

RCA UPDATE

May 4, 2020

Funding Opportunity Edition

Today's issue of the RCA Update is a Funding Opportunity edition. Twice each month the RCA Update will primarily focus on this information.

Dear Research Colleagues:

Happy May to you all! The grass and trees are getting greener and the flowers have started to appear. I hope that with spring you are all finding new energy in your research and classroom activities.

As our state's land grant university, we carry a responsibility of serving the needs of the people of North Dakota. Even though we're doing it a little differently, there are a number of initiatives that NDSU researchers are exploring that could help citizens everywhere. These include a contact tracing project by Public Health; the development of guidance to manufacturers related to new industrial hygiene standards; community water supply testing research; development of 3D-printed reusable respirators; potential new collaborations with industry looking at the creation of large scale viral decontamination procedures; and some UAS-enabled projects. Innovation



definitely continues at NDSU!

A quick reminder about the RCA undergraduate research survey: If you haven't yet done so, please take a few minutes to let us know how you both encourage and support undergraduate students as part of your research at NDSU:

https://ndstate.co1.qualtrics.com/jfe/form/SV_8csIZj10tG4cH1r . This information will be critical in forming a better picture of undergraduate research activity at NDSU.

Thank you for everything you are doing. As always, let us know if there is anything the RCA team can assist you with in your research activities. We're in this together.

Kind regards,
Jane Schuh
Vice President
Research and Creative Activity

COVID-19 Guidance for researchers is available on the [RCA Website](#), including NDSU guidance for PIs, Federal Agency guidance, and Funding Opportunities. As this situation is rapidly changing, please refer to the [NDSU COVID-19 Preparedness and Response page](#) for additional information.

FUNDING OPPORTUNITIES

- [DoD CDMRP: Emerging Viral Diseases and Respiratory Health](#)
- [DoD DARPA: Biological Technologies](#)
- [Facebook: Explorations of Trust in AR, VR, and Smart Devices](#)

- [Mallinckrodt Foundation: Biomedical Grants for Early Stage Investigators](#)
- [NASA ROSES: Early Career Investigator Program in Earth Science](#)
- [NEH: Digital Projects for the Public](#)
- [NEH: Humanities Collections and Reference Resources](#)
- [NIH: Long-Term Effects of Disasters on Health Care Systems Serving Health Disparity Populations](#)
- [NIH NOSI: Data Driven Research on COVID-19](#)
- [NSF / Amazon: Fairness in AI](#)
- [NSF: Civic Innovation Challenge](#)
- [NSF: Partnerships for Innovation](#)
- [PEN America: Fund for Literary Translation into English](#)
- [Spencer Foundation: Research Grants on Education – COVID-19 Special Grant Cycle](#)
- [USDA NIFA: Crop Protection and Pest Management Competitive Grants Program](#)
- [USDA NIFA: New Beginnings for Tribal Students](#)
- [USDA NRCS: 2020 Soil Science Collaborative Research Proposals](#)
- [USDA NRCS: Conservation Innovation Grants](#)
- [Wenner-Gren Foundation: Virtual Anthropological Workshops](#)

For more funding opportunities related to COVID-19, visit the [RCA COVID-19 Funding Opportunities page](#).

**Looking for
Collaborators?
Search
[Researcher
Profiles](#)**

**In Search of
Equipment?
Check the
[NDSU Equipment
Database](#)**



Need to update your profile?
Click here to learn how!

DoD CDMRP: Emerging Viral Diseases and Respiratory Health

The Office of Congressionally Directed Medical Research Programs (CDMRP) has several open opportunities in the area of Emerging Viral Diseases and Respiratory Health:

Investigator-Initiated Research Award for Emerging Viral Diseases and Respiratory Health: This program supports studies that will make an important contribution toward research and/or patient care in one or more focus areas published in this funding opportunity for the topic areas of Emerging Viral Diseases and/or Respiratory Health. [Download PDF >>](#)

