

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.

GRANT OPPORTUNITIES

Division of Science and Research

The request for proposals for the NASA WV EPSCoR and NASA WV Space Grant Consortium for the 2017-18 cycle are now available on our web page: <http://wvspacegrant.org>.

The due date for all proposals is Monday, March 6, 2017 by 11:59 PM (EST) and the anticipated start date for all successful projects is May 16, 2017.

The Global Probiotics Council (GPC), a committee established in 2004 by DANONE NUTRICIA RESEARCH and YAKULT HONSHA CO., LTD., has announced the tenth annual Young Investigator Grant for Probiotics Research (YIGPRO). The Council is again offering three grants for 2017. The purpose of these three annual grants of \$50,000 each is to support new research on probiotics and gastrointestinal microbiota in the United States. Young Investigators committed to basic research on gastrointestinal microbiota, probiotics and their role in health and wellness should apply. For information on application: <https://probioticsresearch.com>.

Young investigators who are senior fellows with a committed faculty appointment or early faculty members within a maximum of 5 consecutive years of his/her first faculty appointment (appointments must be in the United States) are eligible. Applicants must be interested in understanding the health benefits of probiotics and microbiota and the relationship between probiotics, gastrointestinal microbiota and the body. Candidates must be part of an established research program with the capacity to do research on microbiota and its role in health and disease. Applicants are limited to one submission per investigator. The deadline is **February 15, 2017**.

NSF
NIH
DOE

National Science Foundation

Data Infrastructure Building Blocks (DIBBs) - The DIBBs program encourages development of robust and shared data-centric cyberinfrastructure capabilities, to accelerate interdisciplinary and collaborative research in areas of inquiry stimulated by data. DIBBs investments enable new data-focused services, capabilities, and resources to advance scientific discoveries, collaborations, and innovations. The investments are expected to build upon, integrate with, and contribute to existing community cyberinfrastructure, serving as evaluative resources while developments in national-scale access, policy, interoperability and sustainability continue to evolve. This solicitation includes two classes of science data pilot awards: 1. Early Implementations are large "at scale" evaluations, building upon cyberinfrastructure capabilities of existing research communities or recognized community data collections, and extending those data-focused cyberinfrastructure capabilities to additional research communities and domains with broad community engagement; and 2. Pilot Demonstrations address advanced cyberinfrastructure challenges across emerging research communities, building upon recognized community data collections and disciplinary research interests, to address specific challenges in science and engineering research. Full Proposal Deadline Date: January 3, 2017.

The **Industry-University Cooperative Research Centers (IUCRC)** program develops long-term partnerships among industry, academe, and government. The Centers are catalyzed by an investment from the National Science Foundation (NSF) and are primarily supported by industry Center members, with NSF taking a supporting role in the development and evolution of the Center. Each Center is established to conduct research that is of interest to both the industry members and the Center faculty. An IUCRC contributes to the nation's research infrastructure base and enhances the intellectual capacity of the engineering and science workforce through the integration of research and education. As appropriate, an IUCRC uses international collaborations to advance these goals within the global context. Preliminary Proposal Deadline Date: January 3, 2017. Full Proposal Target Date: February 28, 2017.

In recent years, somatic cells as therapeutic agents have provided new treatment approaches for a number of pathological conditions that were deemed untreatable, or difficult to treat. Several successful cell therapies using T cells have been demonstrated for cancer and autoimmune diseases, while stem cell therapies have given relief for heart disease and stroke. Hundreds of clinical trials are ongoing to examine efficacy of cell therapies for a variety of other diseases including diabetes, Alzheimer's, Parkinson's, and Crohn's disease. Production of therapeutic cells is currently expensive and, therefore, cost prohibitive for the large number of people who might benefit from these treatments. The overarching goal of this [Advanced Biomanufacturing of Therapeutic Cells \(ABTC\)](#) solicitation is to catalyze well-integrated interdisciplinary research to understand, design, and control cell manufacturing systems and processes that will enable reproducible, cost-effective, and high-quality production of cells with predictable performance for the identified therapeutic function. Preliminary Proposal Deadline Date: January 4, 2017. Full Proposal Deadline Date: April 17, 2017 (Invited Proposal Deadline).

