Grant Opportunity Alerts: Issue: ORD-GOA-2015-14

Reminder: NJIT Open Forum Event and Grant Opportunities Alert

Event: NJIT Open Forum on Research Related Processes and Infrastructure Support
When and Where: 11.30 AM to 1.00 PM, May 1, 2015; Room GITC 1100
Hosts: Faculty Senate and Office of Research & Development
Panel Moderator and Host: Amitabha Bose, Faculty Senate President
Panelists:
Henry Mauemeyer, Senior Vice President for Administration and Treasurer
Andrew P. Christ, Vice President for Real Estate Development and Capital Operations
Atam Dhawan, Interim Vice Provost for Research, Office of Research
Dave Ullman, Associate Provost for Information Services
Maria La Lima, Director, Accounts Payable
Ritu Kumar, Payroll Manager
Norman J. Van Houten, Director, Health & Environmental Safety
Kamal Joshi, Assistant Vice President, Human Resources
Jeanie Regencio, Director, Purchasing Department
Brief Description and Call for Questions: Representatives from several NJIT offices that impact your research will be present to answer questions and listen to your suggestions in order to improve the efficiency of research related processes and protocols. It will be a moderated forum where representatives from Office of Research, Purchasing, Account Payable, Computing Services, Payroll, Human Resources, Physical Plant and Safety will be joining the panel. The Faculty Senate committee of research, scholarship and creativity is now soliciting your questions and suggestions for the above offices as well as the whole NJIT research infrastructure.

Please send your questions to Jay Meegoda (Meegoda@NJIT.edu) by Thursday, April 23, 2015.

Grant Opportunities Alerts:
Keywords and Areas Included in Funding Opportunities Alerts**:**
US Army Medical Research Acquisition Activity: DoD Peer Reviewed Medical Focused Program Award
NSF: Cognitive Neuroscience, GeoPFRISMS**,** Data Intensive Research in Education
NASA: ROSES 2015: Mars Science Laboratory Participating Scientist Program
National Institute of Health: Summer Research Program (R25), NIMHD Pathway to Independence Award (K99/R00), Neuroscience training grant (T32)

DoD/ US Army Medical Research Acquisition Activity

Grant Program: DoD Peer Reviewed Medical Focused Program Award
Agency: US Army Medical Research Acquisition Activity W81XWH-15-PRMRP-FPA
RFP Website: http://cdmrp.army.mil/dmrdp/default.shtml
Brief Description: Applications to the Fiscal Year 2015 (FY15) Peer Reviewed Medical Research Program (PRMRP) are being solicited for the Defense Health Agency, Research, Development, and Acquisition (DHA RDA) Directorate, by the U.S. Army Medical Research Acquisition Activity (USAMRAA). As directed by the Office of the Assistant Secretary of Defense for Health Affairs, the DHA RDA Directorate manages and executes the Defense Health Program (DHP) Research, Development, Test, and Evaluation (RDT&E) appropriation. The executing agent for this Program Announcement/Funding Opportunity is the Congressionally Directed Medical Research Programs (CDMRP). The PRMRP was initiated in fiscal year 1999 (FY99) to provide support for military health-related research of exceptional scientific merit. Appropriations for the PRMRP from FY99 through FY14 totaled $844.5 million (M). The FY15 appropriation is $247.5M.
The vision of the FY15 PRMRP is to improve the health and well-being of all military Service members, Veterans, and beneficiaries. The PRMRP challenges the scientific and clinical communities to address at least one of the FY15 Topic Areas with original ideas that foster new directions along the entire spectrum of research and clinical care. The program seeks applications in laboratory, clinical, behavioral, epidemiologic, and other areas of research to advance knowledge in disease etiology, improve prevention, detection, diagnosis, treatment, and quality of life for those affected by a relevant disease or condition, and to develop and validate clinical care or public health guidelines.
The PRMRP Focused Program Award mechanism is intended to optimize research and accelerate the solution for a critical question related to a designated FY15 PRMRP Focused Program Award Topic Area through a synergistic, multidisciplinary research program.
Awards: Up to $10 million direct costs for five years
Letter of Intent: See Below
Pre-Application Deadline: 5:00 p.m. Eastern time (ET), June 18, 2015
• **_Invitation to Submit an Application:** July 2015
Application Submission Deadline: 11:59 p.m. ET, October 28, 2015
End of Application Verification Period: 5:00 p.m. ET, November 2, 2015
Peer Review: December 2015
Programmatic Review: February 2016

