Funding Opportunity Edition

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

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Please note: The NDSU Scholars Database website has been retired. This public-facing tool was targeted at sharing faculty Pivot profile information with individuals who did not have access to Pivot but may have wanted to find collaborators at NDSU. All faculty profile information is still available to Pivot users. Any links to the Scholars Database should be changed to https://pivot.proquest.com/profiles/main.

Need to update your profile? Click here to learn how!
DoD: Defense University Research Instrumentation Program

The Department of Defense (DoD) announced the Fiscal Year 2021 Defense University Research Instrumentation Program (DURIP). 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. The Air Force Office of Scientific Research (AFOSR), the Army Research Office (ARO), and the Office of Naval Research (ONR) all participate in this Program:

- **AFOSR**: FOA-AFRL-AFOSR-2020-0001
- **ARO**: W911NF-20-S-0006
- **ONR**: N00014-20-S-F004

Inquiries and Questions Deadline: April 24, 2020
Application Deadline: May 15, 2020

DoD: Multidisciplinary Research Program of the University Research Initiative

The Multidisciplinary Research Program of the University Research Initiative (MURI) program supports basic research in science and engineering at U.S. institutions of higher education that is of potential interest to the Department of Defense (DoD). The program is focused on multidisciplinary research efforts where more than one traditional discipline interacts to provide rapid advances in scientific areas of interest to the DoD. As defined in the DoD Financial Management Regulation:

Basic research is systematic study directed toward greater knowledge or understanding of the fundamental aspects of phenomena and of observable facts without specific applications towards processes or products in mind. It includes all scientific study and experimentation directed toward increasing
fundamental knowledge and understanding in those fields of the physical, engineering, environmental, and life sciences related to long-term national security needs. It is farsighted high payoff research that provides the basis for technological progress (DoD 7000.14-R, vol. 2B, chap. 5, para. 050201.B).
DoD’s basic research program invests broadly in many specific fields to ensure that it has early cognizance of new scientific knowledge.

Deadline for White Paper Inquiries and Questions: May 18, 2020
Deadline for White Papers: June 01, 2020

Donaghue Foundation: Research to Improve Health of Older Adults in Long-Term Care Facilities

The Donaghue Foundation seeks to be an imaginative, collaborative, and engaged participant in the process that begins with rigorous health research and ends in realized health benefits.

To that end, the Foundation welcomes applications to its Another Look 2020 grant program. The program supports health-related research projects with the potential to improve the quality of care and life for adults age 65 or older who are long-term residents living in nursing homes, assisted living facilities, and other congregate care facilities.

The Foundation welcomes all topics related to improving quality in long-term care facilities but is particularly interested in supporting the following topics:

- increasing the availability and use of palliative, end of life, and hospice care;
- assessing the impact of innovations in staffing roles and expertise on resident quality of life;
- assessing the role of family members and informal caregivers on resident quality of life;
- understanding and reducing the impact of ageism on resident health and well-being;
- reducing isolation and loneliness and their negative impact on resident health and well-being;
• addressing racial, ethnic, gender or income disparities in care quality or health outcomes; and
• enhancing understanding of the specialized care needs of resident populations with developmental disabilities or with serious mental illness.

In 2020, the foundation will invest a total of approximately $750,000 in the program and expects to make four or five awards. Projects may be up to two years in length.

To be eligible, applicants must be a PhD-level (or equivalent) investigator at a tax-exempt research institution in the United States.


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**Fahs-Beck Fund for Research and Experimentation: Mental Health Research**

The **Fahs-Beck Fund for Research and Experimentation** is inviting applications for its **Faculty/Post-Doctoral Research Grant Program**. Through the program, grants of up to $20,000 will be awarded in support of faculty or postdoctoral research. Areas of interest identified by the fund include studies to develop, refine, evaluate, or disseminate innovative interventions designed to prevent or ameliorate major social, psychological, behavioral, or public health problems affecting children, adults, couples, families, or communities, or studies that have the potential for adding significantly to knowledge about such problems.

To be eligible, applicants must be a faculty member at an accredited college or university or be affiliated with a nonprofit human service organization in the United States or Canada. Research for which funding is requested must focus on the U.S. or Canada, or on a comparison between the U.S. or Canada and one or more other country. The principal investigator also must have an earned doctorate in a relevant discipline and relevant experience.

**Deadline: April 1, 2020**
Bill and Melinda Gates Foundation: Grand Challenges

The Bill & Melinda Gates foundation is inviting grant proposals for the following Grand Challenges and Grand Challenges Explorations initiatives. The Grand Challenges family of initiatives fosters innovation to solve key global health and development problems.

