

ABE-Notes

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Issue 01 – January 6, 2010

Funding Opportunities

USDE FIELD-INITIATED (FI) PROJECTS - <http://www.ed.gov/programs/fip/index.html> Deadline:

January 6. The purpose of the FI Projects program is to develop methods, procedures, and rehabilitation technology that maximize the full inclusion and integration into society, employment, independent living, family support, and economic and social self-sufficiency of individuals with disabilities, especially individuals with the most severe disabilities. NIDRR makes two types of awards under the FI Projects program: research grants (CFDA 84.133G-1) and development grants (CFDA 84.133G-2). In carrying out a research activity, a grantee must identify one or more hypotheses or research questions and perform an intensive, systematic study directed toward producing (1) new scientific knowledge, or (2) better understanding of the subject, problem studied, or body of knowledge.



ANNUAL SHOWALTER TRUST - this year's focus is on air and water pollution, biochemistry, human disease, food production, and instrumentation. They are also looking for new, interdisciplinary approaches.

Therefore, a number of faculty might be interested in applying for this. Funds cannot be used for supporting efforts in sociology, social studies, or psychiatry. Only six preproposals from each college will be considered at the university level, where they will compete with those from other colleges, and approximately about 20-24 will be selected for full proposal. Typically, the Showalter trust will fund 8-10 proposals. Proposal requests cannot exceed \$75,000. The six preproposals are due to the VPR's office on January 18, 2010. The preproposal must be submitted electronically to Sherry Oland no later than

December 14, 2010. Additional details are available at:

<http://www.purdue.edu/research/vpr/funding/showalter.php>.

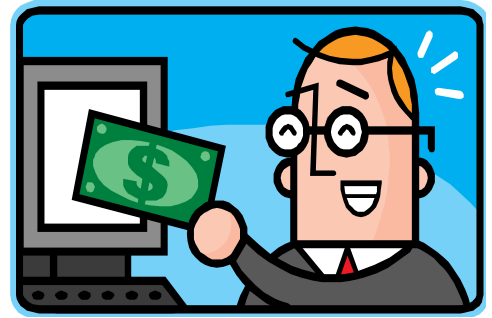


Funding Opportunities

NIH ENGINEERED NANOMATERIALS: LINKING PHYSICAL AND CHEMICAL PROPERTIES TO BIOLOGY

(U19) - <http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-09-011.html>

Deadline: January 22. The National Institute of Environmental Health Sciences invites applications that will (1) determine which physical or chemical characteristic of an engineered nanomaterial (ENM), or cluster of characteristics, is integral to ENM-molecular interactions in a cellular process or organ system and (2) relate these findings to potential health effects. NIEHS recognizes that three types of activities need to converge to accomplish this research agenda. The first activity should focus on a detailed understanding of how physical and chemical characteristics of ENMs influence their molecular interactions at the cellular level, while the second activity should determine how the physical and chemical characteristics critical to that interaction are associated with any observed physiological or pathobiological events. The third activity will capitalize on these multidisciplinary efforts through integration of biochemical, molecular, and physiological mechanisms to expand traditional hazard identification and health risk assessment. An extraordinary level of synergy, integration, and potential for advancement of ENM hazard identification and risk assessment is expected. Proposals responsive to this FOA should employ three projects that will examine an overarching research theme through mechanistic studies and in vitro, ex vivo, and in vivo model systems. Grants awarded under this FOA will become part of a consortium that will collaboratively manage the research conducted through the individual grants. Funds Available and Anticipated Number of Awards. The total amount of funding to be committed to this program is \$5 million (total costs) per year for 5 years. An applicant may request a project period of up to 5 years and a budget for direct costs up to \$750,000 dollars per year.



ENGINEER OF 2020 SEED GRANT PROGRAM - The Request for Proposal (RFP) can be found on the Engineer of 2020 website at:

<https://engineering.purdue.edu/Intranet/Groups/Committees/Engr2020/SeedGrantProgram/2010>.

