect Cryobiology and Ecophysiology (ICE) Network: Integrating Genomics, Physiology, and Modeling. The goal of the ICE Network is to understand how bees overcome harsh winter conditions to successfully emerge and reproduce in spring. Bowsher has been studying bees for years and is proud of how the concept of "Save the Bees" has taken off. Along with her NDSU colleagues, Kendra Greenlee and Saeed Salem, the grant includes collaborators from the USDA, New Mexico State University, and the University of Wyoming.

Bowsher's advice to new researchers is simple: success is all about time management. She's taught time management philosophies to fellow faculty members

and students. Finding time to do everything you need to do comes down to owning your time and that's something you can develop and nurture. The other benefit to owning time is that it gives researchers the time to write, which is another piece of advice she offers. Bowsher sets aside an hour of each day to do her own writing because, as she puts it, "If you're not writing, you're not thinking. Plus, writing for an hour gives you a sense of accomplishment and that's a great way to start every day."

In her spare time, Bowsher is a triathlete and trains with her colleagues. Exercising with her peers is a great method to share ideas and converse about research. And most importantly, she says, it takes her mind off the exercise itself.

Congratulations to Julia Bowsher, the RCA Researcher of the Month!



Congratulations to all award recipients from May, June, and July!

View the complete list online: [PDF](#) | [Excel](#)

The awards listed are externally funded projects. Each month one of the RCA Updates will include prior month awards.



Looking for collaborators? Check the [Scholars@NDSU database](#), a public-facing site where you can search for researchers with particular disciplinary expertise. This database is also used by business, industry, potential students, and the media. Pivot Expertise Profiles are used to populate Scholars@NDSU, so make sure that your [Pivot](#) profile is up to date!



The "[New Faculty Guide to Competing for Research Funding](#)" is an e-book that covers broadly applicable strategies for finding funding and writing research proposals. This resource is published by [Academic Research Funding Strategies, LLC](#), and is available to access with your NDSU network login. This login also allows access to an [archive](#) of research development and grant writing newsletters published by the same group.



Shibboleth authentication will allow you to log in to your Pivot account using your NDSU network login rather than a separate username and password. If you have a Pivot account, you can set up Shibboleth authentication by following these steps:

(1) Go to <https://pivot.cos.com> and click on Login at the upper right corner of the screen. Within the login window,

there is a link called **Access via My Institution Login**. The *first time* you click on that link, you will be taken through several steps to set up Shibboleth authentication.

(2) Choose your institution (NDSU) from the drop down menu.

(3) Enter your **NDSU network credentials** into the username and password fields. Click the login or submit button.

(4) Pivot will need a little more information to personalize your experience. Fill in the required information and select Get Started.

The next time you use Pivot, select **Access via My Institution Login** in the login window, choose your institution, and sign in with your NDSU network credentials.

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DOD: National Geospatial-Intelligence Research Program (NARP)

The National Geospatial-Intelligence Agency ([NGA](#)) welcomes all innovative ideas for path-breaking research that may advance the NGA mission, which is to provide timely, relevant, and accurate geospatial intelligence (GEOINT) in support of national security objectives. The NGA Academic Research Program (NARP) is focused on innovative, far-reaching basic and applied research in science, technology, engineering and mathematics that has the potential to advance the GEOINT mission. The objective of the NARP is to support innovative, high-payoff research that provides the basis for revolutionary progress in areas of science and technology affecting the needs and mission of NGA. This research also supports the National System for Geospatial Intelligence (NSG), which is the combination of technology, systems and organizations that gather, produce, distribute and consume geospatial data and information. This research is aimed at advancing GEOINT capabilities by improving analytical methods, enhancing and expanding systems capabilities, and leveraging resources for common NSG goals. The NARP also seeks to improve education in scientific, mathematics, and engineering skills necessary to advance GEOINT capabilities. The NGA is soliciting fundamental research under this Broad Agency Announcement (BAA): [HMO476-18-BAA-0001](#). *White papers accepted on a continuous, rolling basis through September 31, 2021.*

Track this opportunity in [Pivot >>](#)



Fahs-Beck Fund: Mental Health Research

The [Fahs-Beck Fund for Research and Experimentation](#) is accepting applications in support of behavioral or psychological research studies based in the United States or Canada. Through its Faculty/Post-Doctoral Fellows program, the fund will award grants of up to \$20,000 in support of studies designed to develop, refine, evaluate, or disseminate innovative interventions aimed at preventing or ameliorating major social, psychological, behavioral, or public health problems affecting children, adults, couples, families, or communities. The fund also will consider studies that have the potential for adding significantly to the knowledge base about such problems. Projects must focus on the United States or Canada or on a comparison between the U.S. or Canada and one or more other country.