DoD/ US Army Medical Research Acquisition Activity

Grant Program: DoD Peer Reviewed Medical Investigator-Initiated Research Award
Agency: US Army Medical Research Acquisition Activity
W81XWH-15-PRMRP-IIRA
RFP Website: http://cdmrp.army.mil/dmrdp/default.shtml
Brief Description: Applications to the Fiscal Year 2015 (FY15) Peer Reviewed Medical Research Program (PRMRP) are being solicited for the Defense Health Agency, Research,

Development, and Acquisition (DHA RDA) Directorate, by the U.S. Army Medical Research Acquisition Activity (USAMRAA). As directed by the Office of the Assistant Secretary of Defense for Health Affairs, the DHA RDA Directorate manages and executes the Defense Health Program (DHP) Research, Development, Test, and Evaluation (RDT&E) appropriation. The executing agent for this Program Announcement/Funding Opportunity is the Congressionally Directed Medical Research Programs (CDMRP). The PRMRP was initiated in fiscal year 1999 (FY99) to provide support for military health-related research of exceptional scientific merit. Appropriations for the PRMRP from FY99 through FY14 totaled $844.5 million (M). The FY15 appropriation is $247.5M.
The PRMRP Investigator-Initiated Research Award is intended to support studies that will make an important contribution toward research and/or patient care for a disease or condition related to at least one of the Congressionally directed FY15 PRMRP Topic Areas.
The PRMRP Focused Program Award mechanism is intended to optimize research and accelerate the solution for a critical question related to a designated FY15 PRMRP Focused Program Award Topic Area through a synergistic, multidisciplinary research program.
The rationale for a research idea may be derived from a laboratory discovery, population-based studies, a clinician's first-hand knowledge of patients or anecdotal data. Applications must include relevant data that support the rationale for the proposed study. These data may be unpublished or from the published literature.
The Investigator-Initiated Research Award is designed to support research with the potential to yield highly impactful data that could lead to critical discoveries or major advancements.
Awards: Various
Letter of Intent: Up to $1.2 million direct costs for three years
Pre-Application Deadline: 5:00 p.m. Eastern time (ET), June 11, 2015
Invitation to Submit an Application: August 2015
Application Submission Deadline: 11:59 p.m. ET, October 15, 2015
End of Application Verification Period: 5:00 p.m. ET, October 20, 2015
Peer Review: December 2015
Programmatic Review: February 2016

National Science Foundation

Grant Program: Cognitive Neuroscience (CogNeuro)
Agency: National Science Foundation NSF PD 15-1699
RFP Website:
http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5316&org=NSF&sel_org=NSF&from=fund
Brief Description: Cognitive neuroscience is an interdisciplinary field of research dedicated to the understanding of the neural mechanisms underlying human cognition. As this field continues to grow, the National Science Foundation intends for cognitive neuroscience emphases to spur the development of highly novel theories, techniques and models directed toward enabling basic scientific understanding of a broad range of issues involving brain, cognition, and behavior. The emphasis at NSF is on the integration of cognitive, social and economic science in service of insights into healthy functions of brain, cognition, and behavior. Additionally, NSF highly values the exploration of new methodologies, utilization of

the latest analytic approaches, and the convergence of cutting edge techniques for addressing basic questions about human cognition.

Research topics in Cognitive Neuroscience have included sensory processes (including olfaction, touch, multi-sensory integration), higher perceptual processes (for faces, music, rhythm etc.), higher cognitive functions (e.g., consciousness, decision-making, mathematics, mental imagery, navigation, reasoning), language (e.g., discourse, multi-lingualism, syntax), affect, attention, executive functions, learning, memory, motor control, prediction, sleep, social processes, timing, and uncertainty. Cognitive neuroscientists further clarify their findings by examining developmental and transformational aspects of such phenomena across the span of life, in healthy young and aging populations, as well as in neurological and psychiatric disorders (Autism, Schizophrenia, Parkinson's Disease) that provide models for understanding healthy brain function.