Proposals with budgets of up to \$40k will be considered. Specifically, the Program objectives are to solicit innovative proposals that will: 1) accelerate the effective and sustainable development of the target attributes of the Purdue's Engineer of 2020 in our graduates, and 2) to foster collaboration across the College in this endeavor, including broad dissemination and uptake of effective teaching and learning strategies that will achieve the goals of the Purdue Engineer of 2020. The deadline to submit the RFP is January 22, 2010 by 5pm in the Dean's Office (for specific details, see the RFP).

THE NATIONAL SCIENCE FOUNDATION - has released this year's solicitation for the Integrative Graduate Education and Research Traineeship Program (IGERT), which "has been developed to meet the challenges of educating U.S. Ph.D. scientists and engineers who will pursue careers in research and education, with the interdisciplinary backgrounds, deep knowledge in chosen disciplines, and technical, professional, and personal skills to become, in their own careers, leaders and creative agents for change. The program is intended to catalyze a cultural change in graduate education, for students, faculty, and institutions, by establishing innovative new models for graduate education and training in a fertile environment for collaborative research that transcends traditional disciplinary boundaries. It is also intended to facilitate diversity in student participation and preparation, and to contribute to a world-class, broadly inclusive, and globally engaged science and engineering workforce." The request for proposals is available at <http://www.nsf.gov/pubs/2010/nsf10523/nsf10523.htm>.



USDA SPECIALTY CROP RESEARCH INITIATIVE (SCRI) -

<http://www.nifa.usda.gov/funding/scri/scri.html> Deadline: January 14. The National Institute of Food and Agriculture requests applications for the Specialty Crop Research Initiative (SCRI) for fiscal year (FY) 2010 to solve critical United States specialty crop issues, priorities, or problems through the integration of

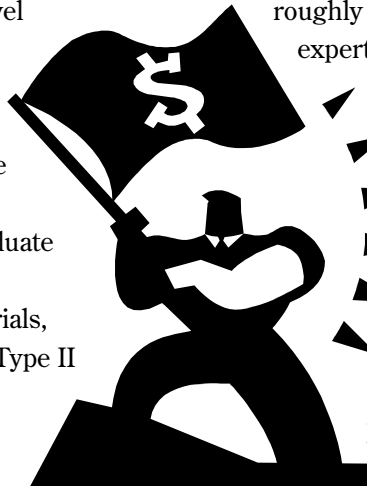


research and extension activities that takes systems-based, trans-disciplinary approaches. The intent of the SCRI is to solve the needs of the various specialty crop industries through the promotion of collaboration, open communication, the exchange of information and the development of resources that accelerate application of scientific discovery and technology. The SCRI offers the following five project types in FY 2010. Applicants should decide which project type is best suited to the objectives of their research and extension project and develop a budget that fits the objectives.

1. Standard Research and Extension Projects (SREPs) - To support targeted problem-solving efforts that would not otherwise qualify in scope for support as a CAP project. Budget requests should be not less than \$250,000 with a project period of up to five years.
2. Coordinated Agricultural Projects (CAPs) - To address specific multiple components of a primary system or multiple components of areas where primary systems overlap. Budget requests should not exceed \$2,000,000 per year with a project period of three to five years.
3. Regional Partnerships for Innovation (RPIs) - To form partnerships that provide the local or regional infrastructure needed to fully exploit future technology commercialization and adoption. Budget requests should not exceed \$2,000,000 with a project period of two to three years.
4. eXtension Projects - To develop Communities of Practice (COPs) for the eXtension system and to support existing COPs. Budget requests should not exceed \$500,000 with a project period of three to five years.
5. Research and Extension Planning Projects - To provide assistance to applicants in the development of quality proposals. Budget requests can be up to \$50,000 with a project period of one year.