Technology/Therapeutic Development Award for Emerging Viral Diseases and Respiratory Health: This product-driven award mechanism is intended to provide support for the translation of promising pre-clinical findings into products for clinical applications in one or more focus areas published in this funding opportunity for the topic areas of Emerging Viral Diseases and/or Respiratory Health. Products in development should be responsive to the healthcare needs of military Service members, Veterans, and/or beneficiaries. [Download PDF >>](#)

Clinical Trial Award for Emerging Viral Diseases and Respiratory Health: This program supports the rapid implementation of clinical trials with the potential to have a significant impact in one or more of the focus areas published in this funding opportunity for the topic areas of Emerging Viral Diseases and Respiratory Health. Clinical trials may be designed to evaluate promising new products, pharmacologic agents (drugs or biologics), devices, clinical guidance, and/or emerging approaches and technologies. [Download PDF >>](#)

[Learn more about these programs >>](#)

DoD DARPA: Biological Technologies

The Department of Defense (DoD) Defense Advanced Research Projects Agency (DARPA) has issued a [Broad Agency Announcement \(BAA\)](#) through the Biological Technologies Office (BTO). The mission of BTO is to foster, demonstrate, and transition breakthrough research, discoveries, and applications that integrate biology, engineering, computer science, mathematics, and the physical sciences. BTO's research investment portfolio includes combating pandemic disease, innovative physiological interventions, human performance and warfighter readiness, microbes as production platforms, and deep exploration of changing ecologies and environments on U.S. capabilities and resilience. BTO's programs operate across a wide range of scales, from individual cells to the warfighter to global ecosystems. BTO responds to the urgent and long-term needs of the Department of Defense (DoD) and addresses national security priorities.

Read the [complete solicitation](#) for more information, including specific areas of interest.

Abstracts are accepted on a rolling basis until 3:00pm, April 22, 2021.

Facebook: Explorations of Trust in AR, VR, and Smart Devices

Facebook is soliciting proposals to help accelerate research in Augmented Reality (AR), Virtual Reality (VR), and Smart Devices with the hope of helping to foster a world of trustworthy mixed-reality and smart device products. We are interested in a broad range of topics relating to applications like AR glasses, VR headsets, other AR or VR form-factors, smart home products, and more.

Applicants should submit a proposal detailing what contribution their research is expected to make, how the research domain will benefit from the work, a project timeline, and a budget overview of how the proposed funding will be used. Proposals are highly encouraged to focus funding of project personnel, especially PhD students. Proposals from small collaborative teams, particularly with PIs bridging necessary technical areas, are also encouraged.

A total of up to four awards are available, up to \$75,000 each, depending on the specific requirements. Payment will be made to the proposer's host university as an unrestricted gift. For full details and to apply, visit the [Explorations of Trust in AR, VR, and Smart Devices RFP Page](#).

Deadline: June 12, 2020

^^

Mallinckrodt Foundation: Biomedical Grants for Early Stage Investigators – 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.

Mallinckrodt Grants : [Notify RCA](#) by 5/15/2020, 5:00 p.m. if you are interested in submitting to this program.

The [Edward Mallinckrodt, Jr. Foundation](#) is a private foundation that funds basic biomedical research. The mission of the Foundation is to support early stage investigators engaged in biomedical research that has the potential to significantly advance the understanding, diagnosis, or treatment of disease. Any domestic biomedical institution, whether solely research or educational, is invited to [submit one candidate for the Mallinckrodt Board's consideration](#). Applicants should be in the first to fourth year of their tenure track faculty position and not have current R01 funding. Grants are usually \$60,000 and funding commences on October 1. No indirect costs are allowed. Salary is acceptable.

^^

NASA ROSES: Early Career Investigator Program in Earth Science

The [New \(Early Career\) Investigator Program \(NIP\)](#) in Earth science is designed to support outstanding scientific research and career development of

scientists and engineers at the early stage of their professional careers. The Earth Science Division (ESD) places particular emphasis on the investigators' ability to promote and increase the use of space-based remote sensing through the proposed research. Proposals with objectives connected to needs identified in the most recent [Decadal Survey Thriving on our Changing Planet: A Decadal Strategy for Earth Observation from Space](#) are welcomed.

