

NJIT Research Newsletter

Issue: ORN-2017-26

NJIT Research Newsletter includes recent awards, and announcements of research related seminars, webinars, national and federal research news related to research funding, and **Grant Opportunity Alerts**. The Newsletter is posted on the NJIT Research Website <http://www.njit.edu/research/>.

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Special Announcement

Reminder: Call For Proposals: NJIT Faculty Seed Grant Awards – 2017-18

Proposal Submission Deadline to College/School Dean: September 1, 2017

Purpose:

NJIT “2020 Vision” strategic plan targets on substantial increase in academic research and external funding with faculty and student professional development. The purpose of the NJIT Faculty Seed Grant (FSG) initiative is to promote academic research in the core and interdisciplinary areas by providing seed funding to obtain preliminary results or establish hypotheses for developing future grant proposals for submission to external funding agencies. The FSG initiative specifically seeks seed funding proposals from faculty to launch new initiatives in core and interdisciplinary emerging areas aligned with NJIT strategic tactics to develop critical research mass.

Eligibility and Type of Awards:

NJIT full-time faculty with specific research initiative to enhance the critical mass in key and emerging areas may apply to FSG program for internal funding with a budget of \$7500 per project over the FY18 ending June 30, 2018. Multidisciplinary projects with strong recommendation and justification from College/School Dean will be considered at the funding level of \$10,000 subject to availability of funds. It is expected that about 20-25 FSG awards will be made this year. Funding is arranged through the Offices of Research and College/School Deans.

Recipients of FSG as lead faculty are not eligible to receive another FSG award as lead faculty within three years from the last FSG award. Projects funded by FSG are not eligible to receive another FSG as the intent of internal seed funding is to facilitate initial research towards obtaining external funds to pursue research.

Allowable Expenses include Project supplies and small equipment, travel to conferences and/or funding agencies, travel expenses for funding agency people to visit NJIT, student hourly wages. Faculty summer salary, AY release and any stipend are not permitted in the budget.

Deadlines:

FSG Proposal Due in the Office of College/School Dean: September 1, 2017

College/School Dean Recommendations to Office of Research: September 10, 2017

Institutional Review and Announcement of Awards: September 15, 2017

Period of Award: October 1, 2017– June 30, 2018 (no extension will be available)

Review Process and Criterion:

All Proposals will be reviewed within the College/School to which PI is affiliated. College/School Dean will make the recommendation of top ranked proposals based on the reviews from the College/School review committee, which will be forwarded to the Office of Research for further review and discussion with Deans leading to the announcement of awards.

Review criterion primarily includes the scientific merit of the proposal, and potential of external funding. Additional criterion includes significance of project goals, fit to the NJIT strategic research clusters and emerging trends towards developing critical mass in key areas, justification of internal funding, expected outcomes, and faculty expertise.

Other Requirements: Faculty receiving FSG awards will submit a full proposal to external funding agencies within six months from the end date of the award. They will also participate in the NJIT Faculty Research Showcase and Panel Discussion events in Spring semester.

Required FSG Proposal Format:

The main proposal (sections 2-7 in the required FSG proposal format below) is limited to 5 pages with single spaced 12 point font size. The page limit does not include the cover sheet, budget and budget justification (maximum one page) and list of references (maximum one page). In addition up to 2 pages of biographical sketch and 1 page of current and pending support are required for PI and each investigator. Please see the proposal format guidelines below.

The main proposal should have the following sections:

1. Cover Sheet:

Title of the Project

Principal and Co-Principal Investigators

Department

College

Date Submitted

PI and Co-PI (if multiple investigators) Signatures

2. Abstract (Maximum 250 words; Non-IP for public dissemination):

(Please summarize briefly on):

a. Project Goal(s)

b. Significance

c. Expected Outcomes

d. Justification of Internal Funding

3. Specific Objectives

4. Methods and Procedures

5. Evaluation and Deliverables

6. Future Plans

(Describe how the project funding with the deliverables will help in future proposal submissions, enhancing the research synergy, and obtaining external funds)

7. Justification of Internal Funding

(Describe what other funds are available and why additional internal funding is needed)

8. Budget and Budget Justification (maximum 1 page)

9. References (maximum 1 page)

10. Appendix (for PI and each Co-PI/Investigator):

a. PI Biographical Sketch (NSF/NIH or Federal Agency Format; maximum 2 pages per investigator)

b. Other Grant Support (maximum 1 page per investigator; summarize specific project goal(s) for each grant and any overlap with this proposal)

Internal Competition for NSF Innovations in Graduate Education (IGE) Program

Pre-proposals in the following format (maximum 5 pages) should be submitted to respective dean's office by September August 25, 2017. Deans are requested to forward up to 2 pre-proposals with their recommendations to the Office of Research at dhawan@njit.edu by September 4, 2017. Two pre-proposals will be selected after institutional review by Sept 8, 2017.

Pre-proposal Format (maximum 5 pages):

1. Title and key personnel with affiliation
2. Project Summary (1-page)
3. Internal and External Collaboration
4. Intellectual Merit: Innovation in Graduate Education
5. Broader Impact
6. Performance Assessment/Project Evaluation
7. Tentative Budget Summary and Any Resources Needed

Grant Program: Innovations in Graduate Education (IGE) Program

Agency: National Science Foundation NSF 17-585

RFP Website: <https://www.nsf.gov/pubs/2017/nsf17585/nsf17585.htm>

Brief Description: The Innovations in Graduate Education (IGE) program is designed to encourage the development and implementation of bold, new, and potentially transformative approaches to STEM graduate education training. The program seeks proposals that explore ways for graduate students in research-based master's and doctoral degree programs to develop the skills, knowledge, and competencies needed to pursue a range of STEM careers.

IGE focuses on projects aimed at piloting, testing, and validating innovative and potentially transformative approaches to graduate education. IGE projects are intended to generate the knowledge required for their customization, implementation, and broader adoption. The program supports testing of novel models or activities with high potential to enrich and extend the knowledge base on effective graduate education approaches.

The program addresses both workforce development, emphasizing broad participation, and institutional capacity building needs in graduate education. Strategic collaborations with the

private sector, non-governmental organizations (NGOs), government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners are encouraged.

Awards: Standard Grants. **Anticipated Funding Amount:** \$4,000,000

Limit on Number of Proposals per Organization: 2

An eligible organization may participate in two Innovations in Graduate Education proposals per competition. Participation includes serving as a lead organization on a non-collaborative proposal or as a lead organization, non-lead organization, or subawardee on a collaborative proposal. Organizations participating solely as evaluators on projects are excluded from this limitation. Proposals that exceed the institutional eligibility limit (beyond the first two submissions based on timestamp) will be returned without review regardless of the institution's role (lead, non-lead, subawardee) in the returned proposal..

Limit on Number of Proposals per PI or Co-PI: 1

An individual may serve as Lead Principal Investigator (PI) or Co-PI on only one proposal submitted to the IGE program per annual competition. Proposals that exceed the PI/Co-PI eligibility limit (beyond the first submission based on timestamp) will be returned without review.

Letter of Intent: Not Required

Proposal Submission Due Date: October 25, 2017

Contacts: Laura B. Regassa, telephone: (703) 292-2343, email: lregassa@nsf.gov

- Tara L. Smith, telephone: (703) 292-7239, email: tsmith@nsf.gov
- Stephen Mulkey, telephone: (703) 292-8954, email: smulkey@nsf.gov

Grant Opportunity Alerts

Keywords and Areas Included in the Grant Opportunity Alert Section Below

NSF: Japan-US Network Opportunity 2 (JUNO2); Process Separations; Innovations in Graduate Education (IGE) Program; Discovery Research PreK-12 (DRK-12); CISE Research Infrastructure (CRI); Secure and Trustworthy Cyberspace (SaTC); Advancing Informal STEM Learning (AISL)

NIH: Grant Program: Point-of-Care Technologies Research Network Centers (U54); NIBIB Exploratory/Developmental Research Grant Program (R21); Ethical, Legal, and Social Implications (ELSI) of Genomics Exploratory/Developmental Research Grant Program (R21) (R01) (R03); Exploratory/Developmental Investigations on Primary Immunodeficiency Diseases (R21); Synthetic Biology for Engineering Applications (R01)

Department of Defense/US Army/DARPA/ONR: DoD, Peer Reviewed Alzheimer's Research; FY2018 Basic Research Challenge (BRC) Program; CENTER OF EXCELLENCE: Trusted Human-Machine Teaming; FY2018 Vannevar Bush Faculty Fellowship

Department of Energy: Advanced Manufacturing Graduate-Level Traineeships; Photovoltaics (PV) Innovation Roadmap; Technology Development to Ensure Environmentally Sustainable CO2 Injection Operations

NASA: ROSES 2017: Solar Irradiance Science Team; ROSES 2017: New Investigator Program

National Endowment of Humanities: Summer Stipends; Research and Development Grants

Bayer: Novel Drug Targets

Simon Foundation: Foundation Grants

Recent Research Grant and Contract Awards

Congratulations to faculty and staff on receiving research grant and contract awards!

PI: Xiabo Li (PI)

Department: Biomedical Engineering

Grant/Contract Project Title: Neuroanatomical Markers of Persistence Versus Remission of ADHD

Funding Agency: NIH

Duration: 09/01/16-08/31/18

PI: Iulian Neamtiu (PI)

Department: Computer Science

Grant/Contract Project Title: MACRO: Models for Enabling Continuous Reconfigurability of Secure Missions

Funding Agency: Department of Defense (ARL)

Duration: 09/20/16-09/19/18

PI: Bryan Pfister (PI)

Department: Biomedical Engineering

Grant/Contract Project Title: Novel Cellular Approach to Study Acute Neuronal Hyperexcitability in a Traumatic Brain Injury Model

Funding Agency: NIH

Duration: 07/01/16-06/30/18

PI: Bin Chen (PI)

Department: Center for Solar Terrestrial Research

Grant/Contract Project Title: Collaborative Research: SHINE - Magnetic Energy Release During Solar Eruptions - From Large to Small Scales

Funding Agency: NSF

Duration: 08/15/17-07/31/20

PI: Deane Evans (PI)

Department: Center for Building Knowledge

Grant/Contract Project Title: Checklist Implementation/Adaptation Consulting

Funding Agency: Vermont Energy Investment Corp.