NSF CYBER-ENABLED DISCOVERY AND INNOVATION (CDI) -

<http://www.nsf.gov/pubs/2010/nsf10506/nsf10506.htm> CDI seeks ambitious, transformative, multidisciplinary research proposals within or across the following three thematic areas: From Data to Knowledge: enhancing human cognition and generating new knowledge from a wealth of heterogeneous digital data; Understanding Complexity in Natural, Built, and Social Systems: deriving fundamental insights on systems comprising multiple interacting elements; and Virtual Organizations: enhancing discovery and innovation by bringing people and resources together across institutional, geographical and cultural boundaries. Two types of CDI awards will be supported as a result of the FY 2010 CDI competition: Type I awards will require efforts up to a level roughly comparable to: summer support for two investigators with complementary expertise; two graduate students; and their collective research needs (e.g. materials, supplies, travel) for three years. Submission window: January 4 - February 4. Type II awards will require larger (than Type I) efforts up to a level roughly comparable to: summer support for three investigators with complementary expertise; three graduate students; one or two senior researchers and staff; and their collective research needs (e.g. materials, supplies, travel) for four years. The integrative contributions of the Type II team should clearly be greater than the sum of the contributions of each individual member of the team. Submission window: January 5 - February 5. In subsequent years, subject to availability of funds, funding opportunities will include Type III awards - Type III awards will require the engagement of larger (than Type II) multidisciplinary teams, roughly comparable to multiple senior investigators with complementary expertise, multiple graduate students, several senior personnel, and their collective research needs (e.g. materials, supplies, travel) for up to five years. As for Type II awards, the integrative contributions of the Type III team should be clearly greater than the sum of the contributions of each individual member of the team.



NIH PARTNERSHIPS IN IMPLEMENTING PATIENT SAFETY II (R18) -

<http://grants.nih.gov/grants/guide/pa-files/PA-10-022.html> Deadline: Standard dates apply, please see <http://grants1.nih.gov/grants/funding/submissionschedule.htm> Expiration Date: January 8, 2013. The purpose of this Funding Opportunity (FOA) is to support Research Demonstration and Dissemination (R18) grant applications from organizations that will implement safe practice interventions that demonstrate evidence of reducing or eliminating medical errors, risks, hazards, and harms associated with the process of health care. These 24 month implementation projects will inform AHRQ, providers, patients, payers, policy makers, and the public about how safe practice interventions can be successfully implemented in diverse health care settings and lead to safer and better health care for all Americans. This FOA follows the release of an earlier FOA in 2005 that resulted in the release of successful implementation projects and toolkits available to the public. Background information on the earlier FOA can be found at <http://grants1.nih.gov/grants/guide/FOA-files/FOA-HS-05-012.html>. Examples of and Information on projects from the initial Partnerships in Implementing Patient Safety FOA can be found at <http://www.ahrq.gov/qual/pips/>. The total costs awarded under this FOA will not exceed \$300,000 annually for the entire 24 month project period. Any application with a budget that exceeds \$300,000 total costs per year will not be reviewed. The project period for these grants is 24 months. Funding beyond the first year will be contingent upon a review and acceptance of the annual progress report by Agency staff.

NIH STATE AND COMMUNITY TOBACCO CONTROL POLICY AND MEDIA RESEARCH

(U01) - <http://grants.nih.gov/grants/guide/rfa-files/RFA-CA-10-008.html> Deadline: January 22. This Funding Opportunity Announcement (FOA), issued by the National Cancer Institute (NCI), solicits cooperative agreement (U01) applications for research projects to investigate the effectiveness of the State and community tobacco control policy and media interventions. Focal areas include secondhand smoke policies, tax and pricing policies, tobacco industry marketing and promotion, mass media countermeasures, and community and social norms. The proposed projects may address tobacco use and exposure in any form in the United States and may involve both observational and intervention studies. In addition, this FOA also solicits separate cooperative agreement applications for a Coordinating Center for this program. The Coordinating Center will provide the necessary scientific leadership and administrative framework to facilitate interactive and integrative collaboration and communication among the awardees of individual Research Projects to be funded by this initiative and between the awardees and NCI staff. The NCI expects to commit approximately \$12 million in Fiscal Year 2010 to fund approximately four to six Research Project Awards and one Coordinating Center award. Future year amounts will depend on annual appropriations. Research Project applications may request a project period of up to 5 years at a budget of up to \$ 1.7 million per year (total costs). Coordinating Center applications may request a project period of up to 5 years at a budget of up to \$2 million per year (total costs).