The Cognitive Neuroscience program seeks highly innovative proposals aimed at advancing a rigorous understanding of human cognition, including how the human brain mediates action, affect, creativity, decision making, intentionality, perception, social processes, and thought. Topics may bear on core functions such as attention, emotion, empathy, executive processes, language, learning, memory, music, sensory processing, sleep, representation of self and other, reasoning and rhythm. Topics may also include how human cognition develops and changes in the brain across the lifespan.

The program is particularly interested in supporting the development of new techniques and technologies for recording, analyzing, and modeling complex brain activity and human brain mapping. Such projects should include a plan for sharing new software and other technologies with the research community at large. Additionally, the program is interested in supporting projects addressing the growing amount of data collected across disparate lab environments, which may require new standardization, curation, and sharing solutions.

Studies of disease states (e.g., Alzheimer's disease, Autism, brain damaged patients, Parkinson's disease and Schizophrenia) may be components of projects supported by this program. However, the emphasis in such projects must be to advance basic scientific understanding of healthy neural mechanisms, and not on disease etiology, diagnosis, or treatment.

The program also intends to foster projects that integrate perspectives across disciplines, e.g., from the cognitive sciences, psychology, developmental sciences, biology, computer science, engineering, education, anthropology, physics, mathematics and statistics. For example, projects that involve collaborations among individuals with expertise in one of the cognitive sciences, neuroimaging, neural microcircuitry, and modeling complex systems are strongly encouraged.

Examples of appropriate grant proposals include, but are not be limited to, the following. It is to be expected that scientific advances will overtake many of the following issues, and that other research and development matters will emerge as key enablers to progress in basic cognitive neuroscience.

- Proposals related to the development of new, or integration of, existing methodologies to address cognitive questions involving human or non-human primates.
- Application of computational techniques or models for addressing cognitive questions or issues of data analysis.
- Connectivity and network-based examinations to characterize distinct or overlapping cognitive processes.
- Proposals examining non-stationary effects across different time windows spanning several orders of magnitude, such as learning and developmental paradigms in young, aging, healthy or impaired groups.

- Development and utilization of brain stimulation or symptom-mapping methods in conjunction with advanced behavioral analysis for determining causal linkages between neural networks and cognitive functions.

Comparative gene expression studies in humans or non-human primates of neural regions governing higher cognitive functions within a biological framework
Awards: Standard Awards
Cost Sharing Requirements: Inclusion of voluntary committed cost sharing is prohibited.
Letter of Intent: Not Required
Deadlines: August 13, 2015
Contact: Alumit Ishai-Program Director aishai@nsf.gov

Grant Program: GeoPRISMS Program
Agency: National Science Foundation NSF 15-564
RFP Website: http://www.nsf.gov/pubs/2015/nsf15564/nsf15564.htm
Brief Description: GeoPRISMS (Geodynamic Processes at Rifting and Subducting Margins) Program investigates the coupled geodynamics, earth surface processes, and climate interactions that build and modify continental margins over a wide range of timescales. These interactions cross the shoreline and have applications to margin evolution and dynamics, construction of stratigraphic architecture, accumulation of economic resources, and associated geologic hazards and environmental management. The GeoPRISMS Program includes two broadly integrated science initiatives (*Subduction Cycles and Deformation* and *Rift Initiation and Evolution*), linked by five overarching scientific topics and themes, where transformative advances are likely to occur in the decade 2011-2020, and where a focused scientific program could be most effective. These overarching science topics include 1) Origin and evolution of continental crust; 2) Fluids, magmas and their interactions; 3) Climate-surface-tectonics feedbacks; 3) Geochemical cycles; and 5) Plate boundary deformation and geodynamics. Each of the initiatives has identified primary sites for focused investigations, as well as thematic studies that will complement primary site studies.
Further information and a science plan for the program detailing each initiative and the associated thematic studies, as well as the overarching themes, can be found on the GeoPRISMS website at http://www.geoprisms.org/.
The expected level of funding will be approximately $4 million per year for the foreseeable future.
Awards: 10 awards for a total of $4 million
Cost Sharing Requirements: Inclusion of voluntary committed cost sharing is prohibited.
Letter of Intent: Not Required
Deadlines: July 15, 2015
Contact:
Jennifer Wade, Program Director, Petrology and Geochemistry, EAR Division, telephone: (703) 292-4739, email: jwade@nsf.gov
Donna Blackman, Program Director, Marine Geology and Geophysics, OCE Division, telephone: (703) 292-7978, email: dblackma@nsf.gov

