

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

There will be no Grant Opportunities next week, but it will return on February 3.

An opportunity for your students if they live near Charleston. The application for the internship can be found here: <http://wvresearch.org/application-crg-2017-intern>.

The **Coal River Group is looking for interns for the summer of 2017** to help operate the Coal River Canoe & Kayak Rental business. Interns will be primarily tasked with day-to-day operations of the Coal River Group's boat rental business. Responsibilities will include: managing and maintaining boats and equipment; shuttling rental boats and passengers to their put-in/take-out site; handling business transactions for boat rentals and gear purchases; providing safety orientations to boaters; and marketing of the rental program. Interns will also engage in maintenance of the Coal River Water Trail. Tasks will include: creating an inventory of existing signage throughout the 100 miles of water trail, and working with volunteers to replace needed signs.

Special Projects:

- All Coal River Group internships include a youth outreach component. For this position, interns will coordinate several "Kids Outdoor Days" events, which will give local kids the opportunity to kayak and canoe.
- Based on the intern's individual experience, side projects may include marketing, GIS/GPS mapping, water quality monitoring, and other projects
- As a final deliverable upon completion of the position, interns will prepare a report on entrepreneurship in outdoor recreation.

Details & Requirements:

This is a **full-time, 10-week summer internship program** that will take place at the CRG River Center in Tornado, WV. The intern schedule will include flexible hours and days. As this position requires handling boats, applicants for this position should be physically fit, capable of lifting 60lbs, and able to swim. First aid certifications are preferred. Upon completing the internship, interns will be awarded a \$1000 scholarship.

NSF
NIH
DOE
USDA

National Science Foundation

Critical Techniques, Technologies and Methodologies for Advancing Foundations and Applications of Big Data Sciences and Engineering (BIGDATA) - The BIGDATA program seeks novel approaches in computer science, statistics, computational science, and mathematics, along with innovative applications in domain science, including social and behavioral sciences, education, biology, the physical sciences, and engineering that lead towards the further development of the interdisciplinary field of data science. The solicitation invites two categories of proposals: Foundations (F): those developing or studying fundamental theories, techniques, methodologies, and technologies of broad applicability to big data problems, motivated by specific data challenges and requirements; and Innovative Applications (IA): those engaged in translational activities that employ new big data techniques, methodologies, and technologies to address and solve problems in specific application domains. Projects in this category must be collaborative, involving researchers from domain disciplines and one or more methodological disciplines, e.g., computer science, statistics, mathematics, simulation and modeling, etc. Proposals in both categories must include a clear description of the big data aspect(s) that have motivated the

proposed approach(es), for example: the scalability of methods with increasing data volumes, rates, heterogeneity; or data quality and data bias; etc. Innovative Applications proposals must provide clear examples of the impacts of the big data techniques, technologies and/or methodologies on (a) specific domain application(s). Full Proposal Window: March 15, 2017 - March 22, 2017.

The [Emerging Frontiers in Research and Innovation \(EFRI\)](#) program of the NSF Directorate for Engineering (ENG) serves a critical role in helping ENG focus on important emerging areas in a timely manner. This solicitation is a funding opportunity for interdisciplinary teams of researchers to embark on rapidly advancing frontiers of fundamental engineering research. For this solicitation, we will consider proposals that aim to investigate emerging frontiers in the following two research areas: Advancing Communication Quantum Information Research in Engineering (ACQUIRE); and New Light, EM (Electronic) and Acoustic Wave Propagation: Breaking Reciprocity and Time-Reversal Symmetry (NewLAW). Full Proposal Deadline Date: March 24, 2017.

The [National Science Foundation \(NSF\) Scholarships in Science, Technology, Engineering, and Mathematics \(S-STEM\)](#) program addresses the need for a high quality STEM workforce in STEM disciplines supported by the program and for the increased success of low-income academically talented students with demonstrated financial need who are pursuing associate, baccalaureate, or graduate degrees in science, technology, engineering, and mathematics (STEM) [6], [16]. Full Proposal Deadline Date: March 29, 2017.

As computing has become an integral part of the practice of modern science, technology, engineering and mathematics (STEM), the [STEM + Computing Partnerships](#) program seeks to address the urgent need to prepare students from the early grades through high school in the essential skills, competencies, and dispositions needed to succeed in a computationally-dependent world. Thus, STEM+C advances the integration of computational thinking and computing activities in early childhood education through high school (pre-K-12) to provide a strong and developmental foundation in computing and computational thinking through the integration of computing in STEM teaching and learning, and/or the applied integration of STEM content in pre-K-12 computer science education. Full Proposal Deadline Date: March 29, 2017.