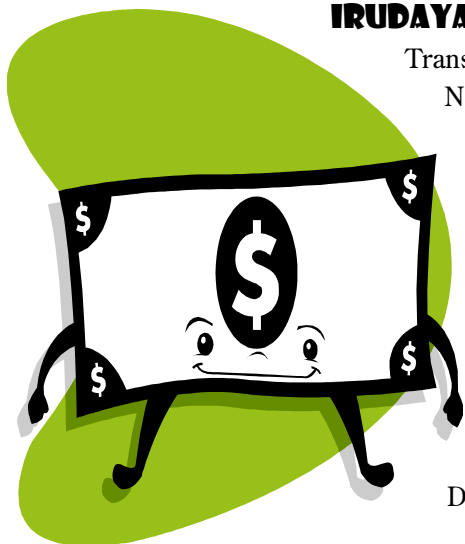
NIH ENVIRONMENTAL HEALTH SCIENCES CORE CENTER GRANTS (P30) -

<http://grants.nih.gov/grants/guide/rfa-files/RFA-ES-10-001.html> Deadline: March 31. The National Institute of Environmental Health Sciences (NIEHS) invites applications from qualified institutions for support of Environmental Health Sciences (EHS) Core Centers. These Centers are designed to establish innovative programs of excellence in the field of environmental health sciences by providing scientific and programmatic support for promising investigators and areas of research. A Core Center Grant is an institutional award to support centralized scientific resources and facilities shared by investigators with existing research projects. By providing a Center structure and Core resources this support is intended to enhance the ability of scientists working in the field of environmental health sciences to identify and capitalize on current and emerging opportunities that will lead to outstanding research advances to improve our understanding of the relationship between environmental exposures and both human biology and human disease. The NIEHS plans to award up to \$6 million in FY 2011 to fund approximately four grants in response to this FOA. New or first-time applicants can apply for up to 4 years of support. New applications are limited to requests for no more than \$600,000 in direct costs in the first year; \$700,000 in direct costs in the second year; \$800,000 in direct costs in the third year; and \$900,000 in direct costs in the fourth year and a minimum of \$100,000 per year is to be dedicated to the Community Outreach and Education Core (COEC). Competing renewal applications may request up to 5 years of support and up to \$1,100,000 per year, with a minimum of \$100,000 per year devoted to the COEC. ARRA (stimulus) funding and limited submissions: Information for Purdue researchers about ARRA funding opportunities and requirements may be found at

<http://www.purdue.edu/Research/vpr/recovery/index.php>. New ARRA funding opportunities are posted on this site as they are issued by the sponsors.



Projects Funded



IRUDAYARAJ AND KIRCHMAIER - \$10,000 – Indiana Clinical & Translational Sciences institute – NIH CTSI – “Manipulating the Fate of Neural Stem Cells by Regulating Epigenetic Processes.”

MICHAEL LADISCH – is one of the recipients of this year’s Millionaire’s Club Award. This award recognizes personnel in the College of Agriculture who have been awarded a \$1M or higher grant.

IRUDAYARAJ AND KIRCHMAIER - \$15,000 + \$15,000 – Purdue Center for Cancer Research Innovative Idea Grant – “Defining Epigenetic Programming Directing Double Stranded DNA Break Repair by Single Molecule Methods.”

Publications/Papers/Presentations

CHEN, J. AND IRUDAYARAJ, J. - Quantitative investigation of compartmentalized dynamics of ErbB2 targeting gold nanorods in live cells by single molecule spectroscopy. ACS Nano. V. 3. (ahead of print).

UMULIS DM. - Analysis of dynamic morphogen scale-invariance. Journal of the Royal Society: Interface. November 2009.

WANG, C. AND IRUDAYARAJ, J. - Multifunctional magnetic-Optical nanoparticle probes for simultaneous detection, separation, and thermal ablation of multiple pathogens. Small Journal (online).

