

# NJIT Research Newsletter

Issue: ORN-2020-28

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**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** (with links to sections). The Newsletter is posted on the NJIT Research Website <https://research.njit.edu/funding-opportunities> .

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## Special Announcements

### **Institutional Review Board (IRB) Application and Conflict of Interest (COI) Disclosure Processing Protocols with Streamlyne**

<https://research.njit.edu/streamlyne-irb>

The Office of Research is pleased to announce that we are adding IRB protocols and research COI disclosures to Streamlyne, our online grant management tool. This continues our standardized approach to information management for research administration and researchers. Training opportunities, including video overviews, step-by-step manuals, and live tutorials, are available to ensure researchers have adequate support during this transition (<https://research.njit.edu/streamlyne-irb>). Should you have any questions on using these new features of Streamlyne, please contact Deidra Slough, the assistant director for research compliance, at [deidra.l.slough@njit.edu](mailto:deidra.l.slough@njit.edu). Questions about the content of IRB protocols or IRB research requirements should be addressed to [irb@njit.edu](mailto:irb@njit.edu).

## NJIT Multi-Phase Ramp Up Research Continuity and Recovery Plan

<https://research.njit.edu/njit-pandemic-recovery-plan>

For ramping up the phased research continuity and recovery operations, the NJIT guidelines and protocols for Phase-1, Phase-2 and Phase-3 are posted on the research website <https://research.njit.edu/njit-pandemic-recovery-plan>. These protocols are subject to change based on the guidance and regulations from the federal, state, and local government agencies.

The Office of the Secretary of Higher Education (OSHE) has issued standards for institutions of higher education as they begin restarting campus operations impacted by the COVID-19 pandemic. The standards align with the stages of New Jersey's phased "[The Road Back: Restoring Economic Health Through Public Health](#)" plan and provide a framework of critical standards, additional steps institutions should consider when formulating plans, and examples of safeguarding practices in 10 key on-campus functional areas: instruction, residential housing, computer laboratories, libraries, research, student services, transportation, dining, international travel, and athletics. New Jersey "Restart Standards for all New Jersey Institutions of Higher Education" plan is posted on the website <https://www.nj.gov/highereducation/documents/pdf/index/OSHErestart.pdf>.

NJIT faculty, staff, and students at research facilities must follow the specific social distancing and safety protocols including the use of personnel protective equipment (PPE) as required by the institutional, state and federal guidelines in the respective phase of the research continuity plan. State and national information regarding current conditions can be found at:

- New Jersey's COVID-19 information hub: <https://covid19.nj.gov/index.html>
- White House Plan for Opening up America Again: <https://www.whitehouse.gov/wp-content/uploads/2020/04/Guidelines-for-Opening-Up-America-Again.pdf>

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### [Grant Opportunity Alerts](#)

Keywords and Areas Included in the Grant Opportunity Alert Section Below

**NSF:** Ecology and Evolution of Infectious Diseases (EEID); Research Experiences for Teachers (RET) in Engineering and Computer Science; Disaster Resilience Research Grants (DRRG); Division of Physics: Investigator-Initiated Research Projects (PHY); NSF-DFG Lead Agency Activity in Electrosynthesis and Electrocatalysis; Division of Chemistry: Disciplinary Research Programs (CHE-DRP); Plant Biotic Interactions

**NIH:** BRAIN Initiative: Tools for Germline Gene Editing in Marmosets (U01); Integrative Research to Understand the Impact of Sex Differences on the Molecular Determinants of AD Risk and Responsiveness to Treatment (R01); PHS 2020-2 Omnibus Solicitation of the NIH, CDC, and FDA for Small Business Innovation Research Grant Applications (Parent SBIR [R43/R44]); BRAIN Initiative: Proof of Concept Development of Early Stage Next Generation Human Brain Imaging (R01); BRAIN Initiative: Theories, Models and Methods for Analysis of Complex Data from the Brain (R01); NIH Neuroscience Development for Advancing the Careers of a Diverse Research Workforce (R25);

Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32); Emergency Awards: RADx-UP Coordination and Data Collection Center (CDCC) (U24)  
**Department of Defense/US Army/DARPA/ONR: Award for Fundamental Research in Socio-Mathematics of Information and Influence;** DoD Pancreatic Cancer, Idea Development Award; Defense Sciences Office Office-wide; COVID-19 Seedling Research Topics; C4ISR, Information Operations, Cyberspace Operations and Information Technology System Research; Naval Air Warfare Center Aircraft Division (NAWCAD) Office-Wide

**Department of Transportation: Advanced Transportation and Congestion Management Technologies Deployment Initiative**

**Department of Agriculture: Agriculture and Food Research Initiative - Foundational and Applied Science;** Biotechnology Risk Assessment Grants Program; REAP-Renewable Energy Systems and Energy Efficiency Improvements

**Department of Labor: Women in Apprenticeship and Nontraditional Occupations (“WANTO”) Technical Assistance Grant Program; Supply Chains Tracing Project**

**EPA: Assessment Tools for Biotechnology Products**

**Department of Energy: Research and Development for Advanced Water Resource Recovery Systems;** Small-Scale Solid Oxide Fuel Cell Systems and Hybrid Electrolyzer Technology Development; Advanced Manufacturing Office Multi-Topic FOA

**NASA: ROSES 2020: Science Team for the OCO Missions; SAGE III/ ISS Science Team; Solar Irradiance Science Team; NASA Innovative Advanced Concepts (NIAC) Phase I; The New (Early Career) Investigator Program in Earth Science; ROSES 2020: Space Weather Science Application Operations-to-Research**

**National Endowment of Humanities: Humanities Initiatives; Public Humanities Projects**

**Private Foundations: Activate.Org: Activate Fellowships; Research Corporation for Science Advancement: Cottrell Scholar Award**

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### **Recent Research Grant and Contract Awards**

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

**PI:** Yuan-Nan Young (PI)

**Department:** Mathematical Sciences

**Grant/Contract Project Title:** Collaborative Research: Mathematical, Numerical, and Experimental Investigation of Flow Sensing by the Primary Cilium

**Funding Agency:** NSF

**Duration:** 08/01/20-07/31/23

**PI:** Yi Chen (PI)

**Department:** MT School of Management

**Grant/Contract Project Title:** New Jersey Alliance for Clinical Translational Science: NJ ACTS

**Funding Agency:** NIH-Rutgers University

**Duration:** 03/01/19-02/28/21

**PI:** Zhi Wei (PI)

**Department:** Computer Science

**Grant/Contract Project Title:** New Jersey Alliance for Clinical Translational Science: NJ ACTS

**Funding Agency:** NIH-Rutgers University

**Duration:** 03/01/19-02/28/21

**PI:** James Geller (PI)

**Department:** Computer Science

**Grant/Contract Project Title:** New Jersey Alliance for Clinical Translational Science: NJ ACTS

**Funding Agency:** NIH-Rutgers University

**Duration:** 03/01/19-02/28/21

**PI:** Reggie Caudill (PI) and Dantong Yu (Co-PI)

**Department:** MT School of Management

**Grant/Contract Project Title:** New Jersey Alliance for Clinical Translational Science: NJ ACTS

**Funding Agency:** NIH-Rutgers University

**Duration:** 03/01/19-02/28/21

**PI:** Gregory Fleishman (PI), Dale Gary (Co-PI) and Gelu Nita (Co-PI)

**Department:** Center for Solar Terrestrial Research

**Grant/Contract Project Title:** 3D Magnetic and Thermal Structure of Active Regions of the Sun

**Funding Agency:** NSF

**Duration:** 09/01/18-08/31/21

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### **In the News...**

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

**Administration Drops Plan To Implement Rules On Student Visas For Online Learning:** The US administration is rescinded its July 6 rule that said foreign students on F-1 and M-1 visas would need to take at least some courses in person in order to legally remain in the U.S. in the fall semester amid the coronavirus pandemic.” According to NBC News, “The reversal comes in the face of heavy criticism from institutions of higher education and lawmakers from both major parties, who argued that the new rules would be disruptive to students and undermine their opportunities and the value of their education.”

**House Advancing Spending Bills on Compressed Schedule:** The House Appropriations Committee is holding subcommittee meetings this week to [advance](#) its versions of all 12 spending bills that will fund the federal government for fiscal year 2021, which begins Oct. 1. Some key provisions which were a part of the committee-based bills include funding to help combat the Coronavirus pandemic, research and development for a range of defense programs and health agencies, immigration reform, and higher education grant dollars. Looking ahead to next week, the House is scheduled to take up a four-bill "minibus." The bills included in the package are Agriculture, Interior & Environment, Military Construction & Veterans' Affairs, and State & Foreign Operations. House Democrats are touting efforts to confront the Coronavirus pandemic, strengthen food security, invest in infrastructure, fund the EPA &

Department of Interior, combat climate change, and support veterans and military families in their minibus.

**PCAST Proposes New R&D Institutes, Spending Surge for AI:** The President’s Council of Advisors on Science and Technology accepted [recommendations](#) last week from three subcommittees focused on spurring R&D related to “Industries of the Future” (IoF), meeting national STEM workforce needs, and better leveraging national labs within the U.S. research enterprise. A number of the recommendations entail establishing collaborative R&D centers, [including](#) a set of “IoF Institutes,” which would aim to strengthen the feedback between basic and applied research and accelerate technology commercialization. The council suggests two “flagship” institutes could focus on the application of AI to advanced manufacturing and biotechnology, respectively. PCAST also [calls](#) for the federal government to increase total nondefense investments in artificial intelligence R&D from a current level of about \$1 billion per year to \$10 billion by 2030. It envisions that some of this funding would go to the National Science Foundation in order to establish a [National AI Research Institute](#) in every state. The council further recommends investing \$100 million annually over five years to create federally funded National Quantum Computing User Facilities, analogous to the high performance computing user facilities currently supported by NSF and the Department of Energy.

