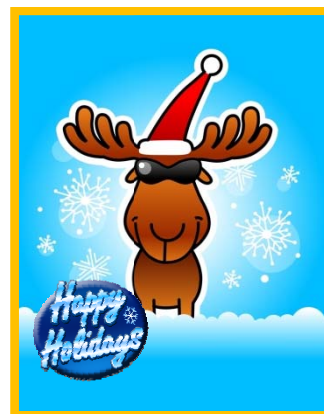


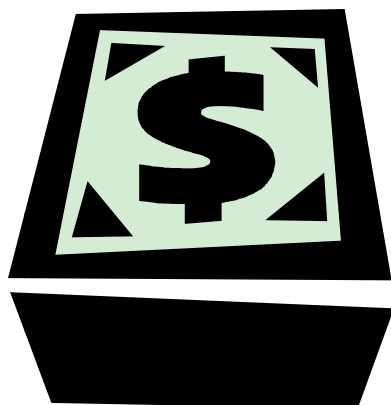
ABE-Notes

Published the 1st Wednesday of each month



Issue 12
December 2, 2009

Funding Opportunities



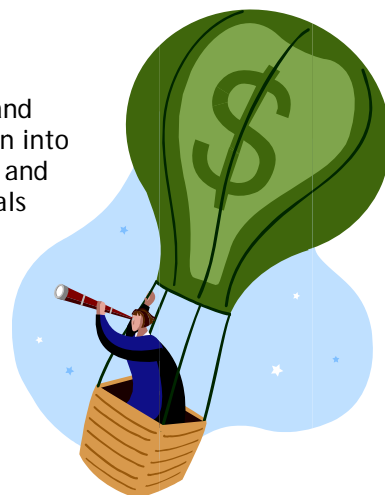
2010 Faculty Fellowships for Study in a Second Discipline - are due to the Provost's Office no later than December 14, 2009. We do not limit the number of applicants per college, but we hope to award fellowships to faculty in as many colleges as possible. The home departments of each recipient will receive \$7,000 per semester to cover substitute instruction. The award of \$3,500 each semester to each faculty recipient for travel, equipment, software and other types of research support associated with a new area of study. We will make up to five awards per semester on the West Lafayette campus. Applicants may apply for one or two semesters. Recipients will be announced in January. Please call or e-mail Beverly Davenport Sypher (bdsypher@purdue.edu) or Charlyce Patterson (cpatter@purdue.edu) if you have questions about the program.

USDE Centers for International Business Education Program -

<http://edocket.access.gpo.gov/2009/pdf/E9-26625.pdf> Deadline: December 8. The purpose of the Centers for International Business Education (CIBE) Program is to coordinate programs of the Federal government in the areas of research, education, and training in international business and trade competitiveness; and to provide grants to pay the Federal share of the cost of planning, establishing, and operating Centers for International Business Education. The agency anticipates making 31 grants of up to \$450,000 through this program. Institutes of higher education and coalitions of IHEs are eligible to participate.

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.





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 take 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.

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 converge to accomplish this research agenda. detailed understanding of how physical and ENMs influence their molecular interactions at the second activity should determine how the characteristics critical to that interaction are observed physiological or plathobiological activity will capitalize on these multidisciplinary integration of biochemical, molecular, and to expand traditional hazard identification and extraordinary level of synergy, integration, and ENM hazard identification and risk assessment is to this FOA should employ three projects that will research theme through mechanistic studies and in vitro, 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.



three types of activities need to
The first activity should focus on a chemical characteristics of the cellular level, while physical and chemical associated with any events. The third efforts through physiological mechanisms health risk assessment. An potential for advancement of expected. Proposals responsive examine an overarching ex vivo, and in vivo model

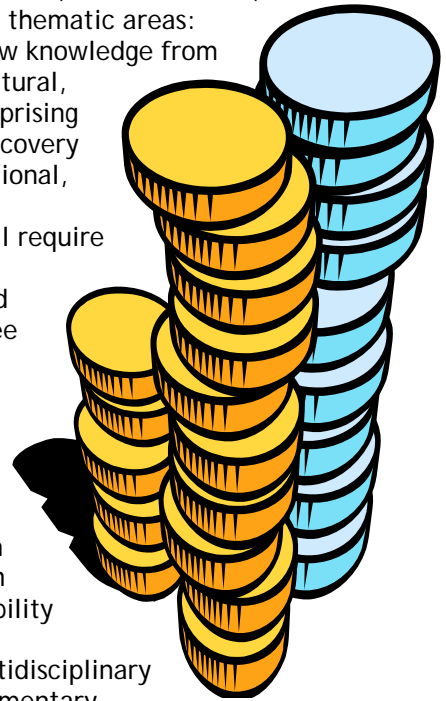
NSF Cyber-Enabled Discovery and Innovation (CDI) -

<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 personnel (including post-doctoral 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, as below:

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.

