



# Research Review

OFFICE OF THE VICE PRESIDENT FOR RESEARCH ♦ PURDUE UNIVERSITY

## Breaking through the Barriers to Writing Proposals

by Christine King

**Monday, April 10**

**8:30 a.m. - 3:30 p.m.**

**Room 121, Burton D. Morgan Center (Discovery Park)**

Dr. Robert A. Lucas, director of the Institute for Scholarly Productivity in San Luis Obispo, California, will be presenting a workshop entitled *Breaking through the Barriers to Writing Proposals*. This session, sponsored by the Office of the Vice President for Research, is designed to help faculty members in all disciplines break through writing blocks and accomplish more professional writing. Special application of the principles will be made to writing proposals for external support.

Dr. Lucas' PhD is in English from the University of Illinois, and his research development experience includes serving as a program representative at the University of Michigan, and as director of research development and later as associate vice president for graduate studies, research, and faculty development at California Polytechnic State University. He has authored more than 90 papers, chapters, and articles on the subject of proposal writing and grants administration, and has served on grant review panels for sponsors ranging from foundations to federal agencies. He has presented at proposal writing workshops throughout the country and repeatedly has received extremely positive reviews when presenting this workshop at Purdue.

Lunch will be provided. There is no charge for this event, but preregistration is required. Please visit <http://www.purdue.edu/research/vpr/proposal/workshops.html> to register. If you have questions about this event, please contact Mary Ryker at [mlryker@purdue.edu](mailto:mlryker@purdue.edu). ♦

*Christine King is director of research development services.*

*Research Review ♦ March 2006*

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UNIVERSITY

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Read the *Research Review* online at:  
<http://www.purdue.edu/research/vpr/publications/researchreview.html>

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## Sponsored Program Services

# NIH Financial Policy for Research Grant Awards – FY 2006

by Jenny Siemers

The President signed the Department of Health and Human Services appropriations bill for FY 2006 on December 30, 2005. The National Institutes of Health (NIH) appropriation includes an across-the-board reduction to non-emergency, discretionary programs. The reduction will have a direct impact on NIH's budget.

This reduction has forced NIH to make some very tough choices. These choices were made based on two key principles: 1) to continue to support the best biomedical research; and 2) to ensure that the next generation of scientists continue to have the opportunity to compete for grants and make the transition to individual investigator status.

Guided by these principles, NIH has adopted the following policies:

- For non-competing research grant awards, reduce funding by 2.35 percent of the amount indicated in the FY 2005 Notice of Grant Award (NGA).
- Restore all previously awarded non-competing funding from 80 percent to 97.65 percent of the amount indicated in the FY 2005 Notice of Grant Award. A revised NGA will be issued.
- For competing research grants, the amount provided will be managed to an average award amount equal to FY 2005 levels including a 3 percent escalation factor for future years (except for modular awards).

NIH fully recognizes that the difficult budget situation will make for tougher competition than in the past. This increases the need for high quality, well-planned proposal submissions from investigators. NIH expects to achieve an estimated overall success rate of 19.5 percent compared to 22.3 percent a year ago. They also expect to fund more than 38,300 competing and non-competing grants, down 570 grants or 1.5 percent from FY 2005.

Non-research grant programs will be managed in accordance with the policies established by each Institute or Center. You are encouraged to contact your NIH program director or grants management specialist if you have questions specific to your grant. Financial questions may also be addressed to the Sponsored Programs Account Management staff. Contact information can be found at <http://www.purdue.edu/sps/staff/nih.html>. ♦

*Jenny Siemers is a senior account manager for sponsored program services.*

## Do you know?

Included among the information and resources on the Web site for the Office of the Vice President for Research is the publication *Federal Grants & Contracts Weekly*. This weekly publication provides information on many upcoming competitions for research and education proposals, as well as insights into current and pending changes in legislation and funding of interest to university researchers. To view this newsletter, please visit [http://www.purdue.edu/research/vpr/funding/fed\\_grants/index.html](http://www.purdue.edu/research/vpr/funding/fed_grants/index.html). ♦

# Fred Regnier Receives the 2006 Outstanding Commercialization Award

Fred Regnier, the John H. Law Distinguished Professor of Chemistry, is being honored for translating ideas into commercial products that make a difference in everyday life and create jobs for Indiana. Diabetics, patients with blood clots, and people who need human growth hormone all have found help from the recipient of the University's 2006 Outstanding Commercialization Award.

The award, sponsored by the Central Indiana Corporate Partnership, salutes his 21 patents, many now licensed by Indiana companies. Patents and technologies spawned in Regnier's lab have created more than 700 jobs and generated more than \$2 million in royalties for Purdue.

"Among the many Purdue faculty who have used their research to make a direct impact on our quality of life, Fred Regnier is a renowned pioneer," says President Martin Jischke. "His research on chromatography is directly responsible for the development of many life-saving biopharmaceuticals. The entire world has benefited from his vision and expertise."

Regnier, a leader in analytical chemistry and biochemistry, has contributed a number of innovations to industrial science. He says his early work on a technique for separating chemicals called chromatography is most representative of his scientific success.

By the early 1970s, when Regnier learned of the idea, chemists had realized that by filtering a composite fluid through a tall tube filled with tiny particles, they could separate the fluid into its component substances.

A little more than a decade later, in the early 1980s, Regnier found an application for chromatography that would change the way medical-supply companies manufactured and purified a number of substances, such as insulin.

"Insulin is one of many protein-based fluids that are made with the help of bacteria," Regnier says. "You grow a colony of tiny microorganisms that produce these proteins through fermentation. It's a bit like making beer. Then you harvest the proteins as a fluid that diabetics can inject. Of course, you have to be careful to separate the bacteria thoroughly. If any of those little microbes somehow remain in the

fluid and are injected into the body, a person can die from the infections they cause."

Regnier realized that chromatography could help, but finding an effective separator was crucial.

"We quickly realized that no clay in nature had particles that would do exactly what we wanted," he says. "So we had to make our own."

Regnier's research group developed a way to coat tiny particles with a thin layer of material that could purify a few of the proteins of interest to them.

In 1988, the team founded a company called Perseptive Biosystems to produce pure injectable proteins with their new artificial particle, which they named Poros. Their chromatographic method was soon producing a number of substances useful to medicine, such as human growth hormone and fluids that can dissolve blood clots.

"When we sold the company in 1998, we had 600 employees and \$100 million in annual sales," Regnier says. "Now, companies such as QuadraSpec and Eli Lilly and Co., are using the method for their own purification work. And Purdue's patent on the technique is still generating royalties for the university."

Regnier also is noted for his efforts in proteomics, the pioneering field of categorizing protein function, and for developing a way to place multiple mini-labs on a single silicon chip.

This is the third year Purdue has presented the award. Previous recipients are R. Graham Cooks, the Henry Bohn Hass Distinguished Professor of Chemistry in the College of Science; and Leslie Geddes, the Showalter Distinguished Professor Emeritus of Bioengineering.

