West Virginia Science & Research :: WVEPSCOR

GRANT OPPORTUNITIES ALERT

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.

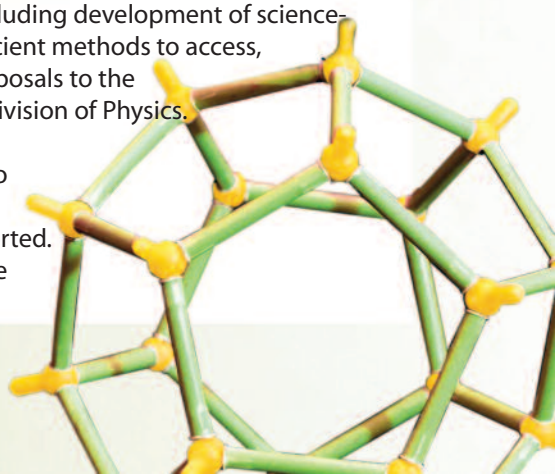
NSF
NIH
DOD
DOE
NASA
USDA
NIST

National Science Foundation

The Alliances for Graduate Education and the Professoriate (AGEP) program seeks to advance knowledge about models to improve pathways to the professoriate and success for historically underrepresented minority doctoral students, postdoctoral fellows and faculty, particularly African Americans, Hispanic Americans, American Indians, Alaska Natives, Native Hawaiians, and Native Pacific Islanders, in specific STEM disciplines and/or STEM education research fields. New and innovative models are encouraged, as are models that reproduce and/or replicate existing evidence-based alliances in significantly different disciplines, institutions, and participant cohorts. The AGEP program goal is to increase the number of historically underrepresented minority faculty, in specific STEM disciplines and STEM education research fields, by advancing knowledge about pathways to career success. The program objectives include: To support the development, implementation and study of innovative models of doctoral education, postdoctoral training, and faculty advancement for historically underrepresented minorities in specific STEM disciplines and/or STEM education research fields; and to advance knowledge about the underlying issues, policies and practices that have an impact on the participation, transitions and advancement of historically underrepresented minorities in the STEM academy. Full Proposal Deadline Date: December 9, 2016.

Computational and Data-Enabled Science and Engineering (CDS&E) - The CDS&E program welcomes proposals in any area of research supported through the participating divisions that address at least one of the following criteria: Promote the creation, development, and application of the next generation of mathematical, computational and statistical theories and tools that are essential for addressing the challenges presented to the scientific and engineering communities by the ever-expanding role of computational modeling and simulation and the explosion and production of digital experimental and observational data; Promote and encourage integrated research projects that create, develop and apply novel computational, mathematical and statistical methods, algorithms, software, data curation, analysis, visualization and mining tools to address major, heretofore intractable questions in core science and engineering disciplines, including large-scale simulations and analysis of large and heterogeneous collections of data; Encourage adventurous ideas that generate new paradigms and that create and apply novel techniques, generating and utilizing digital data in innovative ways to complement or dramatically enhance traditional computational, experimental, observational, and theoretical tools for scientific discovery and application; and Encourage ideas at the interface between scientific frameworks, computing capability, measurements and physical systems that enable advances well beyond the expected natural progression of individual activities, including development of science-driven algorithms to address pivotal problems in science and engineering and efficient methods to access, mine, and utilize large data sets. DUE DATES: November 25 - December 9 for all proposals to the Division of Mathematical Sciences; and December 1, 2016 for all proposals to the Division of Physics.

The Geophysics Program supports basic research in the physics of the solid earth to explore its composition, structure, and processes from the Earth's surface to its' deepest interior. Laboratory, field, theoretical, and computational studies are supported. Topics include (but are not limited to) seismicity, seismic wave propagation, and the nature and occurrence of geophysical hazards; the Earth's magnetic, gravity, and



electrical fields; the Earth's thermal structure; and geodynamics. Supported research also includes geophysical studies of active deformation, including geodesy, and theoretical and experimental studies of the properties and behavior of Earth materials. Full Proposal Target Date: December 9, 2016.

IUSE/Professional Formation of Engineers: REvolutionizing engineering and computer science Departments (IUSE/PFE: RED) - In FY 2017, NSF is continuing a program aligned with the Improving Undergraduate STEM Education (IUSE) framework: REvolutionizing engineering and computer science Departments. This funding opportunity enables engineering and computer science departments to lead the nation by successfully achieving significant sustainable changes necessary to overcome longstanding issues in their undergraduate programs and educate inclusive communities of engineering and computer science students prepared to solve 21st-century challenges. In 2014, ENG launched an initiative, the Professional Formation of Engineers (PFE), to create and support an innovative and inclusive engineering profession for the 21st century. At the same time, in 2014, NSF launched the agency-wide Improving Undergraduate STEM Education (IUSE) framework, which is a comprehensive effort to accelerate improvements in the quality and effectiveness of undergraduate education in all STEM fields. The RED program was first offered in FY 2015 as a PFE initiative aligned with the IUSE framework. Additional programs have been created within the IUSE framework across NSF, such as the IUSE: EHR program within EHR. Letter of Intent Deadline Date: December 9, 2016. Full Proposal Deadline Date: January 18, 2017.

The NSF Research Traineeship (NRT) program is designed to encourage the development and implementation of bold, new, and potentially transformative models for STEM graduate education training. The NRT program seeks proposals that ensure that graduate students in research-based master's and doctoral degree programs develop the skills, knowledge, and competencies needed to pursue a range of STEM careers. The NRT program includes two tracks: the Traineeship Track and the Innovations in Graduate Education (IGE) Track. Letter of Intent Deadline Date: December 9, 2016. Full Proposal Deadline Date: February 7, 2017.

Solar, Heliospheric, and INterplanetary Environment (SHINE) - The solar and heliospheric research communities are dedicated to promoting enhanced understanding of, and predictive capabilities for, solar disturbances that propagate to the Earth. Broad-based, grass-roots associations such as SHINE have developed to focus community effort on these scientific questions. Proposals are solicited for research directly related to topics under consideration and discussion at community workshops organized by SHINE. Information on the current activities of SHINE may be found at the following web site: http://www.shinecon.org. Full Proposal Deadline Date: December 14, 2016.

The CyberCorps(R): Scholarship for Service (SFS) program seeks proposals that address cybersecurity education and workforce development. The Scholarship Track provides funding to award scholarships to students in cybersecurity. All scholarship recipients must work after graduation for a Federal, State, Local, or Tribal Government organization in a position related to cybersecurity for a period equal to the length of the scholarship. A proposing institution must provide clearly documented evidence of a strong existing academic program in cybersecurity. Such evidence can include: designation by the National Security Agency and the Department of Homeland Security as a Center of Academic Excellence in Information Assurance Education/Cyber Defense (CAE IA/CD), in Cyber Operations or in Research (CAE-R); a specialized designation by a nationally recognized organization (for example, in forensics); or equivalent evidence documenting a strong program in cybersecurity. Full Proposal Window: December 1, 2016 - December 15, 2016.