- **Accelerating Discovery for Non-Hormonal Contraceptives**: Grand Challenges seeks new approaches and concepts for the characterization of contraceptive drug targets, the identification of active contraceptive compounds, and the development of novel and impactful research tools with the potential to revolutionize the field of contraceptive R&D.

- **Improving Access to and Use of Safe and Appropriate Cesarean Section**: Grand Challenges seeks ideas for interventions to address challenges related to cesarean section: increasing access to cesarean section where it is currently inadequate, increasing quality and safety of cesarean section to reduce iatrogenic harm to both mothers and newborns, and reducing rates of non-medically indicated cesarean section.

- **Innovations in Materials Science for a Transformative Menstrual Health and Hygiene Product**: Grand Challenges Explorations seeks transformative and innovative ideas to support the design and development of a new menstrual health and hygiene product that meets key criteria of being responsive to user needs, focusing on discreetness, affordability, and sustainability.

- **Innovations for Improving the Impact of Health Campaigns**: Grand Challenges Explorations seeks innovative solutions that accelerate the improvement of coverage, reach, efficiency, and effectiveness of campaign-based delivery of health interventions.

On the Foundation website, you can read summaries of the grants funded to date across the Grand Challenges family of initiatives and to explore an interactive world map of projects across the global Grand Challenges funding partner network. If you would like to know about future opportunities, you can sign up for email updates with the latest opportunities.

NASA: Research Opportunities in Space and Earth Sciences

The National Aeronautics and Space Administration (NASA) Science Mission Directorate (SMD) has released its annual NASA Research Announcement (NRA), Research Opportunities in Space and Earth Sciences (ROSES) – 2020. ROSES is an omnibus NRA, with many individual program elements, each with its own due dates and topics. Topics include:

- Land Cover / Land Use Change
- Emerging Worlds
- Biodiversity
- Earth Surface and Interior
- Ecological Forecasting
- Modeling Analysis and Prediction
- Early Career Investigator Program

View a complete list of topics >>

Application deadlines vary by program.

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NEA: Research Labs and Research Grants in the Arts

These National Endowment for the Arts (NEA) grants provide an opportunity to engage with NEA’s five-year agenda for 2017-2021. The research agenda offers guidance on the types of study questions and topics that to appeal to the agency’s long-term research goals.

Research Grants in the Arts support research that investigates the value and/or impact of the arts, either as individual components of the U.S. arts ecology or as they interact with each other and/or with other domains of American life. We are interested in research that identifies and examines:

- Factors that enhance or inhibit arts participation or arts/cultural assets;
- Detailed characteristics of arts participation or arts/cultural assets, and their interrelationships;
• Individual-level outcomes of arts participation, specifically outcomes corresponding with the following domains:
  o social and emotional well-being
  o creativity, cognition, and learning
  o physiological processes of health and healing; and
• Societal or community-level outcomes of arts/cultural assets, specifically outcomes corresponding with the following domains:
  o civic and corporate innovation
  o attraction for neighborhoods and businesses
  o national and/or state-level economic growth

The NEA Research Labs program intends to cultivate a series of transdisciplinary research partnerships, grounded in the social and behavioral sciences, to produce and report empirical insights about the arts for the benefit of arts and also for non-arts sectors such as healthcare, education, and business or management. NEA Research Labs will define their own related agendas, conduct project activities to implement that agenda, and prepare reports that will contribute substantively to a wider understanding of one of three areas of special interest to the Arts Endowment:

• The Arts, Health, and Social/Emotional Well-Being
  o Therapeutic Approaches and Benefits
  o Non-Therapeutic Approaches and Benefits
• The Arts, Creativity, Cognition, and Learning
• The Arts, Entrepreneurship, and Innovation

Deadline: March 30, 2020

NEH: Digital Humanities Advancement Grants

The National Endowment for the Humanities (NEH) Office of Digital Humanities is accepting applications for the Digital Humanities Advancement Grants program. The program supports innovative, experimental, and/or computationally challenging digital projects at different stages of their lifecycles, from early start-up phases through implementation and sustainability. Experimentation, reuse, and extensibility are hallmarks of this program, leading
to work that can scale to enhance scholarly research, teaching, and public programming in the humanities.

Optional draft deadline: May 19, 2020
Application deadline: June 30, 2020

NIH: Global Disease Diagnostics Technology Accelerator Challenge

The National Institutes of Health has launched a $1 million Technology Accelerator Challenge to spur the design and development of non-invasive, handheld, digital technologies to detect, diagnose and guide therapies for diseases with high global and public health impact. The challenge is focused on sickle cell disease, malaria and anemia and is led by NIH’s National Institute of Biomedical Imaging and Bioengineering (NIBIB). The Bill & Melinda Gates Foundation is cooperating with NIH to help accelerate the transformation of design concepts into products for low-resource settings.

