Oportunidades de Fondos Externos
ACADEMIC YEAR 2020 - 21 / VOLUME VII
AUTORIZADO POR LA COMISIÓN ESTATAL DE ELECCIONES
Universidad de Puerto Rico
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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 12/15/2020 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.

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1. Sustaining Cultural Heritage Collections, National Endowment for the Humanities

Application Deadline: January 14, 2021

The Sustaining Cultural Heritage Collections program helps cultural institutions meet the complex challenge of preserving large and diverse holdings of humanities materials for future generations by supporting sustainable conservation measures that mitigate deterioration, prolong the useful life of collections, and support institutional resilience: the ability to anticipate and respond to disasters resulting from natural or human activity.

Cultural institutions, including libraries, archives, museums, and historical organizations, face an enormous challenge: to preserve humanities collections that facilitate research, strengthen teaching, and provide opportunities for lifelong learning. To ensure the preservation of books and manuscripts, photographs, sound recordings and moving images, archaeological and ethnographic artifacts, art, and historical objects, cultural institutions must implement measures that slow deterioration and prevent catastrophic loss from emergencies resulting from natural or human activity. They can accomplish this work most effectively through preventive conservation. Preventive conservation encompasses managing relative humidity, temperature, light, and pollutants in collection spaces; providing protective storage enclosures and systems for collections; and safeguarding collections from theft, fire, floods, and other disasters.

As museums, libraries, archives, and other collecting institutions strive to be effective stewards of humanities collections, they must find ways to implement preventive conservation measures that are sustainable. This program helps cultural repositories plan and implement preservation strategies that pragmatically balance effectiveness, cost, and environmental impact. Sustainable approaches to preservation can contribute to an institution's financial health, reduce its use of fossil fuels, and benefit its green initiatives, while ensuring that collections are well cared for and available for use in humanities programming, education, and research. Sustainable preventive conservation measures may also aim to prepare and plan for, absorb, respond to, recover from, and more successfully protect collections in the event of emergencies resulting from natural or human activity.

Link to additional information: https://www.neh.gov/grants/preservation/sustaining-cultural-heritage-collections

2. Environmental Convergence Opportunities in Chemical, Bioengineering, Environmental, and Transport Systems, National Science Foundation

Application Deadline: May 7, 2021

Creating effective solutions to our most pressing environmental and sustainability challenges requires imaginative thinking - the kind that evolves when researchers from disparate fields, expertise, or perspectives fully immerse themselves in work toward a common goal. The National Academies of Sciences, Engineering and Medicine (NASEM), in their report "Environmental Engineering for the 21st Century: Addressing Grand Challenges," identified five critical challenges we must address as a society:

- Sustainably supply food, water, and energy
- Curb climate change and adapt to its impacts
- Design a future without pollution and waste
- Create efficient, healthy, and resilient cities
- Foster informed decisions and actions

The report further states, "The challenges provide focal points for evolving environmental engineering education, research, and practice toward increased contributions and a greater impact. Implementing this new model will require modifications in educational curriculum and creative approaches to foster interdisciplinary research on complex social and environmental problems." This solicitation will support projects that tackle these grand challenges using a convergent research model that seamlessly integrates fundamental knowledge and expertise from the fields of chemical process, transport, and biological science and engineering with that of the sustainability and environmental engineering fields. A brief review of convergence research concepts and models can be found on the NSF website - Convergence Reports and References.

Accordingly, the Environmental Convergence Opportunities in Chemical, Bioengineering, Environmental, and Transport Systems (ECO-CBET) solicitation will support fundamental research activities that confront vexing environmental engineering and sustainability problems by developing foundational knowledge underlying processes and mechanisms such that the design of innovative new materials, processes, and systems is possible. Projects should be compelling and reflect sustained, coordinated efforts from highly interdisciplinary research teams. A key objective of the solicitation is to encourage dialogue and tightly integrated collaborations wherein the chemical process systems, transport phenomena, and bioengineering communities engage with environmental engineering and sustainability experts to spark innovation and arrive at unanticipated solutions. Furthermore, training

the future workforce to successfully engage in discipline-transcending research will support continued innovation toward surmounting the complex environmental and sustainability challenges facing our global community.

Process science and engineering, in the context of this solicitation, is broadly defined to include all programmatic interests of the National Science Foundation (NSF) Directorate for Engineering's (ENG) Division of Chemical, Bioengineering, Environmental, and Transport Systems (CBET). These interests are outlined in the "core" program descriptions:

Chemical Process Systems (CPS) Cluster
- Catalysis
- Electrochemical Systems
- Interfacial Engineering
- Process Systems, Reaction Engineering, and Molecular Thermodynamics

Engineering Biology and Health (EBH) Cluster
- Biophotonics
- Biosensing
- Cellular and Biochemical Engineering
- Disability and Rehabilitation Engineering
- Engineering of Biomedical Systems

Environmental Engineering and Sustainability (EES) Cluster
- Environmental Engineering
- Environmental Sustainability
- Nanoscale Interactions

Transport Phenomena (TP) Cluster
- Combustion and Fire Systems
- Fluid Dynamics
- Particulate and Multiphase Processes
- Thermal Transport Processes

Teams should be constructed such that expertise is both complementary and distinct, drawing inspiration from the CBET-supported research communities (see above programmatic clusters). Creative collaborations between research communities that do not typically intersect are highly encouraged. At least three named investigators must be identified, each of whom must possess a unique perspective or skillset that motivates the proposed approach(es). Teams may also wish to consider, as appropriate, including individuals with expertise such as manufacturing, other sciences, especially social, behavioral, and economic sciences, or otherwise to extend the impact of the work.