In order to jumpstart a national innovation ecosystem, NSF has established the NSF Innovation Corps Teams Program (NSF I-Corps Teams). The NSF I-Corps Teams purpose is to identify NSF-funded researchers who will receive additional support - in the form of mentoring and funding - to accelerate innovation that can attract subsequent third-party funding. The purpose of the NSF I-Corps Teams grant is to give the project team access to resources to help determine the readiness to transition technology developed by previously-funded or currently-funded NSF projects. The outcomes of I-Corps Teams projects will be threefold: 1) a clear go or no go decision regarding viability of products and services, 2) should the decision be to move the effort forward, a transition plan for those projects to move forward, and 3) a technology demonstration for potential partners. Full Proposal Window(s): October 1, 2016 - December 15, 2016 and January 1, 2017 - March 15, 2017.

The NSF/Intel Partnership on Computer Assisted Programming for Heterogeneous Architectures (CAPA) aims to address the problem of effective software development for diverse hardware architectures through groundbreaking university

research that will lead to a significant, measurable leap in software development productivity by partially or fully automating software development tasks that are currently performed by humans. The main research objectives for CAPA include programmer effectiveness, performance portability, and performance predictability. In order to address these objectives, CAPA seeks research proposals that explore (1) programming abstractions and/or methodologies that separate performance-related aspects of program design from how they are implemented; (2) program synthesis and machine learning approaches for automatic software construction that are demonstrably correct; (3) advanced hardware-based cost models and abstractions to support multi-target code generation and performance predictability for specified heterogeneous hardware architectures; and (4) integration of research results into principled software development practices. Full Proposal Window: December 8, 2016 - December 15, 2016.

The goals of the Secure and Trustworthy Cyberspace (SaTC) program are aligned with the Federal Cybersecurity Research and Development Strategic Plan (RDSP) and the National Privacy Research Strategy (NPRS) to protect and preserve the growing social and economic benefits of cyber systems while ensuring security and privacy. The RDSP identified six areas critical to successful cybersecurity R&D: (1) scientific foundations; (2) risk management; (3) human aspects; (4) transitioning successful research into practice; (5) workforce development; and (6) enhancing the research infrastructure. The NPRS, which complements the RDSP, identifies a framework for privacy research, anchored in characterizing privacy expectations, understanding privacy violations, engineering privacy-protecting systems, and recovering from privacy violations. In alignment with the objectives in both strategic plans, the SaTC program takes an interdisciplinary, comprehensive and holistic approach to cybersecurity research, development, and education, and encourages the transition of promising research ideas into practice. December 1 - December 15 for CYBERSECURITY EDUCATION Projects.

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National Institutes of Health

HIV, HCV and Related Comorbidities in Rural Communities Affected by Opioid Injection Drug Epidemics in the United States: Building Systems for Prevention, Treatment and Control (UG3/UH3) - This FOA will support biphasic (i.e., two stage, multi-method) research projects that inform community response and promote comprehensive, integrated approaches to prevent HIV and hepatitis C virus (HCV) infection, along with associated comorbidities such as hepatitis B virus (HBV) infection and sexually transmitted diseases (STDs), among people who inject drugs (PWID) in rural US communities. Opioid injection and its consequences (e.g., HIV, HCV, HBV, STDs and overdose) are the primary foci here. These projects should yield evidence of the effectiveness of community response models and best practices in responding to opioid injection epidemics that can be implemented by public health systems in similar rural communities in the US. Companion Funding Opportunity is RFA-DA-17-023, U24 Resource-Related Research Projects--Cooperative Agreements. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date is January 10, 2017.

Secondary Analyses of Existing Datasets in Heart, Lung, and Blood Diseases and Sleep Disorders (R21) - The goal of this funding opportunity is to stimulate the use of existing human datasets for well-focused secondary analyses to investigate novel scientific ideas or new models, systems, tools, methods, or technologies that have the potential for significant impact on biomedical or bio-behavioral research in areas relevant to the NHLBI mission. This FOA actively supports the use of existing database resources to conduct additional analyses secondary to a project's originally-intended primary purpose. Applications may be related to, but must be distinct from, the specific aims of the original data collection; it will not support the collection of new data. Application Due Date(s): New applications: February 24, 2017; February 23, 2018; February 22, 2019. Resubmission Applications: October 30, 2017; October 30, 2018; October 30, 2019.

This FOA encourages grant applications for national Animal Model, and Animal and Biological Material Resource Centers (P40). These Centers provide support for special colonies of laboratory animals, as well as other resources such as reagents, cultures (cells, tissues, and organs) and genetic stocks that serve the biomedical research community. The resource centers for Animal and Biological Materials collect, maintain, characterize, and distribute defined strains of animals and/or related biological materials to biomedical investigators in a variety of research areas on a local, regional, national and international basis. This funding opportunity is designed to both support continuation of existing resources, and to develop new ones when appropriate. Prior to preparing an application, all applicants are strongly encouraged to consult with Program staff to be advised on appropriateness of the intended resource plans for this program, competitiveness of a potential application and ORIP's program priorities. Application Due Date(s): Standard dates apply.

In-Depth Phenotyping and Research Using IMPC-Generated Knockout Mouse Strains Exhibiting Embryonic or Perinatal Lethality or Sub-viability (R01) - The purpose of this Funding Opportunity Announcement (FOA) is to encourage applications to phenotype and/or perform research on embryonic lethal knockout (KO) mouse strains being generated through the International Mouse Phenotyping Consortium (IMPC) of which the NIH Knockout Mouse Phenotyping Program (KOMP2) is a member. The KOMP2 KO mouse phenotyping effort has generated 2,500 mouse strains with plans to generate an additional 6,000 over the next five years. Overall, the IMPC hopes to achieve broad-based phenotyping of 20,000 KO strains. About 30% of these strains either are or are expected to be embryonic or perinatal lethal or sub-viable. A large portion of homozygous lethal mutations are expected to have viable heterozygous phenotypes. The scientific community has the unique opportunity to leverage these mouse strains while they are being created and bred as part of the IMPC adult mouse phenotyping effort to perform additional in depth phenotyping and research. Letter of Intent Due Date(s): 30 days before application receipt date. Application Due Date(s): June 5, 2017 (new) and July 5, 2017 (renewal, resubmission, revision); October 5, 2017 (new) and November 5, 2017 (renewal, resubmission, revision); June 5, 2018 (new) and July 5, 2018 (renewal, resubmission, revision); October 5, 2018 (new) and November 5, 2018 (renewal, resubmission, revision); June 5, 2019 (new) and July 5, 2019 (renewal, resubmission, revision); October 5, 2019 (new) and November 5, 2019 (renewal, resubmission, revision).

BD2K Support for Meetings of Data Science Related Organizations (U13) - The purpose of this Funding Opportunity Announcement (FOA) is to support high quality and impactful conferences/scientific meetings that are convened by data science related organizations whose missions focus on biomedical data science. This FOA, which uses the NIH conference cooperative agreement program (U13), is part of the NIH-wide initiative, Big Data to Knowledge (BD2K). Data science related organizations have a critical role in advancing biomedical data science but often depend on meetings to carry out their work. This FOA will support high quality conferences or meetings that are relevant to the biomedical data science needs of the participating Institutes and Centers of the National Institutes of Health. For the purpose of this FOA, a conference is defined as a gathering, such as in the form of a symposium, seminar, scientific meeting, workshop, or any other organized and formal meeting where persons assemble to coordinate, exchange, and disseminate information, or to explore or clarify a defined subject, problem, or area of knowledge. Applicants representing data science related organizations may request support for one or a series of meetings over multiple years that address areas of data science aligned with the goals of the NIH BD2K program. Application Due Date(s): December 15, 2016; November 31, 2018.

