Grant Opportunity Alerts: Issue: ORD-GOA-2015-06

In This Issue:

1. Reminder: **NJIT Third Faculty Research Symposium and Showcase**: Monday, February 23, 2015 at 11.00 AM in Ballroom A.
2. Reminder: **NJIT Research Cluster Meeting #4 on Data Science and Information Technology** on Friday, February 27 2015 at 11.30 AM in Ballroom B.
3. Reminder: **Internal Competition**: NSF-NRT; Due Date to Dean's Office: February 21, 2015.
4. **Grant Opportunities Alerts**: Keywords and Areas Included in Funding Opportunities Alerts:
   - **National Institute of Food and Agriculture**: Biotechnology Risk Assessment
   - **DARPA**: Communicating with Computers (CwC)
   - **NASA AMES**: ROBOTICS OUTREACH COMPETITION II
   - **Army Research Institute**: Behavioral and Social Sciences
   - **National Institute of Health**: BRAIN: Optimization of Tools and Technologies; Pharmacometric Modeling and Simulation
   - **National Endowment for the Humanities**: Fellowship Grants
   - **NSF**: NRT, STEM + Computer partnerships

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**NJIT Third Faculty Research Symposium**

**Event:** Third NJIT Faculty Research Symposium: Oral Presentations and Electronic Posters  
**When:** February 23, 2015; 11.00 AM – 7.00 PM  
**Where:** Ballroom A & B, and Gallery, Campus Center

**Keynote Speaker:** Dr. Tiffani Lash, Program Director, Division of Discovery Science and Technology, National Institutes of Health. Biosketch: [http://www.nibib.nih.gov/about-nibib/staff/tiffani-lash](http://www.nibib.nih.gov/about-nibib/staff/tiffani-lash)

Please join us to network with our new faculty members, Faculty Seed Grant awardees and research center directors to celebrate research accomplishments. For more information on the program, please see the Grant Opportunity: Issue: ORD-GOA-2015-04 or visit the research website [http://www.njit.edu/research/](http://www.njit.edu/research/)

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**NJIT Research Cluster Meeting #4 on Data Science and Information Technology** on  
Friday February 27, 2015 at 11.30 AM in Ballroom B

As you know, we have scheduled a series of meetings of Focus Group Clusters for Spring 2015 semester to discuss and evolve with strategic goals for specific external target grant opportunities, infrastructure needs, and development of research resources in respective multidisciplinary and cross-disciplinary areas.
The meeting schedule of the remaining Focus Group clusters is as follows:

1. Data Science & Information Technology (Focus Groups 8, 9, 10 and 11): Friday, February 27, 11.30 AM – 1.00 PM: Ballroom B
2. Trans-disciplinary Areas (Focus Groups 12, 13 and 14): Monday, March 2, 11.30 AM – 1.00 PM: Ballroom B

I would like to request Deans, Department Chairs and faculty interested in the respective Research Focus Groups and areas to please join these meetings and actively participate in the discussion on future plans. Please note that additional Research Focus Group meetings will be called by Group Co-Leaders during the semester. For more information, please see the Research Focus Groups Report version 5.0 on the website http://www.njit.edu/research/pdf/Draft-Research-Focus-Groups-Version-5.0.pdf

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**National Institute of Food and Agriculture**

**Grant Program: Biotechnology Risk Assessment Grants Program**

**Agency:** National Institute of Food and Agriculture, US Department of Agriculture (USDA)

**RFP Website:** [http://www.nifa.usda.gov/funding/rfas/biotech_risk.html](http://www.nifa.usda.gov/funding/rfas/biotech_risk.html)

**Brief Description:** NIFA requests applications for the Biotechnology Risk Assessment Research Grants Program (BRAG) for fiscal year (FY) 2015 to support environmental assessment research concerning the introduction of genetically engineered (GE) organisms into the environment. The amount available for support of this program in FY 2015 is approximately $3.6 million.


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 environmental effects of introducing organisms genetically engineered (GE) by recombinant nucleic acid techniques. Such organisms can include plants, microorganisms (including 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 relevant scientific information.