While this solicitation is not restricted to a specific environmental engineering and sustainability research topic, the current solicitation emphasizes research topics related to: 1) greenhouse gas mitigation, 2) managing the nitrogen cycle, and 3) sustainable water purification and resource recovery systems. Assuming sufficient funding is provided in the NSF budget, it is anticipated this competition will continue annually. Research topic priorities are subject to change in subsequent years. Awards are expected to range from $1,500,000 to $1,700,000 over four years. Budgets should be commensurate with the scope of the proposed research. Pending the availability of funds, awards have the potential to be renewed once for a total of eight years of support. Renewal of awards will be subject to a competitive merit review process.

Link to additional information: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf21527

3. Graduate Research Training Initiative for Student Enhancement (G-RISE), Department of Health and Human Services, National Institutes of Health

Application Deadlines: February 26, 2021; January 28, 2022; January 30, 2023

The goal of the Graduate Research Initiative for Student Enhancement (G-RISE) program is to develop a diverse pool of scientists earning a Ph.D., who have the skills to successfully transition into careers in the biomedical research workforce. This funding opportunity announcement (FOA) provides support to eligible, domestic institutions to develop and implement effective, evidence-based approaches to biomedical training and mentoring that will keep pace with the rapid evolution of the research enterprise. NIGMS expects that the proposed research training programs will incorporate didactic, research, mentoring, and career development elements to prepare trainees for careers that will have a significant impact on the health-related research needs of the Nation. **This program is limited to applications from training programs at research-active institutions (i.e., those with a 3-year average of NIH Research Project Grant funding less than $7.5 million total costs).**

This FOA is intended to enable the community to develop and implement evidence-informed approaches to biomedical research training and mentoring to enhance diversity in the biomedical research workforce. The President's Council of Advisors on Science and Technology (PCAST) report provided evidence that financial concerns and a deficit of peers from similar backgrounds can erode self-confidence and the will to remain in STEM majors (PCAST Report, 2012). NIGMS diversity enhancing institutional training grants offset the cost of appointed trainee stipends, tuition and fees, and training related expenses, including health insurance, in accordance with the approved NIH support levels. Additionally, funded programs are expected to provide activities that will build a strong cohort of research-oriented individuals while enhancing the science identity, self-efficacy, and a sense of belonging among the cohort members. Programmatic activities include, but are not limited to, providing authentic research experiences, academic enhancements, skills development, and additional mentoring - activities proven to increase persistence in STEM fields (cited in PCAST Report, 2012 and Graduate STEM Education for the 21st Century, 2018). Each program should provide high-quality training that equips individuals with the technical (e.g., appropriate methods, technologies, and quantitative/computational approaches), operational (e.g., independent knowledge acquisition, rigorous experimental design, and interpretation of data, conducting research in the safest manner possible) and professional (e.g., management, leadership, communication, and teamwork) skills required for careers in the biomedical research workforce. Funded programs are expected to promote inclusive research environments (i.e., institutional and departmental environments where trainees from all backgrounds feel integrated into and supported by the biomedical research community).

Program Objective

The Overarching Objective of this Graduate Research Training Initiative for Student Enhancement program is to develop a diverse pool of well-trained Ph.D. biomedical scientists, who have the following technical, operational, and professional skills:

- A broad understanding across biomedical disciplines and the skills to independently acquire the knowledge needed to advance their chosen fields;
- Expertise in a biomedical scientific discipline and the skills to think critically and independently, and to identify important biomedical research questions and approaches that push forward the boundaries of their areas of study;
- A strong foundation in scientific reasoning, rigorous research design, experimental methods, quantitative and computational approaches, and data analysis and interpretation;
- The skills to conduct research in the safest manner possible, and a commitment to approaching and conducting biomedical research responsibly, ethically, and with integrity;
- Experience initiating, conducting, interpreting, and presenting rigorous and reproducible biomedical research with increasing self-direction;
- The ability to work effectively in teams with colleagues from a variety of cultural and scientific backgrounds, and to promote inclusive and supportive scientific research environments;
- The skills to teach and communicate scientific research methodologies and findings to a wide variety of audiences (e.g., discipline-specific, across disciplines, and the public); and
- The knowledge, professional skills and experiences required to identify and transition into careers in the biomedical research workforce (i.e., the breadth of careers that sustain biomedical research in areas that are relevant to the NIH mission).
- Diversity at all levels—from the kinds of science to the regions in which it is conducted to the backgrounds of the people conducting it— contributes to excellence in research training environments and strengthens the research enterprise.

This FOA is intended to support outstanding research training programs that will enhance diversity at all levels. As part of a larger initiative to enhance diversity, the G-RISE program will support trainees earning a Ph.D. at research-active institutions.

Link to additional information: http://grants.nih.gov/grants/guide/pa-files/PAR-21-026.html

4. Multidisciplinary Studies of HIV/AIDS and Aging, Department of Health and Human Services, National Institutes of Health

Application Deadlines: May 7, 2021 (Standard NIH Dates for AIDS Applications thereafter)

This FOA encourages applications at the intersection of HIV and aging by addressing two overarching objectives:

1) to improve understanding of biological, clinical, and socio-behavioral aspects of aging through the lens of HIV infection and its treatment; and
2) to improve approaches for testing, prevention, and treatment of HIV infection, and management of HIV-related comorbidities, co-infections, and complications in different populations and cultural settings by applying our current understanding of aging science.

Applications appropriate to this FOA should be consistent with the scientific priorities outlined by the NIH Office of AIDS Research (OAR) as described in NOT-OD-20-018.