Population Dynamics Centers Research Infrastructure Program FY 2017 (P2C) - The purpose of this funding opportunity announcement (FOA) is to advance the field of population dynamics research by increasing research impact, innovation, and productivity; develop junior scientists; and maximize the efficiency of research support. Companion Funding Opportunity is RFA-HD-17-022, R24 Resource-Related Research Projects. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date is December 28, 2016.

NINDS Institutional Center Core Grants to Support Neuroscience Research (P30) - This Funding Opportunity Announcement (FOA) invites applications for Center Core Grants that provide resources and facilities shared by a minimum of six NINDS-supported investigators from one or more organizations, and supporting a wider base of neuroscience research. The proposed Centers should offer services and expertise that would be difficult or impractical to support in individual labs. The Centers are expected to capitalize on economies and synergies associated with shared resources, and to foster a collaborative environment among neuroscientists at host institutions. Letter of Intent Due Date is January 14, 2017. Application Due Date is February 14, 2017.

Microphysiological Systems (MPS) for Disease Modeling and Efficacy Testing (UG3/UH3) - This FOA invites applications for the Microphysiological Systems (MPS) for Disease Modeling and Efficacy Testing Program to develop highly reproducible and translatable in vitro models for preclinical efficacy studies through discovery and validation of translatable biomarkers, development of standardized methods for preclinical efficacy testing and definitive efficacy testing of candidate therapeutics using best practices and rigorous study design. An essential feature will be a multidisciplinary approach that brings together experts in bioengineering, microfluidics, material science, "omic" sciences, computational biology, disease biology, pathology, electrophysiology, pharmacology, biostatistics and clinical science. Letter of Intent Due Date is November 13, 2016. Application Due Date is December 13, 2016.

Advancing the Science of Geriatric Palliative Care (R01) - This Funding Opportunity Announcement (FOA) encourages research grant applications focused on palliative care in geriatric populations. This FOA emphasizes studies in a variety

of settings including ambulatory care, hospitals (and specific sites within hospitals including specialty wards, intensive care units and emergency departments), assisted living facilities, and short- and long-term care facilities; however, hospice and end-of-life settings are not included within the scope of this FOA, as they are the subject of other NIH programs. Rather, this FOA highlights research on palliative care in settings and at time points earlier in geriatric patients' disease or disability trajectories. Types of studies may include observational, quasi-experimental, or interventional studies using primary data collection and/or secondary analyses. Leveraging on-going cohorts, intervention studies, networks, data and specimen repositories, and other existing resources and infrastructure are encouraged. Application Due Date(s): Standard dates apply.

R40 Autism Field-Initiated Innovative Research Studies (Autism-FIRST) Program - This announcement solicits applications for two (2) separate competitions, HRSA-17-013 Autism Field-Initiated Innovative Research Studies and HRSA-17-014 Autism Longitudinal Data Project. The purpose of the Autism Field-Initiated Innovative Research Studies and the Autism Longitudinal Data Project competitions are to support the conduct of empirical research that advances the evidence base on interventions to improve the health and wellbeing of children and adolescents with autism spectrum disorders (ASD), with a special focus on addressing the needs of underserved populations. These competitions will address the critical need that exists for research on the barriers to screening, diagnosis, and receipt of evidence-based interventions. Application Due Date: November 17, 2016.

Use of Technology to Enhance Patient Outcomes and Prevent Illness (R21) - This Funding Opportunity Announcement (FOA) seeks clinical research focused on the development and utilization of technologies that can help address patient outcomes. Relevant areas of technology include remote healthcare delivery to patients via telehealth, robotics to enhance medication adherence, on-site (e.g., clinical or home setting) care delivery, mobile heath to increase access and adherence, web-based decision support tools, and others. Research projects may focus on assessment, diagnosis, intervention development, or intervention implementation. Research projects that a) incorporate emerging and cutting edge technologies to explain and predict patient trajectories, b) inform interventions, c) support real-time clinical decision making, and d) facilitate effective long-term management of chronic illness are especially needed. Critical to this FOA, proposed research should identify specific patient outcomes expected to improve from technological approaches. The specific tools or interventions proposed should clearly indicate how they will enhance patient benefits in environments, such as clinical settings, and/or in the home and community. Companion Funding Opportunity is PA-17-010, R01 Research Project Grant. Application Due Date(s): Standard dates apply.

Self-Management Interventions and Technologies to Sustain Health and Optimize Functional Capabilities (R01) - This Funding Opportunity Announcement (FOA) seeks clinical research on self-management interventions and technologies that improve health and quality of life in persons needing assistance to optimize and maintain existing functional capabilities, prevent/delay disabilities and navigate their environment. The research focus encompasses maintenance /restorative care that can be tailored to individuals existing functional abilities and interests and is intended to enhance physical, sensory, motor, and mental capabilities. Of particular interest is research designed to maintain functional capabilities in such conditions as cardiac and respiratory insufficiency, movement impairment associated with arthritis, chronic back pain, stroke, and other physical or cognitive disabilities. Companion Funding Opportunity is PA-17-011, R21 Exploratory/Developmental Grant. Application Due Date(s): Standard dates apply.

Addressing Unmet Needs in Persons with Dementia to Decrease Behavioral Symptoms and Improve Quality of Life (R01) - The purpose of this funding opportunity announcement (FOA) is to stimulate clinical research addressing behavioral and psychological symptoms of dementia (BPSD) and the association of BPSD with unmet physical, social, or environmental needs in persons with dementia. Companion Funding Opportunity is PA-17-013, R21 Exploratory/ Developmental Grant. Application Due Date(s): Standard dates apply.

Improving Individual and Family Outcomes through Continuity and Coordination of Care in Hospice (R21) - This funding opportunity announcement (FOA) seeks to stimulate research that focuses on reducing negative individual and family outcomes related to unwanted transitions at the end of life and optimizing the individual and family outcomes related to high quality coordination of care of care of individuals who are enrolled in hospice. This FOA emphasizes individuals who are receiving hospice care and their family caregivers, in any setting where hospice care is provided, including their home, a relative's home, a hospice inpatient facility, an assisted living facility, a short- or long-term care facility, or a hospital. Companion Funding Opportunity is PA-17-016, R01 Research Project Grant. Application Due Date(s): Standard dates apply.

Role of Peripheral Proteostasis on Brain Aging and on Alzheimers Disease (R01) - This FOA is soliciting research projects that would advance biomedical research on the role of peripheral proteostasis on brain structure and function during aging and in Alzheimers disease, facilitating the identification of molecular and cellular markers of normal brain aging and brain aging during pathological conditions. Letter of Intent Due Date is December 12, 2016. Application Due Date is January 12, 2017.