"The recipients of this award are legendary in their respective disciplines," says Victor Lechtenberg, vice provost for engagement. "They are held in the highest esteem by their peers throughout the world."

*This story first appeared in Inside Purdue, on February 7, 2006. Inside Purdue is available online at: <http://www2.itap.purdue.edu/periodicals/insidepurdue/index.html> ♦*

April 5 & 6

## Energy Center Hydrogen Initiative Symposium (ECHI)

April 5, Stewart Center Room 218 A-D

April 6, Burton D. Morgan Center (Discovery Park)

The inaugural ECHI international conference includes lectures, oral presentations and a poster session dealing with the various aspects of hydrogen generation, storage and utilization. The annual Herbert C. Brown Award for Innovations in Hydrogen Research also will be awarded.

Representatives from the private sector will participate in the symposium along with researchers from universities, national laboratories, and the Department of Energy.

P.V. Ramachandran, associate professor of chemistry, is serving as coordinator for the international conference. Shripad Revankar, an associate professor of nuclear engineering at Purdue, is serving as the event's scientific adviser.

Registration fee is \$150 (\$50 for students) and covers the cost of the symposium abstracts, symposium banquet, lunch and coffee breaks. For guests not purchasing symposium abstracts, the registration fee of \$50 covers the cost of the symposium banquet, lunch and coffee breaks. To register go to <http://www.purdue.edu/dp/echi>. ♦

# Requests for Proposals

## NIH – Pathway to Independence (PI) Award

In late January, the National Institutes of Health inaugurated a program designed to facilitate researchers' receiving an R01 award earlier in their research careers. The primary, long-term goal of the PI Award Program is to increase and maintain a strong cohort of new and talented, NIH-supported independent investigators. The awards will provide post-docs with up to two years of support, at up to \$90,000 annually in total costs, to work with a mentor. In addition, awardees may receive \$249,000 more in total costs annually for an additional three years, with the condition that they find an academic job on the tenure track or its equivalent. The first deadline for receipt of proposals to this program is *April 7*. The criteria for this opportunity is as follows:

- The Pathway to Independence Award will provide up to five years of support consisting of two phases. The initial phase will provide 1-2 years of mentored support for highly promising, postdoctoral research scientists. This phase will be followed by up to 3 years of independent support contingent on securing an independent research position. Award recipients will be expected to compete successfully for independent R01 support from the NIH during the career transition award period. The PI Award is limited to postdoctoral trainees who propose research relevant to the mission of one or more of the participating NIH Institutes and Centers <http://www.nih.gov>.
- The initial application for the mentored phase may be submitted on behalf of the candidate (principal investigator) by any domestic for-profit or non-profit institution/organization such as universities, colleges, hospitals and laboratories, and eligible agencies of the Federal government, including NIH intramural laboratories. Foreign institutions are not eligible to apply.
- The subsequent application for the independent phase may be submitted on behalf of the awardee (principal investigator) by any domestic for-profit or

non-profit institution/organization such as universities, colleges, hospitals and laboratories at which the awardee has been recruited. Agencies of the Federal government (including NIH intramural laboratories) and foreign institutions are not eligible to apply for the independent phase of the PI award.

- Eligible Principal Investigators include outstanding postdoctoral candidates who have terminal clinical or research doctorates (including Ph.D., M.D., D.O., D.C., N.D., D.D.S., D.V.M., Sc.D., D.N.S. or equivalent doctoral degrees) who have no more than 5 years of postdoctoral research training at the time of initial application or resubmission(s).
- Applicants may submit only one PI Award application, and may not simultaneously submit applications or have awards pending for any other PHS career development award (K-series mechanisms). Up to two revisions of an application will be accepted.
- PI award recipients are expected to apply for independent research grant support during the later independent phase of the award.
- Planning, direction, and execution of the proposed research and career development plans are the joint responsibility of the applicant and mentor(s). Pathway to Independence Awards are neither renewable nor transferable from one principal investigator to another.
- It is anticipated that 150 to 200 PI Awards will be issued for this program in the initial year.
- Because the nature and scope of the proposed research will vary from application to application, it is anticipated that the size and duration of each award will also vary. The total amount awarded and the number of awards will depend upon the number, quality, duration, and costs of the applications received.
- Applications must be submitted on or before the receipt dates described at <http://grants.nih.gov/grants/funding/submissionschedule.htm>.

- The NIH will not accept any application in response to this PA that is essentially the same as one currently pending initial review unless the applicant withdraws the pending application. The NIH will not accept any application that is essentially the same as one already reviewed. This does not preclude the submission of a substantial revision of an application already reviewed, but such an application must include an introduction addressing the previous critique.

The complete program announcement is available at <http://grants2.nih.gov/grants/guide/pa-files/PA-06-133.html>.

## NIH – Social and Cultural Dimensions of Health

The National Institutes of Health invites proposals, through 16 of its component organizations, for the Social and Cultural Dimensions of Health program. The ultimate goal of this program is to encourage the development of health research that integrates knowledge from the biomedical and social sciences. This involves the further development of health-related social science research relevant to the missions of the NIH Institutes and Centers (ICs) and the development of multi-or inter-disciplinary research that blends the theories and approaches of the social and biomedical sciences.

This program announcement invites applications in five areas:

1. Basic social and cultural constructs and processes used in health research.
2. Etiology of health and illness.
3. Consequences of poor health for individuals and social groups.
4. Linking science to practice to improve prevention, treatment, health services, and disseminations.
5. Ethical issues in social and cultural research.

For further information, please see the program announcement at <http://grants2.nih.gov/grants/guide/pa-files/PA-05-029.html>.

# NIH Pushes Back Deadline for Submission through Grants.gov

## DARPA – Wireless Network after Next

The Defense Advanced Research Projects Agency's Advanced Technology Office is soliciting proposals for the Wireless Network after Next. For this program, awardees will develop and demonstrate technologies and system concepts that will enable intelligent adaptive wireless networks consisting of densely deployed low cost wireless nodes, in contrast to the past approach of designing military wireless networks organized around costly, hence sparsely deployed nodes. The solicitation is for development of proof-of-concept prototype systems.