This FOA encourages applications with the following characteristics:

- **Clinical orientation.** HIV in aging involves complex interactions among multiple physiologic systems and a variety of human-level factors such as functional status, quality of life, health behaviors, and psychosocial issues; therefore, studying individual factors in isolation may be counter-productive. This FOA encourages animal models and *in vitro* studies where appropriate; however, inclusion of such approaches should be integrated with human studies or demonstrate direct relevance to clinical features of HIV/AIDS.
- **Focus on aging or the aged.** Applicants are strongly encouraged to enroll individuals across the range of older ages, especially individuals at the upper end of the age range (i.e., 70 years or older). Comparisons between younger and older HIV-infected populations or comparisons between older HIV-infected individuals and their age-matched, non-HIV-infected counterparts are appropriate.
- **Attention to geriatric outcomes.** In addition to traditional important outcomes of HIV/AIDS research (e.g., viral load, survival), studies are encouraged to also include outcomes considered important in geriatric medicine and gerontology, such as physical and cognitive function, quality of life measures, and social support.
- **Leveraging existing resources where possible.** A variety of NIH-funded resources are available to study HIV in aging, such as longitudinal studies of HIV-infected individuals and/or their non-infected counterparts (observational or interventional), clinical networks, and research centers. Leveraging such resources through secondary analyses of available data, ancillary studies, or utilization of existing infrastructure are cost-effective approaches to testing hypotheses or generating relevant data for further studies.
- **Selection of appropriate controls.** Aging individuals with HIV present with varied and complex clinical pictures. Biological and psychological co-morbidities, treatment regimens, lifestyle and behavioral factors, socioeconomic factors, and social support may all impact disease development, coping, and progression. This complexity presents a significant challenge to identifying appropriate control populations in observational studies of aging individuals with HIV. Such studies should include adequate justification for selection of the proposed control group(s).
- **Characterization of phenotypes.** Several biological or behavioral phenotypes of HIV in aging have been elucidated that may have markedly different disease courses, biological underpinnings, and treatment responses. Such phenotypes may be described by characteristics like frailty/disability, accelerated aging, successful aging, or other descriptors. Investigators are encouraged to maximize the homogeneity of subgroups by defining specific phenotypes in analyses.

Link to additional information: http://grants.nih.gov/grants/guide/pa-files/PAR-21-068.html

5. Department of Army Ultra-wide Bandgap RF Electronics Center Fiscal Year 2022, Department of Defense, Dept of the Army -- Materiel Command

Application Deadline: June 1, 2021

The U.S. Army Research Office (ARO) is soliciting proposals for establishing a multidisciplinary research center for extreme-radio-frequency electronics (x-RF electronics) based on ultra-wide bandgap (UWBG) semiconductors and related emerging materials. The UWBG RF Electronics Center to be created will facilitate collaboration between extramural academic researchers and the Army in pursuit of a mutual goal: generating the foundational knowledge in solid-state physics, device structures, integrated circuit design, materials discovery and development, and physics-based machine learning needed to enable the next generation of RF electronics with unprecedented power, bandwidth, frequency agility, and size-weight-and-power (SWaP) requirements. This necessitates novel research that moves beyond the frequency, power and noise constraints imposed by current approaches to modeling, materials, and established device structures. The Center will provide the Army with a new ability to create advanced RF technologies across its modernization priorities for robust multi-domain operations in highly
contested electromagnetic (EM) environments.

This BAA consists of three main topics: Ultra-wide Bandgap (UWBG) Semiconductor Physics and Devices, UWBG Materials, and Physics-Driven Machine Learning for UWBG Materials and RF Device Development. Some topics are further divided into sub-topics. Teams are encouraged to self-organize at any scale to create a proposal to address one, several, or all of these areas as they see fit. The full Center will be selected from a set of these Teams (as separate Team awards) that together appropriately cover the full scope of the BAA. Team awards can themselves include sub-awards to one or more institutions or organizations, because the necessary expertise in addressing the numerous facets of the topics may reside within different organizations. All Team awards will collaborate and cooperate among themselves and with the Army S&T enterprise in accomplishing the research objectives.

Response Dates:

a. Proposers' Day: 15 December 2020 1100-1500 Eastern Time. Virtual venue. Registration required and limited. See Amendment of the BAA for the link to register
b. Whitepapers Due – 15 February 2021 no later than 4:00 PM Eastern Time.
c. Selection of whitepapers for full proposal on 22 March 2021
d. Proposals Due – 1 June 2021 no later than 4:00 PM Eastern Time
e. Selection of Proposal – 2 August 2021

Link to additional information: Go to www.grants.gov and search for opportunity number **W911NF-21-S-0003**

6. Ryan White HIV/AIDS Program Part C Capacity Development Program, Department of Health and Human Services, Health Resources and Services Administration

Application Deadline: February 19, 2021

This notice announces the opportunity to apply for funding under the Health Resources and Services Administration's (HRSA) Ryan White HIV/AIDS Program (RWHAP) Part C Capacity Development Program. The purpose of this program is to strengthen organizational capacity to respond to the changing health care landscape and increase access to high-quality HIV primary health care services for low-income, uninsured, and underserved people with HIV.

Funding under this program is intended to support one short-term activity that can be completed by the end of the one-year period of performance. You may propose an expansion of an activity previously supported under FY2019 or FY2020 RWHAP Part D Supplemental (HRSA-19-026; HRSA-20-068) or Part C Capacity Development funding (HRSA-19-031; HRSA-20-067) **however, HRSA will not fund the same activity in FY 2021 as HRSA funded previously in FY 2019 or FY 2020**. If the proposed project is an expansion of a previously funded activity, you will be required to provide a clear rationale for how the proposed activity builds upon and furthers the objectives of the previously funded HIV Care Innovation or Infrastructure Development activity. You may select only one (1) activity under the selected category.

