New Funding Opportunities December 1, 2011

Aloha,

Here are some current funding opportunities that might be of interest to you. Please pass this information on to anyone else who could use it. If the deadline is too short for this year, it is still a good indication of the likely due date for next year. Let me know if I can be of any assistance with developing and submitting a grant application.

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For information on submitting grants electronically on grants.gov the following publication may be useful:

USDA, NIFA Grants.gov Application Guide – A guide for the preparation and submission of NIFA applications via grants.gov:

 $\frac{http://apply07.grants.gov/apply/opportunities/instructions/oppUSDA-NIFA-CGP-002644-cfda10.217-instructions.pdf\%\,20target$

NIFA Help Desk - Phone: 202-401-5048 (M-F 7:00 am -5:00 pm ET)

UH Office of Research Services (ORS) Grants.gov Cover Page Information:

http://www.ors.hawaii.edu/ library/documents/SF424 Instructions.pdf

UH ORS Institutional Profile Information:

http://www.ors.hawaii.edu/institutional-profile.asp

UH ORS Help Desk – Phone: 956-5198 (M-F 7:45-4:30 pm HST)

\$ - NIH, NSF, USDA - Ecology and Evolution of Infectious Diseases

The program's focus is on both the discovery, as well as on building and testing models that elucidate these principles and processes. Research proposals should focus on understanding the determinants of transmission of diseases to humans, non-human animals, or plants; the spread of pathogens by environmental factors, vectors or abiotic agents; the population dynamics and genetics of reservoir species or alternate hosts; or the cultural, social, behavioral, and economic dimensions of disease transmission. Research may be on zoonotic, environmentally-borne, vector-borne, or enteric diseases of either terrestrial, freshwater, or marine systems and organisms, including diseases of non-human animals and plants, at any scale from specific pathogens to inclusive environmental systems. Proposals for research on disease systems of public health concern to developing countries are strongly encouraged, as are disease systems of concern in agricultural and coastal marine systems. Investigators are encouraged to include links to the public health research community, including for example, participation of epidemiologists, physicians, veterinarians, food scientists, social scientists, entomologists, pathologists, virologists, or parasitologists.

Solicitation Date (Opening)	August 26, 2011
Letter of Intent Due Date	None
Due Date (Closing)	December 7, 2011
Estimated Total Program Funding	\$15,000,000.00
Range of Awards	Unavailable
Cost Sharing Requirements	None
For More Information Contact	Peter Johnson
CFDA Number	10.310

http://www.nsf.gov/pubs/2011/nsf11580/nsf11580.htm

\$ - USDA, NSF, NASA, NIH - National Robotics Initiative (NRI): The Realization of Co-Robots Acting in Direct Support of Individuals and Groups

The goal of the National Robotics Initiative is to accelerate the development and use of robots in the United States that work beside, or cooperatively with, people. Innovative robotics research and applications emphasizing the realization of such co-robots acting in direct support of and in a symbiotic relationship with a human is supported by multiple agencies of the federal government including the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), the National Institutes of Health (NIH), the U.S. Department of Agriculture (USDA) and others. The purpose of this program is the development of this next generation of robotics, to advance the capability and usability of such systems and artifacts, and to encourage existing and new communities to focus on innovative application areas. It will address the entire life cycle from fundamental research and development to industry manufacturing and deployment. Methods for the establishment and infusion of robotics in educational curricula and research to gain a better understanding of the long term social, behavioral and economic implications of co-robots across all areas of human activity are important parts of this initiative. Collaboration between academic, industry, non-profit and other organizations is strongly encouraged to establish better linkages between

fundamental science and technology development, deployment and use. Two classes of proposals will be considered in response to this solicitation:

- Small projects: One or more investigators spanning 1 to 5 years.
- Large projects: Multi-disciplinary teams spanning 1 to 5 years.

Deadline: Small Proposal Letter of Intent (required) - October 01, 2011 (Annually Thereafter)

Deadline: Group Large Proposal Letter of Intent (required) - December 15, 2011 (Annually Thereafter)

Solicitation Date (Opening)	June 29, 2011
Due Date (LOI Required):	Oct 1 & Dec 15, 2011
Due Date (full proposals):	Nov 3, 2011 & Jan 18, 2012
Estimated Total Program Funding	\$3,000,000.00
Range of Awards	Unavailable
Cost Sharing Requirements	None
For More Information Contact	Daniel Schmoldt
Funding Opportunity Number	11-553
CFDA Number	10.310
Contact for Electronic Access Problems	webcomments@nifa.usda.gov