Duration: 06/05/17-09/25/17

In the News...

(National and Federal News Related to Research Funding and Grant Opportunities)

Advancing Biosciences: Bioscience is a top manufacturing technology priority across the federal government and is critical for U.S. competitiveness. While the United States maintains a world leadership position in engineering biology and bioscience technology development, other countries are investing heavily in these areas putting the U.S. at risk of losing its competitive advantage. The

United States, unlike China and the U.K. among others, currently lacks a unifying roadmap to guide investment and innovation in bioscience leaving individual agencies, companies and researchers uncertain as to how best to leverage limited resources in a way that creates the most benefit out of federal investment, in the research lab and in the marketplace. The EMCP sector study dialogue on advancing U.S. bioscience, hosted on July 27, 2016 by the Council on Competitiveness in partnership with Lawrence Berkeley National Laboratory, Lawrence Livermore National Laboratory, Pacific Northwest National Laboratory and Sandia National Laboratories gathered national leaders and experts on the bioeconomy to discuss the importance of bioscience to U.S. competitiveness. The recommendations made by the committee include enabling bioscience research platforms to deliver novel and cost prohibitive capabilities to industry, and addressing the talent gap in multidisciplinary areas where bioscience has evolved to require frequent translation of information, updating of codes, and data management skills in high performance computing.

More information on

http://www.compete.org/storage/Leverage_Advancing_US_Bioscience_FINAL.pdf

Building America's Skilled Technical Workforce: Skilled technical occupations—defined as occupations that require a high level of knowledge in a technical domain but do not require a bachelor's degree for entry—are a key component of the U.S. economy. In response to globalization and advances in science and technology, American firms are demanding workers with greater proficiency in literacy and numeracy, as well as strong interpersonal, technical, and problem-solving skills. However, employer surveys and industry and government reports have raised concerns that the nation may not have an adequate supply of skilled technical workers to achieve its competitiveness and economic growth objectives.

In response to the broader need for policy information and advice, *Building America's Skilled Technical Workforce* examines the coverage, effectiveness, flexibility, and coordination of the policies and various programs that prepare Americans for skilled technical jobs. This report provides action-oriented recommendations for improving the American system of technical education, training, and certification. More information and the full report is posted on the website <https://www.nae.edu/170416.aspx>.

Fostering Integrity in Research: The scientific research enterprise is a cornerstone of modern society. The U.S. public and private-sector investment in research delivers enormous benefits to society in the form of better health, enhanced understanding of the natural world, and new technologies that boost economic growth and improve life in myriad ways. The integrity of knowledge that emerges from research is based on individual and collective adherence to core values of objectivity, honesty, openness, fairness, accountability, and stewardship. *Fostering Integrity in Research*, a report from the National Academies of Sciences, Engineering, and Medicine, examines challenges to scientific integrity facing the research enterprise and recommends steps that individual scientists, research institutions, research sponsors, journal publishers, and professional societies should take to meet these challenges and better protect integrity in research. The report also recommends the establishment of an independent, nonprofit Research Integrity Advisory Board to support ongoing efforts to strengthen research integrity.

Concerns about scientific research that have emerged in the scientific and general media over the past several years reinforce the need to rethink the strategies used to support integrity in research environments. A growing body of evidence indicates that substantial percentages of published results in some fields are not reproducible; this lack of reproducibility appears to have many causes, ranging from essential aspects of the research process or differences in procedures to

research misconduct or detrimental research practices. More information and the full report is posted on the website https://www.nap.edu/resource/21896/Fostering_Integrity_in_Research.pdf

NSF Budget: On July 27, the Senate Appropriations Committee approved S. 1662, the FY 2018 Commerce, Justice, Science and Related Agencies Appropriations Act, by a 30-to-1 vote. The bill provides \$7.3 billion for NSF, a decrease of \$161 million, or 2 percent, from the FY 17 enacted level and an increase of \$658 million above the Administration request. The Senate bill would provide \$5.9 billion for the Research and Related Activities account, a decrease of \$116 million, or 2 percent, from the FY 17 enacted level. It would provide \$182.8 million for the Major Research and Facilities Construction account, a decrease of 13 percent from the FY 17 enacted level. The bill includes \$105 million for the design and construction of three Regional Class Research Vessels. The bill approved by the House Appropriations Committee does not provide funding for the research ships. The Senate bill provides \$862.4 million for the Education and Human Resources account, a decrease of \$18 million, or 2 percent, from the FY 17 enacted level. The bill does not specify directorate-level funding. For more information on the Senate bill, see the [legislation](#) and [committee report](#); for information on the House bill, see the July 14 [NSF and Congress highlight](#).

Clean Energy and Fusion: The Committee recommends \$167.5 million for solar; \$72.5 million for wind; and \$82 million for water power. Contrary to the administration's shift to early-stage R&D, it says "such an approach will not successfully integrate the results of early-stage research and development into the U.S. energy system." The panel says it "understands the Department has either delayed or does not intend to initiate a renewal for the Batteries and Energy Storage Hub, the Joint Center for Energy Storage Research [JCESR]. The Committee directs the Department to move forward with the review and renewal process to support the next 5-year charter for next-generation battery and storage technologies" and provides \$24 million for the hub. While providing \$232 million for fusion, the panel seeks once again to zero out America's contribution to the International Thermonuclear Experimental Reactor being built in France. With House support, ITER has survived in the past. The committee calls on DOE to identify strategic laboratory, university, and industry partnerships that would enhance national security and assist industry in addressing critical threats, including electromagnetic pulse, geomagnetic disturbances, cyber-attacks, and supply chain disruptions. The panel "continues to encourage the Department to establish university partnerships to support ongoing fossil energy programs, to promote broader research into CCS technologies, and to expand its technology transfer efforts." More information on <https://www.congress.gov/115/crpt/srpt125/CRPT-115srpt125.pdf>

Next Generation Researchers Initiative: NIH has launched the Next Generation Researchers Initiative to bolster support for early-stage and mid-career investigators to address longstanding challenges faced by researchers trying to embark upon and sustain independent research careers. NIH and its stakeholder community have for many years been concerned about the long-term stability of the biomedical research enterprise. Too many researchers vying for limited resources has led to a hypercompetitive environment. Many highly meritorious applications go unfunded. This has too often resulted in misaligned incentives and unintended consequences for talented researchers at all career stages who are trying to succeed and stay in science. The current environment is particularly challenging for many new- and mid-career investigators.

Over the last several years, NIH has taken numerous steps to balance, strengthen, and stabilize the biomedical research workforce.

- [Special council review policy](#)

- [New Investigator/Early Stage Investigator Policies](#)
- [Initiatives from the Advisory Council to the NIH Director](#)
- [Programs for early-stage investigators](#)
- [New funding mechanisms for sustained research funding \(R35\)](#)

To ensure the long-term stability and strength of the U.S. biomedical research enterprise, the pool of NIH-funded researchers must be balanced such that the greatest number of early stage and mid-career researchers are enabled to tackle tough research questions to improve the health of all Americans. This conclusion is widely shared both within and outside of NIH. In fact, the 21st Century Cures Act, which became law in December of 2016, instructs the NIH Director to promote policies that will encourage earlier independence and increased funding for new investigators. More information on the website <https://grants.nih.gov/ngri.htm> A PowerPoint presentation from the advisory council is posted on the website <https://acd.od.nih.gov/documents/presentations/06082017Tabak.pdf>

NSF Policy and Awards Update (May 2017): NSF Pilots a New Collaborator and Other Affiliations Template: Last month NSF began piloting a new format for submitting Collaborators and Other Affiliations Information in FastLane. Proposers are required to include collaborators and other affiliations information for principal investigators (PIs), co-PIs and other senior project personnel. NSF uses this information to manage reviewer selection. The pilot standardizes the collection of this data across the Foundation and ensures that the information is submitted in a searchable format. This reduces the burden on NSF program staff who currently must spend time manipulating non-searchable files. Likewise, for the community, proposers can rest assured knowing that their format is acceptable to NSF. The new format requires PIs, co-PIs and other senior project personnel who are identified on the proposal to individually upload their Collaborators and Other Affiliations Information as a Single Copy Document which are only seen by NSF staff and not by reviewers.

Proposers will be directed to the new spreadsheet template while in FastLane. The template is fillable, and the content and format requirements must not be altered by the user. Proposers should not convert the file to PDF format prior to submitting the proposal to NSF, rather it should be completed and saved in .xlsx or .xls format to ensure preservation of searchable text, and uploaded into FastLane as a Single Copy Document. Using any other file format may delay the timely processing and review of the proposal. The template has been tested in Microsoft Excel, Google Sheets and LibreOffice. In addition to benefiting the merit review process, this template provides a compliant and reusable format for PIs to maintain and update for use in subsequent proposal submissions to NSF. The new Collaborators and Other Affiliations pilot only applies to FastLane proposal submissions. Grants.gov proposal submissions shall continue to follow the instructions in the Grants.gov Application Guide, Chapter VI. 2.4. More information on https://www.nsf.gov/pubs/2017/nsf17084/nsf17084.pdf?WT.mc_id=USNSF_109

Webinar and Events

Event: IEEE Tech Insider Webinar: How Analytics can be used to Drive More Effective Business Decisions around Additive Manufacturing

When: August 15, 2017; 2.00 PM

Website: <http://spectrum.ieee.org/webinar/how-analytics-can-be-used-to-drive-more-effective-business-decisions-around-additive-manufacturing>

About the Webinar: The digitalization journey continues. From our foundation presentation “How Digitalization is transforming the Electronics Industry”, we continue along the connected journey to adopting a digitalization strategy. Manufacturers are increasingly looking to disruptive technologies like Additive Manufacturing to enable on demand production, produce components never before possible and reduce order to cash cycle time. Even though 3D Printers are more accessible than ever, moving from prototyping to meaningful volume production still requires a significant investment in capital, process change and retooling of personnel. Going beyond the basic technology of 3D printing, this session draws from recent collaboration between leading manufactures who are seeking to fully understand the “why” to additive manufacturing and how data analytics can be used to drive more effective business decisions. We believe a new data analytics approach to unify, contextualize and present simplified business insights for proper component/part selection has the potential to dramatically improve the return from 3D printing. All by focusing valuable capital resources to produce the right parts at the right time. Please join us while we take a deeper dive into some of the new and fascinating areas and technological advances that are transforming the electronics industry.