HIV Care Innovation - HIV Care Innovation activities support progress along the HIV care continuum to improve the health and increase the life span of people with HIV and prevent new infections. There are four (4) activities from which to choose. **If applying under this category, select only one of the four activities listed below:**

- Community Health Workers
- Integration of HIV Primary Care with Oral Health and/or Behavioral Health
- Rapid Antiretroviral Therapy (ART)
- Transitioning Youth into Adult HIV Care

Infrastructure Development - Infrastructure Development activities support organizational development and will increase the capacity of organizations to respond to changes in the health care environment. There are three (3) activities from which to choose. **If applying under this category, select only one of the three activities listed below:**

- Dental Equipment for Expanding Dental Service Capacity
- Emergency Preparedness
- Telemedicine

Link to additional information:
https://grants.hrsa.gov/2010/Web2External/Interface/FundingCycle/ExternalView.aspx?fCycleID=ecd5f302-2188-4b0a-b8bf-122c9aa0d079

7. Molecular Foundations for Biotechnology, National Science Foundation

Application Deadline: LOI: January 14, 2021; DL: Mar 16, 2021

This initiative calls for fundamentally new approaches in chemistry to drive new directions in biotechnology, an important Industry of the Future (IotF). Collaborative high risk/high reward projects are sought; the research must involve innovative chemistry. A multi-year campaign is envisioned (contingent on availability of funding), targeting broad annual themes. This year's solicitation calls for synergistic scientific partnerships grounded in the principles of synthetic, physical organic and molecular recognition chemistry creating novel chemical biology tools to drive innovations in biotechnology. The focus is on the development and deployment of

fundamentally new techniques to modify the structure, function and/or fate of proteins interacting with small molecules for important applications in biotechnology.

This solicitation will support teams of researchers conducting chemistry-led, synergistic collaborative studies in the area of small molecule-protein interactions that are potentially foundations of new biotechnology. Chemistry lies at the heart of many of the challenges confronting burgeoning biotechnology industries, and yet meeting those challenges requires varied expertise, as well as the perspective to facilitate translation of solutions into the Industries of the Future. The specific focus areas for this solicitation are described in the Program Description.

The Division of Chemistry interprets "partnerships" broadly. Such partnerships must be led by an Institution of Higher Education (IHE). Non-profit, non-academic research organizations may be funded partners. Additional unfunded partners may include government agencies (including national labs), for-profit organizations, and international organizations. Partnerships will enable dexterous, effective, and potentially transformative research targeting those challenges, while building a workforce trained at the relevant technical interfaces. While not required, engagement of industrial partners is encouraged. Project-related partner interactions can take many forms, including active collaborations and bidirectional visits, engaging industrial scientists in the academic labs, and student or postdoctoral internships in industrial or government labs.

This solicitation calls for synergistic scientific teams grounded in the principles of synthetic, physical organic and molecular recognition chemistry to develop novel chemical biology tools that drive innovations in biotechnology. The focus is on the development and deployment of fundamentally new techniques to modify the structure, function and/or fate of proteins with small molecules for important applications in biotechnology. Specifically, the following topics are targeted in this solicitation:

- Development of novel bioorthogonal chemistry that can be used to study protein structure and function in complex biological environments.
- Highly innovative methods for the selective labeling of (i) specific domains or motifs in proteins; (ii) specific classes of proteins based on activity class or active site architecture (e.g., creative activity-based protein profiling) or (iii) proteins in specific cellular compartments.
- Creative methods that use small molecules to alter the fate of proteins, for example, via targeted protein degradation beyond conventional bifunctional probe-based approaches.

Proposals directed at the synthesis of specific enzyme inhibitors or focused on medicinal chemistry are not appropriate for this solicitation. Similarly, projects in the areas of directed enzyme evolution and biocatalysis are not responsive to this solicitation. These research partnerships also provide rich opportunities for professional training, and workforce development. University-based opportunities can be augmented with opportunities for internships or similar opportunities for graduate students and postdoctoral researchers to work in non-academic settings for up to three months per year. While these research partnerships can include researchers from many sectors, the NSF funds will be used to support researchers affiliated with IHEs and non-profit, non-academic organizations. No awards or subawards will be made to government labs (including national labs), for-profit organizations, or international organizations. NSF funding can be used for university research/education activities and may support activities of faculty and their students and research associates in the for-profit, government laboratory, or international setting.

Link to additional information: https://www.nsf.gov/pubs/2021/nsf21540/nsf21540.pdf

8. Johnson & Johnson Invites Proposals for Nurse-Led Mental Health Care Ideas

Application Deadline: January 15, 2021

As part of a broader pledge to supporting frontline healthcare workers, Johnson & Johnson, in partnership with the with the American Psychiatric Nurses Association, has launched the Johnson & Johnson Nurses Innovate QuickFire Challenge on Mental Health series.

The COVID-19 pandemic has focused a spotlight on nurses and their impact like never before, with the world seeing nurses in action as innovative leaders who possess the resiliency and resourcefulness to navigate health emergencies and provide support to patients and fellow frontline health workers alike.

Issued through Johnson & Johnson Innovation JLABS, the challenge invites nurses and nursing students worldwide to submit novel nurse-led concepts, education programs, protocols, prevention or treatment approaches, screening tools, or consumer product ideas with the power to potentially transform mental health care and well-being for their fellow healthcare professionals or the patients they are serving during the current pandemic and beyond.

Awardees will receive $100,000 in grant funding, mentoring from experts across the Johnson & Johnson Family of Companies, and access to the Johnson & Johnson Innovation - JLABS ecosystem.

Ideas may include potential solutions for practice in any setting, including inpatient, outpatient, education, private practice, community, military and VA settings, and can address health and wellness promotion, prevention of mental health conditions, and care and treatment considerations for persons with psychiatric and/or substance use disorders. Example focus areas include mental health conditions, including trauma, depression, PTSD, etc.; the impact of health disparities/health inequities on mental health needs; access to care and treatment for those with mental health and/or substance use conditions; and remote care delivery opportunities such as telehealth.

See the Johnson & Johnson website (https://www.jnj.com/) for complete program guidelines and application instructions.

Link to complete RFP: https://jlabs.jnjinnovation.com/quickfire-challenges/nurses-innovate-quickfire-challenge-mental-health#paragraph-13696

9. Spencer Foundation Invites Proposals for Education Research Grants

Application Deadline: January 15, 2021 (Letters of Intent); February 5, 2021 (Full Application)

The Spencer Foundation, the only national foundation focused exclusively on supporting education research, is inviting applications for its Research Grants on Education program, which provides support to education research projects with the potential to contribute to the improvement of education, broadly conceived.