**Awards:** Up to $1,000,000
DARPA

Grant Program: Communicating with Computers (CwC)
Agency: DARPA - Information Innovation Office DARPA-BAA-15-18
RFP Website: https://www.fbo.gov/index?tab=documents&tabmode=form&subtab=core&tabid=6a6f9af2a5dec8dd379a3ef1b8e4a790

Brief Description: DARPA is soliciting innovative research proposals in the area of natural communication with computers. This program is a 6.1 basic research effort that aims to accelerate progress toward two-way communication between people and computers in which the machine is more than merely a receiver of commands and in which a full range of natural modes is tapped, including potentially language, gesture and facial or other expressions. The CwC program is based on four premises:

- 1) Complex ideas are composed from elementary ones;
- 2) Most elementary ideas are about the physical world;
- 3) Language specifies how to compose complex ideas; but,
- 4) Context is often needed to boost the specificity of complex ideas that can be composed given language.

Here, the word "idea" denotes a representation of the meaning of a communicative act. The CwC program is committed to a compositional account of meaning by which a vast space of ideas can be composed from a relatively small set of elementary ideas. On this account, the purpose of communication is to share complex ideas.

Awards: DARPA anticipates that the Communicating with Computers program will consist of three phases: two 18-month phases and one 24-month phase. DARPA anticipates one research award for Technical Area 1 (TA1), multiple awards addressing technical areas 2, 3 and 4, and at most one award for TA5 (Evaluation). A combined award for TA1 and TA5 might be made; no other awards for TAs combined with TA5 will be considered. Combined awards for TAs 1, 2, 3, and/or 4 may be considered.

Letter of Intent: Abstract Due Date: March 6, 2015, 12:00 noon (ET)
Full Proposal Deadline: April 9, 2015, 12:00 noon (ET)

NASA AMES

Grant Program: ROBOTICS OUTREACH COMPETITION II; National Strategy for Trusted Identities in Cyberspace (NSTIC) Pilots Cooperative Agreement Program
Agency: National Aeronautics and Space Administration
Ames Research Center Announcement Number NNA15525443C

RFP Website: http://nspires.nasaprs.com/external/
**Brief Description:** The NASA Ames Robotics Alliance Project (RAP) invites offerors to submit proposals to this NASA Cooperative Agreement Notice (CAN) to design and administer two distinct robotics competition programs, referred to collectively as the NASA Ames Robotics Outreach Competition (ROC-II). Separate proposals must be submitted for each of the following programs:

- ROC-II-A – Medium Scale Autonomous Robotics Competition
  (estimated at $500K per year for five years for a total of $2.5M)
- ROC-II-B – Medium Scale Autonomous/Remotely Controlled Robotics Competition
  (estimated at $500K per year for five years for a total of $2.5M)

The two programs have the same goals and basic requirements, but they differ in that the ROC-II-A competitions run solely on artificial intelligence from the start of their matches and ROC-II-B competitions run initially on artificial intelligence and then conclude with remote control.

While NASA anticipates awarding two cooperative agreements to two different organizations, offerors are not precluded from submitting proposals for both programs.

**Awards:** Up to $2,500,000

**Letter of Intent:** March 25, 2015

**Full Proposal Deadline:** April 22, 2015

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**Army Research Institute**

**Grant Program:** Army Research Institute for the Behavioral and Social Sciences (ARI)
Foundational Science Research Unit (FSRU)- Broad Agency Announcement for Basic Scientific Research (FY 2015)

