Strategic Resources YEAR 2020 - VOLUME IV AUTORIZADO POR LA COMISIÓN ESTATAL DE ELECCIONES

MAY 7, 2020 CEE-SA-2020-7751

erto Rico

UPR external funding success is of utmost importance to strengthen the connection between its investigators/faculty and funding entities who have the potential to sponsor their research and academic endeavors. This publication has been developed in order to summarize funding opportunities and promote the participation of faculty and collaborative research groups in their intent to apply for external funds. Such efforts are aligned with the UPR Strategic Plan 2017-2022: A New Era of Innovation and Transformation for Student Success; Certification 50 (2016-2017) of the Governing Board, December 19, 2016. Strategic Area: Research and Creative Work. Goal 2: Increase Applications for and awards of external funds for research and creative work.

SELECTED FUNDING OPPORTUNITIES

This is a selection of identified funding opportunities for the period ending 04/07/2020 and is in no way all-inclusive of funding opportunities available. Further information has been shared with External Resource Coordinators and Research Coordinators at each UPR campus by e-mail or MS Teams.

1. Coastlines and People Hubs for Research and Broadening Participation, National Science Foundation

Letter of Intent (Required): August 10, 2020

Application Deadline: September 9, 2020

Scientific research into complex coastal systems and the interplay with coastal hazards is vital for predicting, responding to and mitigating threats in these regions. Understanding the risks associated with coastal hazards requires a holistic Earth Systems approach that integrates improved understanding of and, where possible, predictions about natural, social, and technological processes with efforts to increase the resilience of coastal systems. The Coastlines and People program supports diverse, innovative, multi-institution awards that are focused on critically important coastlines and people research that is integrated with broadening participation goals. The objective of this solicitation is to support Coastal Research Hubs, structured using a convergent science approach, at the nexus between coastal sustainability, human dimensions, and coastal processes to transform understanding of interactions among natural, human-built, and social systems in coastal, populated environments.

Scientific research into complex coastal systems and the interplay with coastal hazards is vital for predicting, responding to and mitigating threats in these regions. Understanding the risks associated with coastal hazards requires a holistic Earth Systems approach that integrates improved understanding of and, where possible, predictions about natural, social, and technological processes with efforts to increase the resilience of coastal systems. Significant population growth in coastal regions increases risk exposure to these coastal hazards. This motivates an investment in interdisciplinary, convergent research across many disciplines including biology, engineering, geoscience, and the social and behavioral science. Convergent research is driven by specific challenge or opportunity. It entails integrating knowledge, methods, and expertise from different disciplines to form novel frameworks to catalyze scientific discovery and innovation.

Therefore, a successful research framework responsive to this solicitation brings together researchers from multiple disciplines, cutting across natural and/or engineering and/or social and behavioral sciences, to study the dynamic Earth Systems processes and vulnerabilities across varying spatial and temporal scales. The complex interface between coastal processes/hazards and people requires strong partnerships between the research team and relevant stakeholders. Therefore, critical sectors of the global coastal economy, e.g., tourism, construction, fisheries, and national security, must be proactively engaged in the development of novel research approaches to advance coastal zone science that inform sound management and conservation efforts for long-term resiliency. Through these partnerships, coastal vulnerabilities can be addressed through research that informs a variety of practical actions including planning and adaptation promoting resilience; active mitigation of impacts prior to, and after, events; and by accounting for predictable slowly occurring processes at longer temporal and spatial scales.

Link to additional information: https://www.nsf.gov/pubs/2020/nsf20567/nsf20567.pdf

2. Farm and Ranch Stress Assistance Network, Department of Agriculture/National Institute of Food and Agriculture

Application Deadline: June 23, 2020

The purpose of the Farm and Ranch Stress Assistance Network (FRSAN) Program is to establish a network that connects individuals who are engaged in farming, ranching, and other agriculture-related occupations to stress assistance programs. The establishment of a network that assists farmers and ranchers in time of stress can offer a conduit to improving behavioral health awareness, literacy, and outcomes for agricultural producers, workers and their families.

Agricultural work is one of the most hazardous professions, with risk of injury, disability, and death higher than most other career paths. Daily decision-making in the context of long-term planning to ensure crop and livestock yields and profits can prove extremely difficult. Even the most proactive planning can be short circuited by factors beyond an individual's control, such as natural disasters or pest infestations. Operating costs are many, and prices have remained stubbornly flat for some commodities.

