

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

GRANT OPPORTUNITIES

Division of Science and Research

NSF
NIH
DOD
DOE
NASA

National Science Foundation

[Big Data Regional Innovation Hubs: Establishing Spokes to Advance Big Data Applications \(BD Spokes\)](#) -

Collaborating with BD Hubs, each BD Spoke will focus on a particular topic that requires Big Data approaches and solutions. The set of activities managed by a BD Spoke will promote progress towards solutions in the chosen topic area. The regional BD Hub Steering Committee will provide general guidance to each BD Spoke and will assist the BD Spoke in coordinating with the national BD Hub network, with other BD Spokes, and with the broader innovation ecosystem. The Big Data activities of a BD Spoke will be guided by the following broad themes: Accelerating progress towards addressing societal grand challenges relevant to the regional and national priority areas defined by the BD Hubs (information on priority areas can be found on each Hub's website); Helping automate the Big Data lifecycle; and Enabling access to and spurring the use of important and valuable available data assets, including international data sets where relevant. NSF's overall Big Data research and development (R&D) portfolio includes fundamental research, infrastructure development and provisioning, education and workforce development, and community engagement. Not all of these aspects of the overall portfolio are covered by this solicitation. In particular, this solicitation is not meant to fund proposals in which fundamental research is the primary activity. Full Proposal Deadline Date: September 18, 2017.

[Software Infrastructure for Sustained Innovation \(SI²\)](#) is a bold and long-term investment that maintains a sustained focus on realizing the Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21, <http://www.nsf.gov/pubs/2010/nsf10015/nsf10015.jsp>), which envisions a highly reusable and interoperable cyberinfrastructure architecture that integrates large-scale computing, high-speed networks, massive data archives, instruments and major facilities, observatories, experiments, and embedded sensors and actuators, across the nation and the world, to help make great strides towards revolutionizing virtually every science and engineering discipline. The SI² program focuses on supporting robust, reliable and sustainable software that will support and advance sustained scientific innovation and discovery. Thus, proposals are strongly encouraged to describe their approach to quality software development through a defined software engineering process that includes software testing, the appropriate use of analysis tools and capabilities such as those made available through the Software Assurance Marketplace (SWAMP, <https://continuousassurance.org/>), and collaborations with resources such as Software Carpentry (<http://software-carpentry.org/>) and the Center for Trustworthy Scientific Cyberinfrastructure (CTSC, <http://trustedci.org/>), in order to gain access to expertise where needed, such as in software design and engineering, as well as in cybersecurity. Full Proposal Deadline Date: September 19, 2017 for Scientific Software Integration.

The Division of Earth Sciences (EAR) invites the submission of proposals for collaborative, interdisciplinary studies of the Earth's interior within the framework of the community-based initiative known as [Cooperative Studies of the Earth's Deep Interior \(CSEDI\)](#). Funding will support basic research on the character and dynamics of the Earth's mantle and core, their influence on the evolution of the Earth as a whole, and on processes operating within the deep interior that affect or are expressed on the Earth's surface. Projects may employ any combination of field, laboratory, and computational studies with observational, theoretical, or experimental approaches. Support is available for research and research infrastructure through grants and cooperative agreements awarded in response to investigator-initiated proposals from U.S. universities and other eligible institutions. Full Proposal Target Date: September 25, 2017.

The goal of the [Research in the Formation of Engineers \(RFE\)](#) program is to advance our understanding of professional formation. It seeks to both deepen our fundamental understanding of the underlying processes and mechanisms that support professional formation and to demonstrate how professional formation is or can be

accomplished. Ultimately, RFE aims to transform the engineering formation system. Therefore, the impact of proposed projects on this system must be described in the proposal. Proposers should provide a roadmap detailing how they envision the proposed research will eventually broadly impact practice within the engineering formation system, even if these activities are not within the scope of the submitted proposal. RFE welcomes proposals in two categories: 1) Research Projects and 2) Design and Development Projects. Research Projects address fundamental questions of professional formation, while Design and Development Projects provide new approaches to achieving professional formation. Full Proposal Deadline Date: September 27, 2017.