For further information about this competition, please see <http://www.darpa.mil/baa/#ato>. ♦

The National Institutes of Health announced, on February 7, that it will adjust the timeline for its plans to: 1) transition from the PHS398 application to the SF424 Research and Related (R&R) application; and 2) simultaneously transition to electronic submission of RO1 grant applications via Grants.gov. Previously scheduled for implementation in October 2006, the changes have been pushed back to February 2007, following recommendations from the research community. The notice of this action may be found at <http://grants.nih.gov/grants/guide/notice-files/NOT-OD-06-035.html>. ♦

### Please Note:

Federal, state, foundation, and corporate funding opportunities in all disciplines are available through Purdue's subscription to Community of Science (COS). For assistance in setting up your weekly COS e-mail funding alert, contact Christine King at [hcking@purdue.edu](mailto:hcking@purdue.edu) or 46706. ♦

## Sponsored Program Year-to-Date Activity

### Awards by Sponsor

July 1 to January 31

SPONSOR	Fiscal Year 2004-05		Fiscal Year 2005-06		% Change	
	*No.	\$ Amount	*No.	\$ Amount	*No.	\$ Amount
National Science Foundation	166	35,304,405	165	29,122,029	-1%	-18%
Dept. of Health & Human Services	121	22,264,300	150	19,149,607	24%	1%
Dept. of Defense	101	10,738,403	83	10,717,146	-18%	-0%
Dept. of Agriculture	102	11,276,354	104	8,316,759	2%	-26%
Dept. of Energy	57	8,464,643	65	9,719,920	14%	15%
Dept. of Education	23	5,680,810	10	2,366,395	-57%	-58%
Other Federal	91	5,025,989	76	9,322,234	-16%	85%
Environmental Protection Agency	16	3,252,705	12	1,431,393	-25%	-56%
Agency for International Development	19	1,455,201	23	1,352,553	21%	-7%
Dept. of Transportation	18	665,662	9	2,200,612	-50%	231%
<b>Total Federal</b>	<b>714</b>	<b>\$104,128,472</b>	<b>697</b>	<b>\$96,939,642</b>	<b>-2%</b>	<b>-7%</b>
Industrials & Foundations	804	25,456,596	894	35,797,611	11%	41%
State/Local Governments	153	19,260,244	129	12,821,365	-16%	-33%
Purdue Research Foundation/Purdue University Fellowships, Assistantships, Research Grants	518	3,304,356	233	2,171,823	-55%	-34%
Foreign Governments	6	451,008	8	1,072,426	33%	138%
<b>Total Non-Federal</b>	<b>1,481</b>	<b>\$48,472,204</b>	<b>1,264</b>	<b>\$51,863,228</b>	<b>-15%</b>	<b>7%</b>
<b>Total Purdue Systemwide</b>	<b>2,195</b>	<b>\$152,600,676</b>	<b>1,961</b>	<b>\$148,802,870</b>	<b>-11%</b>	<b>-2%</b>

\*Number of proposals ♦

# Nanotech Conference Helps Set Stage for Federal Funding Agenda

by Phillip Fiorini

On February 6, Purdue University brought together leaders from around the country to probe the possibilities and promise of the new frontier in research: nanotechnology.

“This is just the beginning of a new frontier in science and engineering. The long-term expectations from nanotechnology in the areas of health care, productivity and the environment cannot be overestimated,” said Mihail “Mike” C. Roco, the National Science Foundation’s senior adviser for nanotechnology who led one of three panels of experts at the Purdue conference, sponsored by the Lilly Endowment.

“And investment in nanotechnology is important, particularly at our universities, if we want to prepare the work force needed to capitalize on these new technologies.”

Roco also is chairman of the U.S. National Science and Technology Council’s subcommittee on Nanoscale Science, Engineering and Technology.

The State of the Union message singled out nanotechnology as a national priority expected to receive increased federal funding.

George Adams, research development manager for the Birck Nanotechnology Center in Purdue’s Discovery Park, said President Bush’s remarks energized the conference.

“President Bush said he would like to increase funding for the agencies actively involved in nanotechnology research, and Purdue will certainly be a leader, thanks to our new \$58 million Birck Nanotechnology Center,” said Adams, a coordinator for the conference. “It’s among the most elite centers in the nation.”

The National Nanotechnology Initiative sparked the federal government’s decision to bolster funding for the emerging fields of nanoscience and nanoengineering, with roughly 70 percent of that new funding going to university-based research.

Since that effort was launched five years ago, an estimated \$3.8 billion has been made available through the NSF and other federal agencies, and about half of that has gone for nanotech research alone.

Kicking off the conference was a journalists’ panel discussion, titled “Giant Ideas for Nano’s Future.” Panelists Candace Stuart, editor-in-chief of *Small Times*; Samuel Moore, senior associate editor of *IEEE Spectrum*; and Josh Wolfe, nanotechnology columnist for *Forbes*, discussed the trends they see in covering this burgeoning industry.

That panel was followed by Roco’s, which included George Scalise, president of the Semiconductor Industry Association; Peter Cummings, director of the Nanomaterials Theory Institute at Oak Ridge National Laboratory; Fabian Pease, electrical engineering professor at Stanford University; Phaedon Avouris, manager of Nanometer Scale Science and Technology at IBM Corp.; Daniel Coy, director of engineering at Nanophase Technologies Inc.; and

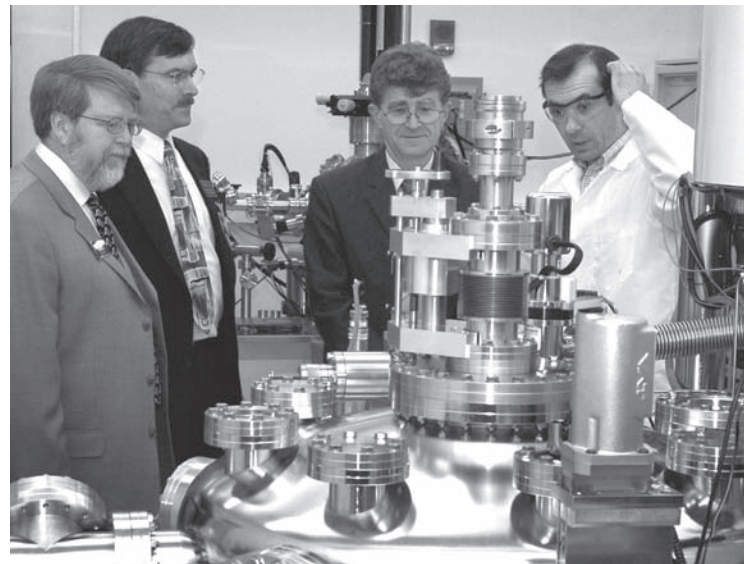
Wolfe, who also is managing partner of Lux Capital.

Those experts discussed topics ranging from how to start a nanotech business and advancements in treating cancer to the potential for venture capital funding and nanotech’s applications in health-care delivery and electronics products.

Purdue President Martin C. Jischke welcomed the third panel of experts at 5:30 p.m. to discuss health care, ethics, policy and other societal issues in nanotechnology.

Indiana Commerce Secretary Mickey Maurer, who also serves as president of the Indiana Economic Development Corp., followed Jischke to discuss the potential that nanotechnology research and development at Purdue holds for Indiana’s economy.