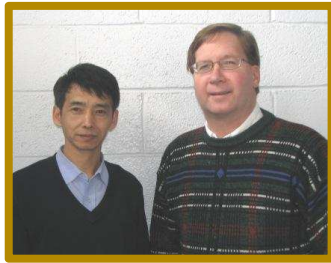
OTHMER HG, PAINTER K, UMULIS DM, AND XUE C. - Mathematical models of pattern formation in biology. MMNP on Morphogenesis, 4, 3-79 2009.

IRUDAYARAJ – Invited Lecture – Nanotechnology for detecting microRNAs (IUPUI microRNA Symposium, November 2009).

UMULIS DM, O’CONNOR MB, BLAIR SS. - the extracellular regulation of Bone Morphogenetic Protein signaling. Development, November 15 2009.



ABC News



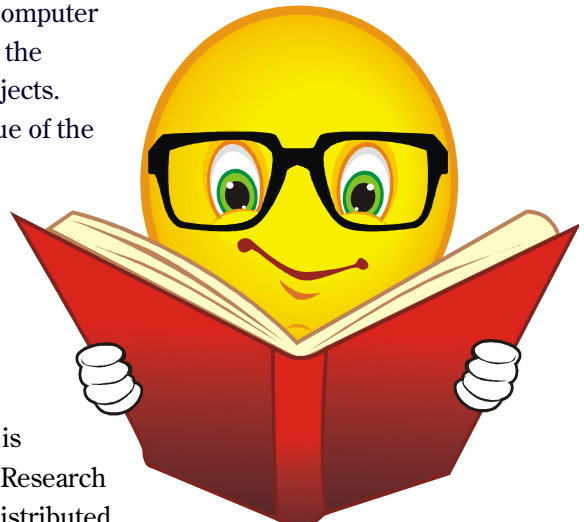
DENNIS BUCKMASTER - will have a new visiting scholar; Mr. Wang Defu who is visiting from Northeast Agricultural University, Heilongjiang province, China. Mr. Defu will be collaborating with Dennis Buckmaster and likely Animal Science faculty with regard to machinery systems for forage handling, ensiling, and total mixed ration delivery.

Student News

PAULO HENRIQUE SANTOS – his paper was awarded the “Best Student Paper Award of the International Conference on Chemical Engineering 2009” at The World Congress on Engineering and Computer Science - the WCECS 2009 is organized by the International Association of Engineers (IAENG), a non-profit international association for the engineers and the computer scientists. The congress has the focus on the frontier topics in the theoretical and applied engineering and computer science subjects. This paper was also selected to be published in the special issue of the journal “Engineering Letters”, an International Association of Engineers publication.

MAYA SAWADSKY-WEIST – attended the UN Climate Change Conference in Copenhagen from December 7 thru December 18.

REBECCA LOGSDON – her undergraduate research paper is being published in the University of Arkansas Undergraduate Research Journal, *Inquiry*. The title of the paper is "Development of a Distributed Artificial Neural Network for Hydrologic Modeling."



STUDENT GRANTS - Funds are available to provide grants to students or student organizations for work on community service learning projects. The program, sponsored by the vice provost for engagement, has the goal to expand the community involvement of Purdue students in partnership with communities, nonprofit agencies, schools, and governmental bodies. A copy of the Application and Guidelines for the Student Grant Program for Community Service/Service Learning Projects can be found online at www.purdue.edu/engagement/service/sgpcs.shtml. Applications are due for the spring semester projects on or before Feb. 12.

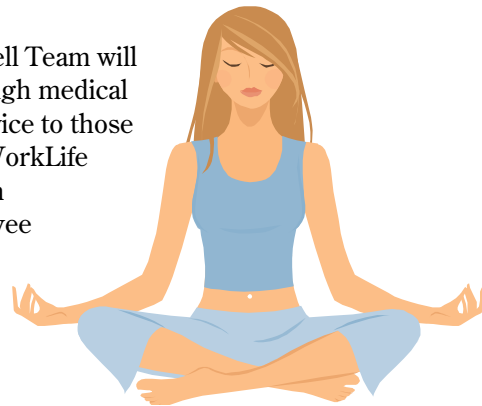
Alumni News

If you are looking for a new opportunity – check out our ABE Alumni Job Opportunity webpage at - https://engineering.purdue.edu/ABE/InfoFor/AlumniAndFriends/alumni_job_opportunities.html.