**White House Planned Science Agency "Reforms":** American Institute of Physics provides an informative overview of the impact on R&D programs of the [White House's recently released blueprint](#) outlining over 80 recommendations for reorganizing the federal government. Among the recommendations related to R&D:

- Consolidate DOE's applied R&D programs (Energy Efficiency and Renewable Energy, Nuclear Energy, and Fossil Energy) as well as ARPA-E into a new "Office of Energy Innovation." (The administration has been hostile to ARPA-E, so this may be a stealth way to eliminate it.)
- Consolidate "smaller" federally funded graduate research fellowships under NSF
- Eliminate the EPA STAR program
- Consolidate AHRQ, NIOSH and the National Institute on Disability and Rehabilitation Research under NIH
- Merge the Department of Education and the Labor Department

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### **Webinar and Events**

**Event: Webinar: Forecasting Costs for Biomedical Data Preservation**

**Sponsor: The National Academies: Science, Engineering and Medicine**

**When: July 22, 2020 2.00 PM – 3.00 PM**

**Website: [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=297681&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=297681&org=NSF)**

**Brief Description:** Preserving and promoting access to data from biomedical research accelerates scientific discovery and improves health outcomes. In order to plan for the disposition of these increasingly complex data sets, researchers and data archivists need to be able to accurately budget for the costs associated with long-term data curation. Our recent report, [Life Cycle Decisions for Biomedical Data: The Challenge of Forecasting Costs](#), examines approaches for forecasting costs for preserving, archiving, and promoting access to biomedical research data. This report provides a comprehensive conceptual framework for cost-effective decision making that encourages data accessibility and reuse for

researchers, data managers, data scientists, and institutions that support platforms that enable biomedical research data preservation, discoverability, and use.

**To Join the Webinar:** [Click here to register for this Webinar](#)

**Event: Webinar: EHR Core Research Program**

**Sponsor:** NSF

**When:** July 23, 2020 3.00 PM – 4.00 PM

July 30, 2020 3.00 PM – 4.00 PM

**Website:** <https://www.nsf.gov/pubs/2019/nsf19508/nsf19508.htm>

[https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=300751&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=300751&org=NSF)

**Brief Description:** HR Core Research (ECR) Overview of Solicitation and Proposal Submission: Solicitation [NSF 19-508](#) Program Outreach Webinar

Registration is required so we can communicate with you before and after the webinar - there is no need to contact the program directly. After registering, you will automatically receive instructions by email from Zoom for joining the webinar. If you don't receive the email, please check your junk or clutter folders.

**To Join the Webinar:** [REGISTER FOR THE REGULAR SESSION ECR WEBINARS](#)

**Event: Webinar: NSF ADVANCE Program - Adaptation and Partnership Proposal Development**

**Sponsor:** NSF

**When:** July 29, 2020 1.30 PM – 3.00 PM

**Website:** [https://www.nsf.gov/events/event\\_summ.jsp?cntn\\_id=297681&org=NSF](https://www.nsf.gov/events/event_summ.jsp?cntn_id=297681&org=NSF)

**Brief Description:** HR Core Research (ECR) Overview of Solicitation and Proposal Submission: Solicitation [NSF 19-508](#) Program Outreach Webinar

Registration is required so we can communicate with you before and after the webinar - there is no need to contact the program directly. After registering, you will automatically receive instructions by email from Zoom for joining the webinar. If you don't receive the email, please check your junk or clutter folders.

**To Join the Webinar:** [Click here to register for this Webinar](#)

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**Grant Opportunities**

**National Science Foundation**

**Grant Program: Ecology and Evolution of Infectious Diseases (EEID)**

**Agency:** National Science Foundation NSF 20-585

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20585/nsf20585.htm>

**Brief Description:** The multi-agency Ecology and Evolution of Infectious Diseases program supports research on the ecological, evolutionary, and social drivers that influence the transmission dynamics of infectious diseases. The central theme of submitted projects must be the quantitative or computational understanding of pathogen transmission dynamics. The intent is discovery of principles of infectious disease transmission and testing mathematical or computational models that elucidate infectious disease systems. Projects should be broad, interdisciplinary efforts that go beyond the scope of typical studies. They should focus on the determinants and interactions of transmission among any host species, including but not limited to humans, non-human animals, and/or plants. This includes, for example, the spread of

pathogens; the influence of environmental factors such as climate; the population dynamics and genetics of reservoir species or hosts; the feedback between ecological transmission and evolutionary dynamics; and the cultural, social, behavioral, and economic dimensions of pathogen transmission. Research may be on zoonotic, environmentally-borne, vector-borne, or enteric pathogens of either terrestrial or aquatic systems and organisms, including diseases of animals and plants, at any scale from specific pathogens to inclusive environmental systems. Proposals for research on disease systems of public health concern to developing countries are strongly encouraged, as are disease systems of concern in agricultural systems. Investigators are encouraged to develop the appropriate multidisciplinary team, including for example, anthropologists, modelers, ecologists, bioinformaticians, genomics researchers, social scientists, economists, oceanographers, mathematical scientists, epidemiologists, evolutionary biologists, entomologists, parasitologists, microbiologists, bacteriologists, virologists, pathologists or veterinarians, with the goal of integrating knowledge across disciplines to enhance our ability to predict and control infectious diseases.

**Awards:** Standard or continuing grants; **Anticipated Funding Amount:** \$24,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** November 18, 2020

**Contacts:** Katharina Dittmar, Program Director, NSF/BIO, telephone: (703) 292-7799, email: [kdittmar@nsf.gov](mailto:kdittmar@nsf.gov)

- Christine Jessup, Program Director, NIH/FIC, telephone: (301) 496-1653, fax: (301) 402-0779, email: [christine.jessup@nih.gov](mailto:christine.jessup@nih.gov)
- Mark Mirando, National Program Leader, USDA/NIFA, telephone: (202) 445-5575, email: [mark.mirando@usda.gov](mailto:mark.mirando@usda.gov)

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**Grant Program: Research Experiences for Teachers (RET) in Engineering and Computer Science**  
**Agency: National Science Foundation NSF 20-584**

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20584/nsf20584.htm>

**Brief Description:** NSF's Directorate for Engineering (ENG) and the Directorate for Computer and Information Science and Engineering (CISE) have joined to support the Research Experiences for Teachers (RET) in Engineering and Computer Science program. This program supports active long-term collaborative partnerships between K-12 Science, Technology, Engineering, Computer and Information Science, and Mathematics (STEM) in-service and pre-service teachers, full-time community college faculty, university faculty and students, and industry partners to enhance the scientific disciplinary knowledge and capacity of the STEM teachers and/or community college faculty through participation in authentic summer research experiences with engineering and computer science faculty researchers. The research projects and experiences all revolve around a focused research area related to engineering and/or computer science that will provide a common cohort experience to the participating educators. The K-12 STEM teachers and/or full-time community college faculty also translate their research experiences and new scientific knowledge into their classroom activities and curricula. The university team will include faculty, graduate and undergraduate students as well as industrial advisors. As part of the long-term partnership arrangements, involvement of undergraduate/graduate students with the integration of the RET curricular materials into classroom activities is particularly encouraged.

**Awards:** Standard or continuing grants; **Anticipated Funding Amount:** \$5,800,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:** September 30, 2020

**Contacts:** Amelia S. Greer, ENG/EEC, telephone: (703) 292-2552, email: [agreer@nsf.gov](mailto:agreer@nsf.gov)

- Allyson Kennedy, CISE/CNS, telephone: (703) 292-8950, email: [aykenned@nsf.gov](mailto:aykenned@nsf.gov)

**Grant Program: Disaster Resilience Research Grants (DRRG)**

**Agency: National Science Foundation NSF 20-581**

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20581/nsf20581.htm>

**Brief Description:** With this joint solicitation, the NSF and the U.S Department of Commerce (DOC) National Institute for Standards and Technology (NIST) call for proposals for research to advance fundamental understanding of disaster resilience in support of improved, science-based planning, policy, decisions, design, codes, and standards.

**Awards:** Standard or continuing grants; **Anticipated Funding Amount:** \$3,100,000

**Letters of Intent:** August 14, 2020

**Proposal Submission Deadline:** September 15, 2020

**Contacts:** Jacqueline R. Meszaros, ENG/CMMI, telephone: (703) 292-7261, email: [jmeszaro@nsf.gov](mailto:jmeszaro@nsf.gov)

- Jason Averill, Chief, MSS Div, ENG Lab, NIST, telephone: (301)975-2585, email: [jason.averill@nist.gov](mailto:jason.averill@nist.gov)

**Grant Program: Division of Physics: Investigator-Initiated Research Projects (PHY)**

**Agency: National Science Foundation NSF 20-580**

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20580/nsf20580.htm>

**Brief Description:** The Division of Physics (PHY) supports physics research and the preparation of future scientists in the nation's colleges and universities across a broad range of physics disciplines that span scales of space and time from the largest to the smallest and the oldest to the youngest. The Division is comprised of disciplinary programs covering experimental and theoretical research in the following major subfields of physics: Atomic, Molecular and Optical Physics; Elementary Particle Physics; Gravitational Physics; Integrative Activities in Physics; Nuclear Physics; Particle Astrophysics; Physics at the Information Frontier; Physics of Living Systems; Plasma Physics; and Quantum Information Science. The Division of Physics strongly encourages single proposal submission for possible co-review rather than submission of multiple related proposals to several programs.

PIs considering submitting more than one proposal to this solicitation, or who already have an active PHY award, are encouraged to first consult with the relevant program officer(s) before preparing a new proposal. This does not apply to awards from or submissions to the MRI, REU, and/or center programs, or in cases of renewal proposals.

**Awards:** Standard or continuing grants; **Anticipated Funding Amount:** \$90,000,000

**Letters of Intent:** Not required

**Proposal Submission Deadline:**

October 19, 2020

Third Monday in October, Annually Thereafter Physics of Living Systems

November 16, 2020

Third Monday in November, Annually Thereafter Plasma Physics

November 25, 2020

Fourth Wednesday in November, Annually Thereafter AMO - Theory and Experiment; Gravitational Physics - Theory and Experiment; LIGO Research Support; Integrative Activities in Physics

December 01, 2020

First Tuesday in December, Annually Thereafter Nuclear Physics - Theory and Experiment; Elementary Particle Physics - Experiment; Particle Astrophysics - Experiment

December 08, 2020

Second Tuesday in December, Annually Thereafter Elementary Particle Physics - Theory; Particle Astrophysics and Cosmology – Theory; Quantum Information Science



**Contacts:** Krastan B. Blagoev, Physics of Living Systems, telephone: (703) 292-4666, email: [kblagoev@nsf.gov](mailto:kblagoev@nsf.gov)

- Mark Coles, Projects and Facilities, telephone: (703) 292-4432, email: [mcoles@nsf.gov](mailto:mcoles@nsf.gov)
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**Grant Program: NSF-DFG Lead Agency Activity in Electrosynthesis and Electrocatalysis (NSF-DFG EChem)**

**Agency: National Science Foundation NSF 20-578**

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20578/nsf20578.htm>

**Brief Description:** We are particularly interested in novel and fundamental electrochemical reactions and studies addressing transformations in organic and polymer synthesis, water splitting (hydrogen/oxygen evolution), and nitrogen reduction (ammonia production). Relevant activities include, but are not limited to, mechanistic studies; catalyst design, synthesis, and characterization; computational modeling, theory, and simulation; and experimental tool development. For fundamental engineering science projects, we are interested in studies involving reaction engineering, reactor system design, and component or device scale studies as examples that provide fundamental knowledge supporting scale-up of systems. In addition, fundamental engineering science projects involving alternative (to thermal) activation mechanisms such as microwaves (e.g. microwave assisted catalysis) and low temperature plasmas (e.g. plasma-assisted catalysis) are welcomed.

