Science, Research .: WVEPSCOR

GRANT OPPORTUNITIES

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.

WV continues to recover from the recent flooding, we will be identifying many needs, some essential to health and life and others less significant but still key for bringing us back to normalcy. One of those will be the **replacement of chemistry and science labs and equipment in K-12 schools where science labs have been destroyed.**

Mike Fultz, a chemistry professor at WV State University (WVSU), is spearheading an effort with the Charleston section of the American Chemistry Society to help in that regard. The Chemical Alliance Zone fully supports and will aid in this effort. Thus, if you are with a company or college and are about to update electronic balances, stir plates, glassware, or other equipment, or if you have stockpiles of glassware or other typical equipment ... even lab furniture, filing cabinets, etc..., please let us know. Mike will collect and inventory equipment and supplies. Please make sure any used materials are clean and in good condition. Cash donations from individuals and companies are also welcome (tax deductible through the local ACS or WVSU Foundation).

If you are able to donate supplies, equipment or dollars to this effort, please contact Mike (mfultz@wystateu.edu)

NSF NIH DOD NASA

National Science Foundation

The LIGO Research Support program oversees the commissioning and operation of the Laser Interferometer Gravity Wave Observatory (LIGO), and provides support for LIGO users and other experimental investigations in gravitational physics and related areas. This includes tasks that range from instrument science, data analysis and detector characterization to source population calculations and the connection between the gravitational waves and the electromagnetic and neutrino signatures of astrophysical events. In addition, the program supports infrastructure activities such as short- and long-term visitor programs, workshops, and research centers involving the participation of external scientists from universities, national laboratories, and industry, as well as graduate students and postdoctoral fellows. Full Proposal Deadline Date: October 26, 2016.

The Particle Astrophysics – Experiment program is organized into the following subareas: Particle Astrophysics – <u>Cosmic Phenomena (1643)</u>: This area supports university research that uses astrophysical sources and particle physics techniques to study fundamental physics. This includes astrophysical sources of gamma-rays, cosmic-rays, and neutrinos (except IceCube). Particle Astrophysics – Underground Physics (7235): This area supports university research that locates experiments in low background environments. Currently funded activities include studies of solar, underground, and reactor neutrinos; neutrino mass measurements; searches for the direct detection of Dark Matter. Particle Astrophysics – IceCube Research Support (011Y): This area supports university research that utilizes the facilities of IceCube at the South Pole. Currently supported activities include: searches for ultra-high energy neutrinos and studies of the properties of neutrinos. Proposals should be submitted to the program that are determined to be more complex may, at the discretion of the Program Officer, be subjected to an additional level of review. Full Proposal Deadline Date: October 26, 2016.

The program "Physics of Living Systems" (PoLS) targets synergy of theoretical and experimental research exploring the most fundamental physical processes that living

systems utilize to perform their functions in dynamic and diverse environments. The focus of the research proposals should be on understanding basic physical principles that underlie biological function. Proposals that use physics equipment only as a tool to study biological questions are of VERY low priority. PoLS encourages research that emphasizes the physical principles of organization and function of living systems, including the exploration of artificial life forms and how life began. While the problems under study must be important to advancing our understanding of the living world in a quantitative way, particular emphasis will be placed on those projects in which lessons learned from the biological application also expand the intellectual range of physics. Full Proposal Deadline Date: October 26, 2016.

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National Institutes of Health

Biological Comparisons in Patient-Derived Models of Cancer (U01) - The purpose of this FOA is to encourage applications wherein similarities and differences in the underlying biological mechanisms that drive cancer phenotype and response to perturbations between two or more patient-derived models of cancer originating from a common patient sample are delineated and compared. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): September 14, 2016; March 1, 2017; September 6, 2017; March 7, 2018; September 6, 2018; March 6, 2019.