**Agency:** Department of the Army -- Materiel Command W911NF-15-R-0007

**RFP Website:**
https://www.fbo.gov/?s=opportunity&mode=form&id=576d96a84cf9607ee6a447edc05d9786&tab=core&cview=1

**Brief Description:** This Broad Agency Announcement (BAA) for the Foundational Science Research Unit (FSRU) of the U.S. Army Research Institute for the Behavioral and Social Sciences (ARI) solicits new proposals for its fiscal year 2015 program of basic research in behavioral science. It is issued under the provisions of paragraph 6.102(d) (2) and 35.016 of the Federal Acquisition Regulation (FAR), which provides for the competitive selection of proposals. Proposals submitted in response to this BAA and selected for award are considered to be the result of full and open competition and in full compliance with the provisions of Public Law 98-369, the Competition in Contracting Act of 1984, and subsequent amendments. The U.S. Army Research Institute for the Behavioral and Social Sciences is the Army’s lead agency for the conduct of research, development, and analyses for the improvement of Army readiness and performance via research advances and applications of the behavioral and social sciences that address personnel, organization, training, and leader development issues. The basic research program supports research projects that are designed to expand fundamental knowledge and discover general principles in the behavioral and social sciences. In addition to programmatic efforts to develop and evaluate psychological and behavioral theory, we strongly encourage researchers to propose novel, state-of-the-art, and multidisciplinary approaches that address difficult problems. A key consideration in the decision to support a research proposal is that its findings are likely to stimulate new, basic behavioral research, which in turn, will lead to improved performance of Army personnel and
their units. Proposals may address both traditional behavioral issues as well as psychophysiological (to include neuroscience) and network science approaches to social phenomena, memory, cognition, and personality. The agency cannot support proposals through this BAA that are primarily applied research projects (e.g., human factors studies or training program evaluations) or purely focused on physiology, psychopathology or behavioral health. Collaboration is encouraged among educational institutions, non-profit/not-for-profit organizations, commercial organizations, and the other U.S. Military Services. A portion of available funding may be made available for meritorious proposals from minority serving institutions and historically black colleges and universities, and individuals who are early in their research careers and have never received ARI funding as a Principal Investigator. Funding of basic research proposals within ARI areas of interest will be determined by funding constraints and priorities set during each budget cycle. The decision to fund a new basic research proposal consists of two stages. During the first phase, at least two behavioral scientists within the ARI basic research program review each proposal for responsiveness and technical merit. Additionally, other ARI behavioral and social scientists are invited to provide reviews. In some cases, an external subject matter expert may be asked to review a proposal. ARI may solicit input on technical aspects of proposals from non-Government consultants/experts who are strictly bound by non-disclosure requirements. During the second phase, ARI research unit chiefs are asked to identify responsive proposals that may transition to their basic research programs. Each proposal will be reviewed by at least three behavioral research scientists. Funding priority will be given to those proposals that are rated as highly responsive, innovative, having strong technical merit, and identified as having transition potential. Proposals should describe their contribution to theory and how their results might lead to basic behavioral research that would be meaningful to the Army. Those contemplating submission of a proposal are encouraged to submit a white paper before submitting a full proposal (see page 24 of this BAA). This sequence allows earliest determination of the potential for funding and minimizes the labor and cost associated with submission of full proposals that have minimal probability of being selected for funding. Costs associated with white paper or full proposal submissions in response to this BAA are not considered allowable direct charges to any resulting award. These costs may be allowable expenses to normal bid and proposal indirect costs specified in FAR 31.205-18. Offerors submitting proposals are cautioned that only a Government Contracting or Grants Officer may obligate the Government to any legal instrument involving expenditure of Government funds. Decisions to award new basic research awards are subject to funds availability, and ARI may choose to not award any new basic research awards due to unavailability of funds or other factors. Due to Government budget uncertainties, (1) no specific dollars have been reserved for total awards under this BAA, and (2) no award floor or ceiling thresholds have been established for individual awards under this BAA. Proposals are sought from educational institutions, non-profit/not-for-profit organizations, and commercial organizations, domestic or foreign, for research and development (R&D) in those areas specified in Part II Section A of this BAA. The U.S. Army Research Institute for the Behavioral and Social Sciences encourages Historically Black Colleges and Universities/Other Minority Serving Institutions (HBCU/MI) (FAR Part 26.3) small businesses, and small disadvantaged businesses (FAR Part 19) to submit proposals for consideration. Foreign owned, controlled, or influenced organizations are advised that security restrictions may apply that could preclude their participation in these efforts. Government laboratories, Federal Funded Research and Development Centers (FFRDCs), and U.S. Service Academies are not eligible to participate as prime contractors or recipients. However, they may be able to participate as subcontractors or subrecipients.
Examples of priority topics might include, but are not limited to:

- Probes for Large Scale Sensing and/or Manipulation of Neural Activity in Vivo
- Imaging Instrumentation for Recording and/or Manipulating Neural Activity in Vivo
- Development of Electrodes for Large-Scale Recording and/or Circuit Manipulation in Vivo

Technologies to understand the dynamic activity of neural circuits.

Although invention and proof-of-concept testing of new technologies is a key component of the BRAIN Initiative, to achieve their potential these technologies must also be optimized through feedback from end-users in the context of the intended experimental use, and scalable manufacture platforms/processes developed to enable reliable, broad, sustainable dissemination and incorporation into regular neuroscience practice. This FOA seeks SBIR applications for optimization and validation of emergent technologies and approaches for large scale recording and manipulation of neural activity, to enable transformative understanding of dynamic signaling in the nervous system.