**Awards:** Standard or continuing grants; **Anticipated Funding Amount:** \$5,000,000

**Letters of Intent:** An Expression of Interest (EOI) must be submitted to [NSFDFG@nsf.gov](mailto:NSFDFG@nsf.gov) by July 1, 2020, prior to the submission of a full proposal.

**Proposal Submission Deadline:** September 30, 2020

**Contacts:** Kenneth Moloy, CHE, telephone: (703) 292-8441, email: [NSFDFG@nsf.gov](mailto:NSFDFG@nsf.gov)

- Brandi Schottel, CBET, telephone: (703) 292-4798, email: [NSFDFG@nsf.gov](mailto:NSFDFG@nsf.gov)
  - Markus Behnke, DFG/PC, telephone: 49 (228) 885-2181, email: [NSF-DFG-Chemistry@dfg.de](mailto:NSF-DFG-Chemistry@dfg.de)
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**Grant Program: Division of Chemistry: Disciplinary Research Programs (CHE-DRP)**

**Agency: National Science Foundation NSF 20-577**

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20577/nsf20577.htm>

**Brief Description:** This solicitation applies to nine CHE Disciplinary Chemistry Research Programs: Chemical Catalysis (CAT); Chemical Measurement and Imaging (CMI); Chemical Structure, Dynamics and Mechanisms-A (CSDM-A); Chemical Structure Dynamics and Mechanisms-B (CSDM-B); Chemical Synthesis (SYN); Chemical Theory, Models and Computational Methods (CTMC); Chemistry of Life Processes (CLP); Environmental Chemical Sciences (ECS); and Macromolecular, Supramolecular and Nanochemistry (MSN).

All proposals submitted to these nine CHE Disciplinary Research Programs (other than the following exceptions) must be submitted through this solicitation, otherwise they will be returned without review.

Exceptions:

- Faculty Early Career Development Program (CAREER) proposals should be submitted through the CAREER solicitation ([https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=503214](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503214)) by the CAREER deadline date specified.
- Facilitating Research at Primarily Undergraduate Institutions: Research in Undergraduate Institutions (RUI) and Research Opportunity Awards (ROA) proposals should be submitted through the RUI/ROA solicitation ([https://www.nsf.gov/funding/pgm\\_summ.jsp?pims\\_id=5518](https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5518)) during the window for the appropriate CHE Disciplinary Research Program. In addition to the requirements of the RUI program, proposals should follow the guidance in this solicitation.

- Proposals for Early-concept Grants for Exploratory Research (EAGER), Grants for Rapid Response Research (RAPID), Research Advanced by Interdisciplinary Science and Engineering (RAISE), and conferences can be submitted anytime after consultation with the cognizant NSF Program Officer.
- Supplemental funding requests to existing grants can be submitted anytime after consultation with the cognizant NSF Program Officer.

**Awards:** Standard or continuing grants; **Anticipated Funding Amount:** \$150,000,000

**Letters of Intent:** Not Required

**Proposal Submission Deadline:** September 01, 2020 - September 30, 2020

**Contacts:** For CLP: Catalina Achim, telephone: (703) 292-2048, email: [cachim@nsf.gov](mailto:cachim@nsf.gov)

- For CSDM-A: Colby A. Foss, telephone: (703) 292-5327, email: [cfoss@nsf.gov](mailto:cfoss@nsf.gov)
- For CMI: Kelsey D. Cook, telephone: (703) 292-7490, email: [kcook@nsf.gov](mailto:kcook@nsf.gov)

### **Grant Program: Plant Biotic Interactions**

**Agency:** National Science Foundation NSF 20-576

**RFP Website:** <https://www.nsf.gov/pubs/2020/nsf20576/nsf20576.htm>

**Brief Description:** The Plant Biotic Interactions (PBI) program supports research on the processes that mediate beneficial and antagonistic interactions between plants and their viral, bacterial, oomycete, fungal, plant, and invertebrate symbionts, pathogens and pests. This joint NSF/NIFA program supports projects focused on current and emerging model and non-model systems, and agriculturally relevant plants. The program's scope extends from fundamental mechanisms to translational efforts, with the latter seeking to put into agricultural practice insights gained from basic research on the mechanisms that govern plant biotic interactions. Projects must be strongly justified in terms of fundamental biological processes and/or relevance to agriculture and may be purely fundamental or applied or include aspects of both perspectives. All types of symbiosis are appropriate, including commensalism, mutualism, parasitism, and host-pathogen interactions. Research may focus on the biology of the plant host, its pathogens, pests or symbionts, interactions among these, or on the function of plant-associated microbiomes.

**Awards:** Standard or continuing grants; **Anticipated Funding Amount:** \$18,500,000

**Letters of Intent:** Not Required

**Proposal Submission Deadline:** Proposals Accepted Anytime

**Contacts:** Michael L. Mishkind, Program Director, E12332, telephone: (703) 292-7190, email: [mmishkin@nsf.gov](mailto:mmishkin@nsf.gov)

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### **National Institutes of Health**

**Grant Program: BRAIN Initiative: Tools for Germline Gene Editing in Marmosets (U01 - Clinical Trial Not Allowed)**

**Agency:** National Institutes of Health RFA-DA-21-006

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-DA-21-006.html>

**Brief Description:** This Funding Opportunity Announcement (FOA) solicits applications to develop tools and technologies to routinely conduct germline and somatic transgenic studies and gene editing in the common marmoset with the aim of supporting the BRAIN goals of understanding the brain in health and disease. This includes optimization of strategies, tools, and methods to build a scientifically rigorous, ethical, efficient, and cost-effective brain-specific research infrastructure that can support all aspects of

gene editing in marmosets, including optimizing assisted reproductive technologies, embryonic stem cell culture, ovarian stimulation protocols, development of pre-implantation protocols, standardization of semen collection and freezing, developing molecular genetic tools for gene editing and inducible/tissue-specific studies, creation of CRE driver lines, etc. Awardees are expected to participate in and provide information to an NIH-Funded Marmoset Coordination Center to disseminate the tools to the broader marmoset community. Studies proposing to conduct gene editing must contain at least one germline gene editing component.

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

**Letter of Intent:** 30 days prior to application due date

**Proposal Submission Deadline:** October 15, 2020 and October 14, 2021

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

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.

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### **Grant Program: Integrative Research to Understand the Impact of Sex Differences on the Molecular Determinants of AD Risk and Responsiveness to Treatment (R01 Clinical Trial Optional)**

**Agency:** National Institutes of Health PAR-20-269

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PAR-20-269.html>

**Brief Description:** This FOA invites applications that employ integrative experimental and analytical approaches engaging basic and translational/clinical research aimed at developing a comprehensive understanding of the impact of sex differences on the trajectories of brain aging and disease, phenotypes of AD and AD-related dementias (ADRD) risk, individualized prevention, and responsiveness to pharmacologic and non-pharmacologic interventions. To this end, this funding opportunity encourages research focused on, but not limited to, the following:

- Molecular mechanisms underlying sex differences in brain bioenergetics, blood-brain barrier (BBB) and neurovascular unit function, myelin integrity, synaptic plasticity, and neural circuits integrity as they relate to the transition from healthy to pathologic brain aging/neurodegeneration.
- Molecular mechanisms by which sex differences influence differential vulnerability to metabolic, vascular, and inflammatory risk factors.
- The impact of sex differences on the trajectories of brain aging and on the molecular determinants of AD risk and progression across diverse ethnic groups.
- Molecular mechanisms by which hormonal transition states, i.e., perimenopause, menopause, and andropause, influence the heterogeneity of AD risk and AD progression.
- Understanding how sex interacts with different ApoE genotypes to influence the molecular mechanisms of brain aging, AD risk phenotypes, and responsiveness to treatment.
- Molecular determinants of sex differences in responsiveness to pharmacologic and non-pharmacologic treatment of AD/ADRD.

The central goal of this initiative is to develop robust research programs that will explore how genes, environment, and hormonal status (gonadal and brain-derived) interact at various levels of biologic complexity (cell, tissue, organs/organ systems, and populations) to produce heterogeneous phenotypes of disease risk and responsiveness to therapy in AD/ADRD.

A cross-disciplinary team-science approach that brings together experts in neuroscience, physiology, computational biology and data science, and translational and clinical research is strongly encouraged, as is the integrative use of human data and biosamples with cell-based and animal models. This FOA will *not* support research that relies solely on the use of cell-based and animal models.

**Awards:** Annual direct costs are capped at \$750,000.

**Letter of Intent:** October 10, 2020

**Proposal Submission Deadline:** November 10, 2020

No late applications will be accepted for this Funding Opportunity Announcement.

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

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.

**Contact:** Jean Yuan, Ph.D., National Institute on Aging (NIA), Telephone: 301-496-9350

Email: [yuanx4@mail.nih.gov](mailto:yuanx4@mail.nih.gov)

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**Grant Program:** PHS 2020-2 Omnibus Solicitation of the NIH, CDC, and FDA for Small Business Innovation Research Grant Applications (Parent SBIR [R43/R44] Clinical Trial Required)

**Agency:** National Institutes of Health PA-20-262

**PHS 2020-2 Omnibus Solicitation of the NIH for Small Business Technology Transfer Grant Applications (Parent STTR [R41/R42] Clinical Trial Required) [PA-20-261](#) STTR [R41/R42](#)- Phase I, Phase II, and Fast Track**

**PHS 2020-2 Omnibus Solicitation of the NIH for Small Business Technology Transfer Grant Applications (Parent STTR [R41/R42] Clinical Trial Not Allowed) [PA-20-265](#) STTR [R41/R42](#)- Phase I, Phase II, and Fast Track**

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PA-20-262.html>

**Brief Description:** The [PHS 2020-2 SBIR/STTR Program Descriptions and Research Topics for NIH, CDC, and FDA](#) represent scientific program areas that may be of interest to applicant small businesses in the development of projects that have potential for commercialization. Small business concerns that have the research capabilities and technological expertise to contribute to the R&D mission(s) of the NIH, CDC, or FDA awarding components identified in this FOA are encouraged to submit SBIR grant applications in these areas. SBIR grant applications will also be accepted and considered in any area within the mission of the [Components of Participating Organizations](#) listed for this FOA. In addition to the general SBIR solicitations, some awarding components have additional, specific [NIH Targeted Funding Opportunities](#) of potential interest to small businesses.