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Grant Program: Building Community and Capacity in Data Intensive Research in Education (BCC-EHR)
Agency: National Science Foundation NSF 15-563
RFP Website: http://www.nsf.gov/pubs/2015/nsf15563/nsf15563.htm
Brief Description: As part of NSF's Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21) activity, the Directorate for Education and Human Resources (EHR) seeks to enable research communities to develop visions, teams, and capabilities dedicated to creating new, large-scale, next-generation data resources and relevant analytic techniques to advance fundamental research for EHR areas of research. Successful proposals will outline activities that will have significant impacts across multiple fields by enabling new types of data-intensive research. Investigators should think broadly and create a vision that extends intellectually across multiple disciplines and that includes—but is not necessarily limited to—EHR areas of research.
Awards: Standard Awards
Cost Sharing Requirements: Inclusion of voluntary committed cost sharing is prohibited.
Letter of Intent: Not Required
Deadlines: September 1, 2015

NASA

Grant Program: ROSES 2015: Mars Science Laboratory Participating Scientist Program
Agency: NASA NNH15ZDA001N-MSLPSP
Research Opportunities in Space and Earth Sciences (ROSES) – 2015; NNH15ZDA001N
RFP Website:
http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={19148EC8-0C4D-A31F-7F05-AF399BEF99A8}&path=open
Summary of Solicitations Under ROSES 2015:
http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={9F1341A9-6D0F-F075-C993-276263B186ED}&path=open&redirectURL=%2Fexternal%2Fsolicitations%2Fsolicitations.do%3Fmethod%3Dopen%26stack%3Dpush
Brief Description: This ROSES NRA (NNH15ZDA001N) solicits basic and applied research in support of NASA's Science Mission Directorate (SMD). This NRA covers all aspects of basic and applied supporting research and technology in space and Earth sciences, including, but not limited to: theory, modeling, and analysis of SMD science data; aircraft, scientific balloon, sounding rocket, International Space Station, CubeSat and suborbital reusable launch vehicle investigations; development of experiment techniques suitable for future SMD space missions; development of concepts for future SMD space missions; development of advanced technologies relevant to SMD missions; development of techniques for and the laboratory analysis of both extraterrestrial samples returned by spacecraft, as well as terrestrial samples that support or otherwise help verify observations from SMD Earth system science missions; determination of atomic and composition parameters needed to analyze space data, as well as returned samples from the Earth or space; Earth surface observations and field campaigns that support SMD science missions; development of integrated Earth system models; development of systems for applying Earth science research data to societal needs; and

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

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

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

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

National Institutes of Health

Grant Program: Summer Research Education Experience Programs (R25)
Agency: NIH PAR 15-184
National Institute on Alcohol Abuse and Alcoholism (NIAAA)
Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD)
National Institute on Drug Abuse (NIDA)
National Institute of Environmental Health Sciences (NIEHS)
National Institute of Neurological Disorders and Stroke (NINDS)
RFP Website: http://grants.nih.gov/grants/guide/pa-files/PAR-15-184.html
Brief Description: The NIH Research Education Program (R25) supports research educational activities that complement other formal training programs in the mission areas of the NIH Institutes and Centers. The over-arching goals of the NIH R25 program are to: (1) complement and/or enhance the training of a workforce to meet the nation's biomedical, behavioral and clinical research needs; (2) enhance the diversity of the biomedical, behavioral and clinical research workforce; (3) help recruit individuals with specific specialty or disciplinary backgrounds to research careers in biomedical, behavioral and clinical sciences; and (4) foster a better understanding of biomedical, behavioral and clinical research and its implications.
The over-arching goal of this R25 program is to support educational activities that foster a better understanding of biomedical, behavioral and clinical research and its implications. To accomplish the stated over-arching goal, this FOA will support creative educational activities with a primary focus on:

- ***Research Experiences:*** Create educational activities during the summer academic break. For example, for undergraduate students: to provide hands-on exposure to research, to reinforce their intent to graduate with a science degree, and/or to prepare them for graduate school admissions and/or careers in research; for high school and college science teachers: to enhance their science teaching.