The NIP supports all aspects of scientific and technological research aimed to advance NASA's mission in Earth system science (See the NASA Science Plan at <http://science.nasa.gov/about-us/science-strategy/>).

In research and analysis, the focus areas are:

- Carbon Cycle and Ecosystems,
- Climate Variability and Change,
- Water and Energy Cycle,
- Atmospheric Composition,
- Weather, and
- Earth Surface and Interior.

In applied sciences, the ESD encourages the use of data from NASA's Earth-observing satellites and airborne missions to tackle tough challenges and develop solutions that improve our daily lives. Specific areas of interest include efforts that help institutions and individuals make better decisions about our environment, food, water, health, and safety (see <http://appliedsciences.nasa.gov>).

In technological research, the ESD aims to foster the creation and infusion of new technologies – such as data processing, interoperability, visualization, and analysis as well as autonomy, modeling, and mission architecture design – in order to enable new scientific measurements of the Earth system or reduce the cost of current observations (see <http://esto.nasa.gov>).

The ESD also promotes innovative development in computing and information science and engineering of direct relevance to ESD.

[Download the solicitation >>](#)

Deadline: September 15, 2020

NEH: Digital Projects for the Public

The National Endowment for the Humanities (NEH) [Digital Projects for the Public \(DPP\)](#) program supports projects that interpret and analyze humanities content in primarily digital platforms and formats, such as websites, mobile applications and tours, interactive touch screens and kiosks, games, and virtual environments. The projects must be designed to attract broad public audiences.

All DPP projects should:

- present analysis that deepens public understanding of significant humanities stories and ideas;
- incorporate sound humanities scholarship;
- involve humanities scholars in all phases of development and production;
- include appropriate digital media professionals;
- reach a broad public through a realistic plan for development, marketing, and distribution;
- create appealing digital formats for the general public; and
- demonstrate the capacity to sustain themselves.

All projects should demonstrate the potential to attract a broad, general, nonspecialist audience, either online or in person at venues such as museums, libraries, or other cultural institutions. Applicants may also choose to identify particular communities and groups, including students, to whom a project may have particular appeal.

NEH also welcomes applications for non-promotional digital components of a larger project. For these projects, you should explain how the digital platform will enrich the users' learning experience and engagement. For instance, if your request is for a mobile experience that would operate within a museum or would work in conjunction with a film, you should explain how this project element will substantially add to the audience's learning experience.

Deadline: June 19, 2020

NEH: Humanities Collections and Reference Resources

The National Endowment for the Humanities (NEH) Division of Preservation and Access is accepting applications for the [Humanities Collections and Reference Resources program](#). The purpose of this program is to support projects that provide an essential underpinning for scholarship, education, and public programming in the humanities. This program strengthens efforts to extend the life of humanities collections and make their intellectual content widely accessible, often through the use of digital technology. Awards are also made to create various reference resources that facilitate use of cultural materials, from works that provide basic information quickly to tools that synthesize and codify knowledge of a subject for in-depth investigation.

Optional draft deadline: June 3, 2020

Application deadline: July 15, 2020

^^

NIH: Long-Term Effects of Disasters on Health Care Systems Serving Health Disparity Populations (R01 – Clinical Trial Optional)

The purpose of this Funding Opportunity Announcement (FOA) ([PA-20-172](#)) is to support investigative and collaborative research focused on understanding the long-term effects of natural and/or human-made disasters on health care systems serving health disparity populations in communities in the U.S., including the U.S. territories.

Standard dates apply.

The first standard due date for this FOA is October 5, 2020.