The foundation supports work that fosters creative and open-minded scholarship, engages in deep inquiry, and examines robust questions related to education. The program supports proposals with multiple disciplinary and methodological perspectives, both domestically and internationally, and from scholars at various stages in their career.

Proposals may span a wide range of topics and disciplines that creatively investigate questions central to education, including anthropology, philosophy, psychology, sociology, law, economics, history, and neuroscience. Researchers may incorporate data from multiple and varied sources spanning a sufficient length of time as to achieve a depth of understanding and/or work closely with practitioners or community members over the life of the project. Research may utilize a wide array of research methods and techniques, including quantitative, qualitative, mixed, ethnographic, design-based, participatory, and historical. Projects that thoughtfully consider the trajectories, implications, and potential impacts of their findings, including how the knowledge may be shared and utilized across the field, in practice, in policy making, and/or with the broader public, are encouraged. The program is "field-initiated," in that proposals are not requested in response to a particular research topic, discipline, design, or method.)

Through the program, projects with budgets ranging from $125,000 to $500,000 over one to five years will be considered.

To be eligible, principal investigators and co-PIs must have a doctorate in an academic discipline or professional field or have obtained appropriate experience in an education research-related profession. Applicants should be affiliated with a college, university, school district, nonprofit research facility, or nonprofit cultural institution.

Letters of Intent to apply are due January 15, 2021. Upon review, selected applicants will be invited to submit a full proposal by February 5, 2021.

See the Spencer Foundation website https://www.spencer.org/ for complete program guidelines and application instructions.

Link to complete RFP: https://www.spencer.org/grant_types/large-research-grant

10. NetGain Partnership Invites Concept Notes for Digital Misinformation

Application Deadline: January 11, 2021 (Concept Notes)

The NetGain Partnership is a philanthropic collaboration that seeks to advance the public interest in issues of the digital age. Most recently, NetGain has focused on the theme "Digital Threats to Democracy" and the impact of dominant platforms. The scale of platforms' influence and the increasing number of harms they cause continue to represent a considerable challenge for policy makers and civil society.

To help address the issue, the partnership has issued a Request for Proposals for NetGain Year Five Small Grants. The program, which is managed by the Media Democracy Fund, will support projects that catalyze or build on ideas that emerged from NetGain years Four and Five around digital threats to democracy, mis/disinformation, and public interest research on dominant platforms, including projects that investigate, reveal, and/or explain the extent and impact of mis/disinformation facilitated by big platforms, or other projects that advance knowledge on societal harms caused by platform companies or that provide policy, legal, public education, or technological interventions as counterweights to growing platform power.

Priority will be given to projects that are led or directed by organizations that have not historically received significant amounts of funding from the NetGain Partnership and/or that involve collaboration among multiple organizations with unique expertise in service of a common aim.

Eligible activities include research, collaborative projects and/or campaigns, virtual convenings, and creative interventions (i.e., tech tools, art, or cultural projects). The program will award grants ranging between $25,000 and $100,000 over a year. Generally speaking, the fund has no geographic restrictions.

See the NetGain Partnership website (https://www.netgainpartnership.org/) for complete program guidelines and application instructions.
Link to complete RFP: https://www.netgainpartnership.org/smallgrantsrfp

11. Whitehall Foundation Invites LOIs for Bioscience Research Projects

Deadline: January 15, 2021 (Letters of Intent)

The Whitehall Foundation assists scholarly research in the life sciences through its research grants and grants-in-aid programs. It is the foundation's policy to support those dynamic areas of basic biological research that are not heavily supported by federal agencies or other foundations with specialized missions. The foundation emphasizes the support of young scientists at the beginning of their careers and productive senior scientists who wish to move into new fields of interest. To that end, the foundation invites LOIs for two grant programs:

- **Research** - Grants of up to $225,000 over three years will be awarded to established scientists of all ages working at accredited institutions in the United States. Grants will not be awarded to investigators who have already received, or expect to receive, substantial support from other sources, even if it is for an unrelated purpose.

- **Grants-in-Aid** - One-year grants of up to $30,000 will be awarded to researchers at the assistant professor level who experience difficulty in competing for research funds because they have not yet become firmly established. Grants-in-Aid can also be made to senior scientists.

The foundation is interested in basic research in neurobiology, defined as follows: invertebrate and vertebrate (excluding clinical) neurobiology, specifically investigations of neural mechanisms involved in sensory, motor, and other complex functions of the whole organism as these relate to behavior. The overall goal should be to better understand behavioral output or brain mechanisms of behavior.

To be eligible, applicants must hold the position of assistant professor or higher, must hold Principal Investigator status, and be considered an "independent investigator" with his/her own dedicated lab space or with lab space independent of another investigator. Letters of Intent must be received no later than January 15, 2021. Upon review, selected applicants will be invited to submit full applications by June 1, 2021.

For complete program guidelines, information about previous grant recipients, and application procedures, see the Whitehall Foundation website (http://www.whitehall.org/).

Link to complete RFP: http://whitehall.org/grants/

12. Build and Broaden 2.0: Enhancing Social, Behavioral and Economic Science Research and Capacity at Minority-Serving Institutions, National Science Foundation

Application Deadline: March 5, 2021

Build and Broaden 2.0 (B2 2.0) encourages research collaborations between scholars at minority-serving institutions (MSIs) and scholars in other institutions or organizations. Growing the science, technology, engineering, and mathematics (STEM) workforce is a

national priority. National forecasts of the impending shortage of science and engineering skills and essential research workforce underscore a need to expand opportunities to participate in STEM research (President's Council of Advisors on Science and Technology, 2012) (Link to 2012 report). NSF has taken steps to expand participation by focusing on research communities that are not well-represented in the federal research system. Through these steps, NSF is working to expand the volume and increasing the diversity, interconnectedness, and effectiveness of the science, technology, engineering and mathematics (STEM) workforce.