Palliative Care Needs of Individuals with Advanced Rare Diseases and Their Family Caregivers (R01) - This funding opportunity announcement (FOA) seeks to expand knowledge and increase the evidence base for palliative care (PC) in advanced rare diseases, including rare cancers, and to improve physical and psychosocial well-being and quality of life among seriously ill individuals and their family caregivers. Companion Funding Opportunity is PA-17-017, R21 Exploratory/Developmental Grant. Application Due Date(s): Standard dates apply.

Implementation Science Research to Improve Dental, Oral and Craniofacial Health (U01) - This Funding Opportunity Announcement (FOA) encourages investigators to submit research grant applications on the use of implementation science strategies aimed at reducing the time between establishment of the evidence base of interventions/policies/practices and widespread uptake and adoption for dental/oral/craniofacial health. Letter of Intent Due Date is January 21, 2017. Application Due Date is February 21, 2017.

Stimulating Peripheral Activity to Relieve Conditions (SPARC): Pre-clinical Development of Existing Market-approved Devices to Support New Market Indications (U18) - This NIH Funding Opportunity Announcement (FOA) is part of the Stimulating Peripheral Activity to Relieve Conditions (SPARC) Common Fund program. This FOA invites applications exclusively for non-clinical tests in animal models to obtain safety and efficacy data that support new market indications for a limited set of neuromodulation devices. Partnering companies (see Device Portal) have agreed to provide neuromodulation technology to investigators supported by the SPARC program. Pre-clinical developments supported by this FOA are expected to generate the necessary safety and efficacy evidence to enable an Investigational Device Exemption (IDE) submission for a future pilot clinical study. Letter of Intent Due Date is November 21, 2016. Application Due Date is December 21, 2016.

Development and/or Validation of Devices or Electronic Systems to Monitor or Enhance Mind and Body Interventions (R41/R42) - This Funding Opportunity Announcement (FOA) supports Small Business Technology Transfer (STTR) grant applications from small business concerns (SBCs) that will develop and/or validate devices or electronic systems that can: 1) monitor biologically- or behaviorally-based processes applicable to mind and body interventions or 2) be used to assist in optimizing the practice or increasing the efficacy of mind and body interventions. The applications should: 1) lead to the development of new technologies, 2) adapt existing innovative technologies, devices and/or electronic systems, 3) repurpose existing devices and electronic systems, or 4) conduct testing of single or combined components of an integrated, long term, automated, wearable monitoring, stimulation device or electronic system in order to monitor or enhance the mechanistic processes or functional outcomes of mind and body interventions. For the purposes of this FOA, mind and body interventions are defined as non-pharmacological approaches that include mind/brain focused interventions (e.g., meditation, hypnosis), body-based approaches (e.g., acupuncture, massage, spinal manipulation/mobilization), or combined mind and body meditative movement approaches (e.g., yoga, tai-chi, qigong). Companion Funding Opportunity is PAS-17-022, R43/R44 Small Business Innovation Research (SBIR) Grant - Phase I and Phase II. Application Due Date(s): Standard dates apply. Note new SBIR/STTR Standard Due Dates.

BRAIN Initiative Cell Census Network (BICCN) - Specialized Center on Human and Non-Human Primate Brain Cell Atlases (U01) - This Funding Opportunity Announcement (FOA) intends to assemble a group of Specialized Collaboratories that will adopt scalable technology platforms and streamlined workflows to accelerate progress towards establishing reference cell atlases of human brain and/or non-human primate brains. A central goal of this and the three companion FOAs is to build a brain cell census resource that can be widely used throughout the research community. Companion Funding Opportunities are RFA-MH-17-225, U19 Research Project – Cooperative Agreements; RFA-MH-17-230, U01 Research Project – Cooperative Agreements; and RFA-MH-17-215, U24 Resource-Related Research Projects – Cooperative Agreements. Letter of Intent Due Date(s): December 23, 2016; September 13, 2017. Application Due Date(s): January 23, 2017; October 13, 2017.

Nicotinic Immune Modulation in the Presence of HIV-1 Infection (R01) - The FOA encourages the submission of research project applications to determine nicotine's modulatory effects on peripheral and central immune system functions in

the presence of HIV-1 infection. Specifically, NIDA is particularly interested in projects exploring the ability of nicotine to produce anti-inflammatory and protective effects, and the translational potential of the new knowledge in attenuating HIV-induced pathologies and HIV-associated CNS complications such as neurological/cognitive disorders. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date is January 17, 2017.

Addressing Health Disparities in NIDDK Diseases (R01) - This Funding Opportunity Announcement (FOA) invites research projects to improve understanding of the causes of high priority diseases in the United States and reducing/eliminating health disparities. Research is encouraged in the following high priority diseases within the scientific mission areas of the NIDDK: diabetes; obesity; nutrition-related disorders; hepatitis C; gallbladder disease; H. Pylori infection; sickle cell disease, specifically, studies in complications of sickle cell disease within the NIDDK mission areas; kidney diseases; urologic diseases; hematologic diseases, including studies in abnormal hemoglobin synthesis; metabolic diseases; gastrointestinal, hepatic, and renal complications from infection with HIV. Clinical trials are not permitted in response to this FOA. Application Due Date(s): Standard dates apply.

Powering Research through Innovative Methods for mixtures in Epidemiology (PRIME) (R01) - The purpose of this Funding Opportunity Announcement (FOA) is to stimulate the development of innovative statistical, data science, or other quantitative approaches to studying the health effects of complex chemical mixtures in environmental epidemiology. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date is February 22, 2017.

Aging Research Dissertation Awards to Increase Diversity (R36) - The purpose of this Funding Opportunity Announcement (FOA) is to provide dissertation awards in all areas of research within NIAs strategic priorities to increase diversity of the scientific research workforce engaged in research on aging and aging-related health conditions. Application Due Date(s): Standard dates apply.

Brain Lymphatic System in Aging and Alzheimer's Disease (R01) - The goal of this FOA is to support research that will lead to a greater understanding of complex mechanisms by which the brain glymphatic system and meningeal and peripheral lymphatic systems change in normal and pathological brains. This knowledge is critical to determine whether a functional impairment or disruption of these systems may be involved in neurological disorders that are associated with immune system dysfunction, such as Alzheimer's disease. Application Due Date is February 9, 2017.

Human Cell Biology of Genetic Variants in Alzheimer's Disease (R01) - The goal of this FOA is to establish functional genotype-phenotype relationships of genetic variants, suspected of altering the risk of Alzheimer's disease (AD), in neural cells using human induced pluripotent stem cells or other human cell reprogramming approaches. The causal linkage of AD-associated genetic variants identified in genome-wide association studies and genome sequencing studies to molecular and biological cell phenotypes in human neural cells is expected to give greater insight into molecular targets contributing to the etiology of AD. Letter of Intent Due Date is January 10, 2017. Application Due Date is February 10, 2017.

Systems Biology Approaches to Alzheimer's Disease Using Non-mammalian Laboratory Animals (R01) - The National Institute on Aging is seeking applications to develop systems biology approaches to understand the basic biology underpinning neurodegeneration which might ultimately contribute to Alzheimer's disease or related dementias, using non-mammalian laboratory animal models. It is expected that research carried under the auspices of this FOA will lead to discovery of new mechanisms that provoke neurodegeneration and to new molecular pathways that might be involved in causing, amplifying or protecting against neurodegeneration. Applications should propose to use established non-mammalian laboratory animals which have a history of contributions to our understanding of neurobiology or aging biology. Letter of Intent Due Date is December 18, 2016. Application Due Date is January 18, 2017.

