

Grant Opportunity Alerts: Issue: ORD-GOA-2015-15

Grant Opportunities Alerts:

Keywords and Areas Included in Funding Opportunities Alerts:

NSF: Research Experience for Undergraduates, Cybersecurity, Consortium for Advanced Manufacturing Foresights,

US Army Medical Research Acquisition Activity: DoD Peer Reviewed Medical Focused Program Award, Quantum Information Science, Computational Physics

National Institute of Health: Enhancing Regulatory Science for the Risk Based Assessment of Emerging Manufacturing Technologies (U01)

NASA: ROSES 2015: Mars Science Laboratory Participating Scientist Program

National Science Foundation

Grant Program: Research Experience for Undergraduates (REU)

Agency: National Science Foundation NSF 13-542

RFP Website:

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5517&WT.mc_id=USNSF_39&WT.mc_ev=click

Brief Description:

The Research Experiences for Undergraduates (REU) program supports active research participation by undergraduate students in any of the areas of research funded by the National Science Foundation. REU projects involve students in meaningful ways in ongoing research programs or in research projects specifically designed for the REU program. This solicitation features two mechanisms for support of student research: (1) *REU Sites* are based on independent proposals to initiate and conduct projects that engage a number of students in research. REU Sites may be based in a single discipline or academic department or may offer interdisciplinary or multi-department research opportunities with a coherent intellectual theme. Proposals with an international dimension are welcome. (2) *REU Supplements* may be included as a component of proposals for new or renewal NSF grants or cooperative agreements or may be requested for ongoing NSF-funded research projects.

Undergraduate student participants in either REU Sites or REU Supplements must be U.S. citizens, U.S. nationals, or permanent residents of the United States.

Students do not apply to NSF to participate in REU activities. Students apply directly to REU Sites or to NSF-funded investigators who receive REU Supplements. To identify appropriate REU Sites, students should consult the directory of active REU Sites on the Web at

http://www.nsf.gov/crssprgm/reu/reu_search.cfm.

Awards: Various levels

Letter of Intent: Not required

Deadlines: Full Proposal Deadline Date: May 22, 2015

Deadline for REU Site proposals requiring access to Antarctica. All other REU Site proposals must be submitted to the August REU deadline.

Full Proposal Deadline Date: August 26, 2015

Deadline for REU Site proposals except those requiring access to Antarctica

Grant Program: Cybersecurity Innovation for Cyberinfrastructure (CICI)**Agency: National Science Foundation NSF 15-549****RFP Website:** <http://www.nsf.gov/pubs/2015/nsf15549/nsf15549.htm>**Brief Description:**

Advancements in data-driven scientific research depend on trustworthy and reliable cyberinfrastructure. Researchers rely on a variety of networked technologies and software tools to achieve their scientific goals. These may include local or remote instruments, wireless sensors, software programs, operating systems, database servers, high-performance computing, large-scale storage arrays, and other critical infrastructure connected by high-speed networking. This complex, distributed, interconnected global cyberinfrastructure ecosystem presents unique cybersecurity challenges. NSF-funded scientific instruments are specialized, highly visible assets that present attractive targets for both unintentional errors and malicious activity; untrustworthy software or a loss of integrity of the data collected by a scientific instrument may mean corrupt, skewed or incomplete results. Furthermore, often data-driven research, e.g., in the medical field or in the social sciences, requires access to private information, and exposure of such data may cause financial, reputational and/or other damage. Therefore, an increasing area of focus for NSF is the development and deployment of hardware and software technologies and techniques to protect research cyberinfrastructure across every stage of the scientific workflow.

Awards: Cybersecurity awards will be supported at up to \$500,000 total per award for up to three years. A Cybersecurity Center of Excellence award will be supported at up to \$5,000,000 total for up to three years.