^^

NIH NOSI: Data Driven Research on COVID-19 (R21)

The National Library of Medicine (NLM) is issuing this [Notice of Special Interest \(NOSI\)](#) to highlight the urgent need for innovative high-risk / high impact

research on Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) and Coronavirus Disease 2019 (COVID-19) in relation to NLM's strategic goal of fostering data driven research. In order to rapidly improve understanding of the infection of SARS-CoV-2 and of COVID-19, NLM is encouraging the submission of R21 applications to address the following research areas of interest:

- Methods for mining clinical data that can be used to identify or predict presence of COVID-19 in biomedical phenotype data, or other relevant topics such as discovery of risks for infection by SARS-Cov-2 viruses, use of standard terminologies for these viruses in federated health data sets;
- Public health surveillance methods that mine genomic, viromic, health data, environmental data and/or data from other pertinent sources such as social media, to identify spread and impact of SARS-Cov-2.

Applications are expected to focus on informatics and data science methods to help address the COVID-19 pandemic in a timely manner. Applications that are not responsive will be withdrawn without review.

Deadline: June 16, 2020



NSF / Amazon: Fairness in Artificial Intelligence

NSF and Amazon are partnering to jointly support computational research focused on fairness in AI, with the goal of contributing to trustworthy AI systems that are readily accepted and deployed to tackle grand challenges facing society ([NSF 20-566](#)). Specific topics of interest include, but are not limited to, transparency, explainability, accountability, potential adverse biases and effects, mitigation strategies, algorithmic advances, fairness objectives, validation of fairness, and advances in broad accessibility and utility. Funded projects will enable broadened acceptance of AI systems, helping the U.S. further capitalize on the potential of AI technologies. Although Amazon provides partial funding for this program, it will not play a role in the selection of proposals for award.

Advancing AI is a highly interdisciplinary endeavor drawing on fields such as computer science, information science, engineering, statistics, mathematics,

cognitive science, and psychology. As such, NSF and Amazon expect these varied perspectives to be critical for the study of fairness in AI. NSF's ability to bring together multiple scientific disciplines uniquely positions the agency in this collaboration, while building AI that is fair and unbiased is an important aspect of Amazon's AI initiatives. This program supports the conduct of fundamental computer science research into theories, techniques, and methodologies that go well beyond today's capabilities and are motivated by challenges and requirements in real systems.

Deadline: July 13, 2020



NSF: Civic Innovation Challenge

The National Science Foundation (NSF) Civic Innovation Challenge (CIVIC) ([NSF 20-562](#)) is a research and action competition in the Smart and Connected Communities (S&CC) domain designed to build a more cohesive research-to-innovation pipeline and foster a collaborative spirit. CIVIC introduces several unique features that differentiate it from the NSF S&CC program:

1. CIVIC flips the community-university dynamic, asking *communities* to identify civic priorities ripe for innovation and then to partner with researchers to address those priorities;
2. CIVIC focuses on research that is ready for piloting in and with communities on a short timescale, where real-world impact can be evaluated within 12 months;
3. CIVIC requires the inclusion of civic partners in the core project team, to emphasize civic engagement; and
4. CIVIC organizes and fosters “communities of practice” around high-need problem areas that allow for meaningful knowledge sharing and cross-site collaboration during both pre-development and piloting.

CIVIC is organized as a two-stage competition with two tracks centered around the following topic areas:

- Track A. Communities and Mobility (Supported by NSF and DOE): *Offering Better Mobility Options to Solve the Spatial Mismatch Between Housing Affordability and Jobs*; and

- Track B. Resilience to Natural Disasters (Supported by NSF CISE and DHS): *Equipping Communities for Greater Preparedness and Resilience to Natural Disasters*.

In the first stage (Stage 1), up to 12 awards per track will be made for Planning Grants – each with a budget of up to \$50,000 for four months to undertake pre-development activities, including solidifying the team, maturing the project plans, and preparing to submit a well-developed full proposal for Stage 2. Only awardees of Stage 1 will be eligible to submit proposals for Stage 2.

In the second stage (Stage 2), up to four teams per track will be selected from Stage 1 award recipients to receive a full award — each with a budget of up to \$1,000,000 for up to 12 months to execute and evaluate their research-centered pilot projects.

Deadline: July 1, 2020

^^

NSF: Partnerships for Innovation – 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 PFI : Notify RCA by 5/15/2020, 5:00 p.m. if you are interested in submitting to this program.