Build and Broaden 2.0 (B2 2.0) encourages research collaborations between scholars at minority-serving institutions (MSIs) and scholars in other institutions or organizations. Growing the science, technology, engineering, and mathematics (STEM) workforce is a national priority. National forecasts of the impending shortage of science and engineering skills and essential research workforce underscore a need to expand opportunities to participate in STEM research (President's Council of Advisors on Science and Technology, 2012) (Link to 2012 report). NSF has taken steps to expand participation by focusing on research communities that are not well-represented in the federal research system. Through these steps, NSF is working to expand the volume and increasing the diversity, interconnectedness, and effectiveness of the science, technology, engineering and mathematics (STEM) workforce.

MSIs make considerable contributions to educating and training science leaders for U.S. economic growth and competitiveness. Yet, NSF has received comparatively few grant submissions from, or involving, scholars at MSIs. Targeted outreach activities reveal that MSIs have varying degrees of familiarity with funding opportunities within NSF and particularly within the Social, Behavioral and Economic (SBE) Sciences Directorate. As a result, NSF is limited in its ability to support research and training opportunities in the SBE sciences at these institutions. With its emphasis on broadening participation of MSIs, Build and Broaden 2.0 is designed to address this problem. SBE offers Build and Broaden 2.0 in order to increase proposal submissions, advance research collaborations and networks involving MSI scholars, and support research activities in the SBE sciences at MSIs. The Build and Broaden 2.0 solicitation is designed specifically for impact at MSIs. Proposals are invited from single Principal Investigators based at MSIs and from multiple co-investigators from a group of MSIs. Principal Investigators who are not affiliated with MSIs may submit proposals, but must collaborate with PIs, co-PIs, or Senior Personnel from MSIs and describe how their project will foster research partnerships or capacity-building with at least one MSI as a primary goal of the proposed work. Proposals may address any of the scientific areas supported by SBE. These areas include anthropology, archaeology, cognitive neuroscience, decision science, ecological research, economics, geography, linguistics, law and science, organizational behavior, political science, public policy, security and preparedness, psychology, and sociology. For a full list of research areas supported by SBE please visit the SBE programs page.

B2 2.0 is designed to support research projects that:

- Build capacity and enhance research productivity in the SBE sciences at MSIs;
- Provide researchers with new ways to diversify and sustain collaborations;
- Foster partnerships that strengthen career and research trajectories for faculty at MSIs;
- Contribute to stronger, more innovative science by diversifying research and widening the STEM pipeline

Supported projects are expected to yield results that will promote scientific progress; advance national health, prosperity and welfare; strengthen collaborative research initiatives involving MSI scholars and MSI institutions; and establish more robust training and research networks among researchers in the SBE sciences and across other disciplines that have similar interests. MSIs include historically Black colleges and universities (HBCUs), Hispanic-serving institutions (HSIs), Tribal Colleges or Universities (TCUs), and other institutions that enroll a significant percentage of underrepresented minority students as defined by the U.S. Department of Education. These other institutions include Alaska Native-serving institutions, Native Hawaiian-serving institutions, Predominantly Black Institutions, Asian American and Native American Pacific Islander-serving institutions, and Native American-serving nontribal institutions. For more information, please see the U.S. Department of Education's definitions and lists of eligible postsecondary institutions (Link to MSI definitions and eligibility information). Proposals from Principal Investigators who are not affiliated with MSIs must partner with Senior Personnel, a co-PI, and/or subawardee PI who is based at an MSI. In these cases, PIs must describe how their project will foster partnerships or research capacity-building with at least one MSI.

Link to Additional Information: http://www.nsf.gov/publications/pub_summ.jsp?ods_key=nsf21542

13. 2021 Empowering Communities to Address Behavioral Health and Chronic Pain through Chronic Disease Self-Management Education Programs, Department of Health and Human Services, Administration for Community Living

Application Deadline: February 2, 2021

This funding opportunity is designed for applicants to propose how they will develop capacity for, deliver, and sustain evidence-based self-management education and support programs that address behavioral health and/or chronic pain among older adults and adults with disabilities.

Evidence-based chronic disease self-management education (CDSME) programs can help mitigate chronic disease burden by empowering participants to better manage their conditions. The acronym, CDSME, is being used in this announcement as an umbrella term for community-based education programs specifically designed to enhance patient self- management of chronic conditions (including behavioral health concerns and chronic pain). These programs focus on building multiple health behaviors and generalizable skills such as goal setting, decision making, problem solving, and self-monitoring, and are proven to maintain or improve health outcomes of older adults with chronic conditions. Similarly, a self-management support program is a community-based, behavioral change intervention that is proven to increase one or more skills or behaviors relevant to chronic disease self-management such as physical activity or medication management. The program has two goals:

- Goal 1: Through robust partnerships, develop a strategy for addressing behavioral health and/or chronic pain among older adults and adults with disabilities living in your community.
- Goal 2: Significantly increase the number of older adults and adults with disabilities who participate in evidence-based self-management education and/or self-management support programs to empower them to better manage these chronic condition(s), while concurrently pursuing the sustainability of these programs beyond the end of the grant period.

All applicants must propose to implement at least one program that can be delivered in a remote format, i.e., by video conference, phone, mailed toolkit + phone, or some other format that does not have an in-person component. The National Council on Aging (NCOA) maintains a website that tracks remote program guidance by program (https://www.ncoa.org/news/ncoa-news/center-for-healthy-aging-news/track). However, all applicants should contact the program administrator(s) for any program(s) they are interested in delivering remotely to confirm that:

1. the programs are allowed for remote delivery; and
2. that training is readily available for applicants who need it.

Note that the NCOA website includes programs on the pre-approved list in Appendix B and C, as well as other programs not on the list. For this funding opportunity, applicants may ONLY propose programs on the pre-approved lists in Appendix B and C.