Panelists for the final discussion included Vivian Weil, director of the Center for the Study of Ethics in the Professions at the Illinois Institute of Technology; Gregory Downing, director of the Office of Technology and Industrial Relations in the Office of the Director at



Mihail “Mike” C. Roco (center), the National Science Foundation’s senior adviser for nanotechnology, listens as Dmitry Zemlyanov (right), a surface science applications scientist, talks about a spectrometer located in a lab at Purdue University’s Birck Nanotechnology Center. Roco toured the facility with center officials, from left, facility manager John R. Weaver and research development manager George B. Adams. The tour was part of a nanotechnology conference that took place at Purdue through Wednesday (Feb. 8). Roco was on campus to lead one of three panel discussions about various opportunities in nanotechnology. (Purdue News Service photo/David Umberger)

Phillip Fiorini is senior marketing and communication specialist for Discovery Park and Purdue University News Service.

# Nanotechnology Education to Benefit from Museum Projects

by Maggie Morris

the National Cancer Institute, National Institutes of Health; and David Guston, political science professor and associate director of the Consortium for Science, Policy and Outcomes at Arizona State University.

A podcast version of the panel discussions is available for download by at <http://www.purdue.edu/dp/dls/NNI/>.

Nano is a prefix meaning one-billionth, so a nanometer is one-billionth of a meter. Through nanotechnology, new materials and tiny structures are built atom by atom or molecule by molecule, instead of the more conventional approach of sculpting parts from pre-existing materials.

The Birk Nanotechnology Center opened last fall. Discovery Park is Purdue's \$300 million hub for interdisciplinary research and is home to a total of 10 established research centers focusing on everything from biosciences and manufacturing to oncological sciences and health-care engineering. ♦



A new nationwide network of museums will help educate the public about nanoscale science, engineering and technology, according to Larry Bell of Boston's Museum of Science, who spoke at Purdue February 21.

Bell is the vice president for research, development and production at the Museum of Science. The lecture was sponsored by Purdue's Discovery Learning Center.

Bell is the lead investigator for the project, which is funded by a \$20 million National Science Foundation grant to the Boston Museum of Science in partnership with the Science Museum of Minnesota and the Exploratorium in San Francisco. The groups have formed a national Nanoscale Informal Science Education Network of multiple science museums and research institutions to develop ways to engage more research in nanoscale science and engineering education, research and technology.

Purdue is one of a handful of universities around the country that has received subawards from the Boston Museum to help develop the nanoscience and technology projects. Krishna Madhavan, a research scientist in Purdue's Rosen Center for Advanced Computing and Discovery Park's Cyber Center, is leading Purdue's contributions with work on high-end visualization. Aadron Rausch, an extension specialist working with youth development and agricultural education, also is an advisor on the project.

"Purdue is already a leader in the development of nanotechnology research, and the Discovery Learning Center is well-poised to provide leadership in nanoscience education," said Beverly Davenport Sypher, interim director of the Discovery Learning Center and professor of communication. "The museum project along with the work of Nicholas Gior-

dano suggests Purdue is fast becoming a hub for nanoscale learning and teaching."

Giordano, the Hubert James Distinguished Professor of Physics, is the principal investigator for Purdue's multi-institutional partnership in the first national center for learning and teaching of nanoscale science and engineering education in the United States.

Bell has worked in the Education and Exhibit departments at the Museum of Science in Boston since 1971. Through a series of National Science Foundation grants from 1986 to the present, he developed a new model for science center exhibits employing learning experiences to provide visitors with practice in scientific thinking skills.

The Discovery Learning Center, one of 10 centers in Purdue's Discovery Park, supports research that enhances the understanding of the learning process. This includes the development and/or assessment of innovative learning-related technologies and the development of innovative interdisciplinary educational programs. More than 300 faculty representing 12 schools or colleges and 45 academic departments at Purdue, plus those from other universities, business and industry, teachers, and professional organizations, are involved in other similar collaborations or research in conjunction with the Discovery Learning Center.

Discovery Park is Purdue's interdisciplinary research hub that brings the university's scientists, researchers, engineers and management experts together in projects to make basic discoveries available to advance the Indiana economy and solve societal problems by inventing new products and processes.

Discovery Park, under construction on State Street on the west edge of campus, has attracted more than \$300 million for facilities and \$169 million in sponsored research and now involves about 850 faculty as members. The park has been a critical factor in forming eight startup companies and at least 40 patent filings. ♦

*Maggie Morris is a writer and publicist for Purdue University News Service.*

# January 2006 Projects Funded

**W. E. Anderson**, aeronautics & astronautics, from IN Space, LLC, \$5,691, "A Generalized Model for Combustion Instability."

**C. Arndt**, agricultural economics, from University of Copenhagen, \$51,814, "Tax Incidence."

**M. K. Banks** and **K. Haghighi**, civil engineering, engineering education, from Environmental Protection Agency, \$169,981, "Our Town: Enhancing Brownfield Redevelopment through Community/School Partnerships." (a Discovery Park administration award)

**M. K. Banks** and **K. Haghighi**, civil engineering, engineering education, from Environmental Protection Agency, \$292,224, "Our Town: Enhancing Brownfield Development through Community/Schools Partnerships." (a Discovery Park — Center for the Environment award)

**R. Bashir**, electrical & computer engineering, from Ohio State University, \$60,000, "NSEC Proposal for a Center for Affordable Nanoengineering of Polymer Biomedical Devices."

**R. J. Bernhard**, mechanical engineering, from Eaton Aeroquip, \$39,903, "Prediction of Response Variation Using the Finite Element Method."

**M. D. Bowman** and **B. G. McCullouch**, civil engineering, from Indiana Department of Transportation, \$150,000, "Training for Load and Resistance Factor Design (LRFD) of Structures."

**M. W. Caffee**, physics, from Universities Space Research Association, \$16,245, "Statement of Work for Purdue University Primelab: Sample Analysis for Dr. Kevin Righter."

**L. A. Cai**, **X. Y. Lehto** and **D. J. Anderson**, hospitality & tourism management, College of Consumer and Family Sciences, from Greater Louisville C&V Bureau, \$36,000, "The Greater Louisville CVB Image Study 2005-06."

**T. M. Carvajal**, industrial and physical pharmacy, from Purdue Alumni Association, Inc., \$1,000, "Establishment...Surface of Excipients and Their Functionality."

**J. Chen**, biological sciences, from Pews Scholars Program, \$4,030, "Molecular Mechanism of ABC Transporters."

**J. A. Chmielewski**, chemistry, from National Science Foundation, \$142,000, "Self Replicating Peptides."

**S. H. Collicott** and **S. D. Heister**, aeronautics & astronautics, from Rolls-Royce Corporation, \$159,774, "Dynamics of Advanced Engine Oil Sumps and Drains."

**D. E. Comer**, computer science, from John Wiley & Sons Ltd., England, \$24,995, "Software Practice & Experience John Wiley & Sons Limited England."

**R. G. Cooks**, chemistry, from Griffin Analytical Technologies, Inc., \$100,000, "Rectilinear vs. Cylindrical Ion Trap Performance."