The Partnerships for Innovation (PFI) Program (NSF 19-506) within the Division of Industrial Innovation and Partnerships (IIP) offers researchers from all disciplines of science and engineering funded by NSF the opportunity to perform translational research and technology development, catalyze partnerships and accelerate the transition of discoveries from the laboratory to the marketplace for societal benefit.

PFI has five broad goals:

1. identifying and supporting NSF-sponsored research and technologies that have the potential for accelerated commercialization;
2. supporting prior or current NSF-sponsored investigators, institutions of higher education, and non-profit organizations that partner with an institution of higher education in undertaking proof-of-concept work, including the development of technology prototypes that are derived from NSF-sponsored research and have potential market value;
3. promoting sustainable partnerships between NSF-funded institutions, industry, and other organizations within academia and the private sector with the purpose of accelerating the transfer of technology;
4. developing multi-disciplinary innovation ecosystems which involve and are responsive to the specific needs of academia and industry;
5. providing professional development, mentoring, and advice in entrepreneurship, project management, and technology and business development to innovators.

This solicitation offers two broad tracks for proposals in pursuit of the aforementioned goals:

- The **Technology Translation (PFI-TT) track** offers the opportunity to translate prior NSF-funded research results in any field of science or engineering into technological innovations with promising commercial potential and societal impact. PFI-TT supports commercial potential demonstration projects for academic research outputs in any NSF-funded science and engineering discipline. This demonstration is achieved through proof-of-concept, prototyping, technology development and/or scale-up work. Concurrently, students and postdoctoral researchers who participate in PFI-TT projects receive education and leadership training in innovation and entrepreneurship. Successful PFI-TT projects generate technology-driven commercialization outcomes that address societal needs.
- The **Research Partnerships (PFI-RP) track** seeks to achieve the same goals as the PFI-TT track by supporting instead complex, multi-faceted technology development projects that are typically beyond the scope of a single researcher or institution and require a multi-organizational, interdisciplinary, synergistic collaboration. A PFI-RP project requires the creation of partnerships between academic researchers and third-party organizations such as industry, non-academic research organizations, federal laboratories, public or non-profit technology transfer organizations or other universities. Such partnerships are needed to

conduct applied research on a stand-alone larger project toward commercialization and societal impact. In the absence of such synergistic partnership, the project's likelihood for success would be minimal.

The intended outcomes of both PFI-TT and PFI-RP tracks are: a) the commercialization of new intellectual property derived from NSF-funded research outputs; b) the creation of new or broader collaborations with industry (including increased corporate sponsored research); c) the licensing of NSF-funded research outputs to third party corporations or to start-up companies funded by a PFI team; and d) the training of future innovation and entrepreneurship leaders.

^^

PEN America: Fund for Literary Translation into English

[PEN America](#) is accepting applications for the [PEN/Heim Translation Fund](#).

Through the fund, grants will be awarded in support of the translation of book-length works of fiction, creative nonfiction, poetry, or drama that have not previously appeared in English in print or have appeared only in an outdated or otherwise flawed translation. Grants typically range between \$2,000 and \$4,000. Works should be translations-in-progress, as the grant aims to provide support for completion.

Projects may have up to two translators. All other criteria being equal, preference will be given to translators at the beginning of their career, and to works by underrepresented writers working in underrepresented languages. Works with multiple translators, literary criticism, and scholarly or technical texts do not qualify.

Deadline: June 1, 2020

^^

Spencer Foundation: Research Grants on Education - COVID-19 Special Grant Cycle

The [COVID-19 Related Research Grants](#) support education research projects that will contribute to understanding the rapid shifts in education in this time of crisis and change. The Foundation is especially interested in supporting two primary categories of projects.

- Studies that aim to understand and disrupt the reproduction and deepening of educational inequality caused by the COVID-19 crisis.
- Research projects that are working to reimagine educational opportunities in these times.