Speaker: Jeff Spencer is a Portfolio Development Executive at Siemens with over 22 years of industry experience in Big Data Analytics, 3D Design and Product Lifecycle Management.

Register at: Above URL.

Event: IEEE Tech Insider Webinar: Low Current / Ultra-High Resistance Measurement Fundamentals

When: August 10, 2017; 1.00 PM

Website:

<https://event.on24.com/eventRegistration/EventLobbyServlet?target=reg20.jsp&referrer=&eventid=1463381&sessionid=1&key=0E6BDE38E441621A6CDA92B4F8716264®Tag=&sourcepage=register>

About the Webinar: Performing current vs. voltage characterization on devices and materials at very low current levels presents a unique set of measurement challenges. Normal measurement issues such as noise, transient signals and cabling and fixturing parasitics are much harder to solve when dealing with currents in the femtoamp range. In addition, many cutting-edge materials have extremely high resistances that conventional DMMs and source/measurement units (SMUs) cannot measure. In this seminar Keysight will explain the measurement techniques, tricks and tools necessary to measure currents down to 0.01 femtoamps and resistances up to 10 Peta Ohms with both high measurement confidence and repeatability.

Speaker: Alan Wadsworth, Marketing Brand Manager, Keysight

Register at: Above URL.

Event: IEEE Webinar: Advanced Data Acquisition and Logging Systems

When: Available on Demand

Website:

https://event.on24.com/eventRegistration/EventLobbyServlet?target=reg20.jsp&utm_source=Tech%2BAAlert&utm_medium=Email&utm_campaign=TechAlert_07-06-17&eventid=1433462&sessionid=1&key=9BF06E3E1B2B31C7FAE1E9C5CF16298A®Tag=&sourcepage=register

About the Webinar: It is difficult to envision an industrial automation application that does not include a data acquisition system. Most applications include sensor data that must be acquired,

analyzed, and logged, using acquisition (DAQ) systems that can be as diverse as the sensors themselves. With the rise of the Internet of Things, DAQ requirements are becoming even more strict, bringing new challenges. Today's data acquisition systems should perform analysis in real time, work with large amounts of analog data, and make decisions based on those results. The importance of a robust, real-time, decision-making, signal-processing system FPGA platforms the best fit for many such applications. Designers of DAQ systems need to consider scalability, portability, and stable operation. At this session, we will explore the main challenges and best practices in data-logging system design, particularly in the LabVIEW environment. The webinar examines the underlying implementation of an object-oriented approach to application design, DAQ tips and tricks for FPGA platforms, and an object-oriented programming architecture for real-time and host applications. The session also explores several case studies of developed DAQ systems, showing the main challenges faced and the solutions implemented in the projects.

Register at: Above URL.

Grant Opportunities

National Science Foundation

Grant Program: Japan-US Network Opportunity 2 (JUN02)

R&D for Trustworthy Networking for Smart and Connected Communities

Agency: National Science Foundation NSF 17-586

RFP Website: <https://www.nsf.gov/pubs/2017/nsf17586/nsf17586.htm>

Brief Description: The Division of Computer and Network Systems (CNS) within the National Science Foundation's (NSF) Directorate for Computer and Information Science and Engineering (CISE) supports research and education activities that develop a better understanding of the fundamental properties of computer and network systems and to create better abstractions and tools for designing, building, analyzing, and measuring future systems. The Networking Technology and Systems (NeTS) program in the CNS division supports transformative research on fundamental scientific and technological advances leading to the development of future-generation, high-performance networks and future Internet architectures.

Under this umbrella, NSF and the National Institute of Information and Communications Technology (NICT) of Japan have agreed to embark on a collaborative research program to address compelling research challenges associated with enabling trustworthy networks supporting the Internet of Things (IoT) and cyber-physical systems (CPS). This NSF solicitation parallels an equivalent NICT solicitation. Proposals submitted under this solicitation must describe joint research with counterpart Japanese investigators who are requesting funding separately under the NICT solicitation.

The IoT and CPS are becoming pervasive parts of everyday life, enabling a wide array of related emerging services and applications in cities and communities, including in health, transportation, energy/utilities, and other areas. As these systems become embedded in daily life, it is critically important that the networks underlying the services they provide be designed, built, deployed and operated in a highly trustworthy manner, i.e., that they are resilient against disasters, failures and other network disruptions. This program focuses on enabling ultra-high-availability, robust and reliable networks that can support continuity of service under duress. This requires consideration of end-to-end systems, including compute resources needed for services and applications, and creative and innovative ways of approaching the challenges outlined above. This program seeks

joint Japanese-US research projects that leverage each nation's expertise and address the following work areas:

1. **Trustworthy IoT/CPS Networking**

Developing the foundations for a future resilient edge cloud/network system to ensure trustworthy end-to-end networks, addressing such factors as the heterogeneity, characteristics, resource constraints and potential mobility of end devices/sensors, the diversity of access network technologies, the availability/placement of computing resources and Quality of Service (QoS) requirements.

2. **Trustworthy Optical Communications and Networking**

Addressing the need for trustworthy, high-availability, agile optical edge/access and integrated optical/wireless networks that are resilient against disasters, large traffic surges and other major disruptions.

Awards: Standard Grants. **Anticipated Funding Amount:** \$2,250,000

Letter of Intent: Not Required

Proposal Submission Due Date: November 30, 2017

Contacts: Ann C. Von Lehmen, Program Director, CISE/CNS, telephone: (703) 292-4756, email: avonlehm@nsf.gov

- John Brassil, Program Director, CISE/CNS, telephone: (703) 292-8950, email: jbrassil@nsf.gov

Grant Program: Process Separations

Agency: National Science Foundation NSF PD 18-1417

RFP Website:

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505458&org=NSF&sel_org=NSF&from=fund

Brief Description: The **Process Separations** program is part of the Chemical Process Systems cluster, which includes also 1) Catalysis; 2) Process Systems, Reaction Engineering, and Molecular Thermodynamics; and 3) Energy for Sustainability.

The **Process Separations** program supports research focused on novel methods and materials for separation processes, such as those central to the chemical, biochemical, bioprocessing, materials, energy, and pharmaceutical industries. A fundamental understanding of the interfacial, transport, and thermodynamic behavior of multiphase chemical systems as well as quantitative descriptions of processing characteristics in the process-oriented industries is critical for efficient resource management and effective environmental protection. The program encourages proposals that address long standing challenges and emerging research areas and technologies, have a high degree of interdisciplinary work coupled with the generation of fundamental knowledge, and the integration of education and research.

Research topics of particular interest include fundamental molecular-level work on:

- Design of scalable mass separating agents and/or a mechanistic understanding of the interfacial thermodynamics and transport phenomena that relate to purification of gases, chemicals, or water
- Design or improvement of mass separation agents or processes that are based upon, and advance, transport principles
- Downstream purification of biologically derived chemicals for increased throughput

- Field (flow, magnetic, electrical) induced separations and other innovative approaches that address a significant reduction in energy and/or materials requirements in the process industries

Proposals should address the novelty and/or [potentially transformative nature](#) of the proposed work compared to previous work in the field. Also, it is important to address why the proposed work is important in terms of engineering science, as well as to also project the potential impact on society and/or industry of success in the research. The novelty or potentially transformative nature of the research should be included, as a minimum, in the Project Summary of each proposal.

Faculty Early Career Development (CAREER) program proposals are strongly encouraged. Award duration is five years. The submission deadline for Engineering CAREER proposals is in July every year. Please see the CAREER URL [here](#) for more information.

Proposals for Conferences, Workshops, and Supplements: PIs are strongly encouraged to discuss their requests with the Program Director before submission of the proposal.

Grants for Rapid Response Research (RAPID) and **EARly-concept Grants for Exploratory Research (EAGER)** are also considered when appropriate. Please note that proposals of these types must be discussed with the program director before submission. Further details are available in the **Proposal and Award Policies and Procedures Guide (PAPPG)** download found [here](#). **Grant Opportunities for Academic Liaison with Industry (GOALI)** proposals that integrate fundamental research with translational results and are consistent with the application areas of interest to each program are also encouraged. Please note that GOALI proposals must be submitted during the annual unsolicited proposal window for each program. More information on GOALI can be found [here](#).

Awards: Various

Letter of Intent: Not Required

Proposal Submission Due Date: Anytime but please see specific CBET program information on the NSF website.

Contacts: Angela Lueking alueking@nsf.gov (703) 292-2161

Grant Program: Innovations in Graduate Education (IGE) Program

Agency: National Science Foundation NSF 17-585

RFP Website: <https://www.nsf.gov/pubs/2017/nsf17585/nsf17585.htm>

Brief Description: The Innovations in Graduate Education (IGE) program is designed to encourage the development and implementation of bold, new, and potentially transformative approaches to STEM graduate education training. The program seeks proposals that explore ways for graduate students in research-based master's and doctoral degree programs to develop the skills, knowledge, and competencies needed to pursue a range of STEM careers.

IGE focuses on projects aimed at piloting, testing, and validating innovative and potentially transformative approaches to graduate education. IGE projects are intended to generate the knowledge required for their customization, implementation, and broader adoption. The program supports testing of novel models or activities with high potential to enrich and extend the knowledge base on effective graduate education approaches.