Application deadline: November 1, 2018

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NEH: Humanities Connections

The [Humanities Connections program](#) seeks to expand the role of the humanities in undergraduate education at two- and four-year institutions. Awards will support innovative curricular approaches that foster productive partnerships among humanities faculty and their counterparts in the social and natural sciences and in pre-service or professional programs (such as business, engineering, health sciences, law, computer science, and other technology-driven fields), in order to encourage and develop new integrative learning opportunities for students. Competitive applications will demonstrate:

- that the proposed curricular projects address significant and compelling topics or issues in undergraduate education at the applicant institution(s);
- that these projects develop the intellectual skills and habits of mind cultivated by the humanities; and
- that faculty and students will benefit from meaningful collaborations in teaching and learning across disciplines as a result of the project.

Humanities Connections projects have four core features:

1. integration of the subject matter, perspectives, and pedagogical approaches of two or more disciplines (with a minimum of one in and one outside of the humanities);
2. collaboration between faculty from two or more separate departments or schools at one or more institutions;
3. experiential learning as an intrinsic part of the curricular plan; and
4. long-term institutional support for the proposed curriculum innovation(s).

Humanities Connections grants are funded at two levels: Planning and Implementation.

1. Planning Grants (up to twelve months) support the interdisciplinary collaboration of faculty from two or more separate departments or schools (a minimum of one in and one outside of the humanities), with the goal of designing a new, coherent curricular program or initiative.
2. Implementation grants (up to three years) support the interdisciplinary collaboration of faculty from two or more separate departments or schools (a minimum of one in and one outside of the humanities), with the implementation of a sustainable curricular program or initiative as the outcome.

Application deadline: October 17, 2018

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ND EPSCoR: STEM Funding Opportunities

The NDSU campus of [ND EPSCoR](#) has funds available to assist faculty with STEM research and/or outreach activities. Funds are available for the following activities:

- Equipment (\$40,000 maximum)
- Student travel to present at national conferences (\$2,000 maximum)
- Faculty travel for work on collaborative proposals (\$2,000 maximum)
- Seed awards for preliminary data collection (\$10,000 maximum)
- External review of large, interdisciplinary proposals (\$5,000 maximum)
- Seed awards for K12 STEM outreach activities (\$5,000 maximum)

For more information, view the complete request for proposals ([RFP](#)). If you have any questions, please contact Kelly A. Rusch kelly.rusch@ndsu.edu or Jean Ostrom-Blonigen jean.ostrom@ndus.edu.



NSF EPSCoR: Research Infrastructure Improvement Program: Track-2 Focused EPSCoR Collaborations (RII Track-2 FEC) - 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.

[NSF EPSCoR RII Track-2 FEC](#) : [Notify RCA](#) by 9/17/2018 at 5:00 p.m. if you intend to apply.

The NSF EPSCoR Research Infrastructure Improvement Program: Track-2 Focused EPSCoR Collaborations (RII Track-2 FEC) program builds interjurisdictional collaborative teams of EPSCoR investigators in scientific focus areas consistent with NSF priorities. **For FY 2019, RII Track-2 FEC proposals are invited on a single topic: "Harnessing the Data Revolution to solve problems of national importance."** Projects are investigator-driven and must include researchers from at least two RII- eligible jurisdictions with complementary expertise and resources necessary to tackle those projects, which neither party could address as well or rapidly alone. The Science,

Technology, Engineering, and Mathematics (STEM) research and education activities should seek to broaden participation through the strategic inclusion and integration of different types of individuals, institutions, and sectors throughout the project. Proposals must describe a comprehensive and integrated vision to drive discovery and build sustainable STEM capacity that exemplifies diversity of all types (individual, institutional, geographic, and disciplinary). The development of diverse early-career faculty is a critical component of this sustainable STEM capacity. A single proposal is submitted for a project. Support for non-lead collaborating institutions should be requested as subawards. Separately submitted collaborative proposals are not allowed. Each participating EPSCoR jurisdiction must have at least one co-PI on the project. Proposals that do not comply with these requirements will be considered not responsive, and will be returned without review.

Letter of Intent Deadline: November 26, 2018; Full Proposal Deadline: January 25, 2019



NSF: Opportunities for Promoting Understanding Through Synthesis (OPUS)

The Opportunities for Promoting Understanding Through Synthesis ([OPUS](#)) program seeks to provide opportunities for mid- to later-career investigators to develop new understanding of science in the fields supported by the Division of Environmental Biology (DEB) through two tracks of synthesis activities:

- **OPUS: Mid-Career Synthesis**
This track provides an opportunity for a mid-career researcher, defined as a candidate at the associate professor rank (or equivalent) to enhance or develop new research capabilities through collaboration with a mentor who will enable new understanding of their research system and questions of interest.
- **OPUS: Core Research Synthesis**
This track provides an opportunity for an experienced investigator to revisit and synthesize a significant body of their prior research in a way that will enable new understanding of their research system and questions of interest.

All four clusters within the Division of Environmental Biology (Ecosystem Science, Evolutionary Processes, Population and Community Ecology, and Systematics and Biodiversity Science) encourage the submission of these proposals enabling researchers to expand understanding and develop new insights in their research.