Support for science teachers at the K-12 and college level will be limited to those programs with a clear plan for how teachers will utilize their summer experience in their teaching during the school year.
Applications that demonstrate the potential to impact students and teachers from diverse backgrounds are particularly encouraged.
Research education programs may complement ongoing research training and education occurring at the applicant institution, but the proposed educational experiences must be distinct from those training and education programs currently receiving Federal support. R25 programs may augment institutional research training programs (e.g., T32, T90) but cannot be used to replace or circumvent Ruth L. Kirschstein National Research Service Award (NRSA) programs.
Awards: Although the size of award may vary with the scope of the Summer Research Program proposed, budgets cannot exceed $100,000 direct costs per year.
Letter of Intent: 30 days before the due date
Full Proposal Deadline: March 23, 2016, March 23, 2017, March 23, 2018 , 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.

- See more at: http://grants.nih.gov/grants/guide/pa-files/PAR-15-184.html#sthash.mPqDIFWw.dpufApplicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

Grant Program: NIMHD Pathway to Independence Award (K99/R00)
Agency: NIH RFA-MD-15-006
RFP Website: http://grants.nih.gov/grants/guide/rfa-files/RFA-MD-15-006.html
Brief Description: The objective of the NIMHD Pathway to Independence Award (K99/R00) is to help outstanding postdoctoral researchers complete needed, mentored training and transition in a timely manner to independent, tenure-track or equivalent faculty positions. The K99/R00 award is intended to foster the development of a creative, independent research program that will be competitive for subsequent independent funding and that will help advance the mission of the NIMHD.
Health disparities science is an interdisciplinary field of inquiry that seeks to develop an integrated understanding of the myriad determinants of health in and across diverse populations. Health disparities researchers view health as the outcome of multiple factors acting at the biological, behavioral, social, and environmental levels across the lifespan and across generations. The field also emphasizes the translation, implementation, and dissemination of such knowledge to improve population health and reduce or eliminate health disparities. The research project must include a focus on one or more NIH-designated health disparity populations, which include Blacks/African Americans, Hispanics/Latinos, American Indians/Alaska Natives, Asian Americans, Native Hawaiians and other Pacific Islanders, socioeconomically disadvantaged populations, and rural populations.
Applicants must have no more than 4 years of postdoctoral research experience at the time of the initial or the subsequent resubmission or revision application. The K99/R00 award is intended for individuals who require at least 12 months of mentored research training and career development (K99 phase) before transitioning to the R00 award phase of the program. Consequently, the strongest applicants will require, and will propose, a well-conceived plan for 1–2 years of substantive mentored research training and career development that will help them become competitive candidates for tenure-track faculty positions and prepare them to launch robust, independent research programs. *An individual who cannot provide a compelling rationale for at least one year of additional mentored research training at the time of award is not a strong candidate for this award.*
Individuals must be in mentored, postdoctoral training positions to be eligible to apply to the K99/R00 program. If an applicant achieves independence (any faculty or non-mentored research position) before a K99 award is made, neither the K99, nor the R00 award, will be made. The K99/R00 award will provide up to 5 years of support in two phases. The initial (K99) phase will provide support for up to 2 years of mentored postdoctoral research training and career development. The second (R00) phase will provide up to 3 years of independent research support, which is contingent on satisfactory progress during the K99 phase and an approved, independent, tenure-track (or equivalent) faculty position. The two award phases are intended to be continuous in time. Therefore, although exceptions may be possible in limited circumstances, R00 awards will generally only be made to those K99 PDs/PIs who accept independent, tenure-track (or equivalent) faculty positions by the end of the K99 award period.

Awards: NIMHD intends to commit $500,000 in FY 2016 to fund 5 awards.
Full Proposal Deadline: June 23, 2015, by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this date.
Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.

Grant Program: Interdisciplinary Training in Bioinformatics and Diabetes, Obesity and Metabolic Disease(T32)
Agency: NIH PAR-15-182
RFP Website: http://grants.nih.gov/grants/guide/pa-files/PAR-15-182.html
Brief Description: The objective of the Ruth L. Kirschstein National Research Service Award (NRSA) Institutional Research Training Grant (T32) program is to develop and/or enhance research training opportunities for individuals interested in careers in biomedical, behavioral and clinical research that are relevant to the NIH mission. The training program should provide:

- A strong foundation in research design, methods, and analytic techniques appropriate for the proposed research area;
- The enhancement of the trainees' ability to conceptualize and think through research problems with increasing independence;
- Experience conducting research using state-of-the-art methods as well as presenting and publishing their research findings;
- The opportunity to interact with members of the scientific community at appropriate scientific meetings and workshops; and
- The enhancement of the trainees' understanding of the health-related sciences and the relationship of their research training to health and disease.