In particular, we seek exceptionally creative approaches to address major challenges associated with recording and manipulating neural activity, at or near cellular resolution, at multiple spatial and/or temporal scales, in any region and throughout the entire depth of the brain. It is expected that the proposed research may be high risk, but if successful could profoundly change the course of neuroscience research. Technologies may engage diverse types of signaling beyond neuronal electrical activity for large-scale analysis, and may utilize any modality such as optical, electrical, magnetic, acoustic or genetic recording/manipulation. Applications that seek to integrate multiple approaches are encouraged. Where appropriate, applicants are encouraged to integrate multiple domains of expertise, including biological, chemical and physical sciences, engineering, computational modeling and statistical analysis.

Examples of priority topics might include, but are not limited to:

- Probes for Large Scale Sensing and/or Manipulation of Neural Activity in Vivo
- Imaging Instrumentation for Recording and/or Manipulating Neural Activity in Vivo
- Development of Electrodes for Large-Scale Recording and/or Circuit Manipulation in Vivo

National Institutes of Health

Grant Program: BRAIN Initiative: Optimization of Novel Tools and Technologies for Neuroscience Research (R41/R42/R44)
Agency: National Institutes of Health (NIH, NINDS, NIMH, NIDA, NIA and NIDCD)
Brief Description: Based on the priority areas identified by the BRAIN 2025, two general technology areas were identified to be appropriate for commercial development and are outlined below. While some of the markets for these products may be small, NIH is supportive of developing these technologies towards sustainable commercial manufacture. This will enable novel hypothesis-driven experiments to understand the brain that are currently infeasible, or will reduce barriers to these experiments that currently are costly, difficult, or take too long to perform widely. This FOA seeks to highlight two central themes for exploration: 1) Technologies to understand the dynamic activity of neural circuits and 2) Novel tools to facilitate the detailed analysis of complex circuits and provide insights into cellular interactions that underlie brain function.

National Institutes of Health

Contact Maria D. Nelson, (919) 541-4992
Full Proposal Deadline: June 5, 2015

(eligibility will be determined on a case by case basis). This BAA is also available at https://www.fbo.gov under solicitation number W911NF-15-R-0007.
• Techniques and Approaches for Recording/Manipulating Neural Activity during Behaviors

**Novel tools to facilitate the detailed analysis of complex circuits and provide insights into cellular interactions that underlie brain function**

In addition to the topics above, this FOA seeks first-in-class and/or cross-cutting non-invasive or minimally invasive techniques that permit repeated measurements from cells over time in a non-destructive manner. The new tools and technologies should confer a high degree of cell-type and/or circuit-level specificity. Tools/technologies relevant for this initiative are expected to be transformative, either through the development of novel tools or through major advances in current approaches that break through technical barriers and will significantly improve current capabilities. In addition, tools developed through this initiative that can be used in a number of species/model organisms rather than those restricted to a single species are also highly desired as are tools that can be used in any point in the lifespan.

**Awards:** Standard Grants

**Letter of Intent:** Not Required

**Full Proposal Deadline:** April 28, 2015, then [Standard dates](http://grants.nih.gov/grants/guide/pa-files/PAR-15-121.html) 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.

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**Grant Program:** Pharmacometric Modeling and Simulation for Long Acting Injectable Products (U01)

**Agency:** U.S. Food and Drug Administration (FDA)  RFA-FD-15-008


**Brief Description:** The purpose of this project is to: 1) conduct physiologically-based pharmacokinetic modeling (PBPK) to relate critical quality contributes to in vivo performance; and 2) perform population pharmacokinetic-pharmacodynamic (PK-PD) modeling and statistical analysis to identify ways to reduce residual variability and identify appropriate PK metrics, enabling bioequivalence (BE) assessment in parallel BE studies with acceptable sample size. The findings from these studies will help establish scientific and regulatory standards for assuring therapeutic equivalence of generic LAI products.

**Detailed Description:**

Applicants may apply for and receive funding for more than one subtopic; however a separate application must be submitted for each subtopic as listed below. Please refer to Section IV. Application and Submission Information to find further instructions on how to submit an application package for each subtopic.

**Subtopic 1:** Physiologically based pharmacokinetic (PBPK) modeling of LAI microsphere products.

The objective of this subtopic is to develop general PBPK models for LAI microsphere products including models for both microsphere and API. The quantitative model will be used to (1) relate critical quality contributes to in vitro performance thus to in vivo performance, and (2) evaluate bioequivalence criteria for LAI products.