**Awards:** Total funding support (direct costs, indirect costs, fee) normally may not exceed \$256,580 for Phase I awards and \$1,710,531 for Phase II awards. For specific topics, NIH may exceed these total award amounts. The current list of approved topics can be found at <https://sbir.nih.gov/funding#omni-sbir> or in Appendix A of [PHS 2020-2 SBIR/STTR Program Descriptions and Research Topics for NIH, CDC, and FDA](#).

**Letter of Intent:** Not required

**Proposal Submission Deadline:** [Standard dates](#) apply

All applications are due by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on the listed date(s).

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.

**Contact:** NIH SBIR/STTR Program Office; Telephone: 301-435-2688

Email: [sbir@od.nih.gov](mailto:sbir@od.nih.gov)

For Agency, Institute and Center Scientific/Research (Program) contacts, please see middle column here:

<https://sbir.nih.gov/engage/ic-contacts>

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**Grant Program: BRAIN Initiative: Proof of Concept Development of Early Stage Next Generation Human Brain Imaging (R01 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health RFA-EB-20-001**

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-EB-20-001.html>

**Brief Description:** The long-term objective of the overall BRAIN initiative is to accelerate technology development and the use of tools for acquiring fundamental insight about how the nervous system functions in health and disease. This FOA aims to support entirely new noninvasive imaging methods or unusually bold approaches for existing noninvasive imaging methods that will lead to transformative advances in our understanding of the function and connectivity of the human brain.

The FOA solicits small-scale projects to prove exceptionally innovative, original and/or unconventional concepts. The goal is to accelerate early stage development of promising and entirely new concepts that require some initial stage of development and testing before launching into full-scale tool development. Applications submitted in response to this FOA should focus on innovative approaches and proof-of-principle initial stage development for breakthrough, noninvasive imaging technology to measure brain function and connectivity in ways that are currently unachievable. The proposed concepts and approaches are expected to be high-risk, high-impact, and disruptive.

This FOA will support early stage development of novel interdisciplinary research and technology for noninvasive next generation human brain imaging, with the intention that the technologies be capable of being used in healthy humans. To this end, this FOA will support interdisciplinary teams from diverse research domains to conduct research and development activities such as data exchange, prototype development projects, and small-scale studies in mammals or humans to generate preliminary results. The teams should be prepared, by the completion of the award period, to commence fully developing the next-generation brain imaging technology (“BRAIN 2025: A Scientific Vision,” <http://braininitiative.nih.gov/>).

**Awards:** Application budgets are limited to \$300,000 in direct costs in any project year.

**Letter of Intent:** 30 days prior to application due date.

**Proposal Submission Deadline:** September 3, 2020 and September 3, 2021

No late applications will be accepted for this Funding Opportunity Announcement.

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

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.

**Contact:** Shumin Wang, Ph.D., National Institute of Biomedical Imaging and Bioengineering (NIBIB)  
Telephone: 301-594-9001, Email: [shumin.wang@nih.gov](mailto:shumin.wang@nih.gov)

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**Grant Program: BRAIN Initiative: Theories, Models and Methods for Analysis of Complex Data from the Brain (R01 Clinical Trial Not Allowed)**

**Agency: National Institutes of Health RFA-EB-20-002**

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-EB-20-002.html>

**Brief Description:** The broad goal of The BRAIN Initiative<sup>SM</sup> is to understand the circuits and patterns of neural activity that give rise to mental experience and behavior. As stated in the BRAIN 2025 Report (II.5), "Theory, Modeling, and Statistics Will Be Essential to Understanding the Brain." As advances in

neurotechnologies are producing large, complex datasets at an unprecedented rate, novel theoretical and analytical approaches are needed to realize the potential of these rich datasets. Understanding neural circuitry requires an understanding of the algorithms and mechanisms that govern information processing within and between interacting circuits in the brain as a whole. Informed by rich observations, formalized theoretical frameworks allow researchers to infer general principles of brain function and the algorithms underlying functioning neural circuitry. Theory coupled with mathematical modeling and simulations are needed to identify gaps in knowledge, to drive the systematic collection of the future data (e.g., collected data should address model parameters that are currently unknown), and to formulate testable hypotheses on neural circuit mechanisms and how they affect behavioral and cognitive processes. Statistical approaches are needed to conduct formal inference to support or refute a stated theory or hypothesis. Finally, new data analysis methods are needed to detect dynamical features and patterns in complex data, often spanning multiple modalities and scales, are needed to reveal underlying mechanisms of brain function.

**Awards:** Application budgets not limited, but are expected to range between \$150,000 to \$250,000 direct costs per year.

**Letter of Intent:** August 14, 2020

**Proposal Submission Deadline:** September 14, 2020

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

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.

**Contact:** Grace C.Y. Peng, PhD, National Institute of Biomedical Imaging and Bioengineering (NIBIB)  
Telephone: 301-451-4778, Email: [BRAINTheoriesFOA@mail.nih.gov](mailto:BRAINTheoriesFOA@mail.nih.gov)

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### **Grant Program: NIH Neuroscience Development for Advancing the Careers of a Diverse Research Workforce (R25 Clinical Trial Not Allowed)**

**Agency:** National Institutes of Health PAR-20-240

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PAR-20-240.html>

**Brief Description:** This NIH Neuroscience Development for Advancing the Careers of a Diverse Research Workforce (R25) is a flexible and specialized program designed to foster the development of neuroscience researchers from diverse backgrounds, including from underrepresented groups across career stages. Thus, it encourages applications from applicant organizations that propose innovative mentoring and professional development activities in the mission area(s) of the [NINDS](#) and/or [NIMH](#). This Neuroscience Diversity R25 initiative will focus on factors that have been shown to affect retention of underrepresented graduate students, postdoctoral trainees, and junior faculty in neuroscience research such as mentoring, scientific networks, professional development, and attention to the structural and institutional environment regarding inclusion (<http://acd.od.nih.gov/dbr.htm>; [Structure and Belonging: Pathways to Success for Underrepresented Minority and Women Ph.D. Students in STEM Fields](#); [The Science of Effective Mentorship in STEMM](#)).

The NIH expects applicant institutions to propose programs that will lead to an improvement in the professional development, mentoring and technical expertise of individuals who are individuals from diverse backgrounds, including those from groups that are nationally underrepresented in neuroscience research. The NIH Research Education Program (R25) supports research education activities in the mission areas of the NIH. The overarching goal of this R25 program is to support educational activities that encourage individuals from diverse backgrounds, including those from groups underrepresented in the biomedical and behavioral sciences, to pursue further studies or careers in research.

**Awards:** Application budgets are limited to a maximum of \$250,000 direct cost per year.

**Letter of Intent:** 30 days prior to application due date.

**Proposal Submission Deadline:** January 25, 2021, September 27, 2021, and September 26, 2022, 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. All applications are due by 5:00 PM local time of applicant organization. All [types of non-AIDS applications](#) allowed for this funding opportunity announcement are due on the listed date(s).

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.

**Contact:** Michelle Jones-London, Ph.D., National Institute of Neurological Disorders and Stroke (NINDS), Telephone: 301-451-7966 Email: [jonesmiche@ninds.nih.gov](mailto:jonesmiche@ninds.nih.gov)

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**Grant Program: Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32)**

**Agency:** National Institutes of Health PA-20-242

**RFP Website:** <https://grants.nih.gov/grants/guide/pa-files/PA-20-242.html>

**Brief Description:** The purpose of the Ruth L. Kirschstein National Research Service Award (NRSA) Individual Postdoctoral Fellowship (Parent F32) is to support promising candidates during their mentored postdoctoral training under the guidance of outstanding faculty sponsors. The proposed research and training plan should enhance the individual's potential to develop into a productive, independent researcher by providing strong mentorship, appropriate training and career development opportunities, and strong institutional support and commitment. The training plan should document the need for, and the anticipated value of, the proposed mentored training in relationship to the individual's research career goals. The training plan should also facilitate the fellow's transition to the next stage of his/her career.

**Awards:** Award budgets are composed of stipends, tuition and fees, and institutional allowance.

**Letter of Intent:** Not Applicable

**Proposal Submission 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.

**Contact:** [Table of IC-Specific Information, Requirements, and Staff Contacts](#)

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**Grant Program: Emergency Awards: RADx-UP Coordination and Data Collection Center (CDCC) (U24 Clinical Trial Optional)**

**Agency:** National Institutes of Health RFA-OD-20-013

**RFP Website:** <https://grants.nih.gov/grants/guide/rfa-files/RFA-OD-20-013.html>

**Brief Description:** NIH is issuing this FOA in response to the declared public health emergency issued by the Secretary, HHS, for 2019 Novel Coronavirus (COVID-19). This emergency cooperative agreement funding opportunity announcement (FOA) from the National Institutes of Health (NIH) provides an expedited funding mechanism as part of the Rapid Acceleration of Diagnostics-Underserved Populations (RADx-UP) initiative, a consortium of community-engaged research projects to understand factors that have led to disproportionate burden of the pandemic on the underserved and/or vulnerable populations so that interventions can be implemented to decrease these disparities. This FOA seeks to fund a single Coordination and Data Collection Center (CDCC) as an integral part of the consortium. The funding for this initiative is provided from the Paycheck Protection Program and Health Care Enhancement Act, 2020.

**Awards:** Application budgets are limited to \$5 Million in annual direct costs.

**Letter of Intent:** July 8, 2020

**Proposal Submission Deadline:** August 7, 2020. No late applications will be accepted for this Funding Opportunity Announcement.

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

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.

**Contact:** Dorothy Castille, 301-594-9411, [dorothy.castille@nih.gov](mailto:dorothy.castille@nih.gov)

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## **Department of Defense/US Army/DARPA/ONR/AFOSR**

### **Grant Program: Award for Fundamental Research in Socio-Mathematics of Information and Influence**

**Agency:** Department of Defense BRO-20-SOMAI

**Website:** <https://www.grants.gov/web/grants/view-opportunity.html?oppId=328111>

**Brief Description:** The overarching goal of this research program is to enhance and extend the understanding of the theoretical underpinnings of future information warfare, towards rapid detection, tracking and prediction of attempts at social manipulation. The problem requires the deep integration of two, currently distinct scientific fields, mathematics and social sciences. While modern mathematical methods are often and well-used in social science studies, this research program is going well beyond the state of the art and is calling for the development of a new mathematical foundation for describing, analyzing and predicting human social behavior at multiple scales and in complex and dynamic environments, thus laying the groundwork for a new field.