The proposed institutional research training program may complement other ongoing research training and career development programs at the applicant institution, but the proposed program must be clearly distinct from related programs currently receiving Federal support.
Specific Program Objectives of This Announcement
The specific purpose of this Funding Opportunity Announcement (FOA) is to encourage and enable the development of an interdisciplinary workforce to promote the application of bioinformatics to research in diabetes, obesity and related metabolic diseases that are relevant to the research mission of NIDDK. It will support predoctoral and postdoctoral interdisciplinary training to develop bioinformatics scientists capable of leading or participating in integrative and team approaches to solve complex problems related to the understanding, prevention, treatment and cure of diabetes, obesity and related metabolic diseases that are relevant to the research mission of NIDDK, with mentorship in both disciplines. In order to advance bioinformatics science and encourage its application to these diseases and disorders, NIDDK invites applications for implementing novel institutional training and education programs. These programs should focus on interdisciplinary approaches and mentorship between mathematics and computer science and medicine and diabetes, obesity and related metabolic diseases. These programs will support a variety of new and innovative didactic and research activities designed to provide trainees with the necessary knowledge and research experience to apply bioinformatics skills to the prevention, treatment or cure of diabetes, obesity and related disorders. It is expected that

these interdisciplinary training programs would involve multiple departments including bioinformatics and the biological, medical, computational, engineering, and mathematical sciences. Trainees in these programs should be mentored by two or more faculty mentors, one from computational and the other from biology or medical sciences of diabetes, obesity and metabolism, and, ideally, spend time in both mentors' laboratories. Applicants are encouraged to build these new training/education programs around existing institutional research programs in diabetes, obesity and related metabolic diseases that are relevant to the research mission of NIDDK and the computational sciences, whether formal (e.g., research programs supported by program project, center, or cooperative agreement mechanisms) or informal (e.g., networks of collaborating R01 grantees). It is expected that applying institutions have substantial current diabetes, obesity and metabolism research support within the mission of NIDDK and that they have substantial support and facilities for bioinformatics and the computational sciences. Applicants should focus only on research areas within diabetes, obesity and related metabolic diseases that the institution and involved departments have substantial research support and expertise.

Interdisciplinary Research Supported Examples

Bioinformatics trainees should have backgrounds in computational and/or mathematical sciences and should be applying analytical, probabilistic, and heuristic methods to solve research problems in diabetes, obesity and related metabolic disorders. Examples of relevant research areas include, but are not limited to:

1) Metabolic modeling of known and unknown pathway kinetics and compartmentalization in diabetes, obesity and related metabolic disorders.

2) Analysis of genomics, proteomics, metabolomics, epigenetics, clinical records, continuous monitoring and other high dimensional or throughput datasets for characterization of the etiology, characterization, diagnosis, prognosis or response to therapy of these disorders including biomarkers for the risk of developing type I or type II diabetes or obesity.

3) Network and systems biology of intra and intercellular regulation and inter-tissue and organ homeostasis with regard to the etiology, characterization, diagnosis, prognosis or response to treatment of these diseases including the progression of diabetes, obesity, and related metabolic diseases including biomarkers for the risk of developing type I or type II diabetes or obesity.

4) Structural biology/informatics and chemical informatics of endocrine and metabolic pathways in diabetes, obesity and related metabolic disease relevant to the mission of NIDDK.

5) High-throughput and/or high information content image analysis of organs or tissues of relevance to diabetes or obesity.

6) Characterization of the normal or abnormal development of involved organs such as the formation of the islets of Langerhans.

Awards: Standard Budget

Letter of Intent: October 17, 2015

Full Proposal Deadline: November 17, 2015 , by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this date.