URL: http://www.nsf.gov/publications/pub-summ.jsp?ods-key=nsf11553

\$ - NSF - Innovation Corps Program (I-Corps) (NSF 11-560)

Deadline: December 15, March 15, & September 15 (Annually Thereafter)

The National Science Foundation (NSF) seeks to develop and nurture a national innovation ecosystem that builds upon fundamental research to guide the output of scientific discoveries closer to the development of technologies, products and processes that benefit society. In order to jumpstart a national innovation ecosystem, NSF is establishing the NSF Innovation Corps (NSF I-Corps). The NSF I-Corps' purpose is to identify NSF-funded researchers who will receive additional support - in the form of mentoring and funding - to accelerate innovation that can attract subsequent third-party funding. The purpose of the NSF I-Corps grant is to give the project team access to resources to help determine the readiness to transition technology developed by previously-funded or currently-funded NSF projects. The outcome of the I-Corps projects will be threefold: 1) a clear go/no go decision regarding viability of products and services, 2) should the decision be to move the effort forward, a transition plan to do so, and 3) a technology demonstration for potential partners. PI(s) must contact one of the cognizant I-Corps program officers and receive prior written authorization to submit a proposal. PI(s) are strongly encouraged to discuss the commercial readiness of their effort with a Topic-specific program officer prior to contacting a cognizant I-Corps program officer. This will facilitate determining whether the proposed work is appropriate for I-Corps funding.

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=504672&WT.mc_id=USNSF_39&WT.mc_ev=click

\$ - NSF - Industry/University Cooperative Research Centers Program (I/UCRC) (NSF 10-595)

Letter of Intent Deadline for planning grants: January 2, 2012 (annually thereafter) & **June 26, 2012** (annually thereafter)

Full Proposal Deadline: March 6, 2012 (annually thereafter) & September 26, 2011 (annually thereafter)

The Industry/University Cooperative Research Centers (I/UCRC) program develops long-term partnerships among industry, academe, and government. The centers are catalyzed by a small investment from the National Science Foundation (NSF) and are primarily supported by industry center members, with NSF taking a supporting role in the development and evolution of the center. Each center is established to conduct research that is of interest to both the industry members and the center faculty. An I/UCRC contributes to the Nation's research infrastructure base and enhances the intellectual capacity of the engineering and science workforce through the integration of research and education. As appropriate, an I/UCRC uses international collaborations to advance these goals within the global context. URL: http://www.nsf.gov/publications/pub_summ.jsp?WT.z_pims_id=5501&ods_key=nsf10595

\$ - NSF – Informal Science Education (ISE) (NSF 10-565)

Deadlines: January 11, 2012

The ISE program supports innovation in anywhere, anytime, lifelong learning, through investments in research, development, infrastructure, and capacity-building for STEM learning outside formal school settings. "Informal" science education experiences are those that occur outside formal school settings. Americans spend over 80% of lifetime waking hours outside schools (Stevens & Bransford, 2007), and potentially have access to a vast array of learning resources, experiences, and educators. Moreover, mobile media and social networks have increased educational possibilities to create a global learning environment accessible by learners of all ages. In the larger landscape of 21st century STEM education, informal settings are positioned to play a pivotal role. They offer a number of fundamental strengths to STEM learners, with related challenges that NSF encourages the field to address. To advance the field of informal science education, the ISE program encourages project proposals that incorporate activities in research and evaluation, design and development, or capacity-building. The ISE program seeks to build the STEM and education expertise of informal science education's broad community of professionals, volunteers, parents and caregivers, and all those with potential to facilitate the learning of others. Partnerships among creators of informal science education experiences, STEM experts, and learning researchers that encourage the integration of institutional programs and resources are highly desirable. ISE invests in Conferences, Symposia, and Workshops; EAGER and RAPID grants; and Grant Supplements. The ISE program also invests in five types of projects that are specific to the program: Research; Connecting Researchers and Public Audiences; Pathways; Full-Scale Development; and Broad Implementation. These project categories relate to the DRL cycle of innovation (see URL below for additional information). Estimated Number of Awards: 60 - Approximately 8

Research, 8 Pathways, 17 Full-Scale Development, 3 Broad Implementation, and up to 24 Connecting Researchers and Public Audiences awards (CRPA) will be made per year. Anticipated Funding Amount: \$28,000,000 in FY 2012 for new awards, pending availability of funds.

http://www.nsf.gov/pubs/2011/nsf11546/nsf11546.htm?WT.mc_id=USNSF_25&WT.mc_ev=c lick