#### **Research Areas:**

The fundamental science behind the objective of this topic covers multiple, coupled areas, thus requiring a combination of expertise, for example: computer science and machine learning, mathematics, cognitive psychology and sociology, network theory and/or game theory. Some specific research topics to be addressed in this undertaking *may* include, but are not limited to, the following:

- 1) Carefully designed mathematical abstractions based on behavioral science for modeling the agent's psychological and social variables, e.g.: emotional and cognitive states, human intent and belief, and group dynamics. These models should include approaches to multi-scale clustering for accurate comprehension and modeling of aggregate behavior, e.g. individual – group – nation.
- 2) Game-theoretical and Machine Learning concepts, e.g. multi-agent reinforcement learning (RL) or distributional RL, as well as other innovative ideas that can consider a hybrid distribution of irrational and rational agents, including artificial ones (e.g. bots).
- 3) Efficient mathematical methods and algorithms to detect malicious intent and learn agent behavior and objectives from limited and noisy observations.
- 4) Concepts and methods for strategy optimization (inverse design), which may include counter-messaging, network-based intervention, or other means.

Proposals should aim to produce novel conceptual frameworks that present disruptive ways of thinking about the fundamental scientific problems described above. The research is exploratory and can be conducted on publically available data-sets, synthetic data, or real data that can be readily obtained by the performer. Proposals should not rely on the need for data to be supplied by the Government, which does not already exist and is publicly available.



**Awards:** Proposals may be written in two options, of a maximum budget of \$1.5M each. The options may be consecutive or executed in parallel, and the statement of work and research directions in each option are entirely at the discretion of the proposer. A proposer may choose to submit a proposal that contains only one option. Single option proposals are subject to the budget limitation of \$1.5M.

**Letter of Intent:** Not Required

**Proposal Deadline:** August 28, 2020, 4.00 PM

**Contact Information:** Sharon A Hilton, Grantor [sharon.a.hilton.civ@mail.mil](mailto:sharon.a.hilton.civ@mail.mil)

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**Grant Program: DoD Pancreatic Cancer, Idea Development Award**

**Agency: Department of Defense Dept. of the Army – USAMRAA W81XWH-20-PCARP-IDA**

**Website:** <https://cdmrp.army.mil/funding/pa/FY20-PCARP-IDA.pdf>

**Brief Description:** Applications to the Fiscal Year 2020 (FY20) Pancreatic Cancer Research Program (PCARP) are being solicited for the Defense Health Agency (DHA) J9, Research and Development Directorate. To be considered for funding, applications for the FY20 PCARP Idea Development Award must address at least one of the FY20 PCARP Focus Areas. • Understanding precursors, origins, and early progression of pancreatic cancer • Understanding the events that promote pancreatic cancer metastasis • Understanding the relationship between oncogenic signaling and the tumor microenvironment that drives drug resistance and therapeutic response • Integration of biologic and imaging biomarkers to drive more precise and earlier detection and prognosis • Defining viable tumor burden • Supportive care and patient-reported outcomes, quality of life, and perspectives during treatment and survivorship • New drug development targeted toward cancer sensitivity and resistance mechanisms including immune mechanisms of resistance • Development of pharmacological, immunological, or genetic interception approaches

**Awards:** The FY20 appropriation is \$6 million (M).

**Letter of Intent:** Not Required

**Proposal Deadline:** Pre-Application Submission Deadline: 5:00 p.m. Eastern time (ET), August 25, 2020

• Invitation to Submit an Application: September 30, 2020 • Application Submission Deadline: 11:59 p.m. ET, November 20, 2020

**Contact Information:** CDMRP Help Desk Phone: 301-682-5507 Email: [help@eBRAP.org](mailto:help@eBRAP.org)

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**Grant Program: Defense Sciences Office Office-wide**

**Agency: Department of Defense DARPA - Defense Sciences Office HR001120S0048**

**Website:** <https://beta.sam.gov/opp/36d6bc789b364142a0f7a267017b06d9/view>

**Brief Description:** The mission of the Defense Advanced Research Projects Agency (DARPA) Defense Sciences Office (DSO) is to identify and create the next generation of scientific discovery by pursuing high-risk, high-payoff research initiatives across a broad spectrum of science and engineering disciplines and transforming these initiatives into disruptive technologies for U.S. national security. In support of this mission, the DSO Office-wide BAA invites proposers to submit innovative basic or applied research concepts or studies and analysis proposals that address one or more of the following technical thrust areas: (1) Frontiers in Math, Computation and Design, (2) Limits of Sensing and Sensors, (3) Complex Social Systems, and (4) Anticipating Surprise. Each of these thrust areas is described below and includes a list of example research topics that highlight several (but not all) potential areas of interest. Proposals must investigate innovative approaches that enable revolutionary advances. DSO is explicitly not interested in approaches or technologies that primarily result in evolutionary improvements to the existing state of practice.

**Awards:** Multiple awards are anticipated; however, the level of funding for individual awards made under this solicitation has not been predetermined and will depend on the scope and quality of the proposals received, as well as the availability of funds.

**Proposal Deadline:** Executive Summary Due Date and Time: Executive Summaries may be submitted on a rolling basis until Executive Summary Due Date: June 11, 2021, 4:00 p.m. o Proposal Abstract Due Date and Time: Abstracts may be submitted on a rolling basis until June 11, 2021, 4:00 p.m. o FAQ Submission Deadline: June 2, 2021, 4:00 p.m. See Section VIII.A. o Full Proposal Due Date and Time: Proposals may be submitted on a rolling basis until June 11, 2021, 4:00 p.m

**Contact Information:** Phil Root, Deputy Director, DARPA/DSO o BAA Email: [HR001120S0048@darpa.mil](mailto:HR001120S0048@darpa.mil)

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### **Grant Program: COVID-19 Seedling Research Topics**

**Agency: Department of Defense IARPA IARPA-BAA-20-01**

**Website:** <https://beta.sam.gov/opp/173394225301447791745b4ffe707a52/view#general>

**Brief Description:** The Intelligence Advanced Research Projects Activity (IARPA) invests in high-risk/highpayoff research programs that have the potential to provide our nation with an overwhelming intelligence advantage. The current COVID-19 pandemic focuses attention on the need for technologies to assist with:

- detection and sensing;
- supply chain management and integrity;
- geo-spatio-temporal monitoring and mapping, with privacy protection;
- information reliability and collaboration tools; and
- modeling, simulation, and predictive analytics.

These technologies align well with needs of the intelligence and national security communities and are, therefore, under the purview of IARPA's research mission. Successful technology solutions will require creative, multidisciplinary methods, paradigm changing thinking, and transformative approaches. Preference will be given to research with the ability to not only provide rapid capability against the current COVID-19 pandemic, but also enhanced warning and response capacity for future similar events.

**Awards:** Multiple awards anticipated

**Proposal Deadline:** Proposal Due Date for Initial Round of Selections: July 7, 2020 (Offerors may submit proposals any time after June 5, 2020 until the proposal due date for initial round of selections, July 7, 2020.) o BAA Closing Date: May 20, 2021 (A BAA amendment will be issued to announce subsequent rounds of selections, if any)

**Contact Information:** ATTN: IARPA-BAA-20-01 Office of the Director of National Intelligence Intelligence Advanced Research Projects Activity Washington, DC 20511 Electronic mail: [dni-IARPA-BAA-20-01@iarpa.gov](mailto:dni-IARPA-BAA-20-01@iarpa.gov) Phone: Contracting Officer, 301-243-1886 (email is preferred)

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### **Grant Program: C4ISR, Information Operations, Cyberspace Operations and Information Technology System Research**

**Agency: Department of Defense Naval Information Warfare Center Pacific N66001-20-S-4702**

**Website:** <https://www.grants.gov/web/grants/search-grants.html>

**Brief Description:** Naval Information Warfare Center, Pacific (NIWC Pacific), is soliciting proposals in accordance with FAR 35.016, DoDGARS 22.315(a), and DoD Other Transactions (OT) Guide for Prototype Projects for research in areas relating to the advancement of C4ISR capabilities, enabling technologies for Information Operations and Cyberspace Operations, and Information Technology systems. Submissions in response to this announcement shall be for areas relating to the advancement of

Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR) capabilities, enabling technologies for Information Operations and Cyberspace Operations, and Information Technology systems.

Proposed research should investigate unique and innovative approaches for defining and developing next generation integratable C4ISR capabilities and command suites. The area topics reflect the interest of the NIWC Pacific, but interest from other Team NAVWAR components could be generated and selections could be made for funding by other than NIWC Pacific. Only offers that are in the areas of basic research, applied research, advanced technology development, and advanced component development and prototypes will be considered (see Appendix A). Testing and optimizing of concepts or prototypes may be necessary. This may involve virtual simulation and/or laboratory as well as at sea measurements.

**Awards:** Multiple awards are anticipated

**Proposal Deadline:** This announcement is open for 365 days from the original posting date. Any white papers received during that time shall only be considered for award of a contract, other transaction, grant, or cooperative agreement. Closing date; June 03. 2021

**Contact Information:** David Roden (Primary) Contract Specialist Telephone: (619) 553-2087 Email: [David.Roden@navy.mil](mailto:David.Roden@navy.mil) NIWC Pacific Code 22710 53560 Hull Street San Diego, CA 92152-5001

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**Grant Program: Naval Air Warfare Center Aircraft Division (NAWCAD) Office-Wide**

**Agency: Department of Defense NAVAIR N00421-20-S-0001**

**Website:** [N00421-20-S-0001 at Beta.Sam.Gov](https://www.beta.sam.gov/N00421-20-S-0001)

**Brief Description:** The Naval Air Warfare Center Aircraft Division (NAWCAD) is interested in receiving proposals for research and development projects, which offer potential for advancement and improvement of NAWCAD operations. Readers should note that this is an announcement to declare NAWCAD's broad role in competitive funding of meritorious research across a spectrum of science and engineering disciplines. NAWCAD has identified the research needed to address the challenges, problems, and future technology needs of the Warfighter. Research Opportunity Areas of Interest:

Systems Engineering. Areas of research include but are not limited to the following: integrated modeling environments, model based systems engineering methodology, integration of system models and physics-based models, systems safety engineering, air platform development and integration, system of systems architectures, aviation/ship integration, combat survivability, reliability and maintainability engineering, anti-tamper engineering, electromagnetic environmental effects engineering, and manufacturing.

