

The Division of Science and Research distributes a weekly e-mail update regarding current grant opportunities from a variety of funders, including the National Science Foundation, NASA, National Institute of Health and others. To sign up for alerts, contact Dr. Jan Taylor.

> NSF NIH NASA USDA DOD

# **GRANT OPPORTUNITES** Division of Science and Research

## **National Science Foundation**

The Division of Earth Sciences (EAR) will consider proposals for the development of cyberinfrastructure for the geosciences (Geoinformatics). EAR seeks the development and implementation of enabling information technology with impacts that extend beyond an individual investigator or small group of investigators and that facilitates the next generation of geosciences research. Proposals to this solicitation may seek support for community-driven development and implementation of databases; tools for data integration, interoperability, and visualization; software development and code hardening; and data-intensive/new computing methodologies that support the enhancement of geosciences research and education activities. Collaboration with computational scientists and the development of public/private partnerships are strongly encouraged. Full Proposal Deadline Date: July 3, 2017.

The long-range goal of the Enriched Doctoral Training in the Mathematical Sciences (EDT) program is to strengthen the nation's scientific competitiveness by increasing the number of well-prepared U.S. citizens, nationals, and permanent residents who pursue careers in the mathematical sciences and in other professions in which expertise in the mathematical sciences plays an increasingly important role. The EDT program will achieve this by supporting efforts to enrich research training in the mathematical sciences at the doctoral level by preparing Ph.D. students to recognize and find solutions to mathematical challenges arising in other fields and in areas outside today's academic setting. Graduate research training activities supported by EDT will prepare participants for a broader range of mathematical opportunities and career paths than has been traditional in U.S. mathematics doctoral training. Full Proposal Deadline Date: July 12, 2017.

The Science of Learning program supports potentially transformative basic research to advance the science of learning. The goals of the SL Program are to develop basic theoretical insights and fundamental knowledge about learning principles, processes and constraints. Projects that are integrative and/or interdisciplinary may be especially valuable in moving basic understanding of learning forward but research with a single discipline or methodology is also appropriate if it addresses basic scientific questions in learning. The possibility of developing connections between proposed research and specific scientific, technological, educational, and workforce challenges will be considered as valuable broader impacts, but are not necessarily central to the intellectual merit of proposed research. The program will support research addressing learning in a wide range of domains at one or more levels of analysis including: molecular/cellular mechanisms; brain systems; cognitive affective, and behavioral processes; and social/cultural influences. The program supports a variety of methods including: experiments, field studies, surveys, secondary-data analyses, and modeling. Full Proposal Deadline Date: July 12, 2017.

The goal of the Archaeology Program is to fund research which furthers anthropologically relevant archaeological knowledge. In accordance with the National Science Foundation's mission such research has the potential to provide fundamental scientific insight. While within the broad range of "archaeology" the focus is on projects judged to be significant from an anthropological perspective, the Program sets no priorities based on time period, geographic region or specific research topic. The Program administers four competitions each of which is described on this page. It also supports projects submitted under NSF-wide competition guidelines. These include CAREER, EAGER, RAPID and Research Experiences for Undergraduates Supplement requests. Full Proposal Target Date: July 13, 2017 for Archaeology-Senior Research.

## **National Institutes of Health**

Neo-antigen-Based Therapeutic Targeting of Head and Neck Cancers (R01) - The purpose of this Funding Opportunity Announcement (FOA) is to support basic and preclinical research aimed at developing novel immunotherapeutic targets for head and neck cancers (HNC), including salivary gland cancers. Research supported by this FOA will identify human HNC-specific neo-antigens, and will test the utility of these neo-antigens as targets for eliciting anti-tumor immune responses in affected patient populations. Letter of Intent Due Date(s): May 19, 2017. Application Due Date(s): June 19, 2017.

Environmental Health Sciences Core Centers (EHS CC) (P30) - This Funding Opportunity Announcement (FOA) invites grant applications for Environmental Health Sciences Core Centers (EHS CC). As intellectual hubs for environmental health research, the EHS CC is expected to be the thought leaders for the field and advance the goals of the NIEHS Strategic Plan (http://www.niehs.nih.gov/about/strategicplan/). The Core Centers provide critical research infrastructure, shared facilities, services and /or resources, to groups of investigators conducting environmental health sciences research. An EHS CC enables researchers to conduct their independently-funded individual and/or collaborative research projects more efficiently and/or more effectively. The broad overall goal of an EHS CC is to identify and capitalize on emerging issues that advance improving the understanding of the relationships among environmental exposures, human biology, and disease. The EHS CC supports community engagement and translational research as key approaches to improving public health. Letter of Intent Due Date(s): April 17, 2017, March 17, 2018, and March 17, 2019. Application Due Date(s): May 17, 2017, April 17, 2018, and April 17, 2019.