BRAIN Initiative: Research on the Ethical Implications of Advancements in Neurotechnology and Brain Science (R01) - This funding opportunity announcement (FOA), in support of the NIH BRAIN Initiative, is one of several FOAs aimed at supporting transformative discoveries that will lead to breakthroughs in understanding human brain function. Guided by the long-term scientific plan, BRAIN 2025: A Scientific Vision, this FOA specifically seeks to support efforts addressing core ethical issues associated with research focused on the human brain and resulting from emerging technologies and advancements in research and development supported by the BRAIN Initiative. The hope is that efforts supported under this FOA might be both complimentary and integrative with the transformative, breakthrough discoveries being supported through the BRAIN Initiative. Letter of Intent Due Date is December 30, 2016. Application Due Date is January 30, 2017.

BRAIN Initiative: Proof of Concept Development of Early Stage Next Generation Human Brain Imaging (R01) - This funding opportunity announcement (FOA), in support of the NIH BRAIN Initiative, aims to support early stage development of entirely new and novel noninvasive human brain imaging technologies and methods that will lead to transformative advances in our understanding of the human brain. The FOA solicits unusually bold and potentially transformative approaches and supports small scale, proof of concept development based on exceptionally innovative, original and/or unconventional concepts. Companion Funding Opportunity is RFA-EB-17-002, U01 Research Project--Cooperative Agreements. Letter of Intent Due Date is December 20, 2016. Application Due Date is January 20, 2017.

Improving Quality of Care and Quality of Life for Persons with Alzheimer's Disease and Related Dementias at the End of Life (R01) - This FOA invites applications that address clinical and translational research gaps in the study of end-of-life care needs in order to improve quality of life at the end of life of people with Alzheimer's disease and related dementias (ADRD) and their families. Research that either employs (a) secondary analysis of existing data from longitudinal cohort studies or from administrative records or (b) primary data collection for Stage I behavioral intervention development is particularly encouraged. Companion Funding Opportunity is PAS-17-026, R03 Small Grant Program. Application Due Date(s): Standard dates apply.

Common Mechanisms and Interactions Among Neurodegenerative Diseases (R01) - This FOA encourages preclinical and clinical research to study whether, and how, different neurodegenerative disease processes interact with one another to initiate and/or hasten progression of neuropathology and dementia. Application Due Date(s): Standard dates apply.

Dynamic Interactions between Systemic or Non-Neuronal Systems and the Brain in Aging and in Alzheimer's Disease (R01) - This FOA encourages research projects on the role of aging-related changes in systemic, peripheral, and/or non-neuronal factors individually or in combination to the pathogenesis, presentation, and/or progression of Alzheimer's disease (AD). The goal of this FOA is to support innovative multidisciplinary research that will integrate the AD science with the basic biology of aging and clinical aging research. Successful studies may identify critical processes and pathophysiological pathways to inform novel prevention or intervention strategies for AD and other dementias of aging. Successful applications will likely involve a broad range of expertise including the biology of aging, geriatrics/gerontology, neurodegenerative diseases, and other clinical and translational specialties focused on systemic diseases or specific tissue/organ pathophysiology to identify interrelationships among peripheral systems and the brain. Application Due Date(s): Standard dates apply.

Rehabilitation Research Career Development Programs (K12) - This funding opportunity announcement (FOA) invites applications to coordinate the mentoring and career development of rehabilitation researchers in relevant clinical domains, which may include any one of the following: physiatrists, physical/occupational therapy and allied health professionals, clinicians involved in neurological rehabilitation, or bioengineers. Unlike some other NIH K12 programs, this FOA seeks applications for a national network rather than a program exclusively located at the applicant institution. The applicant will be responsible for identifying qualified candidates (scholars) and supporting them in appropriate research environments throughout the country. The NICHD plans to support K12 programs representing relevant academic disciplines, especially those listed above. Letter of Intent Due Date is November 28, 2016. Application Due Date is December 28, 2016.

Pediatric Scientist Development Program (K12) - This FOA invites applications for the pediatric scientist development program (PSDP). This program constitutes a national network of mentors and scholars, in contrast to K12 programs that are based solely at a single applicant institution. The program will be responsible for identifying pediatricians who have completed their clinical training and who have promising research potential, and for matching them with established mentors with strong records of research productivity. The program will develop guidelines for mentoring and career development in order to promote the successful transition of the candidates into independent research careers in academic settings. . Letter of Intent Due Date is November 28, 2016. Application Due Date is December 28, 2016.

Coordinating Center for Population-based Research to Optimize the Screening Process (PROSPR) (U24) - Population-based Research to Optimize the Screening Process (PROSPR) is the National Cancer Institute (NCI) program to promote research aimed at evaluating and improving the cancer screening process. As a part of the reissued PROSPR program, this Funding Opportunity Announcement (FOA) solicits applications for a PROSPR U24 Coordinating Center. A companion FOA (RFA-CA-16-016) will support PROSPR UM1 Research Centers.

The overall goal for the PROSPR Research Centers is to enhance understanding of the implementation and effects of screening as practiced in multiple healthcare environments in the United States. The intent of this FOA is to fund a single Coordinating Center that will support a network of three PROSPR Research Centers (PRCs; one each focused on cervical, colorectal, and lung cancer). Specifically, the Coordinating Center will facilitate the development of common measures across cancer types for (1) system-level factors that may impact the cancer screening process, and (2) quality of screening. It will also coordinate PROSPR network research projects that include more than one cancer type. Finally, the Coordinating Center will be responsible for developing and implementing a process for PROSPR data access and sharing with qualified investigators outside of the PROSPR network. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date is February 9, 2017.

Role of Age-Associated Metabolic Changes in Alzheimer's Disease (AD) (R01) - This FOA encourages innovative experimental approaches to explore the molecular and cellular bases for age-related change in metabolism that impact the development of Alzheimer's disease (AD). Application Due Date(s): Standard dates apply.

Exosomes: From Biogenesis and Secretion to the Early Pathogenesis of Alzheimer's Disease (R01) - This Funding Opportunity Announcement (FOA) invites innovative research focused on understanding the role of exosome biogenesis and secretion in modulating and propagation of early pathogenesis in sporadic and late-onset Alzheimer's disease (AD). Specifically, this FOA encourages collaborative approaches designed to identify and characterize the regulation of molecular machines that are responsible for exosome biogenesis and the secretion of exosomal cargo molecules in AD. Letter of Intent Due Date is January 3, 2017. Application Due Date is February 3, 2017.

Understanding the Effects of ApoE2 on the Interaction between Aging and Alzheimer's Disease (R01) - This FOA invites applications on descriptive, basic and translational studies of APOE2 to delineate the functional effects of ApoE2 on healthy aging of the brain and other tissues. The primary focus is on the APOE2Aging-AD" relationship and the mechanistic effects of the protective variant on aging and potential interaction/cross talk between tissues in the aging process and AD. These studies are expected to generate new mechanistic insights that involve brain and/or other organs and assist in the identification of potential prognostic and diagnostic markers and therapeutic targets for AD and other age-related cognitive disorders. Eventually, the findings from these studies could lead to translational research opportunities not only to prevent or delay the onset of AD, but also to protect against multiple age-related conditions. Letter of Intent Due Date is January 10, 2017. Application Due Date is February 10, 2017.