\$ - USDA, NIFA - Secondary Education, Two-Year Postsecondary Education, and Agriculture in the K-12 Classroom Challenge Grants Program

The Secondary Education, Two-Year Postsecondary Education, and Agriculture in the K-12 Classroom Challenge Grants (SPECA) program seeks to: (a) promote and strengthen secondary education and two-year postsecondary education in agriscience and agribusiness in order to help ensure the existence in the United States of a qualified workforce to serve the food and agricultural sciences system; and (b) promote complementary and synergistic linkages among secondary, two-year postsecondary, and higher education programs in the food and agricultural sciences in order to advance excellence in education and encourage more young Americans to pursue and complete a baccalaureate or higher degree in the food and agricultural sciences.

Solicitation Date (Opening)	October 14, 2011
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Letter of Intent Due Date	None
Due Date (Closing)	January 20, 2012
Estimated Total Program Funding	\$900,000.00
Range of Awards	\$0.00 to \$300,000.00
Percent of Applications Funded Last	210/
Fiscal Year	21%
	Required to match 25% of the
Cost Sharing Requirements	USDA funds awarded from non-
	federal sources
For More Information Contact	Gregory Smith
Funding Opportunity Number	USDA-NIFA-SAECP-003543
	10.226 Secondary And Two-Year
CFDA Number	Postsecondary Agriculture Education
	Challenge Grants

http://www.nifa.usda.gov/funding/rfas/sec challenge.html

\$ - USDA, NIFA - Interregional Research Project #4 Minor Crop Pest Management Program (IR-4)

The primary goal of the IR-4 program is to provide safe, effective and economical pest management solutions for growers of minor/specialty crops. IR-4 facilitates crop protection by providing expert assistance with product development and registration. IR-4 positively impacts the ability of research and extension personnel, producers, grower organizations, and others to provide a continuous supply of affordable minor/specialty crops to the public. IR-4 is the only publicly supported research program in the United States that provides this service. Successful applicants will demonstrate the capacity and commitment required to accelerate the registration

of newer, reduced risk pest management tools; expedite access to these pest management tools for minor/specialty crop growers, and conduct efficacy research to identify new and more effective minor/specialty crop pest management solutions. The FY 2011 IR-4 Program will fund four geographically-based IR-4 Regional Centers and an IR-4 National Headquarters.

Solicitation Date (Opening)	November 10, 2010
Letter of Intent Due Date	None
Due Date (Closing)	January 26, 2012
Estimated Total Program Funding	\$11,000,000.00
Range of Awards	\$1,000,000.00 to \$4,800,000.00
Percent of Applications Funded Last	100%
Fiscal Year	100 76
Cost Sharing Requirements	0
For More Information Contact	Monte Johnson
Funding Opportunity Number	USDA-NIFA-SRGP-003377
CFDA Number	10.200

URL: http://www.nifa.usda.gov/funding/rfas/minor_crop.html

\$ - USDA, NIFA - Specialty Crop Research Initiative

Document Type: Grants Notice

Funding Opportunity Number: USDA-NIFA-SCRI-003562

Opportunity Category: Discretionary
Posted Date: Oct 27, 2011

Deadline: Jan 31,

Archive Date: Mar 01, 2012

Funding Instrument Type: Grant

Award Ceiling: \$47,300,000

CFDA Number(s): 10.309 -- Specialty Crop Research Initiative

Cost Sharing or Matching Requirement: Yes

The Specialty Crop Research Initiative (SCRI) was established to solve critical industry issues through research and extension activities. SCRI will give priority to projects that are multistate, multi-institutional, or trans-disciplinary; and include explicit mechanisms to communicate results to producers and the public. Projects must address at least one of five focus areas: research in plant breeding, genetics, and genomics to improve crop characteristics; efforts to identify and address threats from pests and diseases, including threats to specialty crop pollinators; efforts to improve production efficiency, productivity, and profitability over the long term; new innovations and technology, including improved mechanization and technologies that delay or inhibit ripening; and methods to prevent, detect, monitor, control, and respond to potential food safety hazards in the production and processing of specialty crops.

http://www.nifa.usda.gov/funding/rfas/specialty_crop.html

\$ - NSF - Science, Technology, and Society (STS) (NSF 08-553)

Deadline Dates: August 1, 2011 & February 1, 2012

STS considers proposals that examine historical, philosophical, and sociological questions that arise in connection with science, engineering, and technology, and their respective interactions with society. STS has four components:

- Ethics and Values in Science, Engineering and Technology (EVS),
- History and Philosophy of Science, Engineering and Technology (HPS),
- Social Studies of Science, Engineering and Technology (SSS),
- Studies of Policy, Science, Engineering and Technology (SPS).