From Genomic Association to Causation: A Convergent Neuroscience Approach for Integrating Levels of Analysis to Delineate Brain Function in Neuropsychiatry (U01) - The primary objective of this FOA is to stimulate innovative Convergent Neuroscience (CN) approaches to establish causal and/or probabilistic linkages across contiguous levels of analysis (e.g., gene, molecule, cell, circuit, system, behavior) in an explanatory model of psychopathology. In particular, applicants should focus on how specific constituent biological processes at one level of analysis contribute to quantifiable properties at other levels, either directly or as emergent phenomena. Although not required, it is preferable that applications link at least three levels of analysis and include an emphasis on genetics. The projects under this FOA will develop novel methods, theories, and approaches through a CN team framework, bringing together highly synergistic inter/transdisciplinary teams from neuroscience and "orthogonal" fields (e.g., data/ computational science, physics, engineering, mathematics, and environmental sciences). Successful teams will combine, expand upon, or develop conceptual frameworks and theoretical approaches, and build explanatory computational models that connect contiguous levels of analysis. Such frameworks, theories, and computational explanatory models should be validated through experimental approaches to elucidate biological underpinnings of complex behavioral (including cognitive and affective) outcomes in psychopathology. Additionally, a goal of this program is to advance research in CN by creating a shared community framework of resources which may be used by the broader research community to further research, as such, successful team will have robust plan for sharing data and other resources. Companion Funding Opportunity is PAR-17-176, Collaborative U01, Collaborative Research Project. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): May 1, 2017 and then Standard dates apply.

Neuroskeletal Biology of the Dental and Craniofacial Skeletal System (R01) - The purpose of this Funding Opportunity Announcement (FOA) is to encourage research on the role of the nervous system in metabolism, homeostasis, remodeling and/or regeneration of the postnatal dental and craniofacial skeletal system (DCS) in health and disease. The objectives are to enhance basic science knowledge about interactions between the peripheral and central nervous systems (PNS/CNS) and the DCS, and facilitate development of strategies to optimize normal function, reduce the impact of disease, and develop capacity to repair and regenerate injured teeth and craniofacial bones. Companion Funding Opportunity is RFA-DE-18-006, R21 Exploratory/Developmental Grant. Letter of Intent Due Date(s): August 28, 2017. Application Due Date(s): September 28, 2017.

#### Pragmatic Research in Healthcare Settings to Improve Diabetes and Obesity Prevention and Care (R18) - The

purpose of this Funding Opportunity Announcement (FOA) is to encourage research applications to test innovative approaches to improve diabetes and obesity prevention and/or treatment that are adapted for implementation in healthcare settings where individuals receive their routine medical care. Research applications should be designed to test practical and sustainable strategies to improve processes of care and health outcomes for individuals with or t risk of diabetes and/or obesity. The research should also focus on approaches that can be broadly disseminated outside the specific setting where it is being tested. The goal of the research is to obtain results that will improve routine healthcare practice and inform healthcare policy for the prevention or management of these conditions. Therefore, interventions must be integrated into the existing healthcare structure and/or processes; the healthcare setting may not be used solely as a venue for recruitment. Companion Funding Opportunity is PAR-17-180, R34 Planning Grant. Application Due Date(s): May 1, 2017; November 1, 2017; March 1, 2018; November 1, 2018; March 1, 2019; and November 1, 2019.

Evaluating Natural Experiments in Healthcare to Improve Diabetes Prevention and Treatment (R18) - The purpose of this Research Demonstration and Dissemination Projects (R18) Funding Opportunity Announcement (FOA) is to support research to evaluate large scale policies or programs related to healthcare delivery that are expected to influence diabetes prevention and care. This FOA is not intended to support the initiation and delivery of new policies or programs. Research support is for the evaluation of the effectiveness of healthcare programs and/or policies implemented independent of NIH grant funding. The goal is to support research that meaningfully informs clinical practice and health policy related to prevention or management of diabetes. Application Due Date(s): May 1, 2017; November 1, 2018; November 1, 2018; March 1, 2019; and November 1, 2019.

Innovations in HIV Testing, Adherence, and Retention to Optimize HIV Care Continuum Outcomes (R21) - The health and preventive benefits of treatment for HIV/AIDS, regardless of CD4 count, are now unequivocal. In the United States and globally, ambitious goals have been targeted for HIV testing, adherence, and retention in care, to optimize HIV clinical outcomes and preventive benefit. Additional tools are needed to inform the gaps and strategies that are unique to particular populations, cities, regions, and countries. Applications appropriate for this FOA could include formative basic behavioral and social science to better understand a step in the care continuum and/or multiple steps in the HIV care continuum, and initial development and pilot tests of innovative approaches for intervention. Companion Funding Opportunity is PA-17-182, R01 Research Project. Letter of Intent Due Date(s): 30 days prior to the application deadline. Application Due Date(s): Standard AIDS dates apply.