Research and Intelligence. Areas of research include but are not limited to the following: autonomous behaviors, big data workflow, machine learning (ML)/deep learning (DL), AI enabling technologies, quantum technologies, optics research & fabrication and chemical detection.

Modeling and Simulation. Areas of research include but are not limited to the following: weapon training systems, parallel computing, virtual environments, tactical decision-making, training technologies, multi-discipline simulation methodology development, constructive modeling and simulation, verification, and validation. • Logistics. Areas of research include but are not limited to supply chain development, supportability design, model based product support, automated sustainment monitoring, and supportability.

Additional areas include Data Analysis, Cyber, Weapons & Energetics Integration, Human Systems..

**Awards:** Various

**Proposal Deadline:** This announcement will remain open for one (1) year from the date of publication, or until replaced by a successor BAA. Proposals may be submitted at any time during this period.

**Contact Information:** Elisabeth Keith Contract Specialist Phone 3017570231  
[NAWCAD BAA Coordinator Email](#)

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## **Department of Transportation**

### **Grant Program: Advanced Transportation and Congestion Management Technologies Deployment Initiative**

**Agency: Department of Transportation 693JJ320NF00010**

**Website:** <https://www.fhwa.dot.gov/fastact/factsheets/advtranscongmtfs.cfm>

**Brief Description:** The DOT hereby requests applications to result in awards to eligible entities to develop model deployment sites for large scale installation and operation of advanced transportation technologies to improve safety, efficiency, system performance, and infrastructure return on investment. These model deployments are expected to provide benefits in the form of: • reduced traffic-related fatalities and injuries; • reduced traffic congestion and improved travel time reliability; • reduced transportation-related emissions; • optimized multimodal system performance; • improved access to transportation alternatives, including for underserved populations; • public access to real time integrated traffic, transit, and multimodal transportation information to make informed travel decisions; • cost savings to transportation agencies, businesses, and the traveling public; or • other benefits to transportation users and the general public. This competitive ATCMTD Grant Program will promote the use of innovative transportation solutions. The deployment of these technologies will provide Congress and DOT with valuable real-life data and feedback to inform future decision-making.

**Letter of Intent:** Not Required

**Proposal Deadline:** August 31, 2020

**Contact Information:** Submit Questions to: [ATCMTD@dot.gov](mailto:ATCMTD@dot.gov)

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## **Department of Agriculture:**

### **Grant Program: Agriculture and Food Research Initiative - Foundational and Applied Science**

**Agency: Department of Agriculture USDA-NIFA-AFRI-007692**

**Website:** <https://nifa.usda.gov/funding-opportunity/agriculture-and-food-research-initiative-foundational-applied-science-program>

**Brief Description:** The AFRI Foundational and Applied Science Program supports grants in six AFRI priority areas to advance knowledge in both fundamental and applied sciences important to agriculture. The six priority areas are: Plant Health and Production and Plant Products; Animal Health and Production and Animal Products; Food Safety, Nutrition, and Health; Bioenergy, Natural Resources, and Environment; Agriculture Systems and Technology; and Agriculture Economics and Rural Communities. Research-only, extension-only, and integrated research, education and/or extension projects are solicited in this Request for Applications (RFA). See Foundational and Applied Science RFA for specific details.

**Letter of Intent: Required.**

**Awards:** Up to \$15,000,000; Anticipated available funding: \$290,000,000

**Proposal Deadline:** Thursday, July 29, 2021

**Contact Information:** [AFRI Coordination Team](#)

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**Grant Program: Biotechnology Risk Assessment Grants Program****Agency: Department of Agriculture USDA-NIFA-BRAP-007072****Website:** <https://nifa.usda.gov/funding-opportunity/biotechnology-risk-assessment-research-grants-program-brag>

**Brief Description:** The purpose of the BRAG program is to support the generation of new information that will assist Federal regulatory agencies in making science-based decisions about the effects of introducing into the environment genetically engineered organisms (GE), including plants, microorganisms — such as fungi, bacteria, and viruses — arthropods, fish, birds, mammals and other animals excluding humans. Investigations of effects on both managed and natural environments are relevant. The BRAG program accomplishes its purpose by providing federal regulatory agencies with scientific information relevant to regulatory issues. See the Request for Applications (RFA) for details. [View the Centers of Excellence \(COE\) webpage](#) to access a factsheet on the COE designation process, including COE criteria, and a list of programs offering COE opportunities.

**Awards:** Up to \$500,000; Anticipated available funding: \$4,500,000**Proposal Deadline:** Mar 18, 2020 FY 2020: March 18, 2020 FY 2021: February 24, 2021 Letter of Intent Deadline: February 12, 2020; January 21, 2021 Note: Letter of Intent encouraged but not required**Contact Information:** Dr. Lakshmi Matukumalli [lakshmi.matukumalli@usda.gov](mailto:lakshmi.matukumalli@usda.gov) (816)-926-1189**Grant Program: REAP-Renewable Energy Systems and Energy Efficiency Improvements****Agency: Department of Agriculture RDBCP-11-REAP-RES-EEI-2020****Website:** <https://www.govinfo.gov/content/pkg/FR-2019-08-30/pdf/2019-18825.pdf>

**Brief Description:** Eligible applicants are agricultural producers and rural small businesses. All agricultural producers, including farmers and ranchers, who gain 50% or more of their gross income from the agricultural operations are eligible. Small businesses that are located in a rural area can also apply. Rural electric cooperatives may also be eligible to apply. Additional Information on Eligibility: Citizenship - To be eligible, applicants must be individuals or entities at least 51 percent owned by persons who are either: 1) citizens of the United States (U.S.), the Republic of Palau, the Federated States of Micronesia, the Republic of the Marshall Islands, or American Samoa; or 2) legally admitted permanent residents residing in the U.S. Project - The project must be to conduct a feasibility study for a renewable energy system. Eligible technologies include: projects that produce energy from wind, solar, biomass, geothermal, hydro power and hydrogen-based sources.

**Awards:** Up to \$500,000; Anticipated Funding: \$70 million**Submission Deadline:** September 30, 2020**Contact: Technical Contact:** Maureen Hessel, Energy Specialist, Phone 202-401-0142[Back to Contents](#)**Department of Labor****Grant Program: Women in Apprenticeship and Nontraditional Occupations (“WANTO”) Technical Assistance Grant Program****Agency: Department of Labor FOA-WB-20-01****Website:** <https://www.grants.gov/web/grants/search-grants.html>

**Brief Description:** This program aims to provide technical assistance (TA) to employers and labor unions to encourage employment of women in both apprenticeable occupations and nontraditional occupations (A/NTO), specifically in the following ways: • Developing (establishing, expanding, and/or enhancing)

pre-apprenticeship, apprenticeship (includes Registered Apprenticeship Programs, Industry-Recognized Apprenticeship Programs, and other apprenticeship programs), or other nontraditional skills training programs designed to prepare women for careers in A/NTO; • Providing ongoing orientations or other resources for employers, unions, and workers on creating a successful environment for women in A/NTO; and/or • Setting up support groups, facilitating networks, and/or providing supportive services (as defined in section IV.E.3) for women in A/NTO to improve their retention.

**Awards:** Up to \$750,000; Estimated Total Program Funding: \$4,100,000

**Proposal Deadline:** August 3, 2020

**Contact Information:** Marc Purvis Grants Management Specialist [purvis.marc@dol.gov](mailto:purvis.marc@dol.gov)

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### **Grant Program: Supply Chains Tracing Project**

**Agency:** Department of Labor NOI-ILAB-20-04

**Website:** [NOI-ILAB-20-04](#):

**Brief Description:** The project will aim to achieve the following three outputs: (1) increased number of tested supply chain tracing methodologies; (2) increased number of piloted tools for supply chain tracing; and (3) increased dissemination of supply chain tracing tools and methodologies to a broad range of stakeholders. The Employment and Training Administration (ETA)'s Office of Grants Management anticipates publishing a Funding Opportunity Announcement (FOA) around July 20, 2020, and intends to make awards by November 30, 2020 (these dates are subject to change). Please refer to: <http://www.dol.gov/ilab/grants/> and <https://www.dol.gov/agencies/ilab/resources/grants> for general guidelines and examples of previous cooperative agreement applications. This notice does not include an FOA or any attachments. It only constitutes a notice of USDOL's intent to publish an FOA at a later date. Interested applicants are encouraged to monitor [www.grants.gov](http://www.grants.gov) for the FOA because, if an FOA is published, grants.gov is the method by which the FOA will be made available to the public. No email or paper copies of any FOA will be provided.

**Awards:** Up to \$4,000,000; Estimated Total Program Funding: \$8,000,000

**Proposal Deadline:** This is a Notice of Intent. An announcement is not related to this notice. We are not accepting applications at this time.

**Contact Information:** Sue Levenstein, Grants Management Specialist. [levenstein.susan.l@dol.gov](mailto:levenstein.susan.l@dol.gov)

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## **EPA**

### **Grant Program: Early Career: Assessment Tools for Biotechnology Products**

**Assessment Tools for Biotechnology Products (EPA-G2020-STAR-C1)**

**Agency:** Environmental Protection Agency EPA-G2020-STAR-C2

**Website:** <https://www.epa.gov/research-grants/assessment-tools-biotechnology-products>

**Brief Description:** The United States Environmental Protection Agency (EPA), as part of its Science to Achieve Results (STAR) program, is seeking applications proposing research to support the development of improved science-based human health and environmental risk assessments of new biotechnology products, including those developed through synthetic biology, genome editing, and metabolic engineering.

The Science to Achieve Results (STAR) Program's goal is to stimulate and support scientific and engineering research that advances EPA's mission to protect human health and the environment. It is a competitive, peerreviewed, extramural research program that provides access to the nation's best

scientists and engineers in academic and other nonprofit research institutions. STAR funds research on the environmental and public health effects of air quality, environmental changes, water quality and quantity, hazardous waste, toxic substances, and pesticides. In addition to regular awards, this solicitation includes the opportunity for early career awards. The purpose of the early career award is to fund research projects smaller in scope and budget by early career PIs.

**Award:** Estimated Number of Awards: Approximately 7 awards, 4 regular and 3 early career awards

**Anticipated Funding Amount:** Approximately \$4.4 million total for all awards **Potential Funding per Award:** Up to a total of \$760,000 for regular awards, and up to a total of \$453,333 for early career awards, including direct and indirect costs, with a maximum duration of 3 years.