**R. G. Cooks**, chemistry, from National Aeronautics and Space Administration, \$24,000, "Fundamentals of Ion-Molecule/Surface Reactions and Instrument Development."

**G. L. Coppoc**, veterinary pathobiology, from Indiana University, \$32,418, "Indiana University School of Medicine - Lafayette (Lafayette Center for Medical Education)."

**S. M. Cordes**, Office of Engagement, from Indiana Small Business Development Cent., \$1,680, "Greater Lafayette Small Business Development Center."

**S. M. Cordes**, Office of Engagement, from Indiana Office of Rural Affairs, \$35,000, "Creating the Indiana Rural Strategy."

**L. A. Corson**, civil engineering, from Car Brite, Inc., \$3,912, "Technical Assistance Agreement."

**L. A. Corson**, civil engineering, from Springman, F. X., Inc., \$1,851, "Technical Assistance Agreement."

**W. A. Cramer**, biological sciences, from PHS-NIH National Institute of General Medical Science, \$58,982, "Receptor-Mediated Colicin Import."

**W. A. Crossley**, aeronautics & astronautics, from Cessna Aircraft Company, \$48,119, "Air Taxi Operations as a System-of-Systems Problem."

**S. S. Donkin**, animal sciences, from Cooperative State Research Service, \$270,000, "Propionate and Control of Hepatic PEPCK in Dairy Cattle."

**L. M. Duttlinger**, Student Services - North Central campus, from Lumina Foundation, \$1,531, "Lumina Foundation-Westville Correctional Facility and Lakeside Correctional Facility."

**D. S. Ebert**, **W. S. Cleveland**, **A. R. Chaturvedi**, **A. K. Elmagarmid**, **C. W. Bingham** and **G. Lebanon**, electrical & computer engineering, statistics, School of Management - administration & instruction, computer science, from Battelle Memorial Institute, \$749,343, "Purdue University Regional Visualization and Analytics Center." (a Discovery Park — e-Enterprise Center award)

**G. Ejeta**, agronomy, from International Crops Research Institute, \$46,000, "Improvement of the Striga Resistance of Tanzanian Landrace Sorghum Varieties."

**J. G. Elicker**, child development and family studies, from Indiana Association for the Education of Young Children, \$110,000, "Indiana Infant Toddler Specialist Initiative."

**B. A. Engel**, agricultural & biological engineering, from Indiana Department of Transportation, \$90,000, "WWW-Based Watershed Delineation and Characterization System."

**D. M. Fekete**, biological sciences, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$422,376, "Development Studies of the Inner Ear."

**Z. J. Feng**, **R. K. Swihart** and **Y. D. DeWoody**, mathematics, forestry and natural resources, from James S. McDonnell Foundation, \$8,436, "An Integrated, Hierarchical Framework for Modeling Biocomplexity."

**R. E. Foster**, entomology, from Virginia Polytechnic Institute & State University, \$5,229, "West Africa IPM Consortium of Excellence."

**J. R. Frankenberger** and **L. S. Prokopy**, agricultural & biological engineering, forestry and natural resources, from University of Wisconsin-Madison, \$12,000, "Regional Water Quality Leadership for North Central States in USEPA Region 5."

**J. R. Frankenberger**, **L. S. Prokopy** and **S. R. Broussard**, agricultural & biological engineering, forestry and natural resources, from University of Wisconsin-Madison, \$63,000, "Continuing Support for Regional Water Quality Leadership for North Central States in USEPA Region 5."

**J. P. Garner**, animal sciences, from Trask Trust Fund, \$38,126, "Automated Tactile Stimulus for Mice and Other Animals, and its Implementation in an In-Home-Cage Apparatus for Medium-Throughput Assessment of Learning and Cognition."

## Notice Regarding the Projects Funded

The Projects Funded list is generated by Sponsored Program Administration. Questions concerning the information contained in the Projects Funded section of the *Research Review* should be directed to Christopher Tompkins, 46204 or [tompkinc@purdue.edu](mailto:tompkinc@purdue.edu). ♦

**J. L. Garrison**, aeronautics & astronautics, from National Aeronautics and Space Administration, \$24,000, "NASA Earth System Sciences (ESS) Fellowship."

**P. S. Gerard**, nursing - Calumet campus, from University of Illinois at Chicago, \$30,968, "Bridges Program."

**A. K. Ghosh**, chemistry, from Zapaq Inc, \$562,398, "Exploratory Investigations of Candida, Cathepsin D and Napsin Protease Inhibitors."

**J. P. Gore**, College of Engineering administration, Engineering Experiment Station, from Intel Foundation, \$134, "Intel Summer Undergraduate Research Fellowship (SURF)."

**R. S. Govindaraju**, civil engineering, from Louisiana State University, \$12,625, "Development of a Student Exchange Program Between Canada, Mexico, and United States in Environmental Sciences and Engineering, and Natural Hazards."

**R. S. Govindaraju**, civil engineering, from Indiana Department of Transportation, \$54,044, "Computation of Indiana Flood Discharges."

**R. H. Grant**, agronomy, from Colorado State University, \$3,500, "Climatological Monitoring of Ultraviolet Radiation."

**M. A. Green**, industrial and physical pharmacy, from Brogan Pharmaceuticals Inc, \$5,000, "Pilot Manufacturing of a Short-Lived Radiopharmaceutical Drug Product."

**M. R. Gribskov**, biological sciences, from University of Wisconsin-Madison, \$102,799, "Functional Analysis of the Ubiquitin-Protein Ligase (E3) Families."

**P. Guo**, veterinary pathobiology, from Fort Dodge Animal Health, \$73,116, "Treatment of Avian Influenza Viral Infection with RNA Nano-Particles."

**C. F. Guptill-Yoran** and **H. Hogenesch**, veterinary clinical sciences, veterinary pathobiology, from Pfizer Inc, \$131,950, "Investigational Product Testing."

**K. M. Hannon** and **B. A. Watkins**, basic medical sciences, food sciences, from Eli Lilly and Company, \$26,090, "Eli Lilly Atrophy Study 1/06/A."

**M. G. Heinz**, speech, language and hearing sciences, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$12,857, "Effects of Sensorineural Loss on Robust Speech."

**G. H. Hockerman**, medicinal chemistry and molecular pharmacology, from PHS-NIH National Institute of Diabetes and Digestive and Kidney Diseases, \$210,063, "L-Type Channel Modulation of Beta Cell Function."

**A. L. Hosking**, computer science, from National Science Foundation, \$279,999, "Collaborative CPA: Delivering on Atomic Actions: Unlocking Concurrency for Ordinary Programmers."

**R. W. Hoyt**, field extension educators, from Keep Indianapolis Beautiful Inc, \$19,908, "Memorandum of Agreement for Keep Indianapolis Beautiful Fund."