NICHD Research Education Programs (R25) - The NIH Research Education Program (R25) supports research education activities in the mission areas of the NIH. The over-arching goal of this NICHD R25 program is to support educational activities that complement and/or enhance the training of a workforce to meet the nations biomedical, behavioral and clinical research needs. Letter of Intent Due Date(s): 30 days before application due date(s). Application Due Date(s): May 25, 2017; May 25, 2018; May 25, 2019.

NIDCD Research Grants for Translating Basic Research into Clinical Tools (R01) - This Funding Opportunity Announcement (FOA) is to provide an avenue for basic scientists, clinicians and clinical scientists to jointly initiate and conduct translational research projects which translate basic research findings into clinical tools for better human health. The scope of this FOA includes a range of activities to encourage translation of basic research findings which will impact the diagnosis, treatment and prevention of communication disorders. Connection to the clinical condition must be clearly established and the outcomes of the grant must have practical clinical impact. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): October 18, 2017; June 19, 2018; February 20, 2019; October 18, 2019; June 18, 2020.

The Health and Retirement Study (U01) - The purpose of this FOA is to solicit applications for the next 6-year cycle of the Health and Retirement Study (HRS), which is the leading longitudinal data resource on patterns of age-related changes in the health and well-being of adults age 50 and older in the U.S. The goals of the next cycle are to: 1) continue the current structure and design elements of the HRS while reducing respondent burden; 2) establish a repository of blood samples for future study; 3) enrich administrative linkages and collaborations with genetics consortia; 4) conduct follow-up dementia assessment using the Harmonized Cognitive Assessment Protocol (HCAP) to update data on the prevalence of dementia including Alzheimer's Disease and related dementias (AD/ADRD); 5) enhance harmonization with comparable surveys of population aging; and 6) augment data dissemination and user support. Letter of Intent Due Date(s): April 16, 2017. Application Due Date(s): May 16, 2017.

NEI Clinical Vision Research: Resource Center Grant (UG1) - The National Eye Institute (NEI) supports investigatorinitiated clinical vision research projects, including multi-center clinical trials, human gene-transfer and stem cell therapy studies, and other complex or high-risk clinical vision research studies. These studies are typically funded as either a single grant award with multiple components (e.g., Chair's, Coordinating Center, Clinical Center, Resource Center) or as a group of linked single-component grant awards to separate institutions. This funding opportunity announcement (FOA) encourages applications for single component grant awards. Institutions interested in a multi-component grant should use the companion FOA PAR-14-096. Other companion funding opportunities are: PAR-14-097, (UG1) Clinical Research Cooperative Agreements - Single Project; PAR-14-099, (UG1) Clinical Research Cooperative Agreements -Single Project; and PAR-14-100, (UG1) Clinical Research Cooperative Agreements - Single Project. Application Due Date(s): Standard dates apply. National Cooperative Drug/Device Discovery/Development Groups (U01) - The purpose of this initiative is to: accelerate innovative drug and device discovery; develop pharmacologic and neuro-modulatory tools for basic and clinical research on mental health, substance use disorders (SUDs) or alcohol addiction; develop and validate tools (pharmacologic or neuro-stimulation) in support of experimental therapeutic studies of innovative new candidates for mental disorders; and support early stage human studies to rapidly assess the safety, tolerability, and pharmacodynamics of promising drug candidates/devices and new indications for novel Investigational New Drug (IND)-ready agents or Pre-Market Approval (PMA)-ready devices for the treatment of mental disorders, SUDs or alcohol addiction. This FOA encourages applications to advance the discovery, preclinical development, and proof of concept (PoC) testing of new, rationally based candidate agents and neuro-stimulation approaches to treat mental disorders or SUDs or alcohol addiction, and to develop novel ligands and circuit-engagement devices as tools to further characterize existing or to validate new drug/device targets. Partnerships between academia and industry are strongly encouraged. Companion Funding Opportunity is PAR-17-186, (U19) Cooperative Agreement. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): June 23, 2017; October 23, 2017; February 23, 2018; June 22, 2018; October 23, 2018; February 22, 2019; June 24, 2019; October 23, 2019; February 24, 2020.

NIMHD Specialized Centers of Excellence for Research on Minority Health and Health Disparities (U54) - This Funding Opportunity Announcement (FOA) invites applications to establish NIMHD Centers of Excellence in eligible institutions of higher education. The purpose of this initiative is to advance the science of minority health and health disparities by conducting transdisciplinary, multi-level research in a defined thematic area and by providing research opportunities and support for post-doctoral fellows, junior faculty, and other investigators. Letter of Intent Due Date(s): April 14, 2017. Application Due Date(s): May 15, 2017.