[Prediction of and Resilience against Extreme Events \(PREEVENTS\)](#) - PREEVENTS is designed as a logical successor to Hazards SEES and is one element of the NSF-wide Risk and Resilience activity, which has the overarching goal of improving predictability and risk assessment, and increasing resilience, in order to reduce the impact of extreme events on our life, society, and economy. PREEVENTS will provide an additional mechanism to support research and related activities that will improve our understanding of the fundamental processes underlying natural hazards and extreme events in the geosciences. PREEVENTS is focused on natural hazards and extreme events, and not on technological or deliberately human-caused hazards. The PREEVENTS portfolio will include the potential for disciplinary and multidisciplinary research at all scales, particularly aimed at areas ripe for significant near- or medium-term advances. Full Proposal Window: August 1, 2016 - January 4, 2017 for Track 1 (conferences): see proposal preparation instructions for further details.

[Research Coordination Networks \(RCN\)](#) - The goal of the RCN program is to advance a field or create new directions in research or education by supporting groups of investigators to communicate and coordinate their research, training and educational activities across disciplinary, organizational, geographic and international boundaries. RCN provides opportunities to foster new collaborations, including international partnerships, and address interdisciplinary topics. Innovative ideas for implementing novel networking strategies, collaborative technologies, and development of community standards for data and meta-data are especially encouraged. RCN awards are not meant to support existing networks; nor are they meant to support the activities of established collaborations. RCN awards do not support primary research. RCN supports the means by which investigators can share information and ideas, coordinate ongoing or planned research activities, foster synthesis and new collaborations, develop community standards, and in other ways advance science and education through communication and sharing of ideas. Proposed networking activities directed to the RCN program should focus on a theme to give coherence to the collaboration, such as a broad research question or particular technologies or approaches. Full Proposal Accepted Anytime (General (non-targeted) RCN proposals should be submitted to a particular program according to the program's submission dates.) PIs are encouraged (for CISE required) to discuss suitability of an RCN topic with the P.O.s that manage the appropriate program. Proposal Due Date: January 4, 2017 for RCN UBE & UBE Incubator Track.

The [Petrology and Geochemistry Program](#) supports basic research on the formation of planet Earth, including its accretion, early differentiation, and subsequent petrologic and geochemical modification via igneous and metamorphic processes. Proposals in this program generally address the petrology and high-temperature geochemistry of igneous and metamorphic rocks (including mantle samples), mineral physics, economic geology, and volcanology. Proposals that are focused on the development of analytical tools, theoretical and computational models, and experimental techniques for applications by the igneous and metamorphic petrology, and high temperature geochemistry and geochronology communities are also invited. Full Proposal Target Date: January 9, 2017.

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National Institutes of Health

[NCI Research Specialist \(Core-based Scientist\) Award \(R50\)](#) - This Funding Opportunity Announcement (FOA) invites grant applications for the Research Specialist Award (R50) in any area of NCI-funded cancer research. This FOA is specifically for core/shared resource/central scientific support scientists. Companion Funding Opportunity is [PAR-17-049, R50 Research Specialist Award](#). Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date is February 2, 2017.

[Interdisciplinary Research to Understand the Complex Biology of Resilience to Alzheimer's Disease Risk \(R01\)](#) -

This funding opportunity announcement invites comprehensive, cross-disciplinary studies aimed at building predictive molecular models of cognitive resilience based on high-dimensional molecular data collected in individuals who remain free of dementia despite being at high risk for Alzheimer's disease. Application Due Date is February 21, 2017.

Phylogenetic Tracking of HIV Transmission (R01) - The purpose of this Funding Opportunity Announcement (FOA) is to support interdisciplinary research collaborations to study and optimize approaches using phylogenetic analyses of HIV genotyping databases to monitor HIV transmission networks in near real-time. The long-range goal is to leverage existing databases and support innovations in HIV phylogenetics to better inform testing, treatment, and prevention efforts. Letter of Intent Due Date(s): 30 days before the application due date. Application Due Date(s): March 15, 2017; March 15, 2018; March 15, 2019.