**Y. C. Hu**, electrical & computer engineering, from National Science Foundation, \$104,032, "CAREER: A Peer to Peer Framework for Decentralized Resource Administration and Management in Grid Computing."

**Y. C. Hu**, electrical & computer engineering, from National Science Foundation, \$118,611, "Collaborative Research: Safari: A Scalable Architecture for Ad Hoc Networking and Services."

**I. Hua, C. T. Jafvert** and **R. F. Turco**, civil engineering, agronomy, from Advanced Concepts & Technology International, \$300,000, "Improved Detection & Remediation of NBC/CBRN/TIC/TIM Contaminants in Potable Water."

**W. J. Hutzler**, mechanical engineering technology, from Micromet, Inc., \$7,832, "Development of Air Flow Testing Laboratory-Phase III."

**M. Ishii**, nuclear engineering, from Bechtel Bettis, Inc., \$110,000, "Two-Phase Interfacial Development Structure."

**D. F. Jacobs** and **K. E. Woeste**, forestry and natural resources, from Indiana Department of Natural Resources, \$4,500, "Enhancing Stewardship with Early Masting Oaks."

**E. M. Janle**, foods and nutrition, from Dairy Management, Inc. (DMI), \$39,855, "Potential of Dietary Whey Protein to Ameliorate the Development of Diabetes in the Zucker Diabetic Rat."

**M. C. Jischke**, Office of the Provost, from Lumina Foundation, \$125, "Purdue University's Multicultural Learning Communities Project."

**G. W. Kalamaras**, English and linguistics - Fort Wayne campus, from Arts United of Greater Fort Wayne, \$1,303, "Arts Project Support."

**H. I. Kenttamaa**, chemistry, from PHS-NIH National Institute of General Medical Science, \$3,300, "Mass Spectrometry Studies on Radical Reactions of DNA."

**G. B. King** and **N. M. Laurendeau**, mechanical engineering, from Air Force Office of Scientific Research, \$175,462, "Two-Point Scalar Time-Series Measurements in Turbulent Partially Premixed Flames."

**B. A. Kingsbury**, biology - Fort Wayne campus, from Michigan Department of Natural Resources, \$24,300, "Massasauga and Response to Construction and Restoration Efforts."

**B. A. Kingsbury**, biology - Fort Wayne campus, from Michigan Department of Natural Resources, \$13,225, "Copperbelly Water Snake Status Assessment."

**D. W. Knapp, J. A. Ramos-Vara, J. A. Christian** and **S. B. Hooser**, veterinary clinical sciences, veterinary pathobiology, from AKC Canine Health Foundation, Inc., \$12,960, "Evaluation of the Safety of Cisplatin/Cox-2 Inhibitor Treatment for Canine Cancer."

**M. J. Krane**, materials engineering, from Kent State University, \$54,056, "NSDL Materials Digital Library Pathway: Hub for Materials Education and Research."

**J. Li**, health sciences, from U.S. Department of Energy, \$185,914, "Regulation of Nf=Kb and MNSOD in Low Dose Radiation Induced Adaptive Protection of Mouse and Human Skin Cells."

**M. J. Lipman**, arts & sciences administration - Fort Wayne campus, from Lumina Foundation, \$1,522, "An Enhanced First-Year Experience for Under Represented Students at IPFW."

**D. J. Love**, electrical & computer engineering, from Samsung Electronics Co., Ltd., \$90,000, "Scheduling in Wireless Networks and Analog Vs. Digital Feedback."

**D. P. Love** and **D. A. Savaiano**, child development and family studies, College of Consumer and Family Sciences, from Indiana Association for the Education of Young Children, \$78,080, "Indiana Non-Formal Child Development Associate Project."

**P. S. Low**, chemistry, from Eli Lilly and Company, \$100,000, "Vitamin-Mediated Targeted of Activated Macrophages Within Steoarthritic Joints." (a Discovery Park — Bindley Bioscience Center award.)

**J. R. Lucas** and **M. T. Nolen**, biological sciences, from Indiana Academy of Science, \$2,960, "The Nature and Symmetry of Vocal Information Flow in Mixed-Species Forest Bird Flocks: Are Mobbing Calls Interspecific Communication?"

**A. U. Luescher**, veterinary clinical sciences, from Kenneth Scott Charitable Trust, \$473, "Clinical Residency in Animal Behavior."

**R. D. Mattes**, foods and nutrition, from Kellogg Company, \$243,793, "Project Enzo."

**B. G. McCullough**, civil engineering, from Indiana Department of Transportation, \$17,500, "Implementation of Instructional Materials for Bridge Deck Construction Inspection."

**R. G. McCullough**, anthropology - Fort Wayne campus, from Indiana Department of Natural Resources, \$18,800, "Change Order (\$18,800 Increase) for 653-7367-4471."

**R. S. McDaniel**, civil engineering, from Indiana Department of Transportation, \$99,995, "Evaluation of Recycled Asphalt Pavement for Surface Mixtures."

**L. M. McIntyre**, agronomy, from Donald Danforth Plant Science Center, \$24,000, "Vitis Gene Discovery Program."

**D. R. McKinnis**, Technical Assistance Program, from Indiana Economic Development Council, Inc., \$671,287, "Manufacturing Extension Partnership (MEP)."

**C. L. Merkle**, aeronautics & astronautics, from University of Tennessee Space Institute, \$100,000, "Magnito Hydro Dynamics Generator Modeling Delivery Order 0007."

**C. L. Merkle**, mechanical engineering, from Aerospace Testing Alliance, \$10,000, "Ace Heater Modeling."

**C. A. Mitchell, J. E. Alleman, M. K. Banks, E. R. Blatchley, G. T. Chiu, A. J. Heber, B. C. Joern, B. M. Applegate, B. Yao, J. F. Pekny, J. J. Volenec, L. J. Mauer, M. R. Ladisch, P. B. Brown, Y. Yih, G. S. Gardner, J. F. Russell, J. H. Allen, R. Arangarasan, R. F. Turco, S. Orcun and W. R. Woodson**, horticulture and landscape architecture, civil engineering, mechanical engineering, agricultural & biological engineering, agronomy, food sciences, chemical engineering, forestry and natural resources, industrial engineering, Vice President for Research, e-Enterprise Center, IT Discovery Resources, College of Agriculture - administration, from National Aeronautics and Space Administration, \$91,538, "Minimizing Equivalent System Mass for a Regenerative Life-Support System by Optimizing Kinetics and Energetics of Major Bio-Transformations." (a Discovery Park— e-Enterprise Center award)

**S. Mohammadi**, electrical & computer engineering, from Jet Propulsion Laboratory, \$30,000, "Extreme Environment Electronics Packaging of an Intelligent Nodetic JFET's for Integrated Circuits Under Harsh Environment."

**J. A. Morgan**, chemical engineering, from National Science Foundation, \$77,416, "CAREER: Metabolic Flux Analysis of Photoautotrophic Organisms."

