

March 1, 2010

Research Opportunities Compiled by:

**Ohio Supercomputer Center
Janet L. Gregory, Grants Manager
1224 Kinnear Road
Columbus, OH 43212-1163
Phone: 614-292-8492
Fax: 614-688-3184
Email: jgregory@osc.edu**

Opportunity #1

**Terrestrial Carbon Cycle Research
Department of Energy
DE-FOA-0000287**

Description: The Office of Biological and Environmental Research (BER) of the Office of Science (SC), U.S. Department of Energy (DOE), hereby announces its interest in receiving applications for terrestrial carbon cycle research that will improve the understanding of the role of terrestrial biomes in the global carbon cycle and aid carbon cycle predictions related to climate change.

Link to Full Announcement:

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

Opportunity #2

**Research on Clarus System Data
Department of Transportation
DTFH61-10-R-00015**

Description: This is a Pre-Solicitation notice (synopsis) for a full and open competition. The Federal Highway Administration (FHWA) proposes to issue a Broad Agency Announcement (BAA) to create new and improved services that will benefit the public (both agencies and travelers), academia, and the weather enterprise. The FHWA seeks to foster collaboration between transportation engineering, computer science, and atmospheric science disciplines and to support research on the use of Clarus data to develop new or improved road weather management/operations procedures, create innovative user interfaces, and develop new applications including weather-responsive traffic management tools. The tools and applications that will be developed from research must address a specific surface transportation weather management problem and be implementable by agencies that draw data from the Clarus system. When the solicitation is ready, it will be published at <http://www.fedbizopps.gov>.

Link to Full Announcement:

<http://www07.grants.gov/search/search.do;jsessionid=TcK9LLKNxKBrTFcLQpn46p3jxnJfkZwn8zQ5L7vTCgMpGnLCItWp!-30884949?mode=VIEWREVISIONS&revNum=1>

Opportunity #3

ROSES 2010: Astrophysics Data Analysis NASA NNH10ZDA001N-ADAP

Description: This NASA Research Announcement (NRA) solicits proposals for supporting basic and applied research and technology across a broad range of Earth and space science program elements relevant to one or more of the following NASA Research Programs:

1. Earth Science,
2. Heliophysics,
3. Planetary Science, and
4. Astrophysics.

This ROSES 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, stratospheric balloon, suborbital rocket, and commercial reusable rocket 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 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. Proposal due dates are scheduled starting on April 30, 2010, and continue through April 30, 2011.

Link to Full Announcement:

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={9636473D-602B-F49F-ABDC-5A26F36D08CD}&path=open>

Opportunity #4

ROSES 2010: Cryospheric Science NASA NNH10ZDA001N-CRYO

Description: This NASA Research Announcement (NRA) solicits proposals for supporting basic and applied research and technology across a broad range of Earth and space science program elements relevant to one or more of the following NASA Research Programs:

1. Earth Science,
2. Heliophysics,
3. Planetary Science, and
4. Astrophysics.

This ROSES 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, stratospheric balloon, suborbital rocket, and commercial reusable rocket 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 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. Proposal due dates are scheduled starting on April 30, 2010, and continue through April 30, 2011.

Link to Full Announcement:

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={9636473D-602B-F49F-ABDC-5A26F36D08CD}&path=open>

Opportunity #5**Indo-U.S. Vaccine Action Program (VAP) Small Research Grant Program (R03)
DHHS – NIH
PA-10-115**

Description: Scientific cooperation between India and the U.S. has taken place under a variety of bilateral umbrella agreements, including the Indo-U.S. Science and Technology (S&T) Sub-Commission, the Gandhi-Reagan S&T Initiative, the U.S.-India Fund, and the current S&T Cooperation Agreement. Building upon these agreements and initiatives, representatives of the United States and the Government of India signed a Memorandum of Understanding on July, 9 1987 implementing the Indo-U.S. Vaccine Action Program (VAP) in order to expand collaborative vaccine research. The goal of the VAP is to support collaborative vaccine-related research projects that ultimately reduce the burden of infectious diseases of importance in India, the U.S., the South Asian region and globally. Applications are encouraged from organizations/institutions that propose to conduct vaccine-related research through well-established collaborations with Indian investigators on the following: dengue, influenza (including avian influenza), HIV/AIDS, and tuberculosis. Basic, translational, clinical, or epidemiological vaccine research may be proposed. Clinical trials will not be supported by this initiative. This funding opportunity announcement (FOA) encourages Small Research Grant (R03) applications, which will provide U.S. dollar support of vaccine-related research in India and the United States and augment current VAP activities. Investigators from U.S. and Indian institutions are eligible to apply. Budgets for direct costs of up to \$50,000 per year and a project duration of up to two years may be requested for a maximum of \$100,000 direct costs over a two-year project period. The PHS398 Research Strategy section of the R03 application may not exceed **6** pages, including tables, graphs, figures, diagrams, and charts. More than one PD/PI (i.e., multiple PDs/Pis), may be designated on the application. Applicants may submit more than one application, provided that each application is scientifically distinct. Applicants may submit a resubmission application, but such application must include an Introduction addressing the previous peer review critique (Summary Statement). See new NIH policy on resubmission (amended) applications ([NOT-OD-09-003](#), [NOT-OD-09-016](#)). The R03 is not renewable.