The program addresses both workforce development, emphasizing broad participation, and institutional capacity building needs in graduate education. Strategic collaborations with the private sector, non-governmental organizations (NGOs), government agencies, national laboratories, field stations, teaching and learning centers, informal science centers, and academic partners are encouraged.

Awards: Standard Grants. **Anticipated Funding Amount:** \$4,000,000

Limit on Number of Proposals per Organization: 2

An eligible organization may participate in two Innovations in Graduate Education proposals per competition. Participation includes serving as a lead organization on a non-collaborative proposal or as a lead organization, non-lead organization, or subawardee on a collaborative proposal. Organizations participating solely as evaluators on projects are excluded from this limitation. Proposals that exceed the institutional eligibility limit (beyond the first two submissions based on timestamp) will be returned without review regardless of the institution's role (lead, non-lead, subawardee) in the returned proposal..

Limit on Number of Proposals per PI or Co-PI: 1

An individual may serve as Lead Principal Investigator (PI) or Co-PI on only one proposal submitted to the IGE program per annual competition. Proposals that exceed the PI/Co-PI eligibility limit (beyond the first submission based on timestamp) will be returned without review regardless of the individual's role (PI or co-PI) in the returned proposal.

Internal Competition for Limited Submission: Pre-proposals in the following format (maximum 5 pages) should be submitted to respective dean's office by September August 25, 2017. Deans are requested to forward up to 2 pre-proposals with their recommendations to the Office of Research at dhawan@njit.edu by September 4, 2017. Two pre-proposals will be selected after institutional review by September 8, 2017.

Pre-proposal Format (maximum 5 pages):

8. Title and key personnel with affiliation
9. Project Summary (1-page)
10. Internal and External Collaboration
11. Intellectual Merit: Innovation in Graduate Education
12. Broader Impact
13. Performance Assessment/Project Evaluation
14. Tentative Budget Summary and Any Resources Needed

Letter of Intent: Not Required

Proposal Submission Due Date: October 25, 2017

Contacts: Laura B. Regassa, telephone: (703) 292-2343, email: lregassa@nsf.gov

- Tara L. Smith, telephone: (703) 292-7239, email: tsmith@nsf.gov
- Stephen Mulkey, telephone: (703) 292-8954, email: smulkey@nsf.gov

Grant Program: Discovery Research PreK-12 (DRK-12)

Agency: National Science Foundation NSF 17-584

RFP Website: <https://www.nsf.gov/pubs/2017/nsf17584/nsf17584.htm>

Brief Description: The Discovery Research PreK-12 program (DRK-12) seeks to significantly enhance the learning and teaching of science, technology, engineering, mathematics and computer science (STEM) by preK-12 students and teachers, through research and development of STEM education innovations and approaches. Projects in the DRK-12 program build on fundamental research in STEM education and prior research and development efforts that provide theoretical and empirical justification for proposed projects. Projects should result in research-informed and field-tested outcomes and products that inform teaching and learning. Teachers and students who participate in DRK-12 studies are expected to enhance their understanding and use of STEM content, practices and skills.

The DRK-12 program invites proposals that address immediate challenges that are facing preK-12 STEM education as well as those that anticipate radically different structures and

functions of preK-12 teaching and learning. The DRK-12 program has three major research and development strands: (1) Assessment; (2) Learning; and (3) Teaching. The program recognizes the synergy among the three strands and that there is some overlap and interdependence among them. However, proposals should identify a clear focus of the proposed research efforts (i.e., assessment, learning, or teaching) consistent with the proposal's main objectives and research questions. The program supports five types of projects: (1) Exploratory, (2) Design and Development, (3) Impact, (4) Implementation and Improvement, and (5) Conferences and Syntheses. All five types of projects apply to each of the three DRK-12 program strands.

Awards: Standard Grants. **Anticipated Funding Amount:** \$57,000,000

Letter of Intent: Not Required

Proposal Submission Due Date: November 14, 2017

Contacts: Inquiries can be made to, telephone: (703) 292-8620, email: DRLDRK12@nsf.gov

- David B. Campbell, telephone: (703) 292-5093, email: dcampbel@nsf.gov
- Julia V. Clark, telephone: (703) 292-5119, email: jclark@nsf.gov
- Catherine Eberbach, telephone: (703) 292-4960, email: ceberbac@nsf.gov

Grant Program: CISE Research Infrastructure (CRI)

Agency: National Science Foundation NSF 17-581

RFP Website: <https://www.nsf.gov/pubs/2017/nsf17581/nsf17581.htm>

Brief Description: The CISE Research Infrastructure (CRI) program drives discovery and learning in the core CISE disciplines of the three participating CISE divisions by supporting the creation and enhancement of world-class research infrastructure that will support focused research agendas in computer and information science and engineering. This infrastructure will enable CISE researchers to advance the frontiers of CISE research. Further, through the CRI program, CISE seeks to ensure that individuals from a diverse range of academic institutions, including minority-serving and predominantly undergraduate institutions, have access to such infrastructure.

The CRI program supports two classes of awards:

- **Institutional Infrastructure (II)** awards support the creation of **new (II-NEW)** CISE research infrastructure or the **enhancement (II-EN)** of existing CISE research infrastructure to enable world-class CISE research opportunities at the awardee and collaborating institutions.
- **Community Infrastructure (CI)** awards support the **planning (CI-P)** for new CISE community research infrastructure, the **creation of new (CI-NEW)** CISE research infrastructure, the **enhancement (CI-EN)** of existing CISE infrastructure, or the **sustainment (CI-SUSTAIN)** of existing CISE community infrastructure to enable world-class CISE research opportunities for broad-based communities of CISE researchers that extend well beyond the awardee institutions. Each CI award may support the operation of such infrastructure, ensuring that the awardee institution(s) is (are) well positioned to provide a high quality of service to CISE community researchers expected to use the infrastructure to realize their research goals.

Awards: Standard Grants. **Anticipated Funding Amount:** \$18,000,000

Letter of Intent: Not Required

Limit on Number of Proposals per Organization:

A university or organization may submit no more than three Institutional Infrastructure (II) proposals per competition. There is no limit on Community Infrastructure (CI) proposals per competition.

These eligibility constraints will be strictly enforced in order to treat everyone fairly and consistently. In the event that an institution or organization exceeds this limit, proposals received within the limit will be accepted based on the earliest date and time of proposal submission (i.e., the first three II proposals received will be accepted and the remainder will be returned without review). No exceptions will be made.

Internal LOI: If you are interested in submitting a proposal, please send a project summary with Intellectual Merit and Broader Impact to the Office of Research at dhawan@njit.edu as soon as possible but no later than October 1, 2017 to ensure compliance of limited submission.

Limit on Number of Proposals per PI or Co-PI: 2

In each annual competition, an individual may participate in at most two proposals, across all classes, as PI, Co-PI, or Senior Personnel.

These eligibility constraints will be strictly enforced in order to treat everyone fairly and consistently. In the event that an individual exceeds this limit, proposals received within the limit will be accepted based on the earliest date and time of proposal submission (i.e., the first two proposals received will be accepted and the remainder will be returned without review). No exceptions will be made.

Proposal Submission Due Date: November 2, 2017

Contacts: Harriet G. Taylor, Lead Program Director, 1175, telephone:(703) 292-8950, email: htaylor@nsf.gov

- Tao Li, Program Director, CCF, 1115, telephone:(703) 292-8238, email: taoli@nsf.gov
- Mimi McClure, Associate Program Director, CNS, 1145, telephone:(703) 292-8950, email: mmcclure@nsf.gov
- Wendy Nilsen, Program Director, IIS, 1125, telephone:(703) 292-2568, email: wnilsen@nsf.gov

Grant Program: Advancing Informal STEM Learning (AISL)

Agency: National Science Foundation NSF 17-573

RFP Website: <https://www.nsf.gov/pubs/2017/nsf17573/nsf17573.htm>

Brief Description: The **Advancing Informal STEM Learning (AISL)** program seeks to advance new approaches to and evidence-based understanding of the design and development of STEM learning opportunities for the public in informal environments; provide multiple pathways for broadening access to and engagement in STEM learning experiences; advance innovative research on and assessment of STEM learning in informal environments; and engage the public of all ages in learning STEM in informal environments.

The AISL program supports six types of projects: (1) Pilots and Feasibility Studies, (2) Research in Service to Practice, (3) Innovations in Development, (4) Broad Implementation, (5) Literature Reviews, Syntheses, or Meta-Analyses, and (6) Conferences.

Awards: Standard Grants. **Anticipated Funding Amount:** \$33,000,000

Limit on Number of Proposals per Organization: 3

An institution or organization may serve as lead on no more than three (3) proposals submitted to the November deadline. However, an institution or organization may partner as a subaward on other proposals submitted. Please inform the Office of Vice Provost for Research at dhawan@njit.edu by **September 1, 2017** with a summary including Intellectual Merit and Broader Impact sections if you intend to submit a proposal to this solicitation.