We would like to keep in touch with all ABE Alumni about ABE activities and events, as well as other college and department events, so be sure to send your current information and email address to Micky Creech at mcreech@purdue.edu!

FYI

CHOOSE WELL, LIVE WELL – a new Choose Well, Live Well Team will be available to help Purdue faculty, staff, and their families through medical and wellness matters in 2010, bringing an enhanced level of service to those who take advantage of the team's offerings. Staff Benefits and WorkLife Programs are partnering with CIGNA, Purdue's 2010 health plan administrator, to bring innovative worklife, wellness, and employee assistance program (EAP) services to Purdue through the new team. "The Choose Well, Live Well Personal Health Team will allow employees to dial one phone number for all kinds of support, the number, which will be active in January, is (800) 767-7141.



THE PATHWAY PROGRAM - The Purdue University College of Agriculture and Ivy Tech Community College-Lafayette are partnering on a new program to help make higher education even more accessible to Indiana students. The Pathway Program, is an educational offering that allows students to co-enroll at Ivy Tech and Purdue in preparation for an undergraduate degree in the College of Agriculture. Students in the program will take courses simultaneously at both institutions with the goal of eventually earning a bachelor's degree in agriculture from Purdue. For additional information visit: <http://www.agriculture.purdue.edu/agcomm/agnews/public/story.asp?newsid=2581>.



EMERGING ENERGY CAREER OPPORTUNITIES WORKSHOP

– January 13, 2010 – Pfendler Hall of Agriculture Dean's Auditorium – As part of a joint effort between Conexus Indiana, Indiana WIRED, and ATAIN, you are invited to be a part of Indiana's initiative to develop green and energy industry career opportunities. The workshop will be bringing together educators, energy related businesses, and other interested parties for a half-day workshop to begin the necessary dialogue of identifying the current and emerging demand for green and energy employment. You will learn about expected growth in high-wage occupations, what post secondary education and training will be required to qualify for these careers, and where that education and training is available across the state.

Calendar

January 2010

11	Classes Begin
11	Faculty/Staff Meeting – 11:30 am – ABE 301
18	University Holiday – Martin Luther King Jr. Day – No Classes
25	Faculty/Staff Meeting – 11:30 am – ABE 301

February 2010

8	Faculty/Staff Meeting – 11:30 am – ABE 301
16	Co-Op Days – PMU Ballrooms
17	Co-Op Days – PMU Ballrooms
19	DEA Award – Thomas Burke
22	Faculty/Staff Meeting – 11:30 am – ABE 301
23	Ag Resume Blitz – LILY Lobby – 11:00 am to 3:00 pm
24	College of Agriculture Spring Career Fair – PFEN – 10:00 am to 3:30 pm

March 2010

3	Purdue Graduate Student Career Fair – PMU Ballrooms – 10:00 am to 4:00 pm
5	DAA Award – Ed Voldell
8	Faculty/Staff Meeting – 11:30 am – ABE 301
12	Big Ten Career Expo – Union Station, Indianapolis – 9:00 am to 3:00 pm
15-20	Purdue Spring Break – March 15 thru March 20
22	Faculty/Staff Meeting – 11:30 am – ABE 301

April 2010

5	Faculty/Staff Meeting – 11:30 am – ABE 301
19	Faculty/Staff Meeting – 11:30 am – ABE 301
20	Just in Time Job Fair – 10:00 am to 3:00 pm – Purdue Memorial Union
22	ABE Outstanding Alumni Recognition, Senior Design & Capstone Project Judging & Alumni & Student Celebration Banquet

May 2010

1	Spring Classes End
3	Final Exams – May 3 through May 8
3	Faculty/Staff Meeting – 11:30 am – ABE 301
20	Purdue Spring Fling