**Submission Deadline:** Solicitation Closing Date: July 15, 2020:11:59:59 pm Eastern Time

**Contact:** Technical Contact: Barbara Klieforth; phone: 202-564-7723; email: [klieforth.barbara@epa.gov](mailto:klieforth.barbara@epa.gov)

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## **Department of Energy**

**Grant Program: Research and Development for Advanced Water Resource Recovery Systems**

**Agency: Department of Energy DE-FOA-0002336**

**Website:** <https://eere-exchange.energy.gov/#FoaIdfa6e43fc-9abe-4c4f-867b-224e5fb1d6bb>

**Brief Description:** Energy is often the second-highest operating cost (behind labor costs) for water and wastewater treatment systems. Black & Veatch's client surveys indicate that energy costs at water and wastewater utilities account for well over 10% of total operating costs for a large majority of utilities, with a significant number of utilities having energy costs that exceed 30 percent. Increasingly stringent regulations for contaminants are pushing water and wastewater treatment systems to use even more advanced – and energy intensive – treatment technologies. The energy use of these systems is expected to increase by up to 20 percent in the coming decades due to more stringent water quality standards and growing water demand based on population growth. Additionally, water and wastewater treatment facilities, pipes, and related infrastructure in cities around the country are approaching their end of expected service life. Therefore, a unique window of opportunity exists to replace the aging infrastructure with new, innovative approaches to water and wastewater treatment, resource recovery, and water reuse by looking more broadly at interconnected, cross-sector opportunities (i.e. municipal, industrial, agriculture, oil and gas, etc.) across the energy-water nexus to develop water and wastewater treatment systems of the future – advanced water resource recovery systems. The goal of this Funding Opportunity Announcement (FOA) is to conduct research, development, and deployment on technology innovations that enable advanced water resource recovery systems. Topic Area 1 of this FOA seeks to advance the development of transformative technologies beyond early stage research and development (R&D) to become pilot ready (TRL 4-6). Whereas, Topic Area 2 of this FOA seeks to test currently developed, pilot ready technologies (TRL 6-7) through design, build, and operations in industrially relevant conditions to enable commercialization.

**Awards:** Estimated Total Program Funding: \$20,000,000

**Letter of Intent:** Concept Paper Submission Deadline: 8/4/2020 5:00 PM ET

**Submission Deadline:** Full Application Submission Deadline: 10/6/2020 5:00 PM ET

**Contact:** Questions regarding the FOA must be submitted to [AMOWaterFOA@ee.doe.gov](mailto:AMOWaterFOA@ee.doe.gov)

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**Grant Program: Small-Scale Solid Oxide Fuel Cell Systems and Hybrid Electrolyzer Technology Development**

**Agency: Department of Energy Office of Science DE-FOA-0002300**

**Website:** [https://www.fedconnect.net/FedConnect/PublicPages/PublicSearch/Public\\_Opportunities.aspx](https://www.fedconnect.net/FedConnect/PublicPages/PublicSearch/Public_Opportunities.aspx)

**Brief Description:** This FOA will solicit applications for multiple areas of interest and will correspond to research outlined in the Department's August 2019 Report on the Status of the Solid Oxide Fuel Cell Program" (<https://www.energy.gov/fe/report-congress-status-solid-oxide-fuel-cell-program>), to Congress and could include, but are not limited to the following:

\* Small-scale (nominally 5-25 kWe) distributed generation SOFC systems.

\* Hydrogen production from Solid State Electrolyzer Cell (SOEC) systems and reversible SOFC systems including improving and validating the materials and systems required for the improving the cost, performance and reliability of systems using natural gas or coal-derived syngas as fuel.

\* Cleaning of coal-derived syngas for use as SOFC fuel and testing of single and multiple cells on syngas.

**Awards:** Estimated Total Program Funding: \$30,000,000

**Letter of Intent:** Required by June 26, 2020

**Submission Deadline:** July 27, 2020 at 3:00PM ET.

**Contact:** Ryan Miller, Grantor, Phone 202-287-1487 [ryan.miller@hq.doe.gov](mailto:ryan.miller@hq.doe.gov)

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**Grant Program: FY20 Advanced Manufacturing Office Multi-Topic FOA**

**Agency: Department of Energy Office of Science DE-FOA-0002252**

**Website:** <https://eere-exchange.energy.gov/#FoaId96fd81da-41e6-4d21-b5b9-06252b707825>

**Brief Description:** AMO supports innovative, advanced-manufacturing applied research and development (R&D) projects that focus on specific, high-impact manufacturing technology and process challenges. AMO invests in foundational, energy-related, advanced-manufacturing processes (where energy costs are a determinant of competitive manufacturing) and broadly applicable platform technologies (the enabling base upon which other systems and applications can be developed). The competitively selected projects from this FOA will focus on developing next-generation manufacturing material, information, and process technologies that improve energy efficiency in energy-intensive and energy-dependent processes, and facilitate the transition of emerging, cost-competitive energy technologies to domestic production.

**Awards:** Estimated Total Program Funding: \$67,000,000

**Letter of Intent:** Concept Paper Submission Deadline: 6/25/2020 5:00 PM ET

**Submission Deadline:** Full Application Submission Deadline: 8/26/2020 5:00 PM ET

**Contact:** <https://eere-exchange.energy.gov>

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## NASA

**Grant Program: ROSES 2020: Science Team for the OCO Missions**

**Agency: NASA NNH20ZDA001N-OCOST**

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B7B9745C4-04AD-74F8-59B7-3CF0C8EF15E3%7D&path=&method=init>

**Brief Description:** Proposals are solicited for participation in the Science Team for the Orbiting Carbon Observatory-2 (OCO-2) and Orbiting Carbon Observatory-3 (OCO-3) missions. NASA launched the OCO-2 mission in July 2014. OCO-2 has been operating on orbit, producing precise column average CO<sub>2</sub> concentration data globally with validated precision and accuracy of better than 0.25% , since September 2014. The OCO-3 mission, with a near-replica instrument to OCO-2, has been operating on the



International Space Station (ISS) since June of 2019 and is now returning data with similar precisions as OCO-2. The primary differences in the data sets are the spatial and temporal sampling as a result of the different orbits of the observations (especially inclination) and the available observational modes of the instruments.

**Awards:** Funding anticipated: \$3,500,000

**Notice of Intent:** November 13, 2020

**Proposal Deadline:** January 13, 2021

**Contact:** Kenneth W. Jucks, Earth Science Division, Science Mission Directorate, NASA Headquarters Washington, DC 20546-0001 Telephone: 202-358-0476 Email: [kenneth.w.jucks@nasa.gov](mailto:kenneth.w.jucks@nasa.gov)

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**Grant Program: ROSES 2020: SAGE III/ ISS Science Team**

**Agency:** NASA NNH20ZDA001N-SAGEIII

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BABC8F050-A310-7184-B919-6220765BAF10%7D&path=&method=init>

**Brief Description:** NASA's research for furthering our understanding of atmospheric composition is geared toward providing an improved prognostic capability for key processes and issues, including the recovery of stratospheric ozone and its impacts on surface ultraviolet radiation, evolution of greenhouse gases and their impacts on climate, and evolution of tropospheric ozone and aerosols and their impacts on climate and air quality. Research within the Atmospheric Composition Focus Area addresses the following science questions: • How is atmospheric composition changing? • What trends in atmospheric composition and solar radiation are driving global climate? • How does atmospheric composition respond to and affect global environmental change? • What are the effects of global atmospheric composition and climate changes on regional air quality? • How will future changes in atmospheric composition affect ozone, climate, and global air quality?

**Awards:** Funding anticipated: \$1,500,000

**Notice of Intent:** September 18, 2020

**Proposal Deadline:** November 6, 2020

**Contact:** Richard S. Eckman, Earth Science Division, Science Mission Directorate, NASA Headquarters Washington, DC 20546-0001, Telephone: 202-358-2567 Email: [Richard.S.Eckman@nasa.gov](mailto:Richard.S.Eckman@nasa.gov)

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**Grant Program: ROSES 2020: Solar Irradiance Science Team**

**Agency:** NASA NNH20ZDA001N-SIST

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BEA2EEB7D-1C46-7EA9-747F-B833E9BDA8E5%7D&path=&method=init>

**Brief Description:** Solar irradiance represents the primary external forcing operating on the Earth and contributes to variability and change in the Earth's climate and atmospheric composition. Solar irradiance can only be measured above the atmosphere given the significant absorption that takes place within the atmosphere. The Earth system is sensitive to variations in the Total Solar Irradiance (TSI) and to the spectral dependence of any variation, given that different wavelengths experience the most 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 0.1%. Variations in the solar irradiance as a function of wavelength—or Spectral Solar Irradiance (SSI)—increase with decreasing wavelength, by 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:** Funding anticipated: \$1,000,000

**Notice of Intent:** August 7, 2020

**Proposal Deadline:** September 11, 2020

**Contact:** David B. Considine Earth Science Division Science Mission Directorate NASA Headquarters  
Washington, DC 20546-0001 Telephone: 202-358-2277 Email: [david.b.considine@nasa.gov](mailto:david.b.considine@nasa.gov)

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**Grant Program: NASA Innovative Advanced Concepts (NIAC) Phase I**

**Agency:** NASA 80HQTR20NOA01-21NIAC-A1

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7B9BC1CCC6-3CB9-30BA-8C21-0B88402F4A2A%7D&path=&method=init>

**Brief Description:** The NIAC Program focuses on early stage feasibility studies of visionary concepts that address national government and commercial aerospace goals. Concepts are solicited from any field of study that offers a radically different approach or disruptive innovation that may significantly enhance or enable new human or robotic science and exploration missions. Proposed concepts must be framed in terms of a mission context that clearly identifies scientific or technical advancements and associated benefits compared to current approaches. Comparatively high risk and far term, NIAC concepts are transformational investments in future NASA and commercial space capabilities. The entry Technology Readiness Level (TRL) for Phase I concepts should be TRL 2 or lower. Proposed concepts must identify credible approaches toward new scientific or technical innovations that advance NASA's strategic themes to Discover, Explore, Develop, and Enable, as outlined in the 2018 NASA Strategic Plan. Advancements are sought across the broad spectrum of disciplines that support the goals and objectives encompassed by these themes, including nontraditional areas such as biophysics, life sciences, human factors engineering, artificial intelligence, resource sustainability, and other topics that may inspire innovative approaches to meet future exploration needs.