Link to Additional Information: https://acl.gov/grants/2021-empowering-communities-address-behavioral-health-and-chronic-pain-through-chronic

14. OVW Fiscal Year 2021 Legal Assistance for Victims (LAV) Grant Program Solicitation, Department of Justice, Office on Violence Against Women

Application Deadline: February 2, 2021

This program is authorized by 34 U.S.C. § 20121. The LAV Grant Program (CFDA 16.524) is intended to increase the availability of civil and criminal legal assistance needed to effectively aid adult and youth (ages 11 and older) victims of domestic violence, dating violence, sexual assault, and stalking by providing funds for comprehensive direct legal services to victims in legal matters relating to or arising out of that abuse or violence. "Legal assistance" includes assistance to adult and youth victims of domestic violence, dating violence, sexual assault, and stalking in:

a) family, tribal, territorial, immigration, employment, administrative agency, housing matters, campus administrative, or protection or stay away order proceedings, and other similar matters; and
b) criminal justice investigations, prosecutions, and post-trial matters (including sentencing, parole, and probation) that impact the victim's safety and privacy.

Intake or referral, by itself, does not constitute legal assistance. 34 U.S.C. §12291(a)(19). Comprehensive legal services should address the broad spectrum of legal issues that victims encounter and help promote economic independence for victims. In addition to representation in emergency and non-emergency protection order hearings, this includes representation in family matters (divorce, child custody, or child support), consumer or housing matters, and credit restoration. For additional information about this program and related performance measures, including how awards contribute to the achievement of program goals and objectives, see: OVW grant program information: https://www.justice.gov/ovw/grant-programs. Program performance measures under the Measuring Effectiveness Initiative: https://www.vawamei.org/grant-program/legal-assistance-program/. Examples of successful projects in OVW's most recent report to Congress on the effectiveness of VAWA grant programs: https://www.justice.gov/ovw/page/file/1292636/download.

Purpose Areas - Pursuant to 34 U.S.C. § 20121(c), funds under this program must be used for one or more of the following purposes:

1. To implement, expand, and establish cooperative efforts and projects between domestic violence, dating violence, and sexual assault victim service providers and legal assistance providers to provide legal assistance for victims of domestic violence, dating violence, stalking, and sexual assault.
2. To implement, expand, and establish efforts and projects to provide legal assistance for victims of domestic violence, dating violence, staking, and sexual assault by organizations with a demonstrated history of providing direct legal or advocacy services on behalf of these victims.
3. To implement, expand, and establish efforts and projects to provide competent supervised pro bono legal assistance for victims of domestic violence, dating violence, sexual assault, or stalking, except not more than 10 percent of the funds awarded may be used for this purpose. The 10 percent limit is on the funds awarded under the LAV Grant Program overall and is not specific to an individual project.

OVW Priority Areas - In FY 2021, OVW is interested in supporting the priority area identified below. Applications proposing activities in the following area will be given special consideration: Empower victims to become survivors by focusing on long-term safety and sustainable economic independence.

Links to Additional Information: https://www.justice.gov/ovw/open-solicitations or https://www.justice.gov/ovw/page/file/1343081/download

15. Mental Health Awareness Training, Department of Health and Human Services, Substance Abuse and Mental Health Services Administration

Application Deadline: February 5, 2021

The Substance Abuse and Mental Health Services Administration (SAMHSA), Center for Mental Health Services (CMHS) is accepting applications for fiscal year (FY) 2021 Mental Health Awareness Training grants (Short Title: MHAT). The purpose of this program is to:

(1) train individuals (e.g., school personnel, emergency first responders, law enforcement, veterans, armed services members and their families) to recognize the signs and symptoms of mental disorders, particularly serious mental illness (SMI) and/or serious emotional disturbances (SED);
(2) establish linkages with school- and/or community-based mental health agencies to refer individuals with the signs or symptoms of mental illness to appropriate services;
(3) train emergency services personnel, law enforcement, fire department personnel, veterans, and others to identify persons with a mental disorder and employ crisis de-escalation techniques; and
(4) educate individuals about resources that are available in the community for individuals with a mental disorder. It is expected that this program will prepare and train others on how to appropriately and safely respond to individuals with mental disorders, particularly individuals with SMI and/or SED.

There is a large audience of individuals for which mental health awareness training would be beneficial. Training on how to recognize the signs and symptoms of mental illness and how to safely and appropriately respond could be provided to the following categories of individuals:

- Teachers and relevant school personnel (e.g., school resource officers, security officers, truancy officers, support staff, transportation providers, afterschool providers) who interact with children and youth in a school setting.
- Law enforcement and emergency services personnel (e.g., paramedics, firefighters, emergency medical technicians) who are in regular contact with the general public and may need to safely de-escalate crisis situations.
- Families, caregivers, and service providers in contact with armed services personnel, veterans, and their families, who may be experiencing post-traumatic stress disorder, traumatic brain injury, and other mental disorders that may be impairing their functioning in daily life activities.
- Parents and caregivers of children and youth with a serious emotional disturbance or youth experiencing a first episode of psychosis.
- Primary care and specialty providers of medical care who provide prevention and treatment services to the general public (e.g., obstetricians who treat women with post-partum depression; general practitioners who interact with patients with co-occurring disorders).

Recipients who received funding in FY 2020 and 2019 under SM-18-009 Mental Health Awareness Training are not eligible to apply.

Links to Additional Information: https://www.samhsa.gov/grants/grant-announcements/SM-21-007

16. University Turbine Systems Research (UTSR) - Focus on Hydrogen Fuels, Department of Energy, National Energy Technology Laboratory

Application Deadline: February 1, 2021

The University Turbine Systems Research (UTSR) Program encompasses a portfolio of gas turbine-focused university projects, which address a wide variety of technical topics (including combustion, aerodynamics/heat transfer, and advanced materials topics) by conducting cutting edge R&D. Technical topics are relevant to research goals of the US DOE and the gas turbine industry and support advanced technologies that can increase energy efficiency, reduce emissions, and provide additional performance benefits.