Letter of Intent: Not required

Deadlines: June 2, 2015

Grant Program: Consortium for Advanced Manufacturing Foresights**Agency: National Science Foundation NSF 15-565****RFP Website:**http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=505203&ods_key=nsf15565**Brief Description:**

Accelerating U.S Advanced Manufacturing

(http://www.whitehouse.gov/sites/default/files/microsites/ostp/PCAST/amp20_report_final.pdf), the October 2104 report to the President produced by the Steering Committee of the Advanced Manufacturing Partnership 2.0 (AMP 2.0) for the President's Council of Advisors on Science and Technology (PCAST), calls for the creation of a technology-focused consortium to provide coordinated private-sector input on national advanced manufacturing technology research and development priorities. This solicitation is to establish the Consortium for Advanced Manufacturing Foresights (the "Consortium") to implement that recommendation. The consortium will inform and promote regular and sustained communication and research coordination across the public and private sectors, provide federal decision-makers with timely access to top university and industry experts, and respond quickly to requests from federal decision-makers for detailed input on nascent opportunities and priorities in manufacturing. These activities will improve the coordination of federal advanced manufacturing technology and research and development strategies. The Consortium will cooperate with the Advanced Manufacturing National Program Office (AMNPO) of NIST, the

President's National Science and Technology Council (NSTC), and the U.S. Government Agencies that support advanced manufacturing to help provide the timely information needed to achieve that coordination. NSF is the program lead and is solely responsible for administration of the solicitation and the resulting award. NIST, acting on behalf of the Advanced Manufacturing National Program Office, is the program co-sponsor with NSF and provides financial and administrative support to NSF.

Awards: \$3 - \$6 million

Letter of Intent: Not required

Deadlines: July 20, 2015

Grant Program: Quantum Information Science

Agency: National Science Foundation NSF PD 15-7281

RFP Website:

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505207&org=NSF&sel_org=NSF&from=fund

Brief Description:

Quantum Information Science (QIS) supports theoretical and experimental proposals that explore quantum applications to new computing paradigms or that foster interactions between physicists, mathematicians, and computer scientists that push the frontiers of quantum-based information, transmission, and manipulation.

The quantum information science program is focused on investigations relevant to disciplines supported by the Physics Division, while encouraging broader impacts on other disciplines. Disciplines within the purview of the Physics Division include: atomic, molecular, optical, plasma, elementary particle, nuclear, gravitational and biological physics, particle astrophysics, and accelerator science.

Proposals with intellectual focus in areas supported by other NSF Divisions should be submitted to those divisions directly. Proposals that cross Divisional lines are welcome, but the Physics Division encourages PIs to request a co-review by naming other Divisional programs on the cover sheet. This facilitates the co-review and participation of other programs in the review process.

Awards: Various

Letter of Intent: Not required

Deadlines: December 3, 2015

Grant Program: Computational Physics

Agency: National Science Foundation NSF PD 15-7244

RFP Website:

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505207&org=NSF&sel_org=NSF&from=fund

Brief Description:

Computational Physics (CP) supports research for computational and data-enabled science.

The program emphasizes novel methods for high-performance computing that require significant code development. Priority will be given to proposals that, in addition to compelling scientific goals, have a computational advance or new enabling capability.

Proposals should include either innovation in computing, such as algorithm development and efficient use of novel architectures, or provide significant improvement to community codes.

Computational Physics is the program through which the Physics Division participates in the Computational and Data-Enabled Science and Engineering (CDS&E) program.

The computational physics program is focused on investigations relevant to disciplines supported by the Physics Division, while encouraging broader impacts on other disciplines. Disciplines within the purview of the Physics Division include: atomic, molecular, optical, plasma, elementary particle, nuclear, gravitational and biological physics, particle astrophysics, and accelerator science.

Proposals with intellectual focus in areas supported by other NSF Divisions should be submitted to those divisions directly. Proposals that cross Divisional lines are welcome, but the Physics Division encourages PIs to request a co-review by naming other Divisional programs on the cover sheet. This facilitates the co-review and participation of other programs in the review process.

Awards: Various

Letter of Intent: Not required

Deadlines: December 3, 2015

National Institutes of Health and FDA

Grant Program: Enhancing Regulatory Science for the Risk Based Assessment of Emerging Manufacturing Technologies (U01)

Agency: Department of Health and Human Services PAR 15-187

W81XWH-15-PRMRP-IIRA

RFP Website: <http://cdmrp.army.mil/dmrdp/default.shtml>

Brief Description: The goal of this program is to support the advancement of regulatory science that can facilitate the implementation and the assessment of emerging manufacturing technology in the pharmaceutical sector. Emerging manufacturing technology can be defined as a technology that has the potential to modernize the pharmaceutical manufacturing body of knowledge to support more robust, predictable, or cost-effective processes and with which the FDA has limited review or inspection experiences due to the relative novelty of the technology. Examples of such elements include an innovative or novel: (1) product manufacturing technology, such as the dosage form; (2) manufacturing process (e.g., design, scale-up, and/or commercial scale); and/or (3) testing technology.