Letter of Intent: Not Required

Proposal Submission Due Date: November 06, 2017

Contacts: Address Questions to the Program, telephone: (703)292-8616, email: DRLAISL@nsf.gov

National Institutes of Health

Grant Program: Point-of-Care Technologies Research Network Centers (U54)

Agency: National Institutes of Health PAR-17-453

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-17-453.html>

Brief Description: The network of POCTRN Research Centers will have broad expertise across many research areas and will cover multiple levels of technology readiness from proof of feasibility through products and procedures used in clinical practice (*See individual NIH Institute/Center Areas of Interest*). The scope of work covered within each Center will include 1) assessment and communication of unmet clinical needs in point-of-care testing; 2) collaborations with physical scientists, computational scientists, and engineers (as well as researchers from other relevant disciplines, as appropriate) on technology development projects; 3) development of external partnerships (e.g., technology, clinical, industry, and regulatory) necessary to move enabling technologies toward clinical applications; 4) clinical testing of prototype point-of-care devices and 5) creation of training opportunities for technology developers and other stakeholders on clinical issues related to the development of point-of-care devices. The POCTRN Research Centers provide support to point-of-care stakeholders through sub-awards and other resources (e.g. consultations, database tools, training modules, connections with clinical collaborators and providing de-identified clinical specimens for testing POC devices). A key component of the POCTRN Research Centers includes the ability to provide sub-award support for point-of-care projects that have significant potential to address clinical needs in point-of-care testing and for ultimate commercialization. It is expected that the POCTRN Research Center leadership will establish a review process, manage a solicitation and selection process for projects and the distribution of sub-award funds for point-of-care projects according to Center focus and milestones, budget period, availability of meritorious projects and the overall goal of transitioning functional prototypes out of the Center toward later- stage clinical testing and commercialization. Proposed technology development projects submitted in this application will be initiated at the onset of the grant award. The selection of future sub-award projects for funding beyond those presented in the initial grant application, will be made in consultation with the Scientific Officers and approved by the NIH Program Officer. The details of the full governance structure are provided in Section VI.2, "Cooperative Agreement Terms and Conditions of Award". Although Center institutions may receive funding for collaborative sub-award projects, it is expected that the majority of funds will be used to fund sub-award projects outside of the U54 awardee institution.

Organizational Structure

The structure of a POCTRN Research Center will consist of in-house scientific and point-of-care technological expertise and the clinical partnerships necessary to facilitate the identification and integration of enabling technologies into devices that address defined clinical needs. Each POCTRN Research Center will be comprised of four Core Components: (1) Administrative (*Admin Core*); (2) Technology Development/Refinement (*Technology Dev Core*); (3) Clinical Translation and Validation (*Clinical Trans Valid*) and (4) Technology Training and Dissemination (*Technology Train Dis*).

1) *Admin Core*

The appropriate leadership and structure to manage the many facets of these large and complex Centers will be a key component in establishing a successful Center. The Admin Core serves as the managing component of the Center that is charged with effectively leading the organization, governance, collaboration within the Network, communication with stakeholders, as well as evaluation and continuous improvement in quality and efficiency of the Research Center by establishing an External Advisory Board (EAB). The EAB is appointed by the Center Program Director/Principal Investigator (PD/PI) and advises the PD/PI on future directions of the Center. The Center's Scientific Subcommittee of the Network Steering Committee will also provide scientific and administrative oversight of Center functions, including the review and selection of projects to receive sub-award funding.

2) Technology Dev Core

The Technology Dev Core identifies, evaluates and supports point-of-care technology development/refinement in-house and external to the Center. Support can be in the form of sub-awards, tools and/or other resources. It is expected that the project period for sub-awarded projects will be 6 months up to two years to allow for several technologies to be tested and moved into the next stage of clinical testing during the five-year grant period. Exceptions to this are possible if justification is provided for an extended project period. Therefore, adequate funds should be budgeted in later years of the grant period to allow for transitioning or retiring current projects and recruiting and selecting new technology development/refinement projects. The first round of sub-awards are to be made in Year one of the grant period. Although there is flexibility in the support amount and time periods of the sub-awards, 6 month awards at \$50,000 or 1 year at \$100,000 is suggested. The number of awards would depend on meritorious applications and the Center's goals and budget.

3) Clinical Trans Valid Core

Clinical validation, adoption, and feasibility testing are necessary to ensure that the prototypes supported under this program will have a reasonable rate of success for public uptake.

POCTRN Research Centers are expected to validate the prototypes, and undertake rigorous feasibility and adoption testing for the point-of-care devices in both clinical and "real-world" settings. Examples of intended-use settings include, but are not limited to, the integration of the point-of-care-technologies into clinical workflow (private offices and academic practices), within low-resource settings and among the intended users and/or caregivers. An important characteristic of funded Research Centers is therefore the ability to collaborate effectively with entities that possess the resources and expertise to commercialize the prototype devices developed through Research Center activities. Support for clinical translation can also be in the form of sub-awards, tools and/or other resources.

4) Technology Train Dis Core

The Technology Train Dis Core provides training activities for point-of-care technology stakeholders such as scientists, engineers, clinicians and other medical professionals, patients, policy makers and investors. Within the Technology Train Dis Core, the Research Centers will also conduct assessments of clinical and user needs to inform device design and further define and disseminate publicly available clinical needs information.

Awards: Application budgets are not limited but it is strongly recommended that applicants not request a budget of more than \$1.2M in direct costs per year. Facilities and administrative costs requested by consortium participants are not included in the direct cost limitation.

Letter of Intent: 6 weeks prior to the application due date

Deadline: October 27, 2017, by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on this date.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

Grant Program: NIBIB Exploratory/Developmental Research Grant Program (R21)

Agency: National Institutes of Health PAR-17-441

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-17-441.html>

Brief Description: Cutting-edge research in the biomedical, behavioral, clinical sciences and technologies requires new ideas, techniques, and points of view. Such ideas may differ substantially from current thinking or practice. The NIBIB seeks to foster these new scientific bioengineering and imaging ideas, model systems, tools, agents, targets, and technologies through the Exploratory/Developmental Research Grant Program. More detail on our program areas can be found at <https://www.nibib.nih.gov/research-funding>.

This program is specifically intended to encourage exploratory or developmental projects. These studies may involve considerable risk, but are expected to lead to breakthroughs in novel techniques, agents, methodologies, models, or their applications that could have a major impact on human-health and related research.

These R21 applications must not include preliminary data that demonstrate the feasibility of the specific aims. *Applications including preliminary data will be considered noncompliant with the FOA instructions and will not go forward to review.* Availability of preliminary data demonstrating feasibility of the proposed approach is an indication that the proposed project has advanced beyond the exploratory stage defined by this program, and makes the application unsuitable for this funding opportunity. Appropriate justification for the proposed work can be provided through literature citations and data from other sources.

Exploratory/Developmental Research Grant applications should be exploratory and novel, distinct from those supported through the traditional R01 activity code. For example, long-term projects, or projects designed to increase knowledge in a well-established area, are not appropriate for this FOA. Studies submitted to this FOA should break new ground or take previous discoveries in new directions.

Applications for R21 awards should propose projects distinct from those supported through the traditional R01 mechanism, which are generally longer-term systematic investigations supported by extensive preliminary data. R21 applications should have well-defined goals with the potential for future development. It is expected that successful projects would go on to further development under other funding mechanisms, such as the R01. Not all research endeavors will be suitable for this FOA. Projects from Investigators that are supported by preliminary data should be submitted to the Parent R01 FOA (<https://grants.nih.gov/grants/guide/pa-files/PA-16-160.html>) or the Bioengineering Research Grant FOA (<https://grants.nih.gov/grants/guide/pa-files/PA-16-242.html>).

Awards: Application budgets may not exceed \$275,000 direct costs over a maximum two-year funding period. No more than \$200,000 in direct costs may be requested in any single year.

Letter of Intent: Not Required

Deadline: [Standard dates](#) apply, by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

Grant Ethical, Legal, and Social Implications (ELSI) of Genomics Exploratory/Developmental Research Grant Program (R21) (R01) (R03)

Agency: National Institutes of Health PAR-17-446

[PA-17-444, R01](#) Research Project Grant

[PA-17-445, R03](#) Small Grant Program

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PA-17-446.html>

Brief Description: Continuing advances in genomic technology coupled with lowered sequencing costs have rapidly increased the numbers of people being sequenced, and are transforming biomedical research. As knowledge of relationships between genetic variation and human diseases and traits proliferates, the distinctions between basic and clinical genomic research blur, and new findings are altering the practice of medicine. Meanwhile information technologies - including personal mobile devices, patient health portals, electronic health records, and cloud storage - are influencing the ways an individual's genomic data are stored, analyzed, shared, and used in commercial, biomedical and non-medical settings. Taken together these developments may have profound effects on many long-standing societal beliefs and norms. The purpose of this FOA is to solicit exploratory or developmental research applications that identify, analyze, and address the ethical, legal and social implications (ELSI) of these genetic and genomic advances for individuals, families, communities and society more broadly.

To address the broad scope and reach of genomic advances in society, applications are invited from investigators representing a wide range of disciplines, including but not limited to ethics, genetics and genomics, clinical medicine, law, health services research, public health, bioinformatics and health information sciences, behavioral and social sciences (e.g., psychology, sociology, anthropology, political science, economics, communication science) and the humanities (e.g., history, religion, philosophy, literature).

Applications may propose multi-disciplinary studies using either single or mixed methods. Proposed methods may include but are not limited to data-generating qualitative and quantitative approaches, legal, economic and normative analyses, and other types of analytical and conceptual research methodologies, such as those involving the direct engagement of stakeholders.

Applications to this FOA should propose exploratory or developmental studies that can be accomplished in two years. Often these applications perform pilot or feasibility studies or are used to generate data in preparation for a larger study

For very small projects, such as those involving single investigators, applicants may wish to consider [PA-17-445](#), the ELSI Small Grant (R03) FOA, which provides a total of up to \$50,000 in direct costs a year for two years. For larger multi-disciplinary studies that are building on preliminary data and require funding beyond two years, applicants may wish to consider [PA-17-444](#), the ELSI Research Project Grant (R01) FOA, which provides funding for up to five years..

Awards: Direct costs are limited to \$275,000 over the two-year project period, with no more than \$200,000 in direct costs allowed in any single year.

Letter of Intent: Not Required

Deadline: [Standard dates](#) apply, by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

Grant Program: Exploratory/Developmental Investigations on Primary Immunodeficiency Diseases (R21)

Agency: National Institutes of Health PAR-17-333

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-17-333.html>

Brief Description: This FOA will support a wide range of innovative, exploratory and/or developmental research on primary immunodeficiency diseases. Research areas supported by this FOA include, but are not limited to:

- Identifying the clinical, immunological, genetic and molecular characteristics of genetically determined immunodeficiency diseases;
- Identifying the molecular basis of primary immunodeficiency diseases;
- Advancing our understanding of how a genetic variant results in immunodeficiency;
- Discovering/developing improved diagnostic/newborn screening tools for primary immunodeficiency diseases;
- Performing *ex vivo* studies with human specimens
- Discovering/developing new animal models for primary immunodeficiency diseases; and
- Analyzing clinical data and samples maintained in primary immunodeficiency registries, consortium databases and repositories to address questions relevant to primary immunodeficiency research.