Link to Full Announcement:

<http://grants.nih.gov/grants/guide/pa-files/PA-10-115.html>

Opportunity #6

NIAMS Accelerating Research Translation (ART) in Musculoskeletal and Skin Tissue Engineering and Regenerative Medicine Competitive Revision Award (R01) DHHS – NIH RFA-AR-11-004

Description: The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) solicits Accelerating Research Translation (ART) applications in musculoskeletal and skin tissue engineering and regenerative medicine (TE/RM). The ART awards intend to offer revision support (formerly referred to as a “competing supplement”) to active NIAMS R01, P01 and P50 (parent) grants for conducting large animal pre-clinical studies with the potential to immediately lead to human trials in musculoskeletal and skin TE/RM. These studies will

- 1) provide data required for Phase I/II human clinical trials in musculoskeletal and skin TE/RM,
- 2) demonstrate efficacy of a TE/RM therapy in musculoskeletal and skin TE/RM, or
- 3) develop pre-clinical large animal models that will have the potential to immediately lead TE/RM research into Phase I/II clinical trials

Early stage translational studies using small animals such as rodent and rabbit are not responsive to this FOA. This FOA will utilize the NIH revision to R01 grant mechanism and runs in parallel with a FOA ([RFA-AR-11-005](#)) of identical scientific scope that solicits applications under the NIAMS P01 and P50 mechanisms. The NIAMS plans to commit \$1M in total cost in FY 2011 to make 1 to 3 ART awards for both RFA-AR-11-004 and RFA-AR-11-005. It is expected that all or the majority of the proposed research in an ART revision application will be carried out within the first year of the project period; however, if necessary, up to one additional year may be requested. The total project period for each ART revision application may not exceed two years. Direct costs are limited to \$650,000 over the entire project period. For applicants requesting a two-year project period, a maximum amount up to 10% of the requested direct costs for the entire project period may be requested for the second budget period. In addition, the requested end date of the ART project may not exceed the end date of the parent project. Equipment costs may only be requested in rare circumstances with exceptional justification. Consultation with your NIAMS Program Directors is highly recommended one month prior to application submission date for any equipment request. The ART revision (R01) application Research Strategy section of the PHS398 may not exceed 12 pages, including tables, graphs, figures, diagrams, and charts. More than one PD/PI (i.e., multiple PDs/Pis) may be designated on the application. The contact PD/PI must be the same as that of the parent grant. A new investigator added to the parent grant as a PI with this revision will lose his or her new PI status if the ART application is awarded. Applicants may submit more than one application, provided each application is scientifically distinct. However, only one ART application can be submitted for each active parent grant. Resubmission applications are not permitted in response to this FOA. Renewal applications are not permitted in response to this FOA.

Link to Full Announcement:

<http://grants.nih.gov/grants/guide/rfa-files/RFA-AR-11-004.html>

Opportunity #7

NIAMS Accelerating Research Translation (ART) in Musculoskeletal and Skin Tissue Engineering and Regenerative Medicine Competitive Revision Award (P01 and P50) DHHS – NIH RFA-AR-11-005

Description: The National Institute of Arthritis and Musculoskeletal and Skin Diseases (NIAMS) solicits Accelerating Research Translation (ART) applications in musculoskeletal and skin tissue engineering and regenerative medicine (TE/RM). The ART awards intend to offer revision support (formerly referred to as a “competing supplement”) to active NIAMS R01, P01 and P50 (parent) grants for conducting large animal pre-clinical studies with the potential to immediately lead to human trials in musculoskeletal and skin TE/RM. These studies will

- 1) provide data required for Phase I/II human clinical trials in musculoskeletal and skin TE/RM,
- 2) demonstrate efficacy of a TE/RM therapy in musculoskeletal and skin TE/RM, or
- 3) develop pre-clinical large animal models that will have the potential to immediately lead TE/RM research into Phase I/II clinical trials