The purpose of the [NSF-Simons Research Centers for Mathematics of Complex Biological Systems \(MathBioSys\)](#) is to enable innovative collaborative research at the intersection of mathematics and molecular, cellular and organismal biology, to establish new connections between these two disciplines, and to promote interdisciplinary education and workforce training. The National Science Foundation Directorates for Mathematical and Physical Sciences (MPS) and for Biological Sciences (BIO) and the Simons Foundation Division of Mathematics and the Physical Sciences (MPS) and Division of Life Sciences shall jointly sponsor up to three new research centers to facilitate collaborations among groups of mathematicians, statisticians, and biologists. Research activities conducted at each center will be focused on a particular set of topics at the interface of the mathematical sciences with molecular, cellular, and organismal biology. Each center will conduct interdisciplinary education and training through research involvement of recent doctoral degree recipients and graduate students from across this multi-disciplinary spectrum. Each center is also expected to conduct convening activities, including short-term and/or long-term visitors programs, workshops, and/or outreach activities. These centers will have annual meetings of the Principal Investigators (PIs) and other principal researchers, held at the Simons Foundation in New York City. Letter of Intent Deadline Date: August 10, 2017. Full Proposal Deadline Date: September 29, 2017.

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National Institutes of Health

[U.S. Tobacco Control Policies to Reduce Health Disparities \(R01\)](#) - The purpose of this Funding Opportunity Announcement (FOA) is to support observational or intervention research focused on reducing health disparities in tobacco use in the United States. Specifically, this FOA is intended to stimulate scientific inquiry focused on innovative tobacco control policies. Applicants may propose projects in which the primary outcome of interest is on reducing tobacco use health disparities in vulnerable populations by utilizing tobacco prevention and control strategies. The long-term goal of this FOA is to reduce health disparities in health outcomes thereby reducing the excess disease burden of tobacco use within these groups. Applicants submitting applications related to health economics are encouraged to consult NOT-OD-16-025 to ensure that applications align with NIH mission priorities in health economics research. Companion Funding Opportunity is [PAR-17-218](#), R21 Exploratory/Developmental Grant. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): October 11, 2017; June 13, 2018; October 11, 2018; June 13, 2019; October 11, 2019; June 15, 2020.

[NIDDK Information Network Coordinating Unit: dkNET-CU \(U24\)](#) - The purpose of this Funding Opportunity Announcement (FOA) is to continue development and expansion of the NIDDK Information Network (dkNET) under the direction of the dkNET Coordinating Unit (dkNET-CU). dkNET supports NIDDK research by providing a user-friendly web portal that seamlessly connects the NIDDK research community to an expanding universe of biomedical resources and data. The dkNET-CU will be responsible for providing the scientific direction, vision, and administrative management needed to advance dkNET goals. Letter of Intent Due Date(s): September 30, 2017. Application Due Date(s): October 31, 2017.

[Grants for Early Medical/Surgical Specialists' Transition to Aging Research \(GEMSSTAR\) \(R03\)](#) - The goal of the GEMSSTAR program is to provide support for early-career physician-scientists trained in medical or surgical specialties or early-career dentist-scientists to launch careers as future leaders in aging- or geriatric-focused research. To achieve this goal, the GEMSSTAR FOA provides small grants to conduct transdisciplinary aging research that will yield pilot data and experience for subsequent aging research projects. The GEMSSTAR program also encourages candidates to seek out a supportive research environment to achieve the program's goal of fostering the development of early-career physician- and dentist-scientists in aging- or geriatric-focused research, particularly as it applies to their clinical specialty/discipline. In selecting GEMSSTAR awardees, NIA will consider the extent to which a candidate's environment is supportive of aging- or geriatric-focused research. Letter of Intent Due Date(s): September 23, 2017. Application Due Date(s): October 23, 2017.

[HIV/AIDS and the Tumor Niche \(R01\)](#) - The purpose of this Funding Opportunity Announcement (FOA) is to advance our understanding of the role of the tumor niche or microenvironment in the risks, development, progression,

diagnosis, and treatment of cancer observed in individuals with an underlying HIV infection or Acquired Immune Deficiency Syndrome (AIDS). Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): August 7, 2017; August 7, 2018.

[Small Grants for Secondary Analyses of Existing Data Sets and Stored Biospecimens \(R03\)](#) - This Funding Opportunity Announcement (FOA) encourages applications that propose to conduct secondary analyses of publicly available NICHD-funded data sets or stored biospecimens. The goal of this program is to facilitate innovative yet cost-effective research utilizing data and biospecimens collected with NICHD resources. Application Due Date(s): [Standard dates](#) apply.