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>.

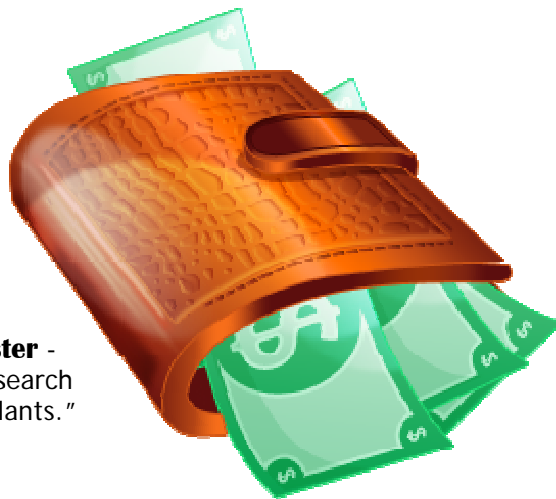
Engineer of 2020 Seed Grant Program - The Request for Proposal (RFP) can be found on the Engineer of 2020 website at:
<https://engineering.purdue.edu/Intranet/Groups/Committees/Engr2020/SeedGrantProgram/2010>.
Proposals with budgets of up to \$40k will be considered. Specifically, the Program objectives 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).

Projects Funded

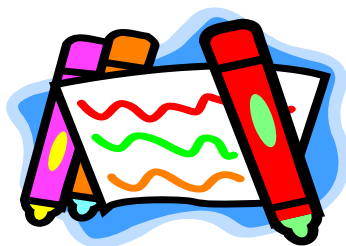
Michael Ladisch, Richard Linton, Bruce Applegate, Rashid Bashir, Arun Bhunia and Lisa Mauer -
\$1,505,692. Agricultural Research Service. "Improved Techniques for Foodborne Pathogens."

William Field - \$2,199,375. Cooperative State Research Service. "National Agrability Project."

Osvaldo Campanella, Carlos Corvalan and Stephen Heister -
\$1,250,000 (total of 5 year project = \$6,250,000). Army Research Office. "Spray and Combustion of Gelled Hypergolic Propellants."



Publications/Papers/Presentations



K. J. Harmeyer, M. A. Holland, T. W. Gallien, J. H. Lumkes and G. W. Krutz - "Embedded Sensors in Rubber and Other Polymer Components." - STRIAN - An International Journal for Experimental Mechanics.

Sabrina S. Jedlicka, Jenna L. Rickus, Dmitry Zemlyanov -
"Controllable Surface Expression of Bioactive Peptides Incorporated into a Silica Thin Film Matrix" - Journal of Physical Chemistry.

ABE News

Marshall Porterfield - has been elected President of ASGSB (American Society of Gravitational and Space Biology). The American Society for Gravitational and Space Biology (ASGSB), founded in 1984, provides a forum to foster research, education and professional development in the multidisciplinary fields of gravitational and space biology. Marshall organized and chaired the Saturday morning Symposia on Biological Engineering, which included genetic engineering in plant systems, metabolic engineering in microbial systems, and engineering of implantable biosensors for biomedical monitoring. Marshall students also participated; Aeraj ul Haque (ABE PhD) and Eric McLamore (ABE Post-Doc) were selected to speak, and Alfred Diggs (ABE PhD) was awarded first place in the student poster competition with Jonathan Claussen (ABE PhD) earning second in the poster contest.

Gary Krutz - has been named a Life Member of the American Society of Mechanical Engineers. Founded in 1880 the American Society of Mechanical Engineers promotes the art, science and practice of mechanical and multidisciplinary engineering and allied sciences around the globe.

Dr. Vince Bralts - former Head of ABE, visited Almaty Kazakhstan in November to participate in an International Forum on Global Science and Engineering Education. The forum was held as part of the 75th Anniversary celebrations for the Kazakhstan National Technical University (KazNTU). His paper and talk were titled "Producing Graduates Effective in a Global Context". During his visit he met with faculty and students from KazNTU and discussed possible student and faculty exchange programs. This was his second visit to Kazakhstan and to the KazNTU. In 2008 he visited Kazakhstan with Dr. Klein Ileleji and the Dean of International Programs to discuss opportunities related to engineering education, irrigation and biofuels development.



Jane Frankenberger - "I am on sabbatical in Minnesota, working primarily on new technologies for agricultural drainage management and other water issues. Here in the "land of 10,000 lakes", protecting water quality is a front-burner issue, and I have benefited from participating in several innovative Minnesota water projects. One example is that the state legislature has asked the university to lead the development of a "Water Sustainability Framework", which could provide ideas for Indiana. I have also had the unique opportunity to live with the Mayor of Northfield, Minnesota, which has provided additional benefits in learning about how local communities deal with water issues. I will be back on December 21."