Circadian Mechanisms Contributing to Obesity, Diabetes Metabolism, and Underlying Heart, Lung, and Blood Disorders (R01) - This FOA invites applications for clinical research to elucidate circadian-dependent mechanisms contributing to the pathophysiology of human obesity, diabetes-related metabolism, obesity-coupled risks for heart, lung, and blood disease, and the identification of novel therapies to improve circadian rhythm for primary or secondary prevention of obesity-associated disease risks. Multi-disciplinary, multiple-investigator teams proposing mechanistic clinical studies to elucidate the relationship of circadian rhythm to causal pathways of disease are encouraged. Studies of epidemiological risk and clinical trials to assess therapeutic efficacy, effectiveness, or implementation are outside the scope of this program. Letter of Intent Due Date is February 14, 2017. Application Due Date is March 14, 2017.

Translational Bioinformatics Approaches to Advance Drug Repositioning and Combination Therapy Development for Alzheimer's Disease (R01) - This funding opportunity invites applications that integrate the use of computational approaches to identify individual drugs currently used for other conditions with potential to be efficacious in AD or AD-related dementias (as single drugs or as drug combinations) with proof-of-concept efficacy studies in cell-based models, animal models and/or humans. Application Due Date(s): Standard dates apply.

Integrative Research to Understand the Impact of Sex Differences on the Molecular Determinants of AD Risk and Responsiveness to Treatment (R01) - This FOA invites applications that apply a cross-disciplinary, team science approach to gain comprehensive, mechanistic understanding of the impact of sex differences on the trajectories of brain aging and phenotypes of AD risk and on the responsiveness to pharmacologic and non-pharmacologic interventions. Application Due Date(s): Standard dates apply.

Clinical Centers for the NHLBI's Precision Interventions for Severe and/or Exacerbation Prone Asthma (PrecISE) Network (UG1) - This Funding Opportunity Announcement (FOA) invites applications to participate in the NHLBI Precision

Interventions for Severe and Exacerbation Prone Asthma (PrecISE) Network. This clinical trial network will conduct sequential, adaptive, phase II/proof of concept clinical trials with precision interventions in stratified patient populations. The Network will utilize patient phenotypes and/or endotypes, predictive, and monitoring biomarkers/profiles in sequential adaptive trials to evaluate the most effective precision intervention strategies for this hard to treat patient population. PrecISE will include multiple clinical centers and a single Data, Modeling, and Coordination Center (DMCC). This FOA invites applications for the Clinical Centers (CC) and runs in parallel with a companion FOA that invites applications for the DMCC. Letter of Intent Due Date is November 28, 2016. Application Due Date is December 28, 2016.

NIDDK Exploratory Clinical Trials for Small Business (R44) - The purpose of this Funding Opportunity Announcement (FOA) is to provide a vehicle for Small Business Concerns (SBCs) submitting Small Business Innovation Research (SBIR) grant applications for investigator-initiated exploratory clinical trials to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The projects must focus on products related to the mission and goals of the NIDDK and may evaluate drugs, biologics, or devices, as well as surgical, behavioral or rehabilitation therapies. The purpose of this Funding Opportunity Announcement (FOA) is to provide a vehicle for Small Business Concerns (SBCs) submitting Small Business Innovation Research (SBIR) grant applications for investigator-initiated exploratory clinical trials to the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK). The projects must focus on products related to the mission and goals of the NIDDK and may evaluate drugs, biologics, or devices, as well as surgical, behavioral or rehabilitation therapies. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): Standard dates apply.

Platform Delivery Technologies for Nucleic Acid Therapeutics (R43/R44) - The purpose of this initiative is to incentivize small businesses to generate new technologies and products for delivering nucleic acids into cells and tissues for the purpose of treatment or prevention of human disease. Companion Funding Opportunity is PAR-17-036, STTR R41/R42-Phase I, Phase II, and Fast Track. Application Due Date(s): Standard dates apply.

Pilot Clinical Trials in Pediatric Chronic Kidney Disease Data Coordinating Center (U24) - The purpose of this Funding Opportunity Announcement (FOA) is to initiate and implement a network of participating clinical centers and a data coordinating center to perform pilot and feasibility studies of therapies to slow or reverse the progression of chronic kidney disease (CKD) in children. This FOA invites applications for the Data Coordinating Center (DCC) and runs in parallel with a separate FOA that invites applications for the Participating Clinical Centers (PCCs) (RFA-DK-16-018). These pilot studies will seek to optimize critical elements of a full-scale randomized control trial design - the most promising study question, agent(s), target population, dosing, data collection, and appropriate outcomes. Applicants must propose two trial designs to be conducted sequentially over the funding period. One trial will be to lower serum uric acid levels, while the other can be an appropriately justified study question of the applicant's choosing. The ultimate goal of this FOA is to obtain the necessary information to design and implement one or more full-scale randomized controlled clinical trial of therapies to reduce morbidity in children with CKD. Companion Funding Opportunities are: RFA-DK-16-018, U01, Research Project – Cooperative Agreements and RFA-DK-16-035, U24 Resource-Related Research Projects. Letter of Intent Due Date is January 17, 2017. Application Due Date is February 17, 2017.

Multi-morbidity in Alzheimer's Disease Impacts Choice of Ancillary Treatments (R33) - This Funding Opportunity Announcement (FOA) invites applications proposing to conduct research into improving the effectiveness of treatment strategies for comorbid conditions that occur frequently in combination with Alzheimer's disease and related dementia (ADRD). This FOA will support advanced-stage observational treatment studies or pragmatic clinical trials. Companion Funding Opportunity is RFA-AG-17-059, R21/R33 Phased Innovation Award. Application Due Date is January 12, 2017.

Clarifying the Relationship between Delirium and Alzheimer's Disease and Related Dementias (R01) - This Funding Opportunity Announcement (FOA) invites applications that focus on clarifying the relationship between delirium and Alzheimer's disease and related dementias (ADRD). Specifically sought is research focusing on understanding why persons with ADRD are at increased risk to develop delirium, often with a worse prognosis compared to those without antecedent ADRD, and why patients who experience delirium are at higher risk to develop subsequent short- and/or long-term mild cognitive impairment or ADRD, often with an accelerated rate of cognitive decline compared to those without preceding delirium. Relevant research projects may focus on, but are not limited to, those that A) provide insight into possible common, sequential, causative, contributory and/or synergistic pathways underlying both ADRD and delirium, B) elucidate mechanisms that lead to the development of delirium against the background of aging and/or

neurodegeneration, with particular emphasis on use of appropriate animal models, C) identify risk factors for the onset and/or progression of delirium in those with ADRD and vice versa, D) diagnose and assess one condition in the setting of the other, E) identify putative phenotypes of patients with co-existing ADRD and delirium, or F) test pharmacologic and/or non-pharmacologic strategies to prevent, treat, or reduce the impact of delirium in patients with ADRD and vice versa. Research supported by this FOA is intended to provide mechanistic insight to improve risk assessment, diagnosis, phenotyping, prevention, and management approaches for both delirium and ADRD. Application Due Date(s): Standard dates apply.