[Addressing Suicide Research Gaps: Understanding Mortality Outcomes \(R01\)](#) - This funding opportunity announcement (FOA) seeks to support efforts focused on linking pertinent data from healthcare system records (e.g., suicide attempt events) to mortality data so that a more accurate understanding of the risk factors for, and the burden of, suicide among those seen in structured healthcare settings can be discerned. Specifically, data are needed on the type, severity, and timing of suicide predictors in the U.S. In addition to improving our national knowledge of the burden of suicide, these data offer the hope of yielding essential benchmarks for both public and private care providers/insurers, who increasingly will be seeking improvements to reduce the frequency of suicide events in their systems. Projects supported by this FOA will help address gaps identified in the 2014 Prioritized Research Agenda for Suicide Prevention. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): November 2, 2017.

[Emerging Global Leader Award \(K43\)](#) - The purpose of the Fogarty Emerging Global Leader Award is to provide research support and protected time (three to five years) to an early career research scientist from a low- or middle-income country (LMIC) who holds a junior faculty position at an LMIC academic or research institution, as defined by the World Bank (<http://data.worldbank.org/about/country-classifications/country-and-lending-groups>), including low-income, lower-middle-income, and upper-middle-income countries). This intensive, mentored research career development experience is expected to lead to an independently funded research career at the LMIC institution or in another LMIC. This Funding Opportunity Announcement (FOA) invites applications from LMIC scientists from any health-related discipline who propose career development activities and a research project that is relevant to the health priorities of their country under the mentorship of LMIC and U.S. mentors. Companion Funding Opportunity is [PAR-17-002, K01 Research Scientist Development Award - Research & Training](#). Letter of Intent Due Date(s): 30 days before the application due date. Application Due Date(s): November 7, 2017; and November 7, 2018.

[Neuroscience Research on Drug Abuse \(R01\)](#) - Long-term misuse and chronic exposure to abused substances can produce widespread changes in brain structure and function. Although much progress has been made, additional research is still needed to identify the neurobiological changes that result from substance use, and how these changes contribute to substance use disorders. The overarching goals of the research areas described in this FOA are to understand the neurobiological mechanisms underlying substance use disorders, with special emphasis on identifying changes and neuroadaptations that occur during dependence, withdrawal, and relapse to chronic substance use. An understanding of the basic mechanisms underlying substance use disorders can help to identify targets for prevention and treatment interventions. Research utilizing basic, translational, or clinical approaches is appropriate. Companion Funding Opportunity is [PA-17-112, R21 Exploratory/Developmental Research Grant](#). Application Due Date(s): [Standard dates](#) apply.

[Socioeconomic Disparities in Health and Mortality at Older Ages \(R01\)](#) - The purpose of this funding opportunity announcement (FOA) is to support studies that identify mechanisms, explanations, and modifiable risk factors underlying recent trends of growing inequalities in morbidity and mortality by income, education, and geographic location at older ages in the United States. Letter of Intent Due Date(s): September 20, 2017. Application Due Date(s): October 20, 2017.

[Partnerships for the Development of Vaccines and Immunoprophylactics Targeting Multiple Antimicrobial-Resistant Bacteria \(R01\)](#) - The purpose of this Funding Opportunity Announcement (FOA) is to support milestone-driven projects focused on discovery, establishment of proof-of-concept for, and/or preclinical development of, lead candidate vaccines or immunoprophylactics that target multiple antimicrobial-resistant Gram-negative bacterial pathogens prevalent in nosocomial infections: carbapenem-resistant Enterobacteriaceae (CRE), multidrug-resistant (MDR) Acinetobacter and MDR Pseudomonas aeruginosa. Letter of Intent Due Date(s): September 4, 2017. Application Due Date(s): October 4, 2017.

[Partnerships for Development of Clinically Useful Diagnostics for Antimicrobial-Resistant Bacteria \(R01\)](#) - The objective of this initiative is to support milestone-driven projects focused on the development of clinically informative diagnostic platforms that identify select antimicrobial-resistant bacterial pathogens and determine associated antimicrobial sensitivity and/or resistance. Applications must include a Product Development Strategy and demonstrate substantive investment by at least one industrial participant. . Letter of Intent Due Date(s): September 4, 2017. Application Due Date(s): October 4, 2017.