Other research areas supported by this FOA include studies of novel therapeutic approaches for treatment of primary immunodeficiency diseases to:

- Improve and better understand existing treatments of primary immunodeficiency diseases;
- Understand complications associated with primary immunodeficiency diseases;
- Define environmental or other triggers that result in complications in individuals with primary immunodeficiency diseases; and
- Identify and validate biomarkers for primary immunodeficiency diseases.

Research areas NOT appropriate for this FOA include studies of:

- Immunodeficiency resulting from infection (e.g., HIV);
- Immunodeficiency resulting from treatments (e.g., chemotherapy), exposures (e.g., radiation), immunosuppression following transplantation, or autoimmune disorders;
- Immunodeficiency resulting from aging or immaturity; and
- Basic immunologic mechanisms unless related to understanding of primary immunodeficiency diseases.

Awards: Direct costs are limited to \$275,000 over the two-year project period, with no more than \$200,000 in direct costs allowed in any single year.

Letter of Intent: Not Required

Deadline: [Standard dates](#) apply, by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

Grant Program: Synthetic Biology for Engineering Applications (R01)

Agency: National Institutes of Health PAR-17-334

RFP Website: <https://grants.nih.gov/grants/guide/pa-files/PAR-17-334.html>

Brief Description: One of the great challenges in biomedical research is to be able to quantitatively predict, test, and harness the complex dynamics of biological systems. Synthetic biology is the design and construction of new biological parts and systems, and the re-design of existing and natural biological systems for specific purposes. In contrast to the traditional genetic engineering approach, which usually focuses on individual genes and proteins, synthetic biology

adopts a more systematic approach targeting entire pathways, networks, and whole organisms with quantitative control and modulation. Synthetic biology is arguably the cornerstone of the next generation of reengineered cells. Gaining new insights into the complex and dynamic biological pathways of these designer cells and developing cell-based diagnostics and therapies are at the frontiers of biomedical science. Enabling these de novo biological systems will require the ability to design and build complex pathways with endogenous or novel functions and with predictable and quantitative responses to endogenous or environmental signals. Achieving this paradigm will allow the testing of hypotheses on complex biological systems and the development of novel therapeutic strategies and diagnostic capabilities. To improve the reach and impact of this paradigm on human health, an integrative research plan based on collaborations of synthetic biologists with computational scientists, cell biologists, engineers, and/or physician scientists is strongly recommended.

Specific Areas of Research Interest

Synthetic biology for human health is advancing, but major challenges, such as the inability to engineer robust complex metabolic and signaling networks or to produce cells with reliable and predictable behavior once in the host, currently limit application. This FOA encourages the development of tools and technology to tackle challenges in biomedical research and in cell-based therapies and diagnostics. Specific topics of interest include, but are not limited to, those listed below.

- Cell-free and cell-based systems for testing and analyzing biological systems and for the efficient and scalable synthesis of complex biological products
- Cell-free (prototyping genetic circuits, discovering and evolving enzymes, and conducting biomolecular reactions)
- Cell-based (materials and pharmaceutical production, microbiome reprogramming, diagnostics)
- Natural and engineered biological circuits for implementing regulation and decision-making strategies in cells (modeling, analysis, design, and use of biological circuits, cell-cell communication, gene regulation, computation strategies)
- Expanding biochemical functionality (novel genetic alphabets, changing molecular machinery of the cell, constructing genomically recoded organisms, genetically encoded reporters)
- Advanced genome editing techniques for manipulating DNA (computational algorithms, zinc finger nucleases, TAL effector nucleases, CRISPR-Cas9)
- Design and evolution strategies to construct biological systems (directed evolution, continuous evolution, multiplexed evolution)

NIBIB Statement of Interest

The National Institute of Biomedical Imaging and Bioengineering (NIBIB) is interested in projects from all of the aforementioned research areas, but with an emphasis on supporting the creation of tools and methods to enable synthetic biology approaches across a wide spectrum of biomedical engineering challenges addressed through broadly applicable diagnostic, therapeutic, and interventional technologies. Furthermore, NIBIB is interested in supporting projects that use synthetic biology approaches for the development and validation of technologies with potential clinical applications. Examples of technologies include, but are not limited to, biomaterials, drug and gene delivery systems and devices, molecular imaging probes, immunoengineering, multiscale modeling, sensors, microsystems, tissue chips, and tissue engineering. A complete list of programmatic interests in NIBIB can be found at: <https://www.nibib.nih.gov/research-funding>. Furthermore, the NIBIB mission does not include the development of new technologies to address basic research questions in cellular processes, functions, and structure. For research leading to

the development of such technologies, applicants should consult the National Institute of General Medical Sciences (NIGMS).

NCI Statement of Interest

The National Cancer Institute (NCI) supports a broad-based portfolio of cancer research and development projects encompassing basic, translational, clinical, and epidemiological inquiries. This includes support for the development and application of novel enabling technologies in a broad range of cancer research. NCI strongly encourages multidisciplinary collaborations between synthetic biologists and cancer biologists or translational cancer researchers in developing novel solutions to tackle critical cancer problems. Some general examples that are relevant to this FOA include, but are not limited to:

- Developing novel synthetic biology methods and tools relevant to cancer research and cancer management
- Using synthetic biology methods to develop novel cell, tissue, and animal based model systems to study the fundamental mechanism of cancer development, progression, and/or response to treatment
- Using synthetic biology methods to develop and evaluate novel diagnostic, preventive, and therapeutic approaches relevant to human cancer

NCCIH Statement of Interest

NCCIH supports a diverse portfolio of natural products research. This includes the use of systems biology technology to better understand the biosynthesis of natural products. NCCIH encourages applications to this initiative aimed at elucidating biosynthetic pathways for high value, plant based, natural products and developing ways to improve their production in either native or heterologous hosts. In the context of this initiative, high value, plant based, natural products are defined as those which have well established therapeutic properties for humans. Use of systems biology for the engineering and production of compounds which are not known from a natural source are considered low priority for NCCIH. Examples of research of interest to NCCIH include, but are not limited to:

- Use of synthetic biology tools to identify biosynthetic gene clusters or pathways responsible for the biosynthesis of plant based natural products
- Use of synthetic biology tools to improve production of plant based natural products from their native sources
- Use of synthetic biology tools to assemble biosynthetic machinery and optimize yield for plant based natural products into heterologous hosts

Awards: Application budgets are not limited but need to reflect the actual needs of the proposed project.

Letter of Intent: October 8, 2017

Deadline: [Standard dates](#) apply, by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on these dates.

Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

This FOA is being issued with limited due dates to accommodate the transition from FORMS-D to FORMS-E application packages. This FOA will be reissued for additional due date(s) on or after January 25, 2018.

Department of Defense/US Army/DARPA/ONR

Grant Program: DoD, Peer Reviewed Alzheimer's Research

Agency: Department of Defense

W81XWH-17-PRARP-RPA	DoD Peer Reviewed Alzheimer's, Research Partnership Award
W81XH-17-PRARP-CSRA	DoD, Peer Reviewed Alzheimer's
W81XWH-17-PRARP-QUAL	DoD Peer Reviewed Alzheimer's, Quality of Life Research Award
W81XWH-17-PRARP-NIRA	DoD Peer Reviewed Alzheimer's, New Investigator Research Award

Website: <http://cdmrp.army.mil/prarp/default>

Brief Description: Several Research Topics in Basic Research: The FY17 Defense Appropriations Act provides \$15 million (M) to the Department of Defense Peer Reviewed Alzheimer's Research Program (PRARP) to support research which addresses the long-term consequences of traumatic brain injury (TBI) as they pertain to Alzheimer's disease (AD) and related dementias (ADRD). The research impact will benefit the military, Veteran, and civilian communities. The PRARP's mission is devoted to (1) understanding the association between traumatic brain injury (TBI) and Alzheimer's disease (AD)/Alzheimer's disease-related dementias (ADRD) and (2) reducing the burden on affected individuals and caregivers, especially in the military and Veteran communities. Consistent with the PRARP's mission and vision, the program faces 6 overarching challenges for FY17. These overarching challenges represent longstanding research goals for the program:

- **Paucity of Research Resources:** The paucity of research resources to examine the interrelationship between TBI and subsequent AD/ADRD for the military, Veteran, and civilian communities.
- **Paucity of Clinical Studies:** The paucity of clinical studies to examine the interrelationship between TBI and subsequent AD/ADRD for the military, Veteran, and civilian communities. This includes research into risk factors which may predispose individuals to AD/ADRD subsequent to TBI.
- **Diagnostic Technologies, Tests, Biomarkers, or Devices:** The need for technologies, tests, or devices to detect or prognose the progression to AD/ADRD subsequent to TBI. This includes research into risk factors which may predispose individuals to AD/ADRD subsequent to TBI.
- **Quality of Life:** The need for technologies, assessments, interventions, or devices to benefit individuals living with the common symptoms or deficits of TBI and AD/ADRD.
- **Caregiver Burden:** The need for technologies, assessments, interventions, or devices with the goal of reducing burden for caregivers of individuals living with the common symptoms or deficits of TBI and AD/ADRD.
- **Epidemiology:** The paucity of epidemiological research to examine the interrelationship between TBI and subsequent AD/ADRD for the military, Veteran, and civilian communities. This includes research into risk factors which may predispose individuals to AD/ADRD subsequent to TBI.

Awards: Standard Grants

Proposal Deadline: September 20, 2017; May need earlier submission of white paper.