Global Non-communicable Diseases and Injury Across the Lifespan: Exploratory Research (R21) - This Funding Opportunity Announcement (FOA) supports planning, design and initial pilots for locally relevant and catalytic research on non-communicable diseases (NCDs) or injury in low and middle-income countries (LMICs). Research addressing multiple NCDs and their risk factors and research addressing NCDs as comorbidities for/with infectious diseases including HIV/AIDS is encouraged. Scientists in the United States (U.S.) or upper middle income countries (UMICs) are eligible to partner with scientists in LMIC institutions. Income categories used are defined by the World Bank at <http://data.worldbank.org/about/country-classifications/country-and-lending-groups>. Pilot activities and research are expected to inform the development of more comprehensive research programs that contribute to the long-term goals of building sustainable research capacity in LMICs to address NCDs and injury throughout life and to lead to diagnostics, prevention, treatment and implementation strategies. The proposed work may also contribute to developing a base for research networking and evidence-based policy beyond the specific research project. For applications on any research topic related to the brain, nervous system, mental health and substance abuse please see the companion FOA: **PAR-14-331 Global brain and nervous system disorders research across the lifespan (R21)**. Applications on those topics are not appropriate for this FOA. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): February 22, 2017; December 14, 2017.

NICHD Genomic Clinical Variant Expert Curation Panels (U24) - The objective of this FOA is to establish expert panels that will select genes and genomic variants associated with diseases or conditions of high priority to NICHD and systematically determine their clinical significance and utility for diagnosis and treatment of these diseases or conditions. The Genomic Clinical Variant Expert Curation Panels funded through this FOA are expected to utilize the NHGRI Clinical Genomics Resource (ClinGen) and the NCBI ClinVar tools and informatics infrastructure to determine the strength of evidence supporting the clinical significance or actionability of the selected genes and variants that will support development of clinical practice guidelines. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date is January 10, 2017.

Advanced Development and Validation of Emerging Biospecimen Science Technologies for Basic and Clinical Cancer Research (R33) - This Funding Opportunity Announcement (FOA) solicits grant applications proposing exploratory research projects focused on further development and validation of emerging technologies that improve the quality of the samples used for cancer research or clinical care. This includes new capabilities to address issues related to pre-analytical degradation of targeted analytes during the collection, processing, handling, and/or storage of cancer-relevant biospecimens. This FOA solicits R33 applications where major feasibility gaps for the technology or methodology have been overcome, as demonstrated with supportive preliminary data, but still requires further development and rigorous validation to encourage adoption by the research community. The overall goal is to support the development of highly innovative technologies capable of maximizing or otherwise interrogating the quality and utility of biological samples used for downstream analyses. This FOA will support the development of tools, devices, instrumentation, and associated methods to preserve or protect sample integrity, or establish verification criteria for quality assessment/quality control and handling under diverse conditions. These technologies are expected to accelerate and/or enhance research in cancer biology, early detection and screening, clinical diagnosis, treatment, epidemiology, or address issues associated with cancer health disparities, by reducing pre-analytical variations that affect biospecimen sample quality. This funding opportunity is part of a broader NCI-sponsored Innovative Molecular Analysis Technologies (IMAT) Program. Companion Funding Opportunities are: **RFA-CA-17-010, R21 Exploratory/Developmental Grant**; **RFA-CA-17-011, R33 Exploratory/Developmental Grant II**; and **RFA-CA-17-012, R21 Exploratory/Developmental Grant**. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): February 28, 2017; May 26, 2017; September 26, 2017.

Research Career Enhancement Award to Advance Therapy Development for Alzheimer's (K18) - This NIA Research Career Enhancement Award (K18) program invites applications from qualified researchers to acquire training and career development experiences that close expertise gaps in data science and in drug discovery. The goal of the

program is to allow Alzheimer's Disease (AD) researchers to expand their expertise to become more effective in leading cross-disciplinary, translational, team-science projects in AD or AD-related dementias (ADRD). This award will also allow data scientists to redirect their expertise toward the study of AD and ADRD. Application Due Date(s): [Standard dates](#) apply.