The Purdue Concentrated Animal Feeding Operation (CAFO) Team - received the PUCESA Team Award. CAFO Team members are Paul Ebner, Alan Sutton, Don Jones, Alan Grant, Mike Boehlje, Janet Ayres, Jane Brown, Chris Sigurdson, Beth Forbes, Al Heber, Jane Frankenberger, Dean Jones, Roman Keeney, Tamilee Nennich, Larry DeBoer and Steve Leer. The team was created to provide scientific information and research on CAFO-related topics to consumers, producers and community leaders. The team has distributed papers, developed a Web site and coordinated the Purdue University Livestock Siting Symposium. The team also conducted a study of 50 CAFOs in eight Indiana counties that examined owner/operator and labor characteristics, fiscal impact, land use, and environmental issues. The PUCESA awards honor Extension specialists who have significantly contributed to Indiana through Purdue Extension.



Mike Ladisch - and his daughter Sarah successfully finished the Chicago Marathon in October. This year was the 32nd running of the race with 34,792 participants at the start and 33,419 official finishers. Mike's time was 4:16:31 and Sarah finished in 3:43:27. Mike has run a marathon every year for the last ten years and hopes to run in the New York City Marathon next year with both his daughter and son.

Student News



Purdue's iGEM (International Genetically Engineered Machine) Team - competed at MIT (Massachusetts Institute of Technology) in a synthetic biology research competition in October, unfortunately the team did not medal but they had a wonderful time at the competition.

ABE connections on the team are; Janie Stein who is a team officer and Senior in Food Processing, she also lead the mathematical modeling work. Craig Barcus is a Food Engineering Masters student and serves as Graduate Student Advisor while Assistant Professor Jenna Rickus serves as Advisor for the club.

ABE Scholarship Information - The on line scholarship application for college and departmental scholarships will be available at <https://engineering.purdue.edu/ABE/InfoFor/CurrentStudents/Scholarships/scholarships.html> for incoming, transfer and current students starting December 21, 2009. Current students will have until February 1, 2010 to complete the application. Incoming and transfer students will have until February 15, 2010 to complete the application

Congratulations to this year's outstanding teachers and counselor within ABE.

Seniors in our programs provided input on outstanding teacher and counselor. The student club officers considered this input and selected the following faculty for recognition:

Outstanding Engineering Teacher ~ Gary Krutz

Outstanding Agriculture Teacher ~ Dan Ess

Outstanding Counselor ~ John Lumkes

Congratulations to Gary, Dan, and John and job well done!

Alumni News

Ryan Oehler (BS ASM '00) - recently accepted a position with Ag Leader Technology as the Territory Manager for Indiana, Michigan and Ohio.

Bob Malcomb (BS ABE '78) - is opening a Prototype Shop in Scottsburg Indiana to assist inventors as well as starting a business called Structural-Engineering US. Bob is currently working on a robot that could locate land mines.

FYI

Holiday Photo Backdrop Available at Visitor Information Center - A

Boilermaker-themed scene will be available for holiday photos at the Visitor Information Center again this year. The studio at 504 Northwestern Avenue will be available at no charge through Dec. 18 (except Nov. 26-28). Hours are 9 a.m.-4 p.m. Monday-Friday and 9 a.m.-1 p.m. Saturday. Those using the studio must bring their own camera and take their own pictures. A tripod will be available. Adults, children and household pets are welcome. Light-colored clothing is recommended, as the background is black. An appointment is required for the half-hour sessions. Call 49-44636 to arrange a time. The busiest days are Fridays and Saturdays, so it is recommended that anyone interested in those days schedule a time as soon as possible.



Smoking on Campus to be Limited - Purdue University's West Lafayette campus will become smoke free except in limited areas beginning July 1. The campus-wide policy was announced Thursday, November 19th coinciding with the 33rd annual Great American Smokeouts. The new policy will confine smoking to limited designated campus areas and will prohibit smoking in all vehicles owned or leased by Purdue.

**Going Away Party
For Chang Lu
December 3, 2009
2:00 pm to 3:30 pm
ABE 212**

Calendar

December 2009	
3	Lunch and Learn Seminar for Students - "No Experience - Not True" - 11:30am - KNOY B027 - Lunch will be provided.
12	Classes End
19	Semester Ends - Student Break Begins
20	Graduation - 9:30 am Agriculture and Engineering
21	Winter Solstice
24	University Holiday
25	University Holiday
31	University Holiday
January 2010	
1	University Holiday
11	Classes Begin
18	University Holiday - Martin Luther King Jr. Day - No Classes
February 2010	
16	Co-Op Days - PMU Ballrooms
17	Co-Op Days - PMU Ballrooms
19	DEA - Thomas Burke
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 - 10:00 am to 4:00 pm PMU Ballrooms
5	DAA - Ed Vondell
April 2010	
22	ABE Outstanding Alumni, Senior Design and Capstone Project Judging and Alumni and Student Celebration