**S. E. Morgan and T. R. Harrison**, communication, from New Jersey Sharing Network, \$321,480, "NJWFPL - the New Jersey Workplace Partnership for Life." (a Discovery Park— e-Enterprise Center award.)

**D. J. Morre**, medicinal chemistry and molecular pharmacology, from NSE Products, Inc., \$10,000, "Testing of Components of Botanical Cosmetic Anti-Aging Preparations with Inhibition of Arnox (Aging-Related Nox Activity as Endpoint)."

**J. Y. Murthy**, mechanical engineering, from Raytech Composites, Inc., \$22,990, "CFD Simulation of Heat Transfer in Wet Friction Clutches and Brakes."

**A. P. Navarre**, veterinary clinical sciences, from TMC, Inc., \$2,873, "North American Veterinary Technician Association."

**E. Negishi**, chemistry, from PHS-NIH National Institute of General Medical Science, \$59,570, "Synthetic Reactions Catalyzed by Transition Metals."

**S. Y. Nof**, industrial engineering, from Indiana Department of Transportation, \$125,000, "Assessment and Enhancement of Awareness Training and Security."

**J. Olek**, civil engineering, from Indiana Department of Transportation, \$102,161, "Updating Physical and Chemical Characteristics Data for Fly Ash in Concrete."

**J. Olek and W. J. Weiss**, civil engineering, from Indiana Department of Transportation, \$84,988, "Field Trials of Rapid Setting Repair Materials."

**J. Olek**, civil engineering, from Indiana Department of Transportation, \$80,000, "PCC Properties to Support W/C Determination for Durability."

**W. L. Pak**, biological sciences, from PHS-NIH National Eye Institute, \$448,268, "Molecular Genetic Dissection of Photoreceptor Function."

**N. K. Parnell and K. K. Gingerich**, veterinary medical teaching hospital, veterinary clinical sciences, from Waltham Foundation, \$14,882, "An Investigation of Zinc and Magnesium Levels in Dogs with Inflammatory Bowel Disease."

**R. B. Pipes**, chemical engineering, from GFT Corporation, \$81,880, "Characterization of Polyimide Precursor Composition and Process Parameters for the Creation of Polyimide Foams." (a Discovery Park — Center for Advanced Manufacturing award)

**T. L. Powley**, psychological sciences, from PHS-NIH National Institute on Diabetes and Digestive and Kidney Disorders, \$297,563, "Autonomic Control of Body Weight and Feeding."

**D. M. Pratt**, education - North Central campus, from Indiana State Teacher Association, \$500, "Developing a Personal Philosophy of Education Web Module."

**M. Prezzi**, civil engineering, from Indiana Department of Transportation, \$101,038, "Design and Application of Helical (SCREW) Piles."

**K. G. Raghothama, C. T. Johnston and D. G. Schulze**, horticulture and landscape architecture, agronomy, from McKnight Foundation, \$2,791, "New Approach for Improving Phosphorus Acquisition and Aluminum Tolerance of Plants in Marginal Soils."

**S. T. Revankar and K. M. Vierow**, nuclear engineering, from Sandia National Laboratories, \$149,388, "Development of Design and Simulation Model for Large Scale Hydrogen Production Using Nuclear Power."

**J. L. Rickus and P. Irazoqui**, agricultural & biological engineering, biomedical engineering, from CURE – Citizens United for Research in Epilepsy, \$100,000, "A Hybrid Cellular-Silicon Neural Prosthetic for Epilepsy." (a Discovery Park — Bindley Bioscience Center award)

**J. Rochet and J. S. Hovis**, medicinal chemistry and molecular pharmacology, from PHS-NIH National Institute Neuro Disorders, Strokes, \$230,255, "Membrane Binding and Aggregation of A-Synuclein."

**M. A. Rotea**, aeronautics & astronautics, from National Science Foundation, \$179,783, "IPA Agreement."

**R. Salgado and M. Prezzi**, civil engineering, from Indiana Department of Transportation, \$81,936, "Use of Dynamic Cone Penetration and Clegg Hammer Tests for Quality Control of Roadway Compaction and Construction."

**D. E. Schendel and G. J. Lynch**, School of Management - administration & instruction, from German International School of Management & Administration Foundation, \$6,000,000, "GISMA and MSIA/EMSM Program in Hanover, Germany."

**S. P. Schneider**, aeronautics & astronautics, from The Boeing Company, \$10,000, "Hypersonic Boundary-Layer Transition on the Scramjet Engine Demonstrator-Waverider."

**W. E. Schoenlein**, biomedical engineering, from Medicine Institute, Inc., \$17,454, "Testing Prototype Stents in a Porcine Vascular Model."

**V. M. Shalaev**, electrical & computer engineering, from Norfolk State University, \$50,000, "Engineering Basic Physical and Spectroscopic Principles of Random Lasers and Other Nano-Composite Photonic Materials."

**P. B. Shepson**, earth & atmospheric sciences, from National Science Foundation, \$174,097, "A Multiphase Study of the Nature, Sources, and Fate of Atmospheric Organic Nitrogen." (a Discovery Park administration award)

**S. Sil**, management - Calumet campus, from Sino Funds Management, Inc., \$60,176, "International Grant Fellowship."

**A. Smith, C. M. Weber-Fox, H. N. Zelaznik and L. A. Goffman**, speech, language and hearing sciences, health & kinesiology, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$454,331, "Physiological Correlates of Stuttering."

**A. Smith, C. M. Weber-Fox, H. N. Zelaznik and L. A. Goffman**, speech, language and hearing sciences, health & kinesiology, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$100,237, "Physiological Correlates of Stuttering."

**B. M. Stansbury**, Airport Operations, from Indiana Department of Transportation, \$43,211, "Pavement & Lighting Repair - Taxiways a, A1, A2, B, & B2 Rehabilitation and Associated Electrical Improvements."

**G. Subbarayan-Shastri and W. W. Chen**, mechanical engineering, aeronautics & astronautics, from Semiconductor Research Corporation, \$133,000, "Valid Constitutive-and Relevant-Failure Models for Snagcu Solder Alloys."

**C. Sun**, aeronautics & astronautics, from Ball Aerospace & Technologies Corp., \$57,541, "High Energy Laser Vulnerability Assessments."

**T. M. Sutton**, forestry and natural resources, from Great Lakes Fishery Commission, \$14,642, "Host-Sizing Selection and Lethality of Sea Lamprey on Lake Sturgeon."

**T. M. Talavage and C. A. Bouman**, electrical & computer engineering, from PHS-NIH National Institute Biomed Imaging/Bioeng, \$355,079, "Systematic Artifact Reduction in Auditory FMRI."

**W. A. Tao**, biochemistry, from Purdue Alumni Association, Inc., \$1,000, "Identification of Drug Targets Based on Dendrimer Nanophobes and Mass Spectrometry."