Contact Information: CDMRP Help Desk: 301-682-5507 Email: help@eBRAP.org

Grant Program: FY2018 Basic Research Challenge (BRC) Program

Agency: Department of Defense ONR N00014-17-S-BA13

Website: <https://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements>

Brief Description: Several Research Topics in Basic Research: Potential fundamental science questions resolved by this BRC would be (1) is quantum wavefunction collapse an objective feature of quantum systems?, (2) are quantum models beyond the Schrodinger equation necessary?, (3) are quantum translational and rotational friction experimentally observable?, (4) are there short-range corrections to the gravitational constant G?, and (5) how does the Casimir force scale from the nano- to microscale, and how/why does it change from attractive to repulsive? The technology developed to address these questions will have the added benefit of realizing a variety of novel sensors. Research Concentration Area: (1) quantum foundations – experimentally explore quantum/classical boundary, test for quantum translational and rotational friction; (2) quantum information - approaches for leveraging spins and levitated particles for information processing; (3) precision measurement - interrogate gravity corrections and Casimir forces at short length scales; (4) thermodynamics/statistical mechanics - exquisite control to constrain dynamics and then follow microscopic trajectories to build up ensemble averages; and (5) material spectroscopy - levitating objects removes substrate induced effects in performing spectroscopy and microscopy on materials, which is especially crucial for nanomaterials.

Also includes:

This BRC program requires a multidisciplinary integrated computational, experimental, and multi-scale characterization effort including, but not limited to, (1) high-throughput CALPHAD computations of phase equilibria/non-equilibrium solidification; (2) high-throughput experiments using materials libraries with microstructural gradients; (3) deformation, strengthening modeling and validation; (4) multi-scale microstructural characterization; (5) phase stability/phase transformation kinetics; (6) lattice distortions and dislocations; (7) materials synthesis/characterization; and (8) multi-scale mechanics. Possible performers would most likely be a small research group with interdisciplinary expertise in quantum chemistry, materials science, materials informatics, interfacial and surface science, mechanics, 2D, 3D, and 4D atomistic computational simulations and modeling, statistical mechanics, molecular dynamics, phase-field modeling, non-equilibrium processing, CALPHAD and multi-scale thermodynamic and kinetic computational tools. These multi-scale modelling efforts would be validated and verified using state-of-the-art atomic-scale analytical tools.

Awards: Standard Grants

Proposal Deadline:

White Papers: Friday, 18 August 2017; Full Proposals: Friday, 17 November 2017

Contact Information:

Dr. Reginald Williams Basic Research Challenge (BRC) Program Manager Code 03R Office of Naval Research 875 North Randolph Street Arlington VA 22203-1995 reginald.g.williams@navy.mil

Grant Program: CENTER OF EXCELLENCE: Trusted Human-Machine Teaming

Agency: Department of Defense AFOSR

Website: <http://www.wpafb.af.mil/Welcome/Fact-Sheets/Display/Article/842050/>

Brief Description: The Air Force Office of Scientific Research (AFOSR) seeks unclassified proposals from educational institutions in the United States for a University Center of Excellence (UCoE) in in Trusted Human-Machine Teaming. Proposals must not contain any proprietary information. This center is a joint project between the Air Force Office of Scientific Research and the Air Force Research Laboratory, Airman Systems Directorate (AFRL/RH), referred to

collectively as “we, our, or us” in this announcement. The center will extend the research capabilities of the Air Force Research Laboratory, and provide opportunities for a new generation of United States scientists and engineers to address the basic research needs of the Air Force.

We will consider proposals for up to five (5) years with a three-year (3) base period and a two-year (2) option period. of Interest across the lifespan of an individual with ASD, are of particular importance to the ARP.

Awards: Up to \$5,000,000

Proposal Deadline: August 18, 2017

Contact Information:

DR. BENJAMIN KNOTT, AFOSR/RTA2

Trust and Influence Program

Telephone: (703) 696-1142

Email: benjamin.knott.2@us.af.mil

DR. ERICA JOHNSON, AFRL/711 HPW/RHCP

Applied Neuroscience Branch

Telephone: (937) 938-3569

Email: erica.johnson.7@us.af.mil

Department of Energy

Grant Program: Advanced Manufacturing Graduate-Level Traineeships

Agency: Department of Energy DE-FOA-0001790

Website: <https://eere-exchange.energy.gov/#Foald365cf14b-d1bc-40f9-9a35-08a8d336d4e7>

Brief Description: Through this Funding Opportunity Announcement (FOA), DOE intends to fund university-led Traineeship Programs that address workforce training needs in the early-stage technology area of advanced materials and process technologies of high importance to manufacturing. The following objectives guide the Office of Energy Efficiency and Renewable Energy (EERE) Advanced Manufacturing Office’s (AMO) traineeship efforts:

- Advance the DOE mission – Traineeship programs are designed and implemented to advance specific Science, Technology, Engineering and Math (STEM) workforce competencies required for the DOE’s unique mission to ensure America’s security and prosperity by addressing its science and energy challenges, particularly with regard to advanced manufacturing.
- Address priority STEM workforce needs and identified gaps in early-stage advanced manufacturing technology – Traineeship programs focus on advancing those critical STEM disciplines and competencies specifically relevant to the AMO missions where other U.S. Government or academic workforce development programs either do not exist or where DOE-relevant early-stage technology areas are not being leveraged to support specific DOE mission responsibilities.

The high priority topic identified in this traineeship program is advanced manufacturing (advanced materials and process technologies in manufacturing).

Award: EERE expects to make approximately \$2,500,000 of Federal funding available for new awards under this FOA, subject to the availability of appropriated funds. EERE anticipates making approximately 1-2 awards under this FOA. EERE may issue one, multiple, or no awards. Individual awards may vary between \$1,250,000 and \$2,500,000.

Proposal Deadline:

- Concept Paper Submission Deadline: 8/8/2017 5:00 PM ET

- Full Application Submission Deadline: 9/13/2017 5:00 PM ET

Contact Information: EERE-ExchangeSupport@hq.doe.gov

Grant Program: Technology Development to Ensure Environmentally Sustainable CO2 Injection Operations

Agency: Department of Energy DE-FOA-0001725

Website:

https://www.fedconnect.net/FedConnect/PublicPages/PublicSearch/Public_Opportunities.aspx

Brief Description: This FOA seeks applications on research to develop techniques, tools, and methodologies that improve detection and assessment of CO2 stored in the target reservoir. Research products developed under this FOA are expected to include monitoring tools and techniques, as well as validation of models and modeling techniques. Successful technologies developed under this FOA will decrease the operator's financial burden associated with long-term monitoring by providing them the capability to assess the position of the CO2 plume in the target reservoir with greater certainty throughout the life cycle of the project (i.e., active- and post-injection).

Award: Up to \$2,000,000

Proposal Deadline: August 11, 2017

Contact Information:

K. Young 412-386-4402 bethan.young@netl.doe.gov

NASA

Grant Program: ROSES 2017: Solar Irradiance Science Team

Agency: NASA NNH17ZDA001N-SIST

Website:

<https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B74B6448A-AF9D-A1F6-9ED7-ABD7FF9C90C8%7D&path=open&method=init>

Brief Description: Solar irradiance represents the primary external forcing that operates on the Earth and contributes to variability and change in the Earth's climate and atmospheric composition. It can only be measured above the atmosphere given the significant absorption that takes place within it. The Earth system is sensitive to variations in both the Total Solar Irradiance (TSI), as well as the spectral dependence of any variation, given the fact that different wavelengths have their greatest absorption at different altitudes in the atmosphere. Variations in TSI are quite small – the typical variation over the 11-year solar cycle is on the order of $\pm 0.15\%$. Variations in the solar irradiance as a function of wavelength increase with decreasing wavelength, potentially being of the order of a few percent at the short wavelength ultraviolet radiation responsible for photodissociation of oxygen and a factor of order unity at wavelengths near Lyman Alpha (121.6 nm).

Awards: Various

Proposal Deadline:

SIST17 NOIs Due Aug 04, 2017

SIST17 Proposals Due Oct 06, 2017

Contact: David B. Considine Earth Science Division Science Mission Directorate NASA Headquarters Washington, DC 20546-0001 Tel: 202-358-2277 Email: david.b.considine@nasa.gov

Grant Program: ROSES 2017: New (Early Career) Investigator Program

Agency: NASA NNH17ZDA001N-NIP

Website:

<https://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={344D6EF1-D56F-60FD-505E-A31035E2B19C}&path=open>

Brief Description: The New (Early Career) Investigator Program (NIP) in Earth Science is designed to support outstanding scientific research and career development of scientists and engineers at the early stage of their professional careers. The program aims to encourage innovative research initiatives and cultivate scientific leadership in Earth system science. The Earth Science Division (ESD) places particular emphasis on the investigators' ability to promote and increase the use of space-based remote sensing through the proposed research. The NIP supports all aspects of scientific and technological research aimed to advance NASA's mission in Earth system science (<http://science.nasa.gov/about-us/sciencestrategy/>). In research and analysis, the focus areas are: • Carbon Cycle and Ecosystems, • Climate Variability and Change, • Water and Energy Cycle, • Atmospheric Composition, • Weather, and • Earth Surface and Interior. In Applied Sciences, the ESD encourages efforts to discover and demonstrate practical uses of NASA Earth science data, knowledge, and technology (see <http://appliedsciences.nasa.gov>). In technological research, the ESD aims to foster the creation and infusion of new technologies into space missions in order to enable new scientific observations of the Earth system or reduce the cost of current observations (see <http://esto.nasa.gov>). The ESD also promotes innovative development in computing and information science and engineering of direct relevance to ESD. See Appendix A.1 for more detailed descriptions of the Focus Areas, themes in applied sciences, and related research topics of high priority to the ESD.

The proposed research project must be led by a single, eligible (see further description below for eligibility) investigator serving as the Principal Investigator (PI). Indeed, this individual must be the only essential team member; no Co-Investigators (Co-Is), paid or unpaid, are permitted. The NIP does not accept proposals with Co-PIs nor two types of PIs, such as Science PI and Institutional PI. Students and postdoctoral fellows may participate as paid team members. The proposed research may include collaborations. See the Guidebook for Proposers at <http://www.hq.nasa.gov/office/procurement/nraguidebook/> for the definitions of Collaborator vs. Co-Investigator and descriptions of China-related restrictions.