A hydrogen economy is again gaining global attention as part of a technology-based approach for reducing global carbon emissions. Even a partial move toward a hydrogen economy will require vast quantities of hydrogen at low cost, including hydrogen for turbine-based, carbon-free electricity generation. Fossil fuels with carbon capture, utilization and/or storage (CCUS) are already, and by far, the lowest cost source of low-carbon hydrogen, and with the right fuel mix and technology, can generate hydrogen with net-negative carbon emissions. Gasification of coal and biomass with CCUS can be a large-scale source of carbon-negative hydrogen. Waste plastics could also be added to the fuel mix, mitigating plastics in the environment. Given this extensive interest in hydrogen-based electricity generation, topics in this FOA focus on fundamental and applied research to enable the use of hydrogen as a gas turbine fuel.

The objective of this FOA is to solicit and competitively award university-based R&D projects that address and resolve fundamental scientific challenges and applied engineering technology issues associated with advancing the performance and efficiency of combustion turbines fueled with pure hydrogen, hydrogen and natural gas mixtures, and other carbon-free hydrogen containing fuels (e.g., ammonia) in combined and simple cycle applications.
The FOA is soliciting with the intent to competitively award laboratory/bench-scale R&D in the following three areas of interest (AOIs):

- AOI 1 – Hydrogen Combustion Fundamentals for Gas Turbines
- AOI 2 – Hydrogen Combustion Applications for Gas Turbines, and
- AOI 3 – Hydrogen-Air Rotating Detonation Engines.

Links to Additional Information:
https://www.fedconnect.net/FedConnect/PublicPages/PublicSearch/Public_OpportunitySummary.aspx?ReturnUrl=%2ffedconnect%2f%3fdoc%3dDE-FOA-0002397%26agency%3dDOE&doc=DE-FOA-0002397&agency=DOE

17. Systems Biology of Bioenergy-Relevant Microbes to Enable Production of Next-Generation Biofuels and Bioproducts, Department of Energy - Office of Science

Application Deadline: Pre-Application: January 19, 2021; Deadline (by invitation only): April 06, 2021

The DOE SC program in Biological and Environmental Research (BER) hereby announces its interest in receiving applications for research within the Biological Systems Science Division's (BSSD) Genomic Science Program (GSP) (http://genomicscience.energy.gov) mission-space. This FOA solicits applications for:

a) research to advance the development of promising new model organisms, microbial functional capabilities, and biosynthetic pathways relevant to biofuels and bioproducts production; and
b) research into the metabolic pathways that can achieve synthetic polymer deconstruction and conversion to recycled monomers.

The GSP aims to solve critical challenges in energy security and environmental stewardship. As part of its mission, BER invests in crosscutting technologies and programs to enable multiscale, systems-level research to achieve a predictive understanding of systems biology, biological community function, and environmental behavior. BSSD aims to provide the necessary fundamental science to understand, predict, manipulate, and design biological processes that underpin innovations for bioenergy and bioproduct research and to enhance the understanding of natural environmental processes relevant to DOE. BSSD supports fundamental research to understand the systems biology of plants and microbes through the GSP. The GSP's portfolio includes research that builds on a foundation of genomic data and combines experimental physiology studies with omics-driven tools of modern systems biology and computational approaches to harness the power of microorganisms and microbial communities as cellular factories. An important goal of the GSP is to meet the challenges associated with microbial production of advanced biofuels and bioproducts from plant-derived biomass via a portfolio of highly interdisciplinary and integrated research projects.

The ability to manipulate microbial biosynthetic pathways and metabolism using synthetic biology provides unprecedented opportunities to address a wide range of topics related to DOE's mission in sustainable bioenergy development. This includes research that enhances the production of advanced biofuels, bioproducts as well as the conversion and upcycling of synthetic polymers. To enable a future where biological systems can be designed and modified for desired specific outcomes and deliver positive impacts for the environment and the bioeconomy, the GSP is soliciting applications in the following subtopic areas for this FOA:

SUBTOPIC A - SUSTAINABLE BIOENERGY: This subtopic specifically targets systems biology driven basic research for the production of advanced biofuels (biologically synthesized compounds with the potential to serve as energy-dense transportation fuels such as gasoline, diesel, and aviation fuel) compatible with existing engines and fuel distribution infrastructure, and for the production of useful bioproducts. In this context, the following areas are of interest:

- Research to develop emerging model microorganisms and/or microbial communities with unique or enhanced capabilities to produce advanced biofuels and/or bioproducts.
- Research to understand novel microbial functional capabilities and biosynthetic pathways relevant to the production of advanced biofuels and bioproducts. Proposed research should include the development of strategies to identify and overcome metabolic impacts that result from pathway modification and limit production of target molecules

SUBTOPIC B - POLYMER UPCYCLING: Applications are solicited for synthetic biology and –omics driven basic research on the bioconversion and reuse of synthetic polymers in the following areas:

- Identify and develop novel biological mechanisms, enzymes, and pathways for polymer deconstruction and conversion in both model and environmental microbes. Applications should focus on the elucidation of novel enzymes and biochemical pathways for polymer breakdown. This may include studies in model organisms or complex consortia. Experiments should aim to use a systems approach to understand the metabolic, biochemical, regulatory, and genetic basis of specific and defined activities.
- Design new biosynthetic pathways for the conversion of polymers into new products or their precursors. Studies should leverage the tools of computational and systems biology to design novel pathways or approaches for polymer degradation and conversion to higher value waste streams. An important focus of this FOA is to expand the range of products that can be produced biologically from recycled polymers.

Links to Additional Information: Go to www.grants.gov and search for Funding Opportunity **DE-FOA-0002448**

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