Grants awarded under subsection (a) may be used to initiate, expand, or sustain programs that provide professional agricultural behavioral health counseling and referral for other forms of assistance as necessary through the following:

- 1. Farm telephone helplines and websites
- 2. Training, including training programs and workshops, for
 - i. Advocates for individuals who are engaged in farming, ranching, and other occupations relating to agriculture
 - Other individuals and entities that may assist individuals who -
 - i. are engaged in farming, ranching, and other occupations relating to agriculture
 - ii. are in crisis
- 3. Activities, including the dissemination of information and materials

Link to additional information: Farm and Ranch Stress Assistance Network (FRSAN) Program

3. Biological Technologies, Department of Defense

Application Deadline: April 22, 2021

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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. BTO is interested in submissions related to the following areas:

• Discovering and leveraging novel findings from biotechnology, biochemistry, molecular biology, neuroscience, psychology, cognitive science, and related disciplines to advance treatment and resilience in neurological health, transformative neural processing, and optimize human performance.

• Understanding and improving interfaces between the biological and physical world to enable seamless hybrid systems and revolutionary new human-machine interfaces.

• Designing novel materials, sensors, or processes that mimic or are inspired by biological systems.

• Leveraging and translating a biological system's underlying design rules, functional processes, and/or means of interactivity to provide insight into or control over complex biological systems from biofilms to organs.

• Developing new tools and capabilities for forward engineering of biological systems, such as cells, tissues, organs, organisms, and complex communities, to both develop new products and functional systems, as well as to gain new insights into underlying mechanisms.

• Developing new platform technologies that integrate, automate, and miniaturize the collection, processing, and analysis of biological and chemical samples.

• Developing technologies that leverage ecological diversity and/or help support human operations in extreme environments (ocean, desert, space, arctic, etc.).

• Developing and validating new theories and computational models that identify factors and principles underlying collective and interactive behaviors of biological organisms at all scales from individual cells to global ecosystems.

• Understanding the dynamics of population and ecosystem behavior to preserve equilibrium, provide strategic opportunity, or avoid catastrophe.

- Developing and leveraging new technologies that can be applied to agricultural ecosystems for production stabilization, by improving quality or reducing losses from pathogens or pests.
- Developing and leveraging new insights into non-human biology across and between populations of microbes, insects, plants, marine life, and other non-human biologic entities.
- Developing technologies to leverage biological systems and enhance the ability to acquire and maintain critical and strategic organic and inorganic materials.
- Developing new technologies and approaches that ensure biosafety, biosecurity, digital biosecurity of biological hardware, data and information, and protection of the bioeconomy.
- Understanding emerging threats to global food and water supplies and developing countermeasures that could be implemented on regional or global scales.
- Developing new technologies to treat, prevent, and predict the emergence and spread of infectious diseases that have the potential to cause significant health, economic, and social burden.
- Developing and leveraging technologies to advance continuous or near-continuous monitoring of an organism's physiology to elucidate mechanisms of human resilience.
- Developing new technologies for the rapid manufacturing, delivery and distribution of large molecule drugs such as biologics.
- Leveraging biology to provide new tactical and strategic maritime operational advantages.
- Developing an understanding of mechanisms that organisms use to assess and interact with their environment.
- Developing new technologies for advanced eukaryotic cellular engineering to support next generation cellular therapeutic applications.
- Developing new platform technologies for targeted, effective, spatio-temporally controlled delivery of large and small molecules and biologics.
- Developing tools to understand the underlying rules defining biomolecular and biomaterial structure/function properties in order to predict desired outcomes for novel materials.
- Leveraging biological systems to produce solutions for antimicrobial resistance.
- Other biological technology topic areas that fit the national security scope of BTO's mission.

Link to additional information: https://beta.sam.gov/opp/4efd37762ed0475d871af927279f010d/view

4. IDeA Program Infrastructure for Clinical and Translational Research (IDeA-CTR), Department of Health and Human Services, National Institutes of Health

Application Deadline: Standard NIH Deadlines Apply

The purpose of the IDeA-CTR initiative is to expand the capacity for clinical and translational research in IDeA-eligible states/jurisdictions and to enhance the competitiveness of the investigators to obtain extramural funding for clinical and translational research. This Funding Opportunity Announcement (FOA) provides cooperative agreement support for statewide and/or interstate regional networks to achieve the following objectives:

- (1) to support the development and/or enhancement of infrastructure and human resources required to address clinical and translational research needs in IDeA-eligible states/jurisdictions,
- (2) to strengthen clinical and translational research that addresses the broad spectrum of health challenges faced by populations in IDeA-eligible states/jurisdictions, and
- (3) to foster and coordinate collaboration in clinical and translational research within an IDeA-CTR network and with other institutions.

It is expected that IDeA-CTR networks will expand the capacity for clinical and translational research in IDeA-eligible states/jurisdictions and enhance the competitiveness of the investigators to obtain extramural funding for clinical and translational research.