Initiative to Maximize Research Education in Genomics: Diversity Action Plan (R25) - This FOA will support creative educational activities with a primary focus on Research Experiences based on the foundational sciences relevant to genomics: genomic sciences (e.g. computational biology, quantitative sciences, bioinformatics and technology development); genomic medicine (e.g. biostatistics, epidemiology, bioinformatics); and genomics and society (e.g. bioethics, social and behavioral sciences, law, the humanities) and Courses for Skills Development appropriate for the career level and proposed outcome for the activity. Complementary didactic activities are also encouraged, especially those academic courses in the foundational sciences that have the potential to increase opportunities for success at the next academic level. Courses are limited to those that are an integral part of the academic preparedness for a formal academic program such as GRE courses and foundational courses in the relevant areas listed above to prepare participants for graduate school. Letter of Intent Due Date(s): 30 days before application due date. Application Due Date(s): Standard dates apply.

NIDCD Research Career Enhancement Award for Established Investigators (K18) - The purpose of the NIDCD Research Career Enhancement Award for Established Investigators (K18) program is to enable established, proven investigators to augment or redirect their research programs through the acquisition of new research skills to answer questions relevant to the hearing, balance, smell, taste, voice, speech and language sciences. Application Due Date(s): October 7, 2016; February 8, 2017; June 8, 2017; October 6, 2017; February 8, 2018; June 8, 2018; October 9, 2018; February 8, 2019; and June 6, 2019.

HIV/AIDS Vaccine Scholars Program (K01) - The purpose of this NIH Mentored Research Scientist Development Award (K01) is to provide salary and research support to investigators who are within ten years of completing their degree or residency training. Research and mentorship must be in the field of HIV/AIDS vaccine development, using nonhuman primates (NHPs) as pre-clinical models. These awards will provide 3 years of support for intensive research career development under the guidance of an experienced mentorship team, with expertise in both development of NHP vaccine models and in translation of the results of investigations performed in NHPs to work in humans. The expectation is through this sustained period of research career development and training, awardees will launch independent research careers and become competitive for new research project grant (e.g., R01) funding. This funding initiative addresses two objectives of the FY 2017 National Institutes of Health Trans-NIH Plan for HIV-Related Research: 1) To develop active and passive HIV/AIDS vaccines, and 2) To promote and support training related to HIV/AIDS. Application Due Date(s): January 11, 2017 and January 11, 2018.

SBIR E-learning for HAZMAT and Emergency Response (R43/R44) - This Funding Opportunity Announcement (FOA) encourages Small Business Innovation Research (SBIR) grant applications from small business concerns (SBCs) that propose to further the development of Advanced Technology Training (ATT) products for the health and safety training of hazardous materials (HAZMAT) workers; skilled support personnel; emergency responders in biosafety response, infectious disease training and cleanup; emergency responders in disasters and resiliency training; and for ATT tools to assist in research into the acute and long-term health effects of environmental disaster. This also includes the training of workers engaged in environmental restoration, waste treatment, and emergency response activities at sites in the U.S. Department of Energy (DOE) nuclear weapons complex. ATT as defined by the Worker Training Program (WTP) includes, but is not limited to, online training, virtual reality, serious gaming, and tools that complement all aspects of training from development to evaluation including advance technologies that enhance, supplement, improve, and provide health and safety training for hazardous materials workers. These products would complement the goals and objectives of the WTP http://www.niehs.nih.gov/careers/hazmat/about_wetp/.The major objective of the NIEHS WTP is to prevent work-related harm by assisting in the training of workers in how best to protect themselves and their communities from exposure to hazardous materials. Letter of Intent Due Date is July 29, 2016. Application Due Date is August 29, 2016.

NHLBI Research Career Development Programs in T4 Implementation Research (K12) - This funding opportunity announcement (FOA) encourages applications for institutional research career development (K12) programs that propose to support mentored research and career development experiences for scholars prepared to address the complex process of bridging research and practice in a variety of real-world settings with a focus on heart, lung, blood, and sleep (HLBS) diseases and conditions. The career development opportunity should lead to research independence in the area of late stage translation (T4) research. Scholars are expected to be supported, depending on needs, for up to 3 years on consecutive 12-month appointments. Candidates selected for support as scholars must hold a research or health-professional doctoral degree and commit a minimum of 9 person-months (equivalent to 75% of full-time professional effort) to conducting dissemination and implementation research focused on HLBS disorders and career development activities associated with the proposed program. Letter of Intent Due Date is September 13, 2016. Application Due Date is October 13, 2016.