NIH will award up to $500,000 for a top finalist and smaller awards to approximately five semi-finalists. The Gates Foundation will separately review winners and honorable mentions and consider them for follow-on support. This may include a grant of up to $500,000 and/or consultations, partnerships for clinical data collection, software development, scale-up, and manufacturing.


NIH: Instrumentation Grants

The National Institutes of Health (NIH) has released several funding opportunity announcements (FOA) for instrumentation programs:

Shared Instrumentation for Animal Research (SIFAR) Grant
Program [PAR-20-112]
SIFAR encourages applications from groups of NIH-funded investigators to purchase or upgrade scientific instruments necessary to carry out animal experiments in all areas of biomedical research supported by the NIH. Applicants may request clusters of commercially available instruments configured as specialized integrated systems or as series of instruments to support a thematic well-defined area of research using animals or related materials. Priority will be given to uniquely configured systems to support innovative and potentially transformative investigations.

This FOA supports requests for state-of-the art commercially available technologies needed for NIH-funded research using any vertebrate and invertebrate animal species. This FOA does not support requests for single instruments. At least one item of the requested instrumentation must cost at least $50,000, after all applicable discounts. No instrument in a cluster can cost less than $20,000, after all applicable discounts. There is no maximum price requirement; however, the maximum award is $750,000.

Shared Instrumentation Grant (SIG) Program [PAR-20-113]
SIG encourages applications from groups of NIH-supported investigators to purchase or upgrade a single item of expensive, specialized, commercially available instruments or integrated systems. The minimum award is $50,000 of direct costs. There is no maximum price limit for the instrument; however, the maximum award is $600,000 of direct costs. Types of instruments supported include, but are not limited to: X-ray diffractometers, mass spectrometers, nuclear magnetic resonance, spectrometers, DNA and protein sequencers, biosensors, electron and light microscopes, cell sorters, and biomedical imagers.

High-End Instrumentation (HEI) Grant Program [PAR-20-114]
HEI encourages applications from groups of NIH-supported investigators to purchase or upgrade a single item of high-end, specialized, commercially available instruments or integrated systems. The minimum award is $600,001. There is no maximum price limit for the instrument; however, the maximum award is $2,000,000. Types of instruments supported include, but are not limited to: X-ray diffractometers, mass spectrometers, nuclear magnetic resonance (NMR) spectrometers, DNA and protein sequencers, biosensors, electron and light microscopes, cell sorters, high throughput robotic screening systems, and biomedical imagers.
NIJ: Research and Evaluation in Safety, Health, and Wellness in the Criminal Justice System

With this solicitation, NIJ seeks applications for funding of multidisciplinary research projects addressing any of these five topics:

1. Resiliency and Recovery of Law Enforcement agencies from Singular, Extreme Traumatic Events.
2. Impact of Organizational Stressors on Officer Health and Wellness.
3. Effects of Pre-Career Interventions and Subsequent Reminders in Modulating Mental, Physical, and Social Responses to Stressors in Law Enforcement Officers.
5. Understanding the Increased Rate of Assaults on Law Enforcement Officers

All five topics, in varying degrees, lend themselves to a mixed-method approach involving a combination of the measurement of behavioral, psychological, biological, and physiological responses. Additionally, all five topics lend themselves to multidisciplinary research from behavioral science, neuroscience, operations research, and the social science communities.

Deadline: April 29, 2020

Research on the Abuse, Neglect, and Exploitation of Elderly Individuals

This solicitation [NIJ-2020-17328] seeks applications for funding for research and evaluation projects that expand understanding of the phenomena of elder abuse, in its many forms, and the effectiveness of strategies to prevent such abuse.
NSF DCL: Build and Broaden: Enabling New Social, Behavioral and Economic Science Collaborations with Minority-Serving Institutions

The National Science Foundation’s (NSF) Directorate for Social, Behavioral, and Economic Sciences (SBE) supports research in many areas associated with our rapidly changing world, including fundamental research on human development, learning, and social behavior, and the surrounding social, economic, and natural environments. Research supported in SBE advances our understanding of people, social organizations and society in a changing world where there are new opportunities for human interconnectedness as well as challenges that affect our ability to live healthy and productive lives.