The components overlap, but are distinguished by the different scientific and scholarly orientations they take to the subject matter, as well as by different focuses within the subject area. STS encourages the submission of hybrid proposals that strive to integrate research involving two or more of these core areas. STS provides the following modes of support:

- Scholars Awards,
- Standard Research Grants and Grants for Collaborative Research,
- Postdoctoral Fellowships,
- Professional Development Fellowships,
- Doctoral Dissertation Research Improvement Grants,
- Small Grants for Training and Research,
- Conference and Workshop Awards,
- Other Funding Opportunities.

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5324&WT.mc_id=USNSF_39&WT.mc_ev=click

\$ - NSF -Research Coordination Networks (RCN)

RCN SEES Track Deadline Date: February 3, 2012

Each of the targeted RCN tracks have specific annual deadlines; proposals for these tracks should be submitted to the RCN solicitation.

General (non-targeted) RCN proposals should be submitted to a participating program in BIO, GEO, SBE, OCI or OPP. Refer to the specific program website for submission dates. PIs are encouraged to discuss suitability of an RCN topic with the program.

The goal of the RCN program is to advance a field or create new directions in research or education. Groups of investigators will be supported to communicate and coordinate their research, training and educational activities across disciplinary, organizational, geographic and international boundaries. RCN provides opportunities to foster new collaborations, including international partnerships, and address interdisciplinary topics. Innovative ideas for implementing novel networking strategies, collaborative technologies, and development of community standards for data and meta-data are especially encouraged. Proposed networking

activities directed to the RCN program should focus on a theme to give coherence to the collaboration, such as a broad research question or particular technologies or approaches. More at:

 $\underline{\text{http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=}11691\&WT.mc_id=}USNSF_39\&WT.mc_c_ev=click$

\$ - NSF - Research on Gender in Science and Engineering (GSE) (NSF 10-516)

Letter of Intent Deadline: February 8, 2012 & September 4, 2012 (Required) Full Proposal Deadline: October 13, 2011 & March 27, 2012 & Second Thursday in October, Annually Thereafter (if LOI accepted)

The Research on Gender in Science and Engineering program supports efforts to understand and address gender-based differences in science, technology, engineering, and mathematics (STEM) education and workforce participation through research, the diffusion of research-based innovations, and extension services in education that will lead to a larger and more diverse domestic science and engineering workforce. Typical projects will contribute to the knowledge base addressing gender-related differences in learning and in the educational experiences that affect student interest, performance, and choice of careers; how pedagogical approaches and teaching styles, curriculum, student services, and institutional culture contribute to causing or closing gender gaps that persist in certain fields. Projects will communicate and apply findings, evaluation results, and proven good practices and products to a wider community.

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=5475&WT.mc_id=USNSF_39&WT.mc_ev=click

\$ - NSF - Sensors and Sensing Systems (SSS) (PD 10-1639)

Deadline: October 1, 2011 & **Feb. 15, 2012**

The SSS program supports research on methods to acquire and use sensor data on civil, mechanical, and manufacturing systems. The program supports fundamental research on advanced actuators, sensors, wireless sensor networks, new materials and concepts for sensing applications, power generation and energy supply for sensors and sensing systems. Also of interest is research on the strategic incorporation of sensors into both natural and engineered systems to achieve effective data acquisition and on processing and transmission of sensor data.

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13349&WT.mc_id=USNSF_39&WT.mc_e_ev=click

\$ - NSF - Infrastructure Management and Extreme Events (IMEE) (PD 10-1638)

Deadline: October 1, 2011 & Feb. 15, 2012

The IMEE program focuses on the impact of large-scale hazards on civil infrastructure and society and on related issues of preparedness, response, mitigation, and recovery. The program supports research to integrate multiple issues from engineering, social, behavioral, political, and economic sciences. It supports fundamental research on the interdependence of civil infrastructure and society, development of sustainable infrastructures, and civil infrastructure vulnerability and risk reduction.