New Informatics Tools and Methods to Enhance US Cancer Surveillance and Research (UG3/UH3) - The goal of this Funding Opportunity Announcement (FOA) is to advance surveillance science by supporting the development of new and innovative tools and methods for more efficient, detailed, timely, and accurate data collection by cancer registries. Specifically, the FOA seeks applications for projects to develop, adapt, apply, scale-up, and validate tools and methods to improve the collection and integration cancer registry data and to expand the data items collected. Applications must be built on partnership with U.S. population-based central cancer registries (a partnership must involve at least two different registries). Tools and methods proposed for development are expected to enhance the registry core infrastructure and, in so doing, expand the usefulness of registry-collected data to support high-quality cancer research. Letter of I ntent Due Date(s): 30 days prior to the application due date. Application Due Date(s): October 14, 2016; April 14, 2017; November 30, 2017; April 16, 2018; November 30, 2018; April 16, 2019.

Small Research Grants for Analyses of Data for the Gabriella Miller Kids First Data Resource (RO3) - The NIH Common Fund has established the Gabriella Miller Kids First Pediatric Research Program (Kids First) to develop a pediatric research data resource populated by genome sequence and phenotype data that will be of high value for the communities of investigators who study the genetics of childhood cancers and/or structural birth defects. The overall goal of the Gabriella Miller Kids First Pediatric Data Resource is to help researchers understand the underlying mechanisms of these conditions, leading to more refined diagnostic capabilities and ultimately more targeted therapies, as well as to develop an integrated pediatric research data resource by obtaining and aggregating genome sequence and phenotype data for as many relevant structural birth defects and pediatric cancer cohorts as possible and to advance research in this area through the broad sharing of these data with the research community. This FOA is intended to promote meritorious small research projects focused on the development and analyses of childhood cancer and/or structural birth defects datasets that are part of the Kids First Data Resource or could be included in the Kids First Data Resource. Development of statistical methodology appropriate for analyzing genome-wide data relevant to childhood cancer and/or structural birth defects may also be proposed. Application Due Date(s): Standard dates apply.

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Department of Defense

Dispersed Computing - DARPA is soliciting innovative research proposals in the area of algorithms and protocols for mission-aware computation and communication across broad-scale, physically dispersed computing infrastructure. Proposed research should investigate innovative approaches that enable revolutionary advances in science, devices, or systems. Specifically excluded is research that primarily results in evolutionary improvements to the existing state of practice. Proposers' Day: June 30, 2016. Proposal Due Date: September 7, 2016, 12:00 noon (ET). BAA Closing Date: September 7, 2016, 12:00 noon (ET).

DoD Peer-Reviewed Cancer Horizon Award - The Horizon Award supports junior-level scientists in conducting impactful research with the mentorship of an experienced cancer researcher (i.e., Mentor). The Horizon Award challenges junior scientists to develop and implement research in the cancer field. This opportunity allows for junior investigators to develop a research project, investigate a problem or question in the field of cancer, and further their intellectual development as a cancer researcher of the future. Under this award mechanism, the junior investigator is considered the Principal Investigator (PI), and the application should focus on the PI's research and career development. It should be clear that the proposed research is intellectually designed by the PI with assistance from the Mentor. **Preliminary data are not required. However, logical reasoning and a sound scientific rationale for the proposed research must be demonstrated. Clinical trials will not be supported by this mechanism. Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), August 17, 2016. Confidential Letters of Recommendation Submission Deadline: 5:00 p.m. ET, October 3, 2016. Application Submission Deadline: 11:59 p.m. ET, September 28, 2016.**