To be eligible for an NIP award, proposed PIs must meet the following requirements:

1. Be employed at an institution in the U.S., its territories, or possessions, or the Commonwealth of Puerto Rico, which awards a baccalaureate or advanced degree in a field supporting the objectives of NASA Earth system studies, or be employed at any nonprofit research institution or other nonprofit organization that performs a significant amount of work in fields of research supporting the objectives of NASA's Earth Science Program. Such organizations could include museums, observatories, Government or nonprofit research laboratories, as well as nonprofit entities in the private sector.
2. Be in tenure- or nontenure-track positions in either teaching or research or both, as long as the employing institution assumes the responsibility of submitting the proposal with the individual as the proposed PI.

3. Despite being more than five years beyond the receipt of their Ph.D. degrees, individuals who have interrupted their careers for reasons such as family leave or serious health problems may also be eligible. These applicants should make a written request for prior concurrence from NASA before the due date for Notices of Intent to propose. NASA will provide a written response within three weeks. Such exception is not intended for individuals who have had successful employment in technical fields in science and engineering, even though the employment is not a direct continuation of their Ph.D. research, nor is it intended for individuals with a recent Ph.D. degree after having already established a successful career in Earth system science and related disciplines.

4. Not hold or have held tenure (or equivalent) on or before the submission deadline of this program.

5. Not be a current or former recipient of the NIP or Presidential Early Career Award for Scientists and Engineers (PECASE) (see further below) award.

Awards: Proposals to the NIP are openly solicited approximately every two years. The anticipated average award is \$80-90K per year for a period of up to three years, subject to satisfactory progress and availability of funds.

Proposal Deadline: NIP17 NOIs Due: July 31, 2017

NIP17 Proposals Due: August 31, 2017

Contact: Lin Chambers, Earth Science Division; Phone: 202-358-1667; lin.h.chambers@nasa.gov

National Endowment of Humanities

Grant Program: Summer Awards

Agency: National Endowment of Humanities

Website: <https://www.neh.gov/grants/research/summer-stipends>

Brief Description: Summer Stipends support individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both. Eligible projects usually result in articles, monographs, books, digital materials and publications, archaeological site reports, translations, or editions. Projects must not result solely in the collection of data; instead they must also incorporate analysis and interpretation.

Summer Stipends support continuous full-time work on a humanities project for a period of two consecutive months. Summer Stipends support projects at any stage of development.

Awards: \$6,000 stipend.

Proposal Deadline: September 27, 2017 for Projects Beginning May 2018

Contact: Contact NEH's Division of Research Programs at 202-606-8200 or stipends@neh.gov.

Burroughs Welcome Fund

Grant Program: BWF's Career Awards at the Scientific Interface

Agency: Burroughs Welcome Fund

Website: <https://www.bwfund.org/grant-programs/interfaces-science/career-awards-scientific-interface>

Brief Description: These grants are intended to foster the early career development of researchers who have transitioned or are transitioning from undergraduate and/or graduate

work in the physical/mathematical/computational sciences or engineering into postdoctoral work in the biological sciences, and who are dedicated to pursuing a career in academic research. Scientific advances such as genomics, quantitative structural biology, imaging techniques, and modeling of complex systems have created opportunities for exciting research careers at the interface between the physical/computational sciences and the biological sciences. Tackling key problems in biology will require scientists trained in areas such as chemistry, physics, applied mathematics, computer science, and engineering.

Application Process:

The competition will employ a two-stage process. Pre-proposals will be reviewed and full proposal invitations will be sent by November 14, 2017.

All applicants will be required to complete a web-based questionnaire assessing their eligibility to apply for this award. If eligibility criteria are met, applicants will be automatically directed to the web-based pre-proposal application.

Awards: BWF's Career Awards at the Scientific Interface (CASI) provide \$500,000 over five years to bridge advanced postdoctoral training and the first three years of faculty service. These awards are open to U.S. and Canadian citizens or permanent residents as well as to U.S. temporary residents

Proposal Deadline:

Sept. 6, 2017: Pre-proposal deadline

Nov. 14, 2017: Invitations sent

Jan. 10, 2018: Full proposal deadline

Mar. 23, 2018: Finalists notified

Apr. 25-26, 2018: In-person interviews

Contact: [Rusty Kelley, Ph.D.](#), Program Officer, 919-991-5120

For more information, please also contact Eric Blitz, Associate Director for Development Corporate and Foundation Relations, eric.blitz@njit.edu

Bayer Grants4Targets

Grant Program: Alfred P. Sloan Foundation Grants

Agency: Bayer Foundation

Website: <https://grants4targets.bayer.com/home/pharma/>

Brief Description: Bayer is offering grants for researchers investigating *novel drug targets* in:

- Oncology

(Focus on oncogenic signaling)

- Gynecology

(Focus on novel treatment options for endometriosis, uterine fibroids and polycystic ovary syndrome (PCOS).)

- Heart & Vascular Diseases

(Focus on Atrial Fibrillation, Chronic Heart Failure, Peripheral Artery Disease, Cardioprotective mechanisms.)

- Specialty Lung Diseases

(Focus on Idiopathic Pulmonary Fibrosis, Interstitial Lung Disease, COPD- Frequent Exacerbators, Chronic Cough, Pulmonary Hypertension).

- Kidney Diseases

(Focus on Hypertensive Nephropathy, Diabetic Kidney Disease, Acute Kidney Injury, Chronic Allograft Nephropathy, Polycystic Kidney Disease)

· Hemostatic & Acute Organ Disorders

(Focus on Acute Respiratory Distress Syndrome, DIC, SIRS, Acute Coronary Syndrome, Stroke Prevention in Atrial Fibrillation, Venous Thrombosis, Hemophilia A).

- Target must be a nucleic acid or a protein (e.g. an enzyme, a receptor) whose activity can be modified by a drug (drug can be a small-molecular-weight chemical compound or a biological, such as an antibody or a recombinant protein)
- Target should have shown to be effective/mechanistically involved in the disease by relevant in vitro or in vivo models
- Target is disease-modifying and/or has a proven function in the pathophysiology of a disease

Awards: There are two types of grants,

Support grants (€ 5,000 - €10,000)*

For druggable targets that are at a very early stage of discovery.

Focus grants (€ 10,000 - €125,000)*

For more mature ideas, e.g. to address specific aspects of a target as a first step towards transferring it to the drug discovery process.

Proposal Deadline: August 31, 2017

Contact: For more information, please also contact Eric Blitz, Associate Director for Development Corporate and Foundation Relations, eric.blitz@njit.edu

Simon Foundation

Grant Program: Simons Grants for Sabbaticals in Math and Theoretical Physics

Agency: Simon Foundation

Website: <https://www.simonsfoundation.org/funding/funding-opportunities/mathematics-physical-sciences/simons-fellow-program/>

Brief Description: *Grants awarded will be restricted to sabbatical-eligible faculty who wish to use the grant for the purpose of extending a single term sabbatical leave to a full academic year.*

Proposal Deadline: September 28, 2017

Contact: For more information, please also contact Eric Blitz, Associate Director for Development Corporate and Foundation Relations, eric.blitz@njit.edu

2017/2018 Institutional Review Board (IRB) Meeting Schedule for Approval of Human Subjects in Research

IRB application forms must be received by the IRB at least 7 business days before the meeting to ensure enough time for accurate review. If it is received after that, it will be reviewed at the following month's meeting.

- Thursday, August 3, 2017
- Tuesday, September 12, 2017
- Tuesday, October 10, 2017
- Tuesday, November 7, 2017
- Tuesday, December 5, 2017
- Tuesday, February 6, 2018
- Tuesday, March 6, 2018
- Tuesday, April 10, 2018

- Tuesday, May 8, 2018

More information about IRB forms and process is posted on the research website <http://www.njit.edu/research/compliance/review-board/>

2017 - 2018 Institutional Biosafety Committee (IBC) Meeting Schedule

IBC application forms must be submitted at least 10 business days before the next meeting date. Submit your forms to IBC@njit.edu.

- Tuesday, September 26, 2017
- Tuesday, November 28, 2017
- Tuesday, February 20, 2018
- Tuesday, April 24, 2018

More information about IBC forms and process is posted on the research website <http://www.njit.edu/research/compliance/biosafety-committee.php>

Streamlyne Update

513 proposals were submitted in FY17. Since January 17, 307 proposals were submitted through streamline. In the last quarter (April-July), 34 proposals were submitted through the System-to-System (S2S) Streamlyne-Grants.gov module. New “How to Do” videos have been posted on the research website <http://www5.njit.edu/research/streamlyne/>. These videos show step-by-step process on the following tasks:

- ◆ [How to Begin Proposal Submission in Streamlyne](#)
- ◆ [How to Input Proposal Budget](#)
- ◆ [How to Process Approvals](#)
- ◆ [How to Upload Proposal Attachments](#)

In addition, most Frequently Asked Question (FAQs) from PIs are posted with answers on the same website as [Streamlyne FAQs](#)

Faculty and staff having any questions on proposal submission, may contact their college representatives, and also follow up with **Justin Samolewicz, Associate Director (Pre Award)** 973-596-3145; justin.m.samolewicz@njit.edu; and **Eric Hetherington, Director, Sponsored Research Programs Administration** 973-596-3631; eric.d.hetherington@njit.edu. The college representatives to help PIs on proposal submissions are

John McCarthy, NCE Director of Research
(973) 596-3247; john.p.mccarthy@njit.edu

Cristo Leon, CSLA Director of Research
(973) 596-6426; cristo.e.yanezleon@njit.edu

Nancy Henderson, CCS Project Manager
973-596-5687; nancy.henderson@njit.edu

Iris Pantoja, CoAD and SOM Project Manager
973-596-4483; irp3@njit.edu