For the purposes of this initiative, the following definitions apply:

- "Clinical research" comprises studies and trials in human subjects as defined by NIH Regulations and Policies (<u>https://grants.nih.gov/grants/glossary.htm#ClinicalResearch</u>).
- "Translational research" includes research that aims to convert basic research advances to practical applications in humans, and research aimed at the adoption of best practices in community healthcare.

IDeA-CTR networks are expected to leverage resources and facilities supported by other IDeA funding initiatives and other NIH programs, such as the IDeA Networks of Biomedical Research Excellence (<u>INBREs</u>), the Centers of Biomedical Research Excellence (<u>COBREs</u>), the Native American Research Centers for Health (<u>NARCH</u>), the Science Education Partnership Awards (<u>SEPA</u>), the

Clinical and Translational Science Awards (<u>CTSAs</u>), the Research Centers in Minority Institutions (<u>RCMI</u>), and the IDeA States Pediatric Clinical Trials Network (<u>ISPCTN</u>). IDeA-CTR networks are expected to facilitate collaboration within each network among participating institutions, and with institutions outside of the network in their research pursuits.

To meet the objectives of the IDeA-CTR, each network is required to have the following key components:

- Administrative Core
- Professional Development Core
- Biostatistics, Epidemiology, and Research Design (BERD) Core
- Community Engagement and Outreach (CEO) Core
- Pilot Projects Program
- Tracking and Evaluation Core

Link to additional information: http://grants.nih.gov/grants/guide/pa-files/PAR-20-175.html

5. Humanities Collections and Reference Resources, National Endowment for the Humanities

Application Deadline: July 15, 2020

The National Endowment for the Humanities (NEH) Division of Preservation and Access is accepting applications for the Humanities Collections and Reference Resources program. 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.

The Humanities Collections and Reference Resources program supports projects that provide an essential underpinning for scholarship, education, and public programming in the humanities. Thousands of libraries, archives, museums, and historical organizations across the country maintain important collections of books and manuscripts, photographs, sound recordings and moving images, archaeological and ethnographic artifacts, art and material culture, and digital objects. This program strengthens efforts to extend the life of such materials 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.

Proposed projects may address the holdings or activities of a single institution or may involve collaboration between institutions. However, even in the case of single-institution projects, working with specialists in other offices or departments or colleagues in other institutions often helps ensure that proposed activities are achievable and will have maximum impact for the humanities. Collaboration can be crucial in providing the appropriate mix of humanities content and methodological expertise and can help broaden the scope of, and audiences for, proposed collections or reference resource

Link to Additional Information: https://www.neh.gov/grants/preservation/humanities-collections-and-reference-resources

6. Soil Science Collaborative Research Proposals 2020, Department of Agriculture, Natural Resources Conservation Service

Application Deadline: June 11, 2020

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.

Proposals must be for projects based in the United States and its territories and possessions and focus on the priorities described in Section A of this notice. Research proposals are sought. NRCS anticipates that the amount available for support of this program in FY

2020 will be up to \$1,700,000.00. Eligibility is limited to institutions of higher education in the Cooperative Ecosystem Studies Unit (CESU) network (http://www.cesu.psu.edu/). Proposals are requested for competitive consideration of awards for projects 1-2 years in duration.

This notice identifies the objectives, eligibility criteria, and application instructions for projects. Proposals will be screened for completeness and compliance with the provisions of this notice. Incomplete and/or noncompliant proposals will be eliminated from competition, and notification of elimination will be sent to the applicant.

Applicants must submit their applications via Grants.gov by 11:59 pm Eastern Time. For technical issues with Grants.gov, please contact Grants.gov Applicant Support at 1-800-518-4726 or <u>support@grants.gov</u>. Awarding agency staff cannot support applicants regarding Grants.gov accounts.

The objectives of the research are to:

• Promote research collaboration between the NRCS Soil and Plant Science Division (SPSD) and university cooperators on significant national issues.

Proposals exhibiting substantial collaboration between the applicant, multiple NCSS cooperators (i.e., a multi-state project), and NRCS soil scientists (National Soil Survey Center (NSSC)Research Soil Scientists, Soil Survey Regional and Major Land Resource Area (MLRA) Soil Survey Office (SSO) soil scientists, State Soil Scientists, and/or Resource Soil Scientists) are encouraged to apply.

• Provide technology transfer and training for NRCS staff.

Each proposal should include a technology transfer component that documents how research results can be incorporated into Soil Survey field or office (databases, interpretations, etc.) functions. In addition, the plan should document how research findings will be shared with the NCSS (e.g., publications, webinars (required), onsite training, and/or other mechanisms).

• Assist in training of students in soil science and related fields.

Proposals that include a strong education component (undergraduate and graduate student involvement) are encouraged, as are proposals from early career scientists and faculty.

Link to additional information: Go to <u>www.grants.gov</u> and search for Opportunity Number USDA-NRCS-NHQ-SOIL-20-NOFO0001003