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13353&WT.mc_id=USNSF_39&WT.mc_c_ev=click

\$ - NIH & CDC - Obesity Policy Research: Evaluation and Measures (R01) (PA-10-027)

Deadlines for R01: Feb. 5, June 5, Oct. 5, 2012

Deadlines for R21 & R03: Feb. 16, June 16, Oct. 16, 2012

This Funding Opportunity Announcement (FOA) encourages Research Project Grant (R01) applications that propose to: (1) conduct evaluation research on obesity-related "natural experiments" (defined here as community and other population-level public policy interventions that may affect diet and physical activity behavior), and/or (2) develop and/or validate relevant community-level measures (instruments and methodologies to assess the food and physical activity environments at the community level). The overarching goal of this FOA is to inform public policy and research relevant to (1) diet and physical activity behavior, and (2) weight and health outcomes of Americans. This FOA will utilize the research project (R01) grant mechanism, and runs in parallel with two other FOAs of identical scientific scope, PA-10-028 and PA-10-029 that encourage applications under the NIH Exploratory/Developmental (R21) and NIH Small Research (R03) grant mechanisms.

R01 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-10-027.html
R01 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-10-028.html
R03 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-10-029.html

\$ - NIH & CDC- School Nutrition and Physical Activity Policies, Obesogenic Behaviors and Weight Outcomes (R01) (PA-10-052) Disease Control and Prevention

Deadlines: Feb. 5, June 5, Oct. 5, 2012

Deadlines for R21 & R03: Feb. 16, June 16, Oct. 16, 2012

Grant applications are encouraged that propose to: (1) Foster multidisciplinary research that will evaluate how policies (federal, state and school district levels) can influence school

physical activity and nutrition environments, youths' obesogenic behaviors (e.g., nutrition and physical activity behaviors), and weight outcomes; (2) Understand how schools are implementing these policies and examine multi-level influences on adoption and implementation at various levels (e.g. federal, state, school district, and school); and (3) understand the synergistic or counteractive effect of school nutrition and physical activity polices on the home and community environment and body weight.

The funding opportunities described here are related, but separate to other recently announced program announcements: *Obesity Policy Research: Evaluation and Measures* (R01: PA-10-027; R21: PA-10-028; R03: PA-10-029). As a general guide, if the focus of a grant proposal is on evaluation research of obesity-related policies outside the school environment, and/or development/validation of community-level measures, the *Obesity Policy Research: Evaluation and Measures* funding opportunities may be the most appropriate. If a grant proposal focuses on children in the context of home/family, schools and/or macro policy environments, the *School Nutrition and Physical Activity Policies, Obesogenic Behaviors and Weight Outcomes* may be the most appropriate funding opportunity to which researchers should apply.

R01 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-10-052.html
R01 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-10-053.html
R03 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-10-053.html

\$ - NIH - Home- and Family-Based Approaches for the Prevention or Management of Overweight or Obesity in Early Childhood (R01) (PA-10-127)

Deadlines for R01: Feb. 5, June 5, Oct. 5, 2012 **Deadlines for R21: Feb. 16,** June 16, Oct. 16, 2012

This Funding Opportunity Announcement (FOA) invites Research Project Grant (R01) applications from institutions/organizations that propose randomized clinical trials testing novel home- or family-based interventions for the prevention or management of overweight in infancy and early childhood. Tested interventions can use behavioral (including dietary and physical activity), environmental, or other relevant approaches. Applications should focus on infants and young children (up to age 6) and emphasize the role of home environment and the influence of family/extended family members and parents (including guardians/substantial care-providers) within the child's home environment. The direct goal of this initiative is to fund research that will advance knowledge for innovative approaches to the prevention or management of overweight in children younger than 6 years of age, with potential for future translation to applications either in the home or linked to a community setting. Research should consider the familial mechanisms of behavior such as the role of families in the initiation, support, and reinforcement of fundamental food and beverage consumption, physical activity practices and sedentary behaviors. In addition, it is of interest to elucidate various underlying behavioral determinants that are crucial to initiate or sustain changes in behaviors that impact energy balance. Research designs may include linkages with other settings (e.g., daycare, preschool, or other community venues) or other care providers (e.g., health-care providers or

teachers) but must include infants or children younger than age 6 years as the primary study participant along with parents, and/or other family members residing with the child. The overarching goal is to identify interventions that influence parent and child behaviors that contribute to inappropriate weight gain, and thereby improve subsequent health status in childhood, adolescence, and adulthood for which overweight is a known risk factor. This FOA will utilize the research project (R01) grant mechanism and runs in parallel with a FOA of identical scientific scope, PA-10-128, that encourages applications under the R21 mechanism.