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National Institutes of Health

[Zika Virus \(ZIKV\) Complications \(R21\)](#) - The purpose of this Funding Opportunity Announcement (FOA) is to provide support for research on Zika virus (ZIKV) and its complications. Application Due Date(s): Standard dates apply.

[FY17 Prevention of Opioid Misuse in Women: Office on Women Health Prevention Awards \(OWHPA\)](#) - This notice solicits applications for up to 12 projects to prevent the misuse of opioids by women across the lifespan. Projects must focus on primary or secondary prevention efforts only and include partnership and collaboration components. Regional, state, local, and community organizations should propose organized activities to achieve this goal through: 1. Program development and implementation, 2. Health education targeting health professionals and/or women directly, or 3. Policy efforts to support primary and/or secondary prevention. We are requesting non-binding letters of intent. Your letter of intent is due **February 16, 2017 by 5 p.m. Eastern Time**. Technical Assistance: A technical assistance webinar for potential applicants will be held on Thursday, **February 9, 2017 from 1-3p.m. Eastern Time**. (Details for the informational webinar will be sent to all who submit a letter of intent.) Applications: Your application is due April 7, 2017 by 5 p.m. Eastern Time.

[Biomarkers for Diabetes, Digestive, Kidney and Urologic Diseases Using Biosamples from the NIDDK Repository \(R01\)](#) - This FOA will provide support for assays (and associated data analysis) of repository-held samples for studies focused on an NIDDK relevant disease. The review of applications to this FOA will consider both access to repository-held samples and funding for assays using the samples. These studies are expected to generate scientific discoveries on disease mechanisms, disease pathogenic processes, disease progression, or clinical responses. Projects that make good use of the associated data from the clinical trials and studies, the original intent of the clinical study and/or trial are highly encouraged. Exploratory studies and discovery research are encouraged especially when samples are not severely limited, the work is justified, and the goal is consistent with the original intent of the clinical research. Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): [Standard dates](#) apply.

[Sex Hormone Induced Thromboembolism in Pre-Menopausal Women \(R61/R33\)](#) - The primary objective of the work to be supported by this funding opportunity is to understand the mechanisms by which female sex hormones and sex hormone-based therapies can increase the risk of venous and arterial thromboembolism in pre-menopausal

women. Understanding the basic physiopathology of how sex hormones may induce or add to the pre-existing risk of thrombosis will strengthen our understanding of the mechanisms underlying thrombus formation in relevant clinical situations such as peripartum or in women using contraceptives or undergoing in vitro fertilization. Such research may help identify women at higher thrombotic risk and thus help guide their clinical care. It could also lead to the identification of potential new therapeutics to prevent thrombus formation. . Letter of Intent Due Date(s): 30 days prior to the application due date. Application Due Date(s): June 20, 2017.

[Quantitative Imaging Tools and Methods for Cancer Therapy Response Assessment \(UG3/UH3\)](#) - This Funding Opportunity Announcement (FOA) encourages research project applications under the cooperative agreement (UG3/UH3) mechanism to address the development, optimization and validation of quantitative imaging (QI) software tools and methods for prediction and/or measurement of response to cancer therapies or for planning and validating radiation therapy treatment strategies in clinical trials. Companion Funding Opportunity is [PAR-17-129](#). Letter of Intent Due Date(s): April 9, 2017. Application Due Date(s): May 9, 2017; September 12, 2017; January 9, 2018; May 9, 2018; September 12, 2018; January 9, 2019; May 9, 2019; September 12, 2019; January 9, 2020.

[Research Program Award \(R35\)](#) - The purpose of the NINDS Research Program Award (RPA) is to provide longer-term support and increased flexibility to Program Directors (PDs) /Principal Investigators (PIs) whose outstanding records of research achievement demonstrate their ability to make major contributions to neuroscience. RPAs will support the overall research programs of NINDS-funded investigators for up to 8 years, at a level commensurate with a PD/PIs recent NINDS support (Part 2, Section II) This greater funding stability will provide investigators with increased freedom and flexibility which may allow them to be more adventurous in their research, to take greater risks, to embark upon research that breaks new ground, to undertake research projects that require a longer timeframe, and/or to extend previous discoveries in new directions. Research supported through the RPA must be within the scope of the NINDS mission (http://www.ninds.nih.gov/about_ninds/mission.htm). Research activities outside of the NINDS mission, or traditionally supported by another NIH Institute or Center will not be considered through this program. Letter of Intent Due Date(s): February 21, 2017. Application Due Date(s): March 21, 2017.