**Subtopic 2:** Pharmacometric modeling and simulation and statistical analysis for LAI microsphere products. The objective of this subtopic is to develop pharmacometric modeling and simulation and statistical methodology to assist the parallel BE study design. This
includes but is not limited to identifying appropriate PK metrics and reducing residual variability for sample size reduction.

**Awards:** $200,000

**Letter of Intent:** Not Required

**Full Proposal Deadline:** April 27, 2015

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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**National Endowment for the Humanities**

**Grant Program:** Fellowships for Advanced Social Science Research on Japan

**Agency:** National Endowment for the Humanities 20150430-FO

**RFP Website:** [http://www.neh.gov/grants/research/fellowships-advanced-social-science-research-japan](http://www.neh.gov/grants/research/fellowships-advanced-social-science-research-japan)

**Brief Description:** The Fellowship Program for Advanced Social Science Research on Japan is a joint activity of the Japan-U.S. Friendship Commission (JUSFC) and the National Endowment for the Humanities. Awards support research on modern Japanese society and political economy, Japan's international relations, and U.S.-Japan relations. The program encourages innovative research that puts these subjects in wider regional and global contexts and is comparative and contemporary in nature. Research should contribute to scholarly knowledge or to the general public’s understanding of issues of concern to Japan and the United States. Appropriate disciplines for the research include anthropology, economics, geography, history, international relations, linguistics, political science, psychology, public administration, and sociology. Awards usually result in articles, monographs, books, digital materials, archaeological site reports, translations, editions, or other scholarly resources. The fellowships are designed for researchers with advanced language skills whose research will require use of data, sources, and documents in their original languages or whose research requires interviews onsite in direct one-on-one contact. Fellows may undertake their projects in Japan, the United States, or both, and may include work in other countries for comparative purposes. Projects may be at any stage of development.

**Awards:** $50,400

**Letter of Intent:** Contact NEH’s Division of Research Programs at 202-606-8200 or fellowships@neh.gov.

**Full Proposal Deadline:** April 30, 2015

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**Grant Program:** Fellowships

**Agency:** National Endowment for the Humanities 20150430-FA

**RFP Website:** [http://www.neh.gov/grants/research/fellowships](http://www.neh.gov/grants/research/fellowships)

**Brief Description:** Fellowships support individuals pursuing advanced research that is of value to humanities scholars, general audiences, or both. Recipients usually produce articles, monographs, books, digital materials, archaeological site reports, translations, editions, or other scholarly resources in the humanities. Projects may be at any stage of development.
Program Statistics. In the last five competitions the Fellowships program received an average of 1,241 applications per year. The program made an average of 83 awards per year, for a funding ratio of 7 percent. The number of applications to an NEH grant program can vary widely from year to year, as can the funding ratio. Information about the average number of applications and awards in recent competitions is meant only to provide historical context for the current competition. Information on the number of applications and awards in individual competitions is available from fellowships@neh.gov.

Awards: $50,400
Letter of Intent: Contact NEH's Division of Research Programs at 202-606-8200 or fellowships@neh.gov.

Full Proposal Deadline: April 30, 2015

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NSF

Grant Program: STEM + Computing Partnerships (STEM+C)
Agency: NSF 15-537
RFP Website: http://nsf.gov/pubs/2015/nsf15537/nsf15537.htm

Brief Description: The STEM+C Partnerships program seeks to significantly enhance the learning and teaching of science, technology, engineering, mathematics (STEM), and computing by K-12 students and teachers, through research on, and development of, courses, curriculum, course materials, pedagogies, instructional strategies, or models that innovatively integrate computing into one or more STEM disciplines, or integrate STEM content into the teaching and learning of computing. In addition, STEM+C seeks to build capacity in K-12 computing education with foundational research and focused teacher preparation. Projects in the STEM+C Partnerships program should build on research in STEM education and prior research and development efforts that provide theoretical and empirical justification for proposed projects. Pre-service and in-service teachers who participate in STEM+C projects are expected to enhance their understanding and teaching of STEM and computing content, practices, and skills.

STEM+C invites creative and innovative proposals that address emerging challenges in the learning and teaching of STEM and computing. The program offers proposers two tracks: (1) Integration of Computing in STEM Education and (2) Computing Education Knowledge and Capacity Building. The second track is discipline-specific and may be expanded to include additional disciplines in future releases of the solicitation.

Awards: Standard Grants
Anticipated Funding Amount: $43,000,000
Letter of Intent: Not required
Deadline: Full Proposal Deadline(s): Full Proposal Due: April 14, 2015