R01 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-10-127.html
R29 FOA: http://grants1.nih.gov/grants/guide/pa-files/PA-10-128.html

\$- NIH -Geographic and Contextual Influences on Energy Balance-Related Health Behaviors (R01) (PA-08-192)

Deadlines for R01: Feb. 5, June 5, Oct. 5, 2012

Deadlines for R21: Feb. 16, June 16, Oct. 16, 2012

This funding opportunity announcement (FOA) encourages the submission of grant applications that propose hypothesis-driven projects exploring associations between the built environment, other contextual features of where people of all ages live and work and health behaviors related to energy balance. These projects should use population level data from health surveys and other large health studies. It is expected that the proposed projects will be designed to add/include contextual variables at diverse levels of geographic aggregation to such studies on behaviors that affect individual energy balance and thereby health. Subsequent analyses should be aimed at understanding the relative importance of the contextual variables (including home, work, school, and/or other environments) as determinants of energy balancerelated health behaviors. Grant applications will be expected to use population level data from diverse sources for: 1) generation and addition of new geographic information system (GIS) data layers for analysis of contextual variables such as measures of the built and natural environments, to existing studies; 2) analyses of existing confidential geographic-based data either on site, at survey data centers, or other protected sites; and/or 3) merging multiple health-related data resources to allow new analyses of associations between contextual variables and energy balance-related health behaviors. This FOA will utilize the NIH research project R01 grant mechanism and runs in parallel with an FOA of identical scientific scope, PA-08-193, that solicits applications for exploratory, pilot projects under the NIH R21 grant mechanism.

R01 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-08-192.html R21 FOA: http://grants.nih.gov/grants/guide/pa-files/PA-08-193.html

\$ - USDA, NIFA - Animal Health

Deadlines: Letter of Intent - Feb 22, 2012 (Anticipated) **Full Proposal – Apr 06, 2012** (Anticipated)

Applicants must address at least one of the following: Improved prevention, control or mitigation of the following diseases:

- 1. Aquaculture: Visceral Toxicosis of Channel Catfish (limited to developing practical and economical prevention or control tools/measures to reduce losses that can be used on commercial farms within two to five years)
- 2. Beef cattle: Bovine Respiratory Disease Complex (limited to study of the synergy of major bacterial and viral agents implicated in BRDC to support improved prevention/control)
- 3. Broilers: Infectious Laryngotracheitis (limited to strategies for improved vaccines)
- 4. Dairy cattle: Staphylococcus aureus or Streptococcus species mastitis (limited to host-pathogen interactions to support improved prevention/control)
- 5. Layers: E. coli peritonitis (limited to strategies for prevention/control)
- 6. Swine: Porcine Reproductive and Respiratory Syndrome (limited to study of mechanisms of heterologous protection to support improved vaccines)

On a global basis, diseases of livestock (including horses) and poultry and aquacultured species are significant hindrances to sustainable animal production, as well as animal well-being. In addition to contributing to animal suffering, diseases result in billions of dollars of economic losses in the U.S. annually, with global losses exceeding hundreds of billions of dollars. New and improved animal disease prevention, control, and mitigation strategies are needed to address current losses and prepare for future threats. Current knowledge gaps in these areas, however, seriously impede a major reduction in animal diseases that are already present in the United States information gaps also jeopardize food security and the future viability of animal industries by increasing animals' vulnerability to pathogens which may establish new niches or undergo genetic mutations to result in new and re-emerging diseases. Research is also needed to develop effective methods to detect and control the potential spread of foreign diseases that are accidentally or intentionally introduced. A growing number of current control strategies, such as antibiotics and pesticides, are becoming less effective due to increasing pathogen resistance. Use of these pharmaceutical products and pursuit of new ones will likely be further reduced due to societal concerns and high development costs. Similarly, current vaccines face the threat of further reduction of efficacy due to pathogen genetic drift and mutation. With fewer options expected in the future to prevent and control important animal diseases, the need for new and improved tools is clear. By better understanding pathogenesis, host-pathogen interactions, immunology, epidemiology, and disease ecology, global animal health will improve through the discovery and development of innovative tools and disease management protocols. This will also support a reduction in non-tariff trade barriers and continue to safeguard the production of high quality foods for consumers.

http://fundingopps.cos.com/cgi-bin/fo2/getRec?id=123944

\$ - USDA, NIFA - Nanotechnology for Agricultural and Food Systems

Deadlines: Letter of Intent – 2/22/12 (Anticipated) **Full Proposal** – 5/11/12 (Anticipated)

This program encompasses nanoscale science, engineering, and technology that address a broad range of critical challenges and opportunities facing agriculture and food systems. Applicants should put forth innovative ideas to develop nanotechnology enabled solutions for global food security through improved productivity and quality, adaptation and mitigation of agricultural production systems to climate changes, improving nutritional quality of foods, and biobased products and bioenergy are suitable and encouraged. he program scope includes, but is not limited to:

- novel uses and high value-added products of nano-biomaterials of agricultural origins for food and non-food applications,
- nanoscale-based sensing mechanisms and devices for reliable early detection of diseases and monitoring physiological biomarkers for optimal production,
- precision agriculture technologies including applications of agricultural chemicals and water resources, and water quality improvements.