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## NASA

NASA Astrobiology Institute - Cycle 8 - The National Aeronautics and Space Administration (NASA) Science Mission Directorate is releasing a Cooperative Agreement Notice (CAN) soliciting team-based proposals for membership in the NASA Astrobiology Institute (NAI). The goal of CAN Cycle 8 is to maintain a multidisciplinary institute by selecting focused, interdisciplinary teams that complement without replicating the strengths of the continuing teams. The teams selected in Cycle 8 will replace the teams selected in Cycle 6, whose five-year Cooperative Agreements are expiring. The CAN for Cycle 8 requires that a brief Step-1 proposal be submitted on April 12, 2017, approximately six weeks after the release of the CAN. Based on a programmatic review of these Step-1 proposals, proposers will be encouraged to or discouraged from submitting a full proposal. Other changes to previous solicitations are described in section 1.7 Open Access to Research. Issuance of this CAN is dependent on programmatic factors, including NASA receiving an appropriation and operating plan containing adequate funding within the NASA Planetary Science Division budget. Any costs incurred by prospective investigators in preparing submissions in response to this CAN are incurred completely at the submitter's own risk. A preproposal conference will be held on March 10, 2017, at 11 AM Pacific Time (2 PM Eastern Time) to provide interested parties with the opportunity to better understand the intent, scope, and selection criteria of this CAN. Information about the preproposal conference will be posted at https://nai.nasa.gov/funding/can-8/. Programmatic questions regarding this solicitation should be submitted in writing or via E-mail no later than 10 days prior to the Step-2 proposal due date to: Dr. Mary Voytek Senior Scientist for Astrobiology/ NAI Program Scientist Science Mission Directorate NASA Headquarters 300 E Street SW Washington, DC 20546 Phone: (202) 358-1577 E-mail: mary.voytek-1@nasa.gov. Step-2 Proposals Due: July 6, 2017.

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## **U.S.** Department of Agriculture

Methyl Bromide Transition Program - The methyl bromide transition program addresses the immediate needs and the costs of transition that have resulted from the scheduled phase-out of the pesticide methyl bromide. Methyl bromide has been a pest and disease control tactic critical to pest management systems for decades for soil-borne and post-harvest pests. The program focuses on integrated commercial-scale research on methyl bromide alternatives and associated extension activity that will foster the adoption of these solutions. Projects should cover a broad range of new methodologies, technologies, systems, and strategies for controlling economically important pests for which methyl bromide has been the only effective pest control option. Research projects must address commodities with critical issues and include a focused economic analysis of the cost of implementing the transition on a commercial scale. Closing Date: Tuesday, April 25, 2017. Supplemental and Alternative Crops (SACC) - The Supplemental and Alternative Crops Competitive (SACC) Grants Program will support the development of canola as a viable supplemental and alternative crop in the United States. The goal of the SACC program is to significantly increase crop production and/or acreage by developing and testing of superior germplasm, improving methods of planting, cultivation, and harvesting, and transferring new knowledge to producers (via Extension) as soon as practicable. Extension, education, and communication activities related to the research areas above must be addressed in the proposal. Closing Date: Tuesday, April 11, 2017.

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### **Department of Defense**

Fiscal Year 2018 Defense University Research Instrumentation Program (DURIP) - The Department of Defense (DoD) announces the Fiscal Year 2018 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. For-profit organizations are not eligible for DURIP funding. DURIP is part of the University Research Initiative (URI). INQUIRIES AND QUESTIONS DEADLINE: Friday, June 16, 2017. Your proposal must be received no later than Friday, July 7, 2017 at 11:59 PM Eastern Daylight time.

NRL WIDE BROAD AGENCY ANNOUNCEMENT - The Naval Research Laboratory (NRL) is the Navy's corporate laboratory. NRL conducts basic and applied research for the Navy in a variety of scientific and technical disciplines. The basic research program is driven by perceptions about future requirements of the Navy. Interested offerors must first submit a white paper (WP). The purpose of a WP is to preclude unwarranted effort on the part of an offeror whose proposed work is not of interest to NRL. White papers should include information on the device type (Role 0 or Role 1), the current detection capabilities, and a statement of the offeror's R&D capabilities. Role type and detection capabilities are device use cases typically identified in our Specific (short term) BAA topics as opposed to the General BAA topics. If you are required to provide that information, instructions will be outlined in the topic summary, when applicable. Offerors of those WPs found to be consistent with the intent of the BAA may be invited to submit a formal proposal. An invitation does not assure an offeror of a subsequent contract award. If selected for a full proposal addition guidance will be provided. Submit one original of each WP to the email address listed in the topic summary. The subject of the email shall be "Subj: BAA number, Topic # and Topic Title". White papers shall be submitted in either Word or pdf format.

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