Early stage translational studies using small animals such as rodent and rabbit are not responsive to this FOA. This FOA will utilize the NIH revision to P01 and P50 grant mechanism and runs in parallel with a FOA ([RFA-AR-11-004](#)) of identical scientific scope that solicits applications under the NIAMS R01 mechanism. The NIAMS plans to commit \$1M in total cost in FY 2011 to make 1 to 3 ART awards for both RFA-AR-11-004 and RFA-AR-11-005. It is expected that all or the majority of the proposed research in an ART revision application will be carried out within the first year of the project period; however, if necessary, up to one additional year may be requested. The total project period for each ART revision application may not exceed two years. Direct costs are limited to \$650,000 over the entire project period. For applicants requesting a two-year project period, a maximum amount up to 10% of the requested direct costs for the entire project period may be requested for the second budget period. In addition, the requested end date of the ART project may not exceed the end date of the parent project. Equipment costs may only be requested in rare circumstances with exceptional justification. Consultation with your NIAMS Program Directors is highly recommended one month prior to application submission date for any equipment request. The ART revision (P01 and P50) application Research Strategy section of the PHS398 may not exceed 12 pages, including tables, graphs, figures, diagrams, and charts. More than one PD/PI (i.e., multiple PDs/Pis), may be designated on the application. The contact PD/PI must be the same as that of the parent grant. A new investigator added to the parent grant as a PI with this revision will lose his or her new PI status if the ART application is awarded. Applicants may submit more than one application, provided they are scientifically distinct. However, only one ART application can be submitted for each active parent grant. Resubmission applications are not permitted in response to this FOA. Renewal applications are not permitted in response to this FOA.

Link to Full Announcement:

<http://grants.nih.gov/grants/guide/rfa-files/RFA-AR-11-005.html>

Opportunity #8

Collaborative Research on the Transition from Acute to Chronic Pain: New Models and Measures in Clinical and Preclinical Pain Research (R01)

DHHS - NIH

RFA-DE-11-001

Description: The overall goal of this FOA is to stimulate preclinical and clinical research that will accelerate our understanding of the biological and behavioral determinants driving the transition from acute pain to chronic pain disorders. An understanding of the mechanisms and risk factors that determine who will transition to a chronic pain state is necessary in order to intervene in this transition and to design new, effective treatments to resolve acute pain before it becomes chronic. The objectives of this FOA are to: 1) assemble research teams with expertise in basic and clinical pain research and related expertise outside the pain field that will provide novel, collaborative, multidisciplinary approaches to answer crucial questions about the transition from acute to chronic pain; 2) discover biological and behavioral mechanisms that drive the transition from an acute pain state to a chronic dysfunctional pain condition; 3) develop new clinical and preclinical models and measures of pain that will be essential to identify and characterize these mechanisms. Studies that involve considerable risk but with the potential for breakthroughs in the field are strongly encouraged. This FOA will utilize the R01 grant mechanism. The NIDCR intends to commit \$5 million total costs in FY 2011 to support meritorious projects solicited through this FOA. We anticipate that 7-10 awards will be made, depending upon the number and quality of applications received and the availability of funds. Because the nature and scope of the proposed research will vary among applications, it is anticipated that the size and duration of each award will also vary. However, the total project period for an application submitted in response to this FOA may not exceed five years. Although R01 applications are not limited in dollars, budgets should be appropriate for the proposed work. The R01 application Research Strategy section of the PHS398 may not exceed 12 pages, including tables, graphs, figures, diagrams, and charts. More than one PD/PI (i.e., multiple PDs/Pis) may be designated on the application. The use of multiple PDs/Pis consistent with the intent of this FOA is strongly encouraged. Applicants may submit more than one application, provided each application is scientifically distinct. Resubmission applications are not permitted in response to this FOA. Renewal applications are not permitted in response to this FOA.

Link to Full Announcement:

<http://grants.nih.gov/grants/guide/rfa-files/RFA-DE-11-001.html>

Opportunity #9

Centers for Advanced Diagnostics and Experimental Therapeutics in Lung Diseases Stage I (CADET I) (P50)

DHHS – NIH

RFA-HL-11-015

Description: The purpose of this FOA issued by the NHLBI, National Institutes of Health, is to invite applications for clinical research centers for Centers for Advanced Diagnostics and Experimental Therapeutics in Lung Diseases Stage I (CADET I). The overall goal of the CADET program (Stages I and II) is to accelerate the development of novel agents for the diagnosis and treatment of lung diseases and sleep disordered breathing through the use of rational strategies based on fundamental pathobiologic processes. CADET I provides the opportunity to explore potential target(s) for validation to determine which are amenable for development of mechanism-based modalities for direct clinical application in the prevention, diagnosis, and treatment of pulmonary diseases and sleep disordered breathing. Companion FOAs for Clinical Research Centers (CRCs) and a Data Coordinating Center (DCC) for CADET Stage II (CADET II) will be released at a later date. Both the CRCs and DCC announcements will be open competitions. Centers that have been awarded in CADET I may apply for Clinical Research Centers in CADET II. This FOA will utilize the P50 award mechanism. The total amount to be awarded for CADET I will be a maximum of \$30 million for the total program. It is anticipated that up to 30 awards, under this FOA, will be awarded for CADET I. The total project period for an application submitted in response to this FOA is 2 years. Budgets for direct costs of up to \$300,000 per year (exclusive of indirect costs associated with consortia) and a project duration of up to 2 years may be requested for a maximum of \$600,000 direct costs over a 2-year project period. The total amount awarded and the number of awards will depend upon the numbers, quality, duration, and costs of the applications received. The P50 Research Strategy section may not exceed 12 pages, including tables, graphs, figures, diagrams, and charts. More than one PD/PI (i.e., multiple PDs/Pis), may be designated on the application. Applicants may submit more than one application, provided they are scientifically distinct. Resubmission applications are not permitted in response to this FOA. Renewal applications are not permitted in response to this FOA.