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Department of Defense

The Fiscal Year 2017 (FY17) Peer Reviewed Orthopaedic Research Program (PRORP) are being solicited for the Defense Health Agency. The FY17 PRORP challenges the scientific community to address the most significant gaps in care for the leading burden of injury and loss of fitness for military duty by funding innovative, high-impact, clinically relevant research to advance optimal treatment and rehabilitation from neuromusculoskeletal injuries (excluding spinal cord injuries) sustained during combat or combat-related activities. It is expected that research findings would also benefit the general population. Applications involving multidisciplinary collaborations among academia, industry, the military Services, the Department of Veterans Affairs (VA), and other Federal agencies are highly encouraged. There are four award mechanisms: [Applied Research Award](#); Clinical Trial Award; Integrated Clinical Trial Award; and [Clinical Translational Research Award](#). Click on Related Documents tab on Grants.gov. Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), July 12, 2017. Invitation to Submit an Application: August 16, 2017. Application Submission Deadline: 11:59 p.m. ET, September 27, 2017.

Applications to the Fiscal Year 2017 (FY17) Peer Reviewed Medical Research Program (PRMRP) are being solicited for the Defense Health Agency. The vision of the FY17 PRMRP is to improve the health and well-being of all military Service members, Veterans, and beneficiaries. The PRMRP challenges the scientific and clinical communities to address at least one of the FY17 Topic Areas with original ideas that foster new directions along the entire spectrum of research and clinical care. The program seeks applications in laboratory, clinical, behavioral, epidemiologic, and other areas of research to advance knowledge in disease etiology, improve prevention, detection, diagnosis, treatment, and quality of life for those affected by a relevant disease or condition, and to develop and validate clinical care or public health guidelines. There are five award mechanisms: [Clinical Trial Award](#) and [Focused Program Award](#) (Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), July 20, 2017. Application Submission Deadline: 11:59 p.m. ET, October 26, 2017.); [Medical Discovery Award](#) (Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), July 19, 2017. Application Submission Deadline: 11:59 p.m. ET, August 2, 2017.); and [Investigator-Initiated Research Award](#) and [Technology/Therapeutic Development Award](#) (Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), July 13, 2017. Application Submission Deadline: 11:59 p.m. ET, October 18, 2017).

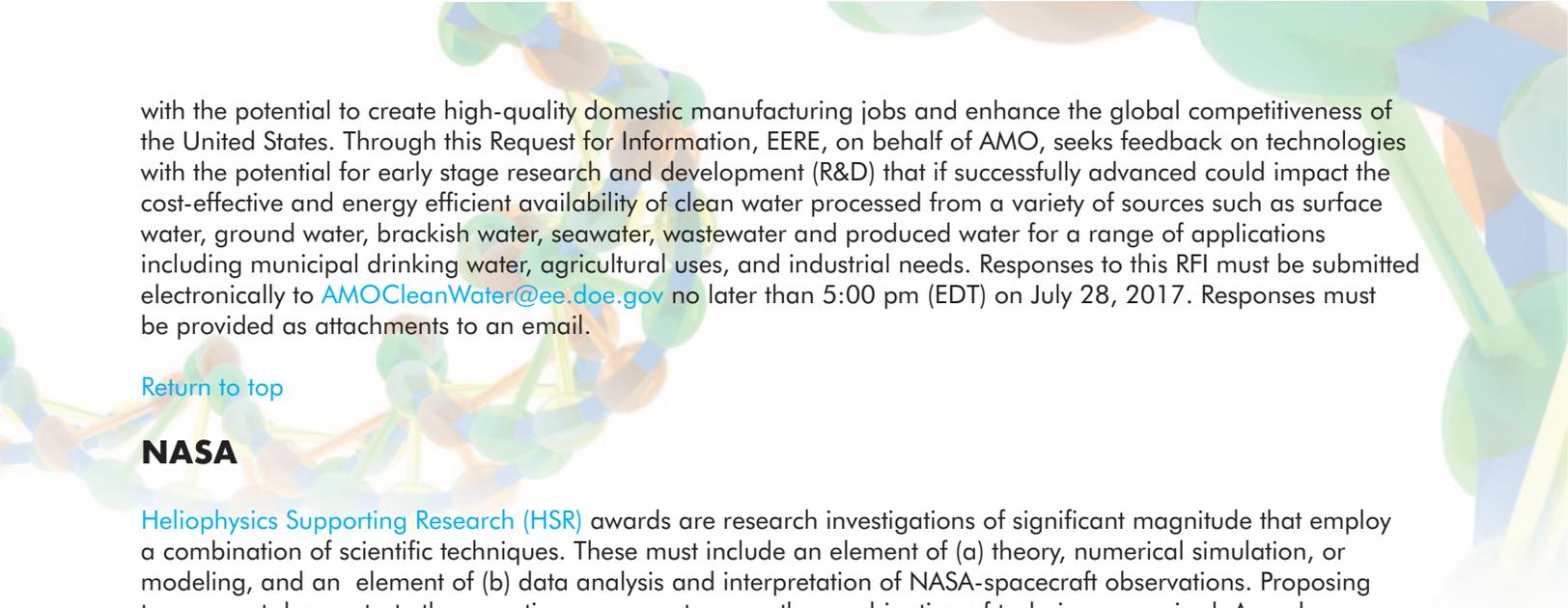
Applications to the Fiscal Year 2017 (FY17) Duchenne Muscular Dystrophy Research Program (DMDRP) are being solicited for the Defense Health Agency (DHA). The vision of the FY17 DMDRP is to preserve and improve the function and quality of life, and to extend the life span of all individuals with Duchenne. As such, the DMDRP is seeking to better support discovery and development of therapeutics, devices, and other interventions, and to promote their rigorous clinical testing. Additionally, DMDRP supports the efforts of the National Institutes of Health Muscular Dystrophy Coordinating Committee (MDCC) and the [2015 MDCC Action Plan for the Muscular Dystrophies](#), which prioritizes the needs to improve treatments and reduce the disease burden for muscular dystrophy including Duchenne. There are two award mechanisms: [Career Development Award](#) (Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), October 4, 2017. Application Submission Deadline: 11:59 p.m. ET, October 18, 2017) and [Investigator-Initiated Award](#) (Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), July 19, 2017. Invitation to Submit an Application: August 2017. Application Submission Deadline: 11:59 p.m. ET, October 18, 2017.) Click on Related Documents tabs for details.