**L. S. Taylor**, industrial and physical pharmacy, from PhRMA Foundation, \$20,000, "PhRMA Foundation."

**K. T. Thomson**, chemical engineering, from National Science Foundation, \$80,000, "CAREER: Computer-Aided Design and Discovery of Novel Nanoporous Materials through AB Initio-Based Molecular Simulation."

**R. J. Trapp, A. Gluhovsky, M. Huber, S. G. Lasher-Trapp and N. S. Diffenbaugh**, earth & atmospheric sciences, from National Science Foundation, \$275,075, "Sub-Daily Scale Extreme Precipitation in Future Climate-Change Scenarios: A Pilot Study." (a Discovery Park administration award)

**P. J. Urcuioli**, psychological sciences, from National Institutes of Health, \$141,715, "Responses and Equivalence Classes."

**D. C. Van Sickle and S. A. Evander**, basic medical sciences, from Medicine Institute, Inc., \$2,223, "Detailed Radiographs of Multiple Specimens."

**D. C. Van Sickle and S. A. Evander**, basic medical sciences, from Orthopaedic Research Institute, \$1,006, "Processing, Sectioning, Staining and Immunohistochemistry of Goat Medial Femoral Comdyles and Trochlear Specimens for Orthopaedic Research Institute."

**A. H. Varma**, civil engineering, from Indiana Department of Transportation, \$150,000, "Evaluation and Verification of Bridge LRFD Design and Analysis Software for INDOT."

**P. M. Waser and J. D. Cooper**, biological sciences, from Bob & Bessie Welder Wildlife Foundation, \$17,600, "The Evolution of Disparate Male and Female Dispersal Strategies: Testing Model Predictions Collared Peccaries (*Tayassu tajacu*) Using Sex-Specific Genetic Markers."

**A. M. Weiner**, electrical & computer engineering, from Army Research Office, \$6,250, "Photonic Synthesis and Processing of Ultrabroadband Radio-Frequency."

**H. M. Weiss and R. S. Dalal**, psychological sciences, from Army Research Institute, \$141,327, "Temporal Investigations into the Relationship Between Affect and Discretionary Work Behaviors."

**S. C. Weller**, horticulture and landscape architecture, from Virginia Polytechnic Institute & State University, \$25,358, "IPM in Latin America and the Caribbean: Crops for Broad-Based Growth and Perennial Production for Fragile Ecosystems."

**R. B. Wilbur**, speech, language and hearing sciences, from National Science Foundation, \$98,843, "A Basic Grammar of Croatian Sign Language."

**R. B. Wilbur and N. Adamo-Villani**, speech, language and hearing sciences, computer graphics technology, from PHS-NIH National Institute on Deafness and Other Communication Disorders, \$85,930, "Modeling the Nonmanuals of American Sign Language."

**R. E. Williams**, entomology, from Orkin Pest Control, \$14,516, "Orkin Inc. Development Agreement."

**R. E. Williams**, entomology, from PetSmart, Inc., \$14,516, "PetSmart Inc Development Agreement."

**D. Xu**, computer science, from National Science Foundation, \$75,729, "CAREER: Towards Virtual Distributed Environments in a Shared Distributed Infrastructure."

**X. Xu**, mechanical engineering, from Knolls Atomic Power Lab, \$11,778, "Developmental Effort to Expand Capability of the Photoacoustic Technique to Measure Thermal Diffusivity of Zircaloy Oxides."

**F. Yang**, sociology and anthropology, from Metanexus Institute, \$150,000, "Faith and Trust in the Emerging Market Economy in China."

**W. Zheng**, health sciences, from PHS-NIH National Institute of Environment Health Science, \$329,500, "Choroid Plexus as a Target in Metal-Induced Neurotoxicity."

**C. Q. Zhou**, engineering - Calumet campus, from 21st Century Research & Technology Fund, \$200,251, "CFD Modeling for High Rate Pulverized Coal Injection (PCI) to Blast Furnace."

**C. Q. Zhou**, mechanical engineering - Calumet campus, from Hadady Corporation, \$8,000, "Computational Fluid Dynamic Analysis of 6.8l Heat Exchanger and Charged Air Cooler."

**T. S. Zwier**, chemistry, from American Chemical Society, \$103,659, "The Journal of Physical Chemistry." ♦

# Research Review

Office of Research Communications  
Engineering Administration Building, Room 328  
400 Centennial Mall Drive  
West Lafayette, IN 47907-2016

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## Seed for Success Awards



The Seed for Success Award recognizes faculty members who have attracted sponsored research grants in excess of one million dollars to Purdue University. On February 24, 2006, awards were presented for the following:

*Prototype Demonstration Using Neutron-Gamma Technology to Detect, Identify, and Locate Hazardous Materials in Sealed Containers* — David S. Koltick (PI), Yeong E. Kim

*An Experimental and Theoretical High Energy Physics Program* — Ian P. Shipsey (PI), Virgil E. Barnes, Daniela Bortoletto, Thomas E. Clark, John P. Finley, Ephraim Fischbach, Arthur F. Garfinkel, Laszlo J. Gutay, Matthew Jones, T. K. Kuo, Sherwin T. Love, David H. Miller, Norbert Neumeister

*Personality and Well-Being Trajectories in Adulthood* — Daniel K. Mroczek (PI)

*Design and Synthesis of SARS Protease Inhibitors* — Arun K. Ghosh (PI)

*The Role of Set1-Mediated Methylation in Chromatin Function* — Scott D. Briggs (PI)

*Whitaker Foundation* — George R. Wodicka (PI)

*Hydrotopic Polymers for Oral Delivery of Paclitaxel* — Kinam Park (PI), Raymond E. Galinsky, Rodolfo Pinal

*Functional Genomics of Plant Polyploids* — Rebecca W. Doerge (PI)

*Local Prevention Services Coalition DSA 07, 10, 12* — Renee K. McKee (PI), Andrea B. Linsmeyer, Kris L. Darlage Meyer, Suzan K. Norris

*Trace Detection of Explosives Using Desorption Electrospray Ionization* — R. Graham Cooks (PI) ♦

Office of Research Administration

## Nuts & Bolts Workshop

for Human Subjects Researchers

10:00 – 11:30 a.m.

March 6

STEW 310

Visit <http://www.purdue.edu/research/vpr/proposal/workshops.html> to register. ♦



Laboratory Animal Program

## Brown Bag Seminars for Animal Researchers

11:30 a.m.–12:30 p.m. on Tuesdays

March 7, VPTH 112

“Necropsy Techniques”  
Speaker: Dr. Jerry Davis

March 21, LYNN 2191/2213

“Diets and Phytoestrogens: Impacts on Research”  
Speaker: Natalie Fredenburg

April 18, LYNN 1191

“Contamination Control in the Laboratory Animal Environment”  
Speaker: Carrie Adams-Carnevale ♦