With this Dear Colleague Letter (DCL), SBE wishes to notify the research community of a new opportunity called Build & Broaden (B²) and invites the submission of conference proposals in FY 2020. Proposals should be designed to foster partnerships and build research collaborations among institutions that include at least one Minority-Serving Institution (MSI). MSIs include Historically Black Colleges and Universities (HBCUs), Hispanic-Serving Institutions (HSIs), Tribal Colleges or Universities (TCUs), and other institutions that enroll a substantial fraction of underrepresented minority students. The response to this DCL will inform future steps for B² in FY 2021.

NSF anticipates funding up to 10 conferences pursuant to this DCL, subject to the availability of funds and the quality of proposals received. Proposals may address any of the scientific areas supported by SBE. Proposals can come directly from HBCUs, HSIs, TCUs and other MSIs, or from any other NSF-eligible research entity. Proposers are strongly encouraged to plan to host and design conferences at the MSI campus identified in the proposal.

Proposal Deadline: May 1, 2020
NSF: Cyberinfrastructure for Emerging Science and Engineering Research

The Cyberinfrastructure for Emerging Science and Engineering Research (CESER) program aims to catalyze new science and engineering discovery pathways through early-stage collaborative activities between disciplinary scientists and engineers as well as developers / implementers of innovative cyberinfrastructure (CI) capabilities, services, and approaches.

Science/engineering-driven collaboration. A central feature of successful CESER projects is a strong, mutually-dependent collaborative team comprising expertise in the target science / engineering discipline(s) and expertise in CI development and implementation.

Exploratory and pilot activities. CESER supports early-stage exploratory efforts that may comprise analysis, community planning, and pilot-level activities that are preparatory or informative for eventual future development and deployment of science/engineering-driven CI. Proposals for full-scale technical efforts leading to development/deployment should be directed to other appropriate NSF programs.

Integrative and accelerative approaches. Proposals are particularly welcomed that address identified common needs across multiple research disciplines; leverage and accelerate the impact of existing CI investments in resources and services in one or more application domains; aim to reduce barriers to broader adoption of CI-enabled science/engineering approaches; and integrate different aspects and elements of CI to achieve holistic solutions with transformative science/engineering impact.

Requirement to contact NSF Cognizant Program Officers. CESER is an inherently collaborative science / engineering-CI program. Successful CESER projects typically involve co-funding from the relevant disciplinary research programs within NSF. Consequently, before submitting a proposal to CESER, proposers must discuss their project idea with a cognizant CESER Program Officer and with the relevant NSF disciplinary research program(s) to ensure that CESER is the appropriate venue and that there is adequate disciplinary interest in the proposed effort.

CESER accepts proposals pursuant to this Program Description year-round.
NSF: Human-Environment and Geographical Sciences Program
The objective of the Human-Environment and Geographical Sciences (HEGS) Program [NSF 20-547] is to support basic scientific research about the nature, causes, and/or consequences of the spatial distribution of human activity and/or environmental processes across a range of scales. Projects about a broad range of topics may be appropriate for support if they enhance fundamental geographical knowledge, concepts, theories, methods, and their application to societal problems and concerns. Recognizing the breadth of the field's contributions to science, the HEGS Program welcomes proposals for empirically grounded, theoretically engaged, and methodologically sophisticated geographical research. National Science Foundation's mandate is to support basic scientific research. Support is provided for projects that are most effective in grounding research in relevant theoretical frameworks relevant to HEGS, that focus on questions that emanate from the theoretical discussions, and that use scientific methods to answer those questions. HEGS supported projects are expected to yield results that will enhance, expand, and transform fundamental geographical theory and methods, and that will have positive broader impacts that benefit society. The HEGS Program recognizes that geography is a broad discipline that includes the natural sciences, the social sciences and the humanities. However, HEGS does not fund research that is solely humanistic, non-science. A proposal to the HEGS Program must explain how the research will contribute to geographic and spatial scientific theory and/or methods development, and how the results are generalizable beyond the case study. It should be noted that HEGS is situated in the Behavioral and Cognitive Sciences Division of the Social, Behavioral and Economic Sciences Directorate at NSF. Therefore, it is critical that research projects submitted to the Human-Environment and Geographical Sciences Program illustrate how the proposed research is relevant and important to people and societies. A proposal that fails to be responsive to these program expectations will be returned without review.