[THE SCIENCE, MATHEMATICS AND RESEARCH FOR TRANSFORMATION \(SMART\) SCHOLARSHIP FOR SERVICE PROGRAM](#) (click on Related Documents tab) - The SMART Scholarship Program is an opportunity for students pursuing an undergraduate or graduate degree in STEM disciplines to receive a full scholarship and be gainfully employed upon degree completion. The program incentivizes students by providing funding for a STEM degree while providing the opportunity to perform hands on research at a DoD facility during the summer months and creating employment for the scholar upon successful completion of their degree. This not only provides the public with a vehicle in which to perform research topics that are on the cutting edge, but also gives opportunity in the form of full tuition to students who would potentially not have been able to attend universities or colleges due to financial distress. The DoD will offer these scholarships to individuals who have demonstrated ability and special aptitude for training in STEM. Applications Due by 11 July 2017.

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Department of Energy

[Request for Information \(RFI\): Clean Water Technologies](#) - EERE's Advanced Manufacturing Office (AMO) partners with industry, small business, universities, and other stakeholders to identify and invest in emerging technologies



with the potential to create high-quality domestic manufacturing jobs and enhance the global competitiveness of the United States. Through this Request for Information, EERE, on behalf of AMO, seeks feedback on technologies with the potential for early stage research and development (R&D) that if successfully advanced could impact the cost-effective and energy efficient availability of clean water processed from a variety of sources such as surface water, ground water, brackish water, seawater, wastewater and produced water for a range of applications including municipal drinking water, agricultural uses, and industrial needs. Responses to this RFI must be submitted electronically to AMOCleanWater@ee.doe.gov no later than 5:00 pm (EDT) on July 28, 2017. Responses must be provided as attachments to an email.

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NASA

[Heliophysics Supporting Research \(HSR\)](#) awards are research investigations of significant magnitude that employ a combination of scientific techniques. These must include an element of (a) theory, numerical simulation, or modeling, and an element of (b) data analysis and interpretation of NASA-spacecraft observations. Proposing teams must demonstrate the expertise necessary to cover the combination of techniques required. Awards are expected to be in the range of approximately \$200K per year – \$250K per year. The Heliophysics Supporting Research program is a component of the Heliophysics Research Program and proposers interested in this program element are encouraged to see the overview of the Heliophysics Research Program in Appendix B.1 of this ROSES NASA Research Announcement. HSPHR17 HSR: Heliosphere Step-1 Proposals Due by Jul 06, 2017 and Step-2 by Sep 07, 2017.

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