**Awards:** Expected Award Amount: Not to exceed \$125K Expected Number of Awards: 12-16

**Proposal Deadline:** Step-A Proposals Due: July 22, 2020 (5:00 pm Eastern)

Step B Invitations Issued: August 25, 2020 (Target) Step B Proposal Due: September 29, 2020 (Target), 5:00pm ET

**Contact:** Jason Derleth, NIAC Program Executive, Space Technology Mission Directorate, NASA Headquarters [hq-niac@mail.nasa.gov](mailto:hq-niac@mail.nasa.gov)

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**Grant Program: ROSES 2020: The New (Early Career) Investigator Program in Earth Science**

**Agency:** NASA NNH20ZDA001N-NIP

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?solId=%7BB05DE781-3B1F-E548-F61A-BB14F66A2FAE%7D&path=&method=init>

**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 welcomes innovative research initiatives and seeks to cultivate diverse 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. Proposals with objectives connected to needs identified in most recent Decadal Survey Thriving on our Changing Planet: A Decadal Strategy for Earth Observation from Space are welcomed.

The NIP supports all aspects of scientific and technological research aimed to advance NASA's mission in Earth system science (See the NASA Science Plan <http://science.nasa.gov/about-us/science-strategy/>).

**Awards:** Various; Available funding: \$3,000,000

**Proposal Deadline:** September 20, 2021

**Contact:** Allison Leidner Earth Science Division Science Mission Directorate NASA Headquarters  
Washington, DC 20546-0001 Telephone: 202.358.0855 Email: [Allison.K.Leidner@nasa.gov](mailto:Allison.K.Leidner@nasa.gov)

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**Grant Program: ROSES 2020: Space Weather Science Application Operations-to-Research**

**Agency:** NASA NNH20ZDA001N-SWO2R

**Website:** <https://nspires.nasaprs.com/external/solicitations/summary.do?sollId=%7B2FF5915D-4700-7B3B-43F1-0094ED1BE130%7D&path=&method=init>

**Brief Description:** The primary goal of the Space Weather Science Application Operations-to-Research (SWO2R) program is to support research to improve numerical models and/or data utilization techniques that could advance specification and/or forecasting capabilities and which could also lead to improved scientific understanding.

The primary goal of this solicitation is to support research to improve numerical models and/or data utilization techniques that could advance forecasting and/or specification capabilities and which could also lead to improved scientific understanding. Effective utilization of available data is encouraged. Employing advanced techniques for data assimilation, ensemble, and/or machine-learning is also encouraged. Improved neutral density specification and forecast capabilities could include, for example, effects of forcing from below, effects of variations in solar EUV flux, effects of heating from particle precipitation and joule dissipation, assimilation of satellite drag data, and regional variations in density. Improved neutral density specification and forecasts can support numerous applications, including satellite drag and orbit propagation, meeting Orbital Debris Mitigation Standard Practices (ODMSP), and planning satellite megaconstellation operations. Improved forecasting and specification of the ionosphere could include the dynamics of total electron content, ionospheric scintillation, and electron density structure.

**Awards:** Various; Available funding: \$2,000.000

**Step 1 Proposal:** December 16, 2020

**Step 2 Proposal Deadline:** February 17, 2021

**Contact:** James Spann Heliophysics Division Science mission Directorate NASA Headquarters  
Washington, DC 20546-0001 Telephone: 202-358-0574 Email: [jim.spann@nasa.gov](mailto:jim.spann@nasa.gov)

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**National Endowment of Humanities**

**Grant Program: Media Projects**

**Agency:** National Endowment for the Humanities 20200812-TD-TR

**Website:** <https://www.neh.gov/program/media-projects>

**Brief Description:** The Media Projects program supports the development, production, and distribution of radio, podcast, television, and long-form documentary film projects that engage general audiences with humanities ideas in creative and appealing ways. All projects must be grounded in humanities scholarship and demonstrate an approach that is thoughtful, balanced, and analytical. The approach to the subject matter must go beyond the mere presentation of factual information to explore its larger significance and stimulate reflection. Media Projects offers two levels of funding: Development and Production.

**Awards:** Maximum award amount: \$75,000 for Development, \$700,000 for Production, \$1,000,000 for Chairman's Special Awards

**Proposal Deadline:** August 12, 2020

**Contact:** Contact the Division of Public Programs Team 202-606-8269 [publicpgms@neh.gov](mailto:publicpgms@neh.gov)

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**Grant Program: Humanities Initiatives****Agency: National Endowment for the Humanities 0200716-AA-AB-AC-AD-AE****Website:** <https://www.neh.gov/program/humanities-initiatives-colleges-and-universities>**Brief Description:** Humanities Initiatives at Colleges and Universities strengthen the teaching and study of the humanities at institutions of higher education by developing new humanities programs, resources (including those in digital format), or courses, or by enhancing existing ones.

Projects must be organized around a core topic or set of themes drawn from such areas of study in the humanities as history, philosophy, religion, literature, and composition and writing skills.

NEH welcomes applications for projects that are modest in scope, duration, and budget, as well as applications for expansive, long-term projects.

**Awards:** Maximum award: \$150,000 Available funding: \$3,000,000**Deadlines:****Optional Draft due:** June 18, 2020**Application due:** July 16, 2020**Contact:** Contact the Division of Education Programs Team [hi@neh.gov](mailto:hi@neh.gov)

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**Grant Program: Public Humanities Projects****Agency: National Endowment for the Humanities****Website:** <https://www.neh.gov/grants/public/public-humanities-projects>**Brief Description:** The program supports projects in three categories: **Exhibitions** (permanent, temporary, or traveling); interpretive programs at **Historic Places**; and **Humanities Discussions** related to [“A More Perfect Union”: NEH Special Initiative Advancing Civic Education and Commemorating the Nation’s 250th Anniversary](#). The period of performance for Planning proposals is up to 24 months. The period of performance for Implementation proposals is up to 48 months. If you are applying for the Implementation funding level, you may now request an additional \$100,000 to create a two-year staff full-time position during a four-year period of performance (or \$50,000 for a one-year period of performance, and a one-year full-time staff position) to work on the proposed project.**Awards:** Maximum award amount: Planning: \$75,000; Implementation: \$400,000 (+additional \$100,000)**Deadlines:****Optional Draft due:** June 18, 2020**Application due:** July 16, 2020**Contact:** Contact the Division of Public Programs Team 202-606-8269 [publicpgms@neh.gov](mailto:publicpgms@neh.gov)[Back to Contents](#)

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**Private Foundations****Activate.ORG****Grant Program: Activate Fellowships****Agency: Activate.org****Website:** <https://www.activate.org/>**Brief Description:** We exist to discover, fund, champion, and propel individuals who have a technology vision that could benefit society and who are committed to bringing it to the world as a new product or

business. Every year, we work with our partners to select a cohort of entrepreneurial scientists and engineers from around the world to be fellows. For two years these innovators embed in a world-class research institution, where they are supported with funding, mentorship, education, and connections with our network of industry leaders, investors, and philanthropists.

Our goal is simple: empower fellows to mature their ideas from concept to first product, while positioning them to align with the most suitable commercial path to bring their technology to scale.

**Awards:** Fellows receive a yearly living stipend of \$80,000 to \$110,000 plus a health insurance stipend and travel allowance. This enables them to focus on their project full-time. Each project also receives \$100,000 of research support at the host laboratory.

**Proposal Deadline:** Applications open early October

**Contact:** If interested, please contact Dr. Michael Ehrlich, Associate Professor, Martin Tuchman School of Management, and Co-Director of NJ Innovation Acceleration Center at [michael.a.ehrlich@njit.edu](mailto:michael.a.ehrlich@njit.edu)

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## **Research Corporation for Science Advancement**

### **Grant Program: Cottrell Scholar Award**

**Agency:**

**Research Corporation for Science Advancement**

**Website:** <https://rescorp.org/cottrell-scholars/guidelines>

**Brief Description:** The Cottrell Scholar Award (CSA) is available to early career faculty at US and Canadian research universities and primarily undergraduate institutions. Eligible applicants are tenure-track faculty who hold primary or courtesy appointments in chemistry, physics, or astronomy departments that offer bachelor's and/or graduate degrees in the applicant's discipline. For the 2020 proposal cycle, eligibility is limited to faculty members who started their first tenure-track appointment anytime in calendar year 2017. Accommodations are made for faculty who have taken maternity or paternity leave, or who have experienced medical conditions that prompted a tenure clock extension. To request an eligibility extension, contact Senior Program Director Silvia Ronco ([sronco@rescorp.org](mailto:sronco@rescorp.org)).

**Awards:** Cottrell Scholar Awards are for three-year projects in the amount of \$100,000 for the entire project.

**Proposal Deadline:** In 2020, the CSA proposal target date is **July 1, 2020**. However, due to the COVID-19 emergency, the submission portal will remain open until **August 15, 2020** midnight PDT (hard deadline). The CSA online submission portal opened **March 1, 2020**. 2021 Cottrell Scholar Awards will be announced by **February 15, 2021**.

**Contact:** If interested, please send an email to Atam Dhawan ([dhawan@njit.edu](mailto:dhawan@njit.edu)) or Richard Rosenberg at [rnr@njit.edu](mailto:rnr@njit.edu)

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## **Streamlyne Question of the Week**

**Question:** Can I generate budgets for multiple years from the Year-1 budget in Streamlyne?

**Answer:** Yes! You only need to input the Year-1 budget and then click on the “generate all periods” button. Streamlyne will create budget sheets for the remaining periods. You can then go to “summary” under the budget tab to review budget sheets for all periods. You can also

change specific budget items that you allocated in Year-1 but you do not want to continue them in the following periods.

More FAQs on Streamlyne: Please visit <https://research.njit.edu/streamlyne>

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### **Proposal Submission and Streamlyne Information Internal Timeline for Successful and Timely Proposal Submission**

Due to the COVID-19 outbreak, PIs are strongly advised to prepare proposals well in advance of agency deadlines. Every effort will be made to meet agency deadlines following the NJIT Research Continuity Plan (<https://research.njit.edu/njit-research-continuity-plan>).

The NJIT Proposal Submission Guidelines and Policy posted on the website <https://research.njit.edu/proposal-submission-guidelines> provides the expected institutional timeline for proposal submission. Streamlyne User Manuals are posted on <https://research.njit.edu/streamlyne>. For contact information on proposal submission, pre-award services and post-award grant management, please visit research website <https://research.njit.edu/researchers> and <https://research.njit.edu/contact>.

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