Comparative Biology of Neurodegeneration (R21) - This FOA invites exploratory comparative biology research projects assessing how different animal species respond to challenges and damage to cellular physiology pathways that might influence the onset of Alzheimer's and other neurodegenerative diseases as well as resilience to them, such as adaptation to stress, macromolecular damage, proteostasis and stem cell function and regeneration. Application Due Date(s): Standard dates apply.

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Department of Defense

Military Medical Photonics Program - The Air Force Office of Scientific Research (AFOSR) seeks unclassified proposals for broad- based research and development aimed at using lasers and other light source technology to develop applications in medicine, photobiology, surgery, and closely related materials sciences, with applications to combat casualty care and other military medical problems. This announcement is primarily directed toward university-based medical institutions; however, all qualified and responsible prime applicants located in the United States are eligible to submit proposals. The highest priority will be extended to proposals up to three (3) years duration to be conducted by teams of physicians, biomedical scientists, physical scientists, and engineers. The efforts proposed may be basic or applied research, and must have direct relevance to combat casualty care or other military medical priorities. Applicants must demonstrate substantial experience working to further military medical priorities, including transitioning research into clinical practice and working products. Substantial experience collaborating with military medical centers is also a requirement to establish relevance to combat casualty care or other military medical priorities, and facilitate the transition of research results to meet military needs. Proposals must be received electronically through Grants.gov not later than 31 December 2016 at 11:59 PM Eastern time to be considered. Pre-proposal inquiries and questions must be received in writing by electronic mail not later than 31 October 2016 at 11:59 PM Eastern time to be considered.

Defense Forensic Science Center Broad Agency Announcement for Basic, Applied, and Advanced Research (Fiscal Years 2017-2021) - The Program is seeking proposals for funding to support forensic research and its application. The requested proposals should focus on adding to general forensic knowledge and/or DFSC activities and needs. Forensic research proposals should focus on the creation of new and improved field or laboratory functional capabilities that result in faster, more robust, more informative, less costly, or less labor-intensive recognition, preservation, collection, and/or analysis of forensic evidence. Proposals involving the development of equipment that is portable, sustainable, and useful in an expeditionary or field environment are also solicited. The expeditionary and field environments require systems that are lightweight, portable, inexpensive, fast, and capable of operating in extreme environments of temperature, dust, humidity, etc. The systems must also be capable of secure data communications. Funding of research and development (R&D) within Program areas of interest will be determined by funding constraints and priorities set during each budget cycle. This Broad Agency Announcement (BAA) is a continuously open five-year announcement valid throughout the period beginning 18 October 2016 and ending 15 October 2021. Amendments to this BAA will be posted to https://www.fbo.gov (FedBizOpps) and http://www.grants.gov when amendments occur. Interested parties are encouraged to periodically check these websites for updates and amendments.

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Department of Energy

Request For Information (RFI) - Grid Optimization Competition Design - This is a Request for Information only. This RFI is not accepting applications for financial assistance. The purpose of this RFI is solely to solicit input for ARPA-E

consideration to inform the possible formulation of future programs. ARPA-E seeks input on the design of a competition (carried out in multiple phases) to accelerate the development and comprehensive evaluation of new solution methods for grid optimization. Specifically, ARPA-E seeks to provide a platform for the identification of transformational and disruptive methods for solving power system optimization problems including Security Constrained Optimal Power Flow (OPF) and Security Constrained Unit Commitment (UC). The information you provide may be used by ARPA-E in support of program planning. THIS IS A REQUEST FOR INFORMATION ONLY. THIS NOTICE DOES NOT CONSTITUTE A FUNDING OPPORTUNITY ANNOUNCEMENT (FOA). NO FOA EXISTS AT THIS TIME. Responses to this RFI should be submitted in PDF or Word format to the email address ARPA-E-RFI@hq.doe.gov by **5:00 PM Eastern Time on November 22, 2016.**

Solid State Lighting Advanced Technology R&D 2017 - Through research and development of solid state lighting (SSL) including both light emitting diode and organic light emitting diode technologies the objectives of this opportunity are to maximize the energy efficiency of SSL products in the market place, remove market barriers through improvements to lifetime, color quality, and lighting system performance, reduce costs of SSL sources and luminaires, improve product consistency while maintaining high quality products, and encourage the growth, leadership, and sustainability of domestic US manufacturing within the SSL industry. Concept Paper Submission Deadline: 11/14/2016 5:00 PM ET. Full Application Submission Deadline: 1/10/2017 5:00 PM ET.

Biosystems Design to Enable Next-Generation Biofuels and Bioproducts - Biological and Environmental Research (BER) of the Office of Science (SC), U.S. Department of Energy (DOE) hereby announces its interest in receiving applications for research of interest to the Genomic Science Program (http://genomicscience.energy.gov) in the following research areas: a) Integrating large-scale systems biology data to model, design, and engineer microbial systems for the production of biofuels and bioproducts: Interdisciplinary approaches to develop innovative, high-throughput modeling, genome-wide design and editing, and engineering technologies for a broad range of microbes relevant for the production of biofuels and bioproducts from biomass. b) Plant systems design for bioenergy: To develop novel technologies for genome-scale engineering to re-design bioenergy crops that can grow in marginal environments while producing high yield of biomass that can be easily converted to biofuels and bioproducts. Applications should include strategies to address biocontainment, minimizing risks of potential release of engineered organisms into the environment or other unintended outcomes. Pre-Applications are required. Pre-Application Due Date: 12/19/2016 at 5 PM Eastern Time. Encourage/Discourage Date: 01/06/2017 at 5 PM Eastern Time. Application Due Date: 03/20/2017 at 11:59 PM Eastern Time.

Scaling Up the Next Generation of Building Efficiency Packages - The Commercial Buildings Integration (CBI) program, working in cooperation with the General Services Administration's (GSA) Green Proving Ground program, will invest $6.5 million in a competitive Funding Opportunity Announcement (FOA). DOE seeks proposals that drive innovation in real building technology demonstrations while also fostering the collaboration of dynamic demonstration teams that include energy organizations (states, local governments or Regional Energy Efficiency Organizations), efficient building hubs (such as Innovation or Incubator hubs), utilities, and building energy modeling professionals. This FOA builds on current laboratory and simulation analysis of technology packages by investing in real building demonstrations led by strategically structured teams who will identify and verify multi-system energy efficiency packages (groups of technologies that improve efficiency across two building systems: envelope, lighting/electrical, plug, process, heating, ventilation, cooling, refrigeration, energy management and information, sensors and controls). Projects selected through this funding opportunity will prime the market for the adoption of emerging and underutilized technology packages and create new synergies between building stakeholder groups, and/or, ultimately help utilities develop and release or expand more aggressive and ambitious Energy Efficiency (EE) program offerings. This FOA also supports the critical function of evaluation, measurement and verification (EM&V) by using existing DOE tools and resources to: 1) identify the most impactful multi-system packages, 2) develop the preliminary savings calculations, 3) collect data to verify package performance along with other market factors in real buildings, and 4) foster more consistent energy efficiency programs across the country. Informational Webinar will be held on November 2, 2016 at 12:00PM Eastern Standard Time. For registration: https://attendee.gotowebinar.com/register/6534736631364875266. Concept Paper Submission Deadline: 11/21/2016 5:00 PM ET. Full Application Submission Deadline: 2/21/2017 5:00 PM ET.