Application deadline: November 19, 2018 or August 5, 2019

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USDA / NSF: Innovations at the Nexus of Food, Energy and Water Systems (INFEWS)

This solicitation allows the partner agencies - National Science Foundation (NSF) and the United States Department of Agriculture National Institute of Food and Agriculture (USDA/NIFA) - to combine resources to identify and fund the most meritorious and highest-impact projects that support their respective missions, while eliminating duplication of effort and fostering collaboration between agencies and the investigators they support. The Innovations at the Nexus of Food, Energy and Water Systems ([INFEWS](#)) program seeks to support research that conceptualizes FEW systems broadly and inclusively, incorporating social and behavioral processes (such as decision making and governance), physical processes (such as built infrastructure and new technologies for more efficient resource utilization), natural processes (such as biogeochemical and hydrologic cycles), biological processes (such as agroecosystem structure and productivity), and cyber-components (such as sensing, networking, computation and visualization for decision-making and assessment). Investigations of these complex systems may produce discoveries that cannot emerge from research on food or energy or water systems alone. It is the synergy among these components in the context of sustainability that will open innovative science and engineering pathways to produce new knowledge, novel technologies, and innovative predictive capabilities.

Current tracks:

Track 1, Social-Physical Modelling of FEW systems (INFEWS modelling);
Track 2, Research to Enable Innovative Solutions (INFEWS solutions); and
Track 3, INFEWS Research Coordination Networks (INFEWS-RCN),
INFEWS proposals must integrate and engage the disciplinary science from three or more intellectually distinct disciplines that represent

scientific areas typically supported (one each) by the three participating NSF directorates (ENG, GEO, SBE) or two (or more) participating directorates and USDA/NIFA.

Application Deadline: September 26, 2018

Track this Opportunity in [Pivot >>](#)



NIH Director Issues Letter on Threats to the Integrity of U.S. Biomedical Research

Dr. Francis S. Collins, Director of the National Institutes of Health (NIH), issued a “Dear Colleague” letter dated August 20, 2018, concerning threats to the integrity of U.S. biomedical research from foreign entities efforts to influence NIH researchers and peer reviewers. The Letter identified three areas of concern:

1. diversion of intellectual property (IP),
2. sharing of confidential information, and
3. failure to disclose substantial resources from other organizations, including foreign governments.

In an effort to mitigate these concerns, NIH is working with the biomedical research community and other government agencies. Their collective efforts will be supported by a working group of the Advisory Committee to the NIH Director, looking to develop methods to:

1. improve the accuracy of reporting of all sources of research support, financial interests, and relevant affiliations,
2. mitigate the risk to IP security while continuing collaborations with foreign scientists and institutions, and
3. identify additional steps to protect the integrity of peer review.

NIH recipients are reminded of the requirements to disclose all forms of other support and financial interests, including support from a foreign government or other foreign entity. In March of 2018, NIH published Notice Number [NOT-OD-18-160](#) covering the Financial Conflict of Interest regulation, which is a term for all NIH awards. Investigators must disclose “all financial interests received from a foreign institution of higher education or the government of another country (which includes local, provincial, or equivalent governments of another country).” The [NIH Grants Policy Statement](#) includes information concerning the requirements that all sources of research support, financial interests, and relevant affiliations be included in all applications and progress reports.

The full letter from Dr. Collins can be found on the SPA webpage under “[News & Events](#)”.



NSF Orientation Video: "The Art and Science of Reviewing Proposals"

Jean Feldman, Head, Policy Office, Division of Institution & Award Support, for the National Science Foundation, has provided a “Dear Colleague” notice as follows: The National Science Foundation (NSF) is committed to ensuring a fair, competitive, and transparent merit review process. The reviews submitted by external peer reviewers are an important part of the decision-making process and a crucial source of feedback to Principal Investigators. NSF has developed a short reviewer orientation video that provides helpful tips for writing high quality reviews.

NSF encourages all reviewers to watch the orientation video, “The Art and Science of Reviewing Proposals,” which can be accessed in FastLane through the Panelist Travel and Reimbursement page and the Proposal Review, *Ad Hoc* Reviewers page. You can also view the video directly at [NSF – Tips for Reviewers](#).

There is a link at the end of the video to additional resources, a list of helpful hints, and a short feedback survey. NSF values your feedback and will use the results of the survey to improve future reviewer orientation materials.



NCURA Region IV Traveling Workshops

SAVE THE DATE, October 19, 2018!

The University of North Dakota (UND) is hosting a National Council of University Research Administrators ([NCURA](#)) traveling workshop, “Essentials of Sponsored Research”, on October 19, 2018. Registration will be \$175 and includes lunch. This is a full day workshop focusing on an introduction to sponsored research administration. The workshop will include both pre- and post-award topics. It is primarily geared towards staff in central research and departmental offices. More information will be coming soon concerning shared travel opportunities and the possibility of partial registration support by Research & Creative Activity.



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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