Funding Opportunity Announcement from the Office of Naval Research (ONR) Navy and Marine Corps FY2016 for the HEL-JTO High Energy Laser Multidisciplinary Research Initiative (HEL-MRI) Program (click Related Documents tab) - The ONR is interested in receiving proposals for basic research relating to the following thrust areas: Thrust Area #1: Next Generation High Energy Laser Technologies Thrust Area #2: High-Power Propagation through Deep Turbulence Thrust Area #3: Next Generation Beam Combination Techniques Thrust Area #4: Modeling of the Lower Atmosphere Thrust Area #5: Low Stress Coatings for HEL Deformable Mirrors Thrust Area #6: Materials Development for High Energy Laser Systems. Questions due: 27 July 2016 (Wednesday) 3:00 PM Eastern Daylight Time. Full Proposals due: 29 August 2016 (Monday) 11:59 PM Eastern Daylight Time.

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NASA

ROSES 2016: Studies with IceSat and CryoSat -2 - The primary goal of this program is to continue the use of satellite altimetry for the study of polar ice sheets. These measurements are expected to improve knowledge of the contribution of Greenland and Antarctica's ice sheets to current and future sea level rise and to determine the coupling of changes in polar sea ice to the Earth system. Investigations must be based on observations made by ICESat, CryoSat-2, and ICESat-2 as well as exploit the complementary nature of these missions to produce extended records. Proposers are also encouraged to use IceBridge measurements to connect and fill gaps between ICESat and CryoSat-2 and establish pathways to link these time series to ICESat-2. Scientific studies based on ICESat, CryoSat-2, and ICESat-2 observations outside of the polar ice sheets are encouraged, but will also be considered at a lower priority. ICESAT2-16 Proposals Due by Aug 05, 2016.

ROSES 2016: IceBridge Science Team - The proposals solicited here are to support participation in the IceBridge Science Team, which provides expert scientific guidance to the IceBridge project that aids in mission planning. To fulfill that role, proposals must include the following sections: 1) the PI's role as a team member; 2) a small research program based on IceBridge altimetry measurements that supports mission planning and bridging ICESat and ICESat-2; and 3) an optional team leader section. Details on each section are discussed below. Proposals are encouraged from researchers at any stage in their career, as well as modelers actively using IceBridge data. Proposals from international scientists with related research interests will be considered at no cost to the program. ICEBST16 NOIs Due by Aug 01, 2016. ICEBST16 Proposals Due by Sep 19, 2016.

ROSES 2016: Mars Data Analysis - The objective of the Mars Data Analysis Program (MDAP) is to enhance the scientific return from missions to Mars conducted by NASA and other space agencies. These include, but are not limited to, the following missions: Mars Pathfinder (MPF), Mars Global Surveyor (MGS), Mars Odyssey (MO), Mars Exploration Rovers (MERs), Mars Express (MEX), Mars Reconnaissance Orbiter (MRO), Phoenix (PHX), Mars Science Laboratory (MSL), and Mars Atmosphere and Volatile EvolutioN (MAVEN). Any proposal may incorporate the investigation of data from more than one mission. Additional information about these missions, as well as references containing preliminary science results, can be found on the Mars Exploration Program (MEP) homepage at: http://mars.jpl.nasa.gov/. MDAP broadens scientific participation in the analysis of mission data sets and funds high-priority areas of research that support planning for future Mars missions. Investigations that use data derived from other sources (e.g., ground-based radar, Hubble) will also

be considered. MDAP supports scientific investigations of Mars using publicly available (released) data. Investigations submitted to this program must demonstrate how the research to be undertaken will directly improve our understanding of open science questions at Mars relevant to current hypotheses. Tasks responsive to this call include 1) data analysis tasks, 2) nondata-analysis tasks that are necessary to analyze or interpret the data, and 3) nondata-analysis tasks that significantly enhance the use or facilitate the interpretation of mission data. These tasks may incorporate theory, modeling, laboratory studies, correlative analyses, and/or other research. Proposals that include nondata-analysis tasks to enhance the use or facilitate the interpretation of mission data must incorporate the results of such tasks in the analysis or interpretation of mission data to be responsive to this call. MDAP does not support field studies or the acquisition of new astronomical observations. Step-1 proposals are due August 26, 2016, and Step-2 proposals are due by October 28, 2016.

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