In addition, discovery and characterization of nanoscale phenomena and processes important in agricultural production species will be supported. To ensure responsible development of nanotechnology applications, the development of methods to evaluate the risk assessment of nanoparticles or the actual assessment of nanoparticles are encouraged. Finally, research on nanostructures of great promise in agricultural production and processing is also applicable.

http://fundingopps.cos.com/cgi-bin/fo2/getRec?id=123951

\$ - USDA, NIFA - Prosperity of Small and Medium-Sized Farms and Rural Communities

Deadline: March 23, 2012 (Anticipated)

The Prosperity of Small and Medium-Sized Farms and Rural Communities Program seeks to generate knowledge that will:

- increase the value of agricultural products sold per farm by small and medium-sized farms through the adoption of environmentally sustainable, economically viable best management practices;
- increase the accessibility and decrease the costs of inputs, including credit, to small and medium-sized farms;
- enhance sustainability of small and medium-sized farms and rural communities through appropriate entrepreneurship and small business development;
- enhance the efficiency and equity of public and private investment in agriculture and rural communities; and
- develop common methods and practices for decision making about optimal landscape design to promote sustainable rural development and in turn, reduce rural poverty.

Applicants must address at least one of the following:

1. Develop new multidisciplinary (economic, physical, biological, environmental, et cetera)

models and tools to facilitate the adoption of new agricultural production and conservation practices, including conservation and carbon offset programs to mitigate the effects of climate change, and in turn, to enhance the prosperity of small and medium-sized farms, including forestland and ranches.

- 2. Evaluate the impacts of changes in input costs and markets, including credit and insurance markets, and their effects on farm entry, farm transition and farm viability; and private strategy and public policy options for addressing these effects.
- 3. Promote the sustainability of small and medium-sized farms and rural communities, by enhancing knowledge of appropriate entrepreneurship and small business development strategies, including the use of emerging information technology systems, e-commerce, local and regional partnerships, entrepreneurial networks, value-added processing, workforce development, et cetera.
- 4. Evaluate the institutional, social, cultural, economic and psychological factors that affect consumer and producer behavior in rural communities and in turn, enhance the efficiency and equity of public and private sector investment in agriculture and rural communities.
- 5. Identify optimal regional land use and architectural decisions that protect the rural environment and promote economic development while reducing poverty and enhancing rural quality of life.

Approximately \$7 million will be awarded. Proposed budgets exceeding \$500,000 total (including indirect costs) for project period of up to five years will not be reviewed. If a project funded for research is commodity-specific and not of national scope, the grant recipient is required to match the USDA funds awarded on a dollar-for-dollar basis from non-federal sources with cash or in-kind contributions.

\$ - USDA, NIFA - Animal Reproduction

Deadline: April 6, 2012 (Anticipated)

Applicants must address at least one of the following:

- 1. Function of the hypothalamic-pituitary-gonadal axis.
- 2. Embryonic and fetal development, including interaction between the conceptus and its uterine environment.

Poor fertility is a major factor limiting the efficiency of animal production and, over the past several decades, fertility has declined significantly in several species of agricultural importance. This rate of decline has far outpaced the discovery of new information on the reproductive biology of these animals. Research is needed that expands our understanding of the basic biological mechanisms of reproduction in livestock, poultry, equine, and aquacultured species. This fundamental knowledge is requisite to the development of new management strategies to mitigate poor fertility and increase reproductive efficiency in herds and flocks. Areas with major gaps in knowledge include the hypothalamic-pituitary axis; gonadal function, (endocrine as well as production, function, and preservation of gametes); and embryonic and fetal development (e.g., interaction between the conceptus and its uterine environment). Approximately \$4 million will be awarded. Proposed budgets exceeding \$500,000 total (including indirect costs) for project period of up to five years will not be reviewed. If a project funded for research is commodity-specific and not of national scope, the grant recipient is

required to match the USDA funds awarded on a dollar-for-dollar basis from non-federal sources with cash or in-kind contributions.