Identified emerging technologies should be sufficiently developed and likely ready for industrial implementation for the purpose of product quality enhancement. The results and knowledge developed in this program can be utilized by industry, academia, and industry to support the implementation of the identified emerging technologies and to ensure that FDA regulatory policies reflect state-of-the-art manufacturing science. Specifically, the expected project outcomes should enable (1) developing tools and approaches for risk-based quality assessment, (2) establishing science-based quality standards and policies, and/or (3) providing training tools for both the industry and/or the regulatory bodies for the identified emerging technology.

As an example, one such emerging manufacturing technology that offers potential flexibility, quality, and economic advantages over traditional processing methods is continuous pharmaceutical manufacturing. Potential research projects to support the implementation of continuous manufacturing may include:

1. Development of approaches to capture the properties and behavior of common raw materials within different continuous process environments to facilitate initial risk screening during quality assessment.
2. Development of process modeling and simulation or pharmaceutical quality informatics platforms that can support risk-based quality assessments
3. Development of science and risk based approaches for the effective regulatory assessment of advanced process control approaches to evaluate the performance, for example, to determine the adequate amount of information needed to validate the performance of advanced process control systems for pharmaceutical applications.
4. Development of a general approach for supporting real time release testing (RTRT). The science and risk based approach should facilitate determination of how much and what type of information and data analysis would be needed to support RTRT.
5. Development of tools and approaches for the risk-based quality assessment for new manufacturing technologies that enable continuous homogenous processing. Examples of such homogeneous processes include extrusion, spray drying, thin film formation, electrospraying and electrospinning, and injection molding and calendaring.

Awards: Up to \$500,000 per year

Letter of Intent: 30 days before the deadline

Deadline: June 30, 2015, by 11:59 PM Eastern Time.
April 29, 2016, by 8:00 PM Eastern Time.

NASA

Grant Program: ROSES 2015: Mars Science Laboratory Participating Scientist Program

Agency: NASA NNH15ZDA001N-MSLPSP

Research Opportunities in Space and Earth Sciences (ROSES) – 2015; NNH15ZDA001N RFP Website:

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={19148EC8-0C4D-A31F-7F05-AF399BEF99A8}&path=open>

Summary of Solicitations Under ROSES 2015:

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={9F1341A9-6D0F-F075-C993-276263B186ED}&path=open&redirectURL=%2Fexternal%2Fsolicitations%2Fsolicitations.do%3Fmethod%3Dopen%26stack%3Dpush>

Brief Description: This ROSES NRA (NNH15ZDA001N) solicits basic and applied research in support of NASA's Science Mission Directorate (SMD). This NRA covers all aspects of basic and applied supporting research and technology in space and Earth sciences, including, but not limited to: theory, modeling, and analysis of SMD science data; aircraft, scientific balloon, sounding rocket, International Space Station, CubeSat and suborbital reusable launch vehicle investigations; development of experiment techniques suitable for future SMD space missions; development of concepts for future SMD space missions; development of advanced technologies relevant to SMD missions; development of techniques for and the laboratory analysis of both extraterrestrial samples returned by spacecraft, as well as terrestrial samples that support or otherwise help verify observations from SMD Earth system science missions;