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Department of Energy

[Combined Heat and Power Technical Assistance Partnerships](#) - The U.S. Department of Energy's (DOE) Office of Energy Efficiency and Renewable Energy's (EERE) Advanced Manufacturing Office (AMO) seeks to further the installation of cost-effective, highly efficient combined heat and power (CHP). CHP is a suite of commercially available, predominately gas-fired distributed generation technologies that produce both electricity and thermal energy onsite, thereby reducing line losses and strain on grid infrastructure while also increasing site reliability and energy security. The promotion of CHP is part of the EERE mission to create and sustain American leadership in the transition to a strong and prosperous America powered by clean, domestic, affordable and secure energy for the industrial, manufacturing, commercial and multifamily sectors. Within AMO, CHP is the focus of both R&D and deployment activities, with R&D activities focused on new CHP technologies including hybrid and also grid reactive controls. On the deployment side, the CHP Deployment Program conducts technical assistance activities that promote the use of combined heat and power to support U.S. economic competitive advantage, promote economic development, instill resiliency in businesses and communities, create and maintain local energy-related jobs, and provide sustainable solutions for modernizing energy generation and delivery. Today's energy environment and technology solutions present an opportunity for continued deployment of CHP. The goal of this FOA is to solicit proposals from interested parties to become regional CHP Technical Assistance Partnerships (CHP TAPs) who will assist the CHP Deployment Program in the development of strategies to maximize CHP exposure to potential end-users and key stakeholders, and to locally promote best practices in CHP technology policies and installation. (For more information about the DOE/EERE CHP Deployment Program, visit <https://energy.gov/eere/amo/chp-deployment>). Informational Webinar: The **Informational Webinar** mentioned in the FOA will be held on January 26, 2017 at 3:00 PM Eastern Standard Time. Attendance is not mandatory and will not positively or negatively impact the overall review of any Applicant submissions. Standard application questions regarding the EERE Office and FOA procedures will be discussed. No new information will be presented during the webinar and EERE will not answer any attendee questions during the webinar. To register for the webinar: <https://attendee.gotowebinar.com/register/6295878727401909505>. Letter of Intent Deadline: 2/14/2017 5:00 PM ET. Full Application Submission Deadline: 3/21/2017 5:00 PM ET.

[Plasma Science Facilities](#) (click on Related Documents tab) - Energy (DOE), hereby announces its interest in receiving cooperative agreement proposals for research and operation of, and/or construction of, intermediate-scale facilities for frontier plasma science research. User facilities are sought that can address frontier plasma science questions in

multiple research areas identified in the 2015 Frontiers of Plasma Science Workshops report. Specific research areas of interest include: • plasma dynamo (generation and amplification of magnetic fields); • magnetic reconnection (topological changes of the magnetic field lines); • particle acceleration by shocks, turbulence, and/or magnetic reconnection; • turbulent cascade and dissipation of energy in magnetized plasmas; and • formation of coherent structures in magnetized plasmas. Consistent with the recommendation made in the 2007 National Research Council report (Plasma Science: Advancing Knowledge in the National Interest by the Plasma 2010 Committee) and intermediate-scale research needs identified in the 2015 Frontiers of Plasma Science Workshops report, the goal of this FOA is to steward research that cannot be adequately addressed through small-scale, single-investigator projects (e.g., table-top experiments) and requires intermediate-scale facilities (e.g., experimental facilities larger than can be easily fielded by a single investigator but smaller than those at the larger national research installations). Pre-Application Due Date: 03/03/2017 at 5 PM Eastern Time (A Pre-Application is required). Encourage/Discourage Date: 03/17/2017 at 5 PM Eastern Time. Application Due Date: 5/05/2017 at 5 PM Eastern Time.

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U.S. Department of Agriculture

[Special Research Grants Program, Potato Breeding Research](#) - The purpose of this grant program is to support potato (*Solanum tuberosum* L.) research programs that focus on varietal development and testing and potato varieties for commercial production. As used herein, varietal development and testing is research using conventional breeding and/or biotechnological genetics to develop improved potato varieties. Aspects of evaluation, screening and testing must support variety development. Closing Date: Friday, March 10, 2017.

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