\$ - NSF - Division of Molecular and Cellular Biosciences: Investigator-initiated research projects (MCB) (NSF 11-545)

Deadline: September 6, 2011 & May 21, 2012

The Division of Molecular and Cellular Biosciences (MCB) supports fundamental research and related activities designed to promote understanding of complex living systems at the molecular, subcellular, and cellular levels. The Division is soliciting proposals for hypothesis-driven and discovery research and related activities in four core clusters:

- Biomolecular dynamics, structure, and function
- Cellular processes
- Genetic mechanisms
- Networks and regulation

The Division supports research using a range of experimental approaches--including *in vivo*, *in vitro* and *in silico* strategies--and a broad spectrum of model and non-model organisms, especially microbes and plants. Typical research in areas supported by MCB integrates theory and experimentation. The Division gives high priority to research projects that use theory, methods, and technologies from physical sciences, mathematics, computational sciences, and engineering to address basic biological questions. **The Division is also interested in projects aimed at understanding and predicting the molecular and cellular underpinnings of phenotypic variation and adaptation to environmental change. Highest funding priority is given to applications that are outstanding in both intellectual merit and broader impacts. The Division supports both hypothesis-driven research and discovery-based, large-scale biology research.**

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503626&WT.mc_id=USNSF_39&WT.mc_ev=click

\$ - NSF - Collections in Support of Biological Research (CSBR) (NSF 11-558)

Deadline: October 16, 2011, **July 27, 2012**

The Collections in Support of Biological Research (CSBR) Program provides funds for improvements to secure, improve, and organize collections that are significant to the NSF/BIO-funded research community. Support is also provided to secure collections-related data for sustained, accurate, and efficient accessibility of the collection to the biological research community. Supplemental funding is also available to transfer collection ownership responsibilities or consolidate or combine existing collections. The CSBR program provides for enhancements that secure and improve existing collections, result in accessible digitized specimen-related data, and develop better methods for specimen curation and collection management. Requests should demonstrate a clear and urgent need to secure the collection, and the proposed activities should address that need. Biological collections supported include

established living stocks/culture collections, vouchered non-living natural history collections, and jointly-curated ancillary collections such as preserved tissues and DNA libraries. More at: http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503651&WT.mc_id=USNSF_39&WT.mc_ev=click

\$ - USDA, NIFA – Western SARE - Sustainable Agriculture Tour Grants

Deadline: applications accepted year round

Sustainable Agricultural Tour Grants are funded for only one year. Any agriculture/natural resource professional in the Western region may apply. These professionals are cooperative extension educators/agents and specialists, USDA-NRCS field staff, agricultural consultants, nonprofit staff members or other agricultural professionals assisting producers at the local level. The grant applicant's institution and or organization are fiscally responsible for the project. These grants are offered as a cost reimbursable contract. Applicants are required to have at least one past or current Western SARE-funded project as part of the tour. Preference will be given for the more Western SARE-funded projects visited. The maximum amount per grant application is \$2,000. These grants are to provide opportunities for producers to:

- Interact and network with producers, and
- Assist producers in adoption of sustainable agricultural production.

URL: https://wsare.usu.edu/grants/RFA/TRG_2010.pdf

\$ - NSF - <u>SBE Doctoral Dissertation Research Improvement Grants (SBE DDRIG)</u> (NSF 11-547)

Full Proposal Deadline Date: Multiple due dates depending on topic

Program Guidelines: The National Science Foundation's Division of Behavioral and Cognitive Sciences (BCS), Division of Social and Economic Sciences (SES), National Center for Science and Engineering Statistics (NCSES), and the SBE Office of Multidisciplinary Activities (SMA) award grants to doctoral students to improve the quality of dissertation research. These grants provide funds for items not normally available through the student's university. Additionally, these grants allow doctoral students to undertake significant data-gathering projects and to conduct field research in settings away from their campus that would not otherwise be possible. Proposals are judged on the basis of their scientific merit, including the theoretical importance of the research question and the appropriateness of the proposed data and methodology to be used in addressing the question. In an effort to improve the quality of dissertation research, many programs in both BCS and SES, the Research on Science and Technology Surveys and Statistics program within NCSES, and the Science of Science and Innovation Policy program in SMA accept doctoral dissertation improvement grant proposals. Requirements vary across programs, so proposers are advised to consult the http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13453&WT.mc_id=USNSF_39&WT.m c_ev=click