Link to Full Announcement:

<http://grants.nih.gov/grants/guide/rfa-files/RFA-HL-11-015.html>

Opportunity #10

Large Scale Production of Perturbagen-Induced Cellular Signatures (U54)

DHHS – NIH

RFA-RM-10-003

Description: This FOA seeks to establish a pilot-scale data production effort to systematize approaches for identifying mechanism-based associations among the effects of disparate biological perturbations, a knowledge base that can be used to study functional relationships among the responding cellular components. The Library of Integrated Network-Based Cellular Signatures (LINCS) program will support the high-throughput collection and integrative computational analysis of informative molecular activity and cellular feature signatures generated in response to a variety of perturbing agents, including siRNAs and small bioactive molecules, which are applied to a set of carefully selected cell types. The resulting knowledge will form the basis of a long-lived resource that can be used broadly by the community. For example LINCS may inform association of disease states with detailed molecular or cellular phenotypes, and ultimately associate disease with specific gene networks, or inform the mechanism of action of known drugs. This FOA seeks to fund pilot-scale data production efforts that will produce a usable initial resource while addressing the following issues: optimization of methods, integration of data, and scalability. Pilot production efforts will interact with multiple future additional components (data analysis and informatics tools; and development and integration of new production-ready technologies) of the LINCS program. This FOA will utilize the U54 specialized centers cooperative agreement award mechanism. It is intended to complement FOAs that will be issued in FY 2011 for development and integration of new production-ready technologies and for development of informatics and data analysis tools for LINCS. We expect to fund up to two awards in FY 2010. Three years of funding may be requested. Total funds available for the program are \$2.7M in FY 2010, ramping to \$5M in each of FY 2011 and FY 2012. The maximum project period for an application submitted in response to this funding opportunity is three years. Direct costs are limited to a maximum of \$900,000 in FY 2010 and \$1.65M in each of FY 2011 and FY 2012. The U54 Research Strategy section may not exceed 30 pages, including tables, graphs, figures, diagrams, and charts. More than one PD/PI (i.e., multiple PDs/Pis), may be designated on the application. Applicants may submit more than one application, provided they are scientifically distinct. Resubmission applications are not permitted in response to this FOA. Renewal applications are not permitted in response to this FOA.

Link to Full Announcement:

<http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-10-003.html>

Opportunity #11

Production of Human Proteins to Be Used For Generating Affinity Reagents (U01)

DHHS – NIH

RFA-RM-10-007

Description: This FOA is the first component of a pilot program organized under the NIH Common Fund Protein Capture Initiative to examine the feasibility and value of generating a community resource of high quality, renewable affinity reagents for all human proteins. This specific FOA topic is focused on the production of proteins or peptides for the purpose of generating monoclonal antibodies that can be used in immunoprecipitation studies, and potentially for other affinity reagents, as well as broader uses by the scientific community and others. Thus, the FOA solicits projects that will provide the targeted proteins, peptides or other immunogens to other components of the pilot program (including a component that will generate monoclonal antibodies, to be solicited in FY2011), as well as to the wider community in the form of a renewable resource, e.g., clones or transfected cell lines. This FOA will prioritize human transcription factors as an initial set of targets. This FOA will utilize the U01 Research Project Cooperative Agreement activity code. We expect to fund a single three year award in FY2010. Total funds available for the program are \$1M, for each of three years. Applications should propose no more than \$600,000 in direct costs per year over a period of no more than three years. The U01 Research Strategy section may not exceed 12 pages, including tables, graphs, figures, diagrams, and charts. More than one PD/PI (i.e., multiple PDs/Pis), may be designated on the application. An individual PI may submit only one application. Resubmission applications are not permitted in response to this FOA. Renewal applications are not permitted in response to this FOA.

Link to Full Announcement:

<http://grants.nih.gov/grants/guide/rfa-files/RFA-RM-10-007.html>