Supporting Clean Energy Startups: Industry and Investment Partnerships for Scaling Innovation - This is a Request for Information (RFI) only. Responses to the RFI will be treated as informational only and will not be viewed as a binding commitment for the respondent to develop or pursue the project or ideas discussed. No applications are being accepted

and no funding is available through this RFI. The U.S. Department of Energy's Office of Energy Efficiency and Renewable Energy's (EERE) Technology-to-Market (T2M) team is issuing a Request for Information (RFI) DE-FOA-0001669. The purpose of this RFI is to gain public input on how T2M can best facilitate a more efficient clean energy innovation ecosystem in the U.S. by leveraging prior initiatives. T2M is looking to understand unaddressed challenges faced by early-stage clean energy start-ups and investors (and other capital providers) and industry partners that can help facilitate the transition of new technologies into the marketplace. The information being sought under this RFI is intended to assist EERE in further defining the scope and priorities of its initiatives by capitalizing on prior year investments to strengthen the U.S. Energy innovation ecosystem. Descriptions of current T2M efforts can be found at http://energy.gov/eere/technology-to-market/technology-market-program. Please see the full RFI document in the "DOCUMENTS" section below. Responses to this RFI must be submitted electronically to T2M@ee.doe.gov no later than 5:00pm (ET) on November 14, 2016.

Production of Salable Rare Earth Elements from Domestic U.S. Coal and Coal By-Products - The Department of Energy Office of Fossil Energy and the National Energy Technology Laboratory are seeking applications for financial assistance awards to achieve small scale production of salable rare earth elements in the form of final products such as individual rare earth oxides and or other individual rare earth compounds from domestic U.S. sources of pre combustion coal and coal by products. Process feedstocks will exclude post combustion and gasification ash char. Proposed projects may produce additional salable products. Amendment to distribute documents from the Pre-Application Webinar held on 10/14/2016. Letter of Intent Due Date: 10/31/2016. Application Due Date: 12/08/2016 at 11:59:59 PM Eastern Time.

The PNDIODES (Power Nitride Doping Innovation Offers Devices Enabling SWITCHES) program seeks to fund transformational advances and mechanistic understanding in the process of selective area doping in the III-Nitride wide band gap (WBG) semiconductor material system and the demonstration of arbitrarily placed, reliable, contactable, and generally useable p-n junction regions that enable high-performance and reliable vertical power electronic semiconductor devices. The microscopic mechanistic understanding and transformational technologies will address the major obstacle in the fabrication of vertical GaN power electronic devices experienced by most of the teams in the ARPA-E SWITCHES (Strategies for Wide Bandgap, Inexpensive Transistors for Controlling High-Efficiency Systems) program. This challenge has been the lack of a viable GaN selective area doping or selective area epitaxial regrowth process that yields material of sufficiently high quality to enable a defect-free p-n junction on patterned GaN surfaces. Success in this area will allow further development of a revolutionary and powerful class of vertical GaN power electronic devices suitable for 1200V to 10kV broad range of applications (consumer electronics, power supplies, solar inverters, wind power, automotive, motor drives, ship propulsion, rail, and the grid). Full Application Submission Deadline: 1/4/2017 5:00 PM ET.

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NASA

The Heliophysics Guest Investigators program is a component of the Heliophysics Research Program. Heliophysics Guest Investigators consists of two ROSES program elements. The Open Heliophysics Guest Investigator (H-GI program element B.4) is offered for investigations that draw extensively upon the data sets from the missions of the Heliophysics System Observatory (HSO). This program element, the Magnetospheric Multiscale Guest Investigator (MMS-GI) program (B.8), is offered only for investigations that primarily use data from the Magnetospheric Multiscale (MMS) Mission, which was launched in March 2015 and is in the second year of its two-year primary mission phase. Due date for Step-1 proposals: 10/27/2016 (Required). Due date for full Step-2 proposals: 12/15/2016.

The goal of the ROSES 2016: Habitable Worlds program is to use knowledge of the history of the Earth and the life upon it as a guide for determining the processes and conditions that create and maintain habitable environments and to search for ancient and contemporary habitable environments and explore the possibility of extant life beyond the Earth. Step-1 proposers merely must fill in the Proposal Summary text box on the NSPIRES cover pages. Only proposers who submit a Step-1 proposal are eligible to submit a Step-2 (full) proposal. HW16 Step-1 Proposals Due by Nov 18, 2016; Step-2 proposals due by Jan 20, 2017.

ROSES 2016: Solar System Workings - The Solar System Workings program solicits proposals for innovative scientific research related to understanding the atmospheric, climatological, dynamical, geologic, physical, and chemical processes

occurring within the Solar System. This program is open to investigations relevant to surfaces and interiors of planetary bodies, planetary atmospheres, rings, orbital dynamics, and exospheres and magnetospheres. The Solar System Workings program values the potential of interdisciplinary efforts to solve key scientific questions. The program also values esearch in comparative planetology. Research supported by this call may include data synthesis, laboratory studies that examine physical or chemical properties and processes, studies of sample or analog materials of other Solar System bodies, field studies of terrestrial analogs of planetary environments, or theoretical and numerical modeling of physical or chemical processes. SSW16 Step-1 Proposals Due by Nov 17, 2016 and Step-2 proposals are due by Feb 23, 2017.

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U.S. Department of Agriculture

Organic Agriculture Research and Extension Initiative - The OREI seeks to solve critical organic agriculture issues, priorities, or problems through the integration of research, education, and extension activities. The purpose of this program is to fund projects that will enhance the ability of producers and processors who have already adopted organic standards to grow and market high quality organic agricultural products. Priority concerns include biological, physical, and social sciences, including economics. The OREI is particularly interested in projects that emphasize research, education and outreach that assist farmers and ranchers with whole farm planning by delivering practical research-based information. Projects should plan to deliver applied production information to producers. Fieldwork must be done on certified organic land or on land in transition to organic certification, as appropriate to project goals and objectives. Refer to the USDA National Organic Program (http://www.ams.usda.gov/nop) for organic production standards. Closing Date: Thursday, January 19, 2017.

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National Institute of Standards and Technology

NIST Consortium for Semiconductor and Future Computing Research Grant Program (click Related Documents tab) - NIST is soliciting proposals for financial assistance from eligible applicants to support basic research, in a consortium-based setting, focused on the long-term research needs of industry in the area of future computing and information processing. There is a critical need for scientific and engineering advances in novel computing paradigms with long-term impact on the semiconductor, electronics, computing, and defense industries. The proposed activities should advance the physical and materials aspects of future computing technologies with a focus on alternatives that provide low latency, low energy per operation, improved data/communication bandwidth, and higher clock speed. Activities should include innovative research in devices, circuits, architectures, metrology or characterization to enable future computing paradigms. Applicants should create mechanisms for extended collaboration with NIST researchers. Applications must be received at Grants.gov no later than 11:59 p.m. Eastern Time, Friday, January 13, 2017.

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