[Post-baccalaureate Research Education Program \(PREP\) \(R25\)](#) - The NIH Research Education Program (R25) supports research education activities in the mission areas of the NIH. The over-arching goal of this NIGMS R25 program is to support educational activities that enhance the diversity of the biomedical, behavioral and clinical research workforce. To accomplish the stated over-arching goal, this FOA will support creative educational activities with a primary focus on Research Experiences and Courses for Skills Development. Applications are encouraged from research-intensive institutions that propose to equip recent baccalaureate science graduates from diverse backgrounds underrepresented in biomedical sciences with the necessary knowledge and skills to pursue Ph.D. degrees in these fields. The program provides support for extensive research experiences and well-designed courses for skills development aimed at preparing individuals from underrepresented backgrounds to complete doctoral degrees. Application Due Date(s): January 24, 2017; January 24, 2018; January 24, 2019.

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Department of Energy

This [Biological and Environmental Research/Advanced Scientific Computing Research \(BER-ASCR\) Scientific Discovery Thru Advanced Computing \(SciDAC\) Partnership](#) FOA will enable scientists to conduct complex scientific and engineering computations at a level of fidelity needed to simulate real-world climate conditions, by supporting deep, necessary, and productive collaborations between climate scientists on the one hand and applied mathematicians and computer scientists on the other, that overcome the barriers between these disciplines and consequently fully exploit the capabilities of Department of Energy (DOE) High Performance Computing (HPC) systems in order to accelerate advances in climate science. This SciDAC opportunity targets three particular topics of high-priority for DOE climate research that are expected to be transformed by effective climate-computational partnerships: the development of new and innovative methods to predict sea-level change; the development of a theoretical-statistical-numerical framework to improve climate prediction; and the development of improved methods for model component coupling. The next-generation climate model capabilities will contribute to the newly launched Accelerated Climate Model for Energy (ACME) and further its progress toward design of climate codes for leadership class computers and in support of energy science and mission requirements. Companion Announcement: http://science.energy.gov/~media/grants/pdf/lab-announcements/2017/LAB_17-1681.pdf. Pre-Proposal Due Date: 01/17/2017 at 5 PM Eastern Time (A Pre-Proposal is required). Encourage/Discourage Date: 01/20/2017 at 5 PM Eastern Time. Proposal Due Date: 03/15/2017 at 11:59 PM Eastern Time.

[Plant Feedstocks Genomics for Bioenergy: A Joint Research Funding Opportunity Announcement USDA, DOE](#) - This Biological and Environmental Research/Advanced Scientific Computing Research (BER-ASCR) Scientific Discovery Thru Advanced Computing (SciDAC) Partnership FOA will enable scientists to conduct complex scientific and engineering computations at a level of fidelity needed to simulate real-world climate conditions, by supporting deep, necessary, and productive collaborations between climate scientists on the one hand and applied mathematicians and computer scientists on the other, that overcome the barriers between these disciplines and consequently fully exploit the capabilities of Department of Energy (DOE) High Performance Computing (HPC) systems in order to accelerate advances in climate science. This SciDAC opportunity targets three particular topics of high-priority for DOE climate research that are expected to be transformed by effective climate-computational partnerships: the development of new and innovative methods to predict sea-level change; the development of a theoretical-statistical-numerical framework to improve climate prediction; and the development of improved methods for model component coupling. The next-generation climate model capabilities will contribute to the newly launched Accelerated Climate Model for Energy (ACME) and further its progress toward design of climate codes for leadership class computers and in support of energy science and mission requirements. Pre-Application Due Date: 12/07/2016 at 5 PM Eastern Time (A Pre-Application is required). Encourage/Discourage Date: 12/21/2016 at 5 PM Eastern Time. Application Due Date: 02/15/2017 at 11:59 PM Eastern Time.

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