Deadline: August 18, 2020

NSF: Signals in the Soil
The National Science Foundation (NSF) Directorates for Engineering (ENG) and Geosciences (GEO), the Divisions of Integrative Organismal Systems (IOS) and Environmental Biology (DEB), in the Directorate for Biological Sciences (BIO), the Division of Computer and Network Systems in the Directorate Computer and Information Science and Engineering (CISE/CNS), and the Division of Chemistry (CHE) in the Directorate for Mathematical and Physical Sciences, in collaboration with the US Department of Agriculture National Institute of Food and Agriculture (USDA NIFA) encourage convergent research that transforms existing capabilities in understanding dynamic soil processes, including soil formation, through advances in sensor systems and modeling. The Signals in the Soil (SitS) program [NSF 20-548] fosters collaboration among the two partner agencies and the researchers they support by combining resources and funding for the most innovative and high-impact projects that address their respective missions. To make transformative advances in our understanding of soils, multiple disciplines must converge to produce environmentally-benign novel sensing systems with multiple modalities that can adapt to different environments and collect and transmit data for a wide range of biological, chemical, and physical parameters. Effective integration of sensor data will be key for achieving a better understanding of signaling interactions among plants, animals, microbes, the soil matrix, and aqueous and gaseous components. New sensor networks have the potential to inform models in novel ways, to radically change how data is obtained from various natural and managed (both urban and rural) ecosystems, and to better inform the communities that directly rely on soils for sustenance and livelihood.

*Deadline: May 20, 2020*

Rise Prize: Solutions that Support Student-Parents

The Rise Prize was created by Imaginable Futures — a venture of the Omidyar Group — and the Lumina Foundation, along with a group of partner organizations, to leverage direct investments in innovative solutions that support student-parents.

Imaginable Futures and Lumina believe that postsecondary success for parents is crucial in improving educational outcomes for entire families and supporting
the journeys of millions of families to economic mobility, with postsecondary success defined as a traditional degree or a non-traditional credential, certificate, workforce development, and alternative college pathway program that leads to economic mobility and overall well-being.

The competition is designed to increase the number of innovative solutions driving postsecondary success for student-parents. To that end, ten awards totaling $1 million will be awarded in support of solutions that drive economic mobility and well-being for student-parents. Three types of awards will be available through a single application process:

**Early Stage** — New ideas and solutions anchored in initial customer validation (user testing or pilots, market research, or a plan for customer validation). This can include pre-seed and seed startups that have developed a plan for customer validation and research; established organizations exploring new ideas and solutions for student parents; and/or academic institutions and social ventures at testing or pilot phases. Six winners from the early stage category will be awarded $50,000 each.

**Mature Stage** — Defined by solutions provided by organizations that have strong conviction about their ability to serve student parents and are looking to take that work to scale. For venture-backed startups, this means Series A and beyond. These solutions should have demonstrated product/market fit and strength of the market; and measured impact on customers or end users. Three winners from the mature stage category will be awarded $200,000 each.

"**Riser's Choice**" Prize — $100,000 awarded by the competition’s student-parent judges to one winner from either the Early Stage or Mature Stage.

*Deadline: April 6, 2020*

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**Robert Wood Johnson Foundation: Investigator-Initiated Research to Build a Culture of Health**

Evidence for Action (E4A), a national program of the Robert Wood Johnson Foundation (RWJF), funds research that expands the evidence needed to build a Culture of Health. A Culture of Health is broadly defined as one in which good health and well-being flourish across geographic, demographic, and social sectors; public and private decision-making is guided by the goal of fostering equitable communities; and everyone has the opportunity to make choices that
lead to healthy lifestyles. RWJF’s Culture of Health Action Framework, which was developed to catalyze a national movement toward improved health, well-being, and equity, guides E4A’s program strategy.

Simons Foundation: Targeted Grants in Mathematics and Physical Sciences

The Simons Foundation’s Mathematics and Physical Sciences (MPS) division invites applications for its Targeted Grants in MPS program. The program is intended to support high-risk theoretical mathematics, physics and computer science projects of exceptional promise and scientific importance on a case-by-case basis.

Proposals accepted on a rolling basis.

USDA-NIFA-AFRI: Education and Workforce Development

The Agriculture and Food Research Initiative (AFRI) is America’s flagship competitive grants program that provides funding for fundamental and applied research, education, and extension projects in the food and agricultural sciences. The Agriculture and Food Research Initiative (AFRI) - Education and Workforce Development (EWD) program focuses on developing the next generation of research, education, and extension professionals in the food and agricultural sciences. In FY 2020, the National Institute of Food and Agriculture (NIFA) requests applications for the AFRI's EWD Program areas to support:

- professional development opportunities for K-14 educational professionals;
- workforce training at community, junior, and technical colleges;
- training of undergraduate students in research and extension; and
- fellowships for predoctoral candidates and postdoctoral scholars.

The program has four overarching goals:
• Growing Agricultural Literacy and Workforce Development for the Future;
• Training or Retraining of Agricultural Workers;
• Developing Pathways;
• Advancing Science.

*Deadlines vary by program area.*

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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