Deadlines: May 18, June 8



USDA NIFA: Crop Protection and Pest Management Competitive Grants Program

The purpose of the [Crop Protection and Pest Management](#) (CPPM) program is to address high priority issues related to pests and their management using Integrated Pest Management (IPM) approaches at the state, regional and national levels. The CPPM program supports projects that will ensure food security and respond effectively to other major societal pest management challenges with comprehensive IPM approaches that are economically viable, ecologically prudent, and safe for human health. The CPPM program addresses IPM challenges for emerging issues and existing priority pest concerns that can be addressed more effectively with new and emerging technologies. The outcomes of the CPPM program are effective, affordable, and environmentally sound IPM practices and strategies needed to maintain agricultural productivity and healthy communities.

Deadline: June 8, 2020



USDA NIFA: New Beginnings for Tribal Students

The [New Beginnings for Tribal Students program](#) makes competitive grants to land-grant colleges and universities to provide identifiable support specifically targeted for Tribal students. A land-grant college or university that receives this grant will use funds for, but not limited to, support of Tribal students for articulation agreements with 1994's; dual credit programs; recruiting; tuition and related fees; experiential learning; student services, including tutoring; counseling; academic advising; and other student services that would increase

the retention and graduation rate of Tribal students enrolled at the land-grant college or university, as determined by the Secretary. The maximum one state can receive is \$500,000 per year.

Deadline: June 12, 2020



USDA NRCS: 2020 Soil Science Collaborative Research Proposals

The Natural Resources Conservation Service (NRCS), an agency under the United States Department of Agriculture (USDA), is [announcing the potential availability of funding](#) for agreements for the purposes of:

- promoting research collaboration between the NRCS Soil and Plant Science Division (SPSD) and university cooperators on significant national issues;
- providing technology transfer and training for NRCS staff;
- assisting in training of students in soil science and related fields.

Eligibility is limited to institutions of higher education in the Cooperative Ecosystem Studies Unit (CESU) network (<http://www.cesu.psu.edu/>); NDSU is a member of the [Great Plains CESU](#).

Deadline: June 11, 2020



USDA NRCS: Conservation Innovation Grants

Natural Resources Conservation Service (NRCS) is announcing the availability of up to \$15 million in [Conservation Innovation Grants \(CIG\) funding](#). The purpose of CIG is to stimulate the development and adoption of innovative conservation approaches and technologies in conjunction with agricultural production. CIG projects are expected to lead to the transfer of conservation technologies, management systems, and innovative approaches (such as market-based systems) to agricultural producers, into NRCS technical manuals and guides, or to the private sector. CIG generally funds pilot projects, field demonstrations, and on-farm conservation research. On-farm conservation research is defined as an investigation conducted to answer a specific applied

conservation question using a statistically valid design while employing farm-scale equipment on farms, ranches, or private forest lands.

Deadline: June 29, 2020



Wenner-Gren Foundation: Virtual Anthropological Workshops

The [Wenner-Gren Foundation for Anthropological Research](#) is currently accepting applications for its [Conference and Workshop Grants program](#). Due to the COVID-19 pandemic, the foundation is not accepting applications for Conference or Workshop Grants involving face-to-face activities, but it is accepting applications to cover the costs involved in hosting virtual workshops. To that end, grants of up to \$5,000 will be awarded in support of virtual events that foster the creation of an international community of research scholars in anthropology and advance significant and innovative anthropological research.

A workshop is defined as a working meeting in which topical issues in theoretical anthropology are developed and debated by small groups of scholars who meet for a sufficient period of time to deal intensively with the topic. Priority will be given to workshops that devote the majority of time to discussion and debate rather than to the presentation of papers. It is expected that workshops will result in a publication.

To be eligible, applicants must be a professional anthropologist acting as the primary organizer of the proposed workshop.

Deadline: June 1, 2020



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

[Contact Us](#)



The Office of Research and Creative Activity (RCA) sends weekly emails to NDSU faculty and staff to provide current information on various topics including funding opportunities, grant program changes, research resources, deadlines, notices, and training.

You are receiving this notification through the NDSU official employee listserv or sub-list. The official listserv refreshes after each pay period.

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