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

Grant Program: Jointly Sponsored Ruth L. Kirschstein National Research Service Award Institutional Predoctoral Training Program in the Neurosciences (T32)
Agency: NIH PAR-15-178
RFP Website: http://grants.nih.gov/grants/guide/pa-files/PAR-15-178.html
Brief Description: The NRSA program has been the primary means of supporting predoctoral and postdoctoral research training programs since enactment of the NRSA legislation in 1974. Research training activities can be in basic biomedical or clinical sciences, in behavioral or social sciences, in health services research, or in any other discipline relevant to the NIH mission.
Institutional NRSA programs allow the Training Program Director/Principal Investigator (Training PD/PI) to select the trainees and develop a program of coursework, research experiences, and technical and/or professional skills development appropriate for the selected trainees. Each program should provide high-quality research training and offer opportunities in addition to conducting mentored research. The grant offsets the cost of stipends, tuition and fees, and training related expenses, including health insurance, for the appointed trainees in accordance with the approved NIH support levels.
Program Objective
Broad-based research training. In keeping with the goals of the NIH Blueprint for Neuroscience Research (http://neuroscienceblueprint.nih.gov/), the National Institute on Aging (NIA), National Institute on Alcohol Abuse and Alcoholism (NIAAA), Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD), National Institute on Drug Abuse (NIDA), National Institute of General Medical Sciences (NIGMS), National Institute of Mental Health (NIMH), and the National Institute of Neurological Disorders and Stroke (NINDS) are continuing this Jointly Sponsored Predoctoral Training Program in the Neurosciences (JSPTPN). The aim of this program is to encourage and support broad training in the neurosciences that will prepare students for research in the mission of any of the participating institutes.
The JSPTPN financially supports a program of broad-based education and research experience during the first two years of graduate training. As such, training programs supported by a JSPTPN training grant must have a comprehensive, two year training plan. Individual programs may choose, however, to use funds from this award to support students for either two years or just a single year. Trainees are expected to participate in a predoctoral curriculum that provides broad and fundamental training in the neurosciences. This curriculum should include education in multiple levels of analysis (which may include, for example, genetic, molecular, cellular, systems, behavior and/or computational; note that not all programs will necessarily cover all levels of analysis, but there must be enough coverage to be considered adequate for an broad understanding of neurobiological function and the technologies used for neuroscience research). In addition, programs are encouraged to expose students to basic, clinical and translational research approaches, and should provide significant exposure to the neuroscience of disease and disorders. It is critical that students obtain a thorough understanding of experimental design, including the principles of experimental rigor (see
http://www.ninds.nih.gov/funding/transparency_in_reporting_guidance.pdf,
http://www.nature.com/news/policy-nih-plans-to-enhance-reproducibility-1.14586,
http://www.nih.gov/about/reporting-preclinical-research.htm), through formal training activities (note that, although some of these examples focus on preclinical and clinical research, the principles are important, and applicable training is necessary, for all research). Programs should ensure that students have a solid understanding of statistics appropriate for neuroscience research, and should provide students with broad exposure to experimental

methodologies, as success in future neuroscience research is likely to depend upon a working knowledge of multiple methodological approaches to answering scientific questions.
Programs are strongly encouraged to engage students in quantitative approaches to research, which may include quantitative problem-solving, an introduction to programming, exercises in quantitative analysis of experimental research, and/or other didactic or hands-on activities that will enhance student understanding of the value of quantitative approaches to answering scientific questions.
There are many ways to achieve breadth of expertise, and the format of the training program is up to the PD/PI. For example, breadth may be achieved through any combination of formal courses, significant laboratory rotations, workshops and other programmatic activities. Programs may provide specially tailored curricula based on individual trainee background and needs, but in these cases, the core knowledge, breadth of knowledge, minimum expertise and research experience expected of all trainees, should be carefully described. Programs should also provide students with outstanding mentoringand training in scientific skills such as written and oral presentation, as well as quantitative skills needed for the conduct of cutting-edge neuroscience research. Programs should provide an environment that encourages students to apply for individual support, such as fellowships, career development awards and other individual awards from federal and non-federal sources. Further, programs should provide training in the skills necessary for such applications, such as grant writing, understanding the grant submission and review process and understanding and responding to critiques. It is expected that these institutional training programs will contribute to fundamental and disease-related neuroscience research that is relevant to the participating NIH Institutes. Moreover, it is expected that the JSPTPN will undergo regular evaluation, in order to promote innovation and evolution, as well as to bring attention to any deficiencies that arise.
Awards: Standard Budget
Letter of Intent: May 10, 2015
Full Proposal Deadline: June 10, 2015 , by 5:00 PM local time of applicant organization. All types of non-AIDS applications allowed for this funding opportunity announcement are due on this date.
Applicants are encouraged to apply early to allow adequate time to make any corrections to errors found in the application during the submission process by the due date.