determination of atomic and composition parameters needed to analyze space data, as well as returned samples from the Earth or space; Earth surface observations and field campaigns that support SMD science missions; development of integrated Earth system models; development of systems for applying Earth science research data to societal needs; and development of applied information systems applicable to SMD objectives and data. Awards range from under \$100K per year for focused, limited efforts (e.g., data analysis) to more than \$1M per year for extensive activities (e.g., development of science experiment hardware). The funds available for awards in each program element offered in this ROSES NRA range from less than one to several million dollars, which allow selection from a few to as many as several dozen proposals depending on the program objectives and the submission of proposals of merit. Awards will be made as grants, cooperative agreements, contracts, and inter- or intra-agency transfers depending on the nature of the proposing organization and/or program requirements. The typical period of performance for an award is four years, although a few programs may specify shorter or longer (maximum of five years) periods. Organizations of every type, domestic and foreign, Government and private, for profit and not-for-profit, may submit proposals without restriction on the number or teaming arrangements. Note that it is NASA policy that all investigations involving non-U.S. organizations will be conducted on the basis of no exchange of funds. Electronic submission of proposals is required by the respective due dates for each program element and must be submitted by an authorized official of the proposing organization. Electronic proposals may be submitted via the NASA proposal data system NSPIRES or via Grants.gov. Every organization that intends to submit a proposal in response to this ROSES NRA must be registered with NSPIRES; organizations that intend to submit proposals via Grants.gov must be registered with Grants.gov, in addition to being registered with NSPIRES. Such registration must identify the authorized organizational representative(s) who will submit the electronic proposal. All principal investigators and other participants (e.g., co-investigators) must be registered in NSPIRES regardless of submission system. Potential proposers and proposing organizations are urged to access the system(s) well in advance of the proposal due date(s) of interest to familiarize themselves with its structure and enter the requested information. Details of the solicited programs are given in the Appendices of this ROSES NRA. Names, due dates, and links for the individual calls are given in Tables 2 and 3 of this ROSES NRA. Interested proposers should monitor <http://nspires.nasaprs.com/> or subscribe to the electronic notification system there for additional new programs or amendments to this ROSES NRA through February 2016, at which time release of a subsequent ROSES NRA is planned. A web archive (and RSS feed) for amendments, clarifications, and corrections to this ROSES NRA will be available at: <http://science.nasa.gov/researchers/sara/grant-solicitations/roses-2015/>. Frequently asked questions about ROSES-2015 will be on the web at <http://science.nasa.gov/researchers/sara/faqs/>. Further information about specific program elements may be obtained from the individual Program Officers listed in the Summary of Key Information for each program element in the Appendices of this ROSES NRA and at <http://science.nasa.gov/researchers/sara/program-officers-list/>. Questions concerning general ROSES NRA policies and procedures may be directed to Max Bernstein, Lead for Research, Science Mission Directorate, at sara@nasa.gov.

Awards: Awards range from under \$100K per year for focused, limited efforts (e.g., data analysis) to more than \$1M per year for extensive activities (e.g., development of science experiment hardware).

Letter of Intent: Step 1, NOI: May 15, 2015

Deadline: Full Proposal Deadline(s): Full Proposal Due: July 17, 2015

DoD/ US Army Medical Research Acquisition Activity

Grant Program: DoD Peer Reviewed Medical Focused Program Award

Agency: US Army Medical Research Acquisition Activity W81XWH-15-PRMRP-FPA

RFP Website: <http://cdmrp.army.mil/dmrdp/default.shtml>

Brief Description: Applications to the Fiscal Year 2015 (FY15) Peer Reviewed Medical Research Program (PRMRP) are being solicited for the Defense Health Agency, Research, Development, and Acquisition (DHA RDA) Directorate, by the U.S. Army Medical Research Acquisition Activity (USAMRAA). As directed by the Office of the Assistant Secretary of Defense for Health Affairs, the DHA RDA Directorate manages and executes the Defense Health Program (DHP) Research, Development, Test, and Evaluation (RDT&E) appropriation. The executing agent for this Program Announcement/Funding Opportunity is the Congressionally Directed Medical Research Programs (CDMRP). The PRMRP was initiated in fiscal year 1999 (FY99) to provide support for military health-related research of exceptional scientific merit. Appropriations for the PRMRP from FY99 through FY14 totaled \$844.5 million (M). The FY15 appropriation is \$247.5M.

The vision of the FY15 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 FY15 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.

The PRMRP Focused Program Award mechanism is intended to optimize research and accelerate the solution for a critical question related to a designated FY15 PRMRP Focused Program Award Topic Area through a synergistic, multidisciplinary research program.

Awards: Up to \$10 million direct costs for five years

Letter of Intent: See Below

Pre-Application Deadline: 5:00 p.m. Eastern time (ET), June 18, 2015

• **Invitation to Submit an Application:** July 2015

Application Submission Deadline: 11:59 p.m. ET, October 28, 2015

End of Application Verification Period: 5:00 p.m. ET, November 2, 2015

Peer Review: December 2015

Programmatic Review: February 2016
