

# Research Enterprise

January 19, 2010

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The Office of the Vice Chancellor for Research (OVCR) publishes the RESEARCH ENTERPRISE to keep the academic community and the community at large informed about research activities, opportunities and development on the IUPUI campus.

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### Editor:

Etta Ward

### Contributing Writer:

Shawna Woodall

### Layout:

Erik Scull

If you have a news item or recent noteworthy research-related achievement that you would like to share, please see the [Research Enterprise Submission Guidelines](#).

Please be aware that not all news items will be deemed appropriate or timely for

## ANNOUNCEMENTS

### Innovation Initiative Launches Workshop Series

On Thursday, December 17, 2009, IUPUI hosted nearly 80 faculty members from 14 schools for an **Innovation Workshop**, titled: **Discovery to Enterprise**. The event was the first in a series aimed at increasing information and resources available to researchers who want to learn about opportunities to commercialize products or start companies. The IUPUI Office of the Vice Chancellor for Research (OVCR), the IUPUI Solution Center, and the Indiana University Research and Technology Corporation (IURTC) are hosting the series.



During the four-hour December workshop, participants explored interests, challenges, and research needs, and heard about experiences from faculty members who had successfully commercialized their innovations. Faculty also worked together to create a framework for increasing discovery and innovation on the IUPUI campus, including:

- Strengthen connections and networking opportunities between industry, faculty, and students.
- Develop mentoring programs and relationships for faculty interested in commercialization.
- Showcase and share examples of successful innovations.
- Create a mechanism to increase awareness of funding resources.
- Connect faculty to legal resources regarding conflicts of interest, ownership, and the patent process.
- Promote and expand interdisciplinary research and innovation.

**Don't miss the next event: Venture Capital and Company Formation: 2010**

publication, but each item will be carefully considered.

With sponsorship from **ProLiance Energy**, the next session in the Innovation Series will focus on venture capital and will be held on February 22nd, 2010, from 8:00 until 11:30 AM, at University Place Conference Center. This event will again be hosted by the IURTC, the OVCR, and the Solution Center. During the session, faculty, researchers, and graduate students will learn about the venture capital market and company formation. IUSM Dean Craig Brater and IU Vice President of IT Brad Wheeler will kick off the seminar. Attendance is free, but registration is required by going to:

<http://innovate.indiana.edu/initiatives/VentCapCompFormSeminar.shtml>.

Information on future events will be forthcoming. Please contact the IUPUI Solution Center to be included on the email list at 317 278-9170 or [solution@iupui.edu](mailto:solution@iupui.edu).

## **New \$2.7 Million Grant to Support Teacher Preparation in STEM and Special Education**

Dr. Patricia Rogan, School of Education Executive Associate Dean, was awarded a \$2.7 million Teacher Quality Partnership grant from the U.S. Department of Education. She served as the Principal Investigator of this newly awarded grant. This teacher preparation program titled *Urban Education Excellence: STEM Teacher Residency with Dual Licensure in Special Education*, addresses the high need for secondary teachers with expertise in STEM fields (science, technology, engineering, and mathematics) and special education. This effort further supports an ongoing collaboration the School of Education at IUPUI has with urban schools and community organizations to prepare highly qualified teachers to meet the needs of diverse learners.

This program builds on the strengths of the School of Education's Transition to Teaching program and the Woodrow Wilson Teaching Fellows program for STEM teachers, with the leadership of UCASE – The Urban Center for the Advancement of STEM Education. UCASE is a partnership between the School of Education, the School of Science, and the School of Engineering and Technology at IUPUI. The national Woodrow Wilson Foundation will recruit exemplary candidates with a focus on individuals from underrepresented groups. This teacher residency program places students in Indianapolis Public Schools classrooms with a mentor teacher, with the support of university faculty mentors, for an entire school year while taking relevant coursework to earn teaching licensure.



Dr. Patricia Rogan,  
School of Education

## **New Research Workshop Series: Responsible Conduct of Research**

The Office of the Vice Chancellor for Research, in collaboration with the Office of Research Administration (ORA), announces a new series of educational opportunities for IUPUI faculty. Specific topics include the life cycle of a grant proposal, research misconduct, conducting research humans as research subjects, and conflicts of interest in research.

**Sessions will be held on the second Wednesday of the month (February – April), from 10:00 AM to 11:30 AM, in University Library, Room 2115-E.** To find out more information about these educational opportunities, please visit the [ORA Research Ethic, Education & Policy \(REEP\) website](#) or contact REEP at 812-855-0656 or [reep@iu.edu](mailto:reep@iu.edu).

**February 10, 2010: Life Cycle of an Externally Funded Sponsored Program**

**Proposal**

From the generation of an original idea to submission of a project's final report, a sponsored program involves the collaboration of numerous university partners. The aim of this workshop is to aid investigators in understanding how to prepare and navigate their proposal through the various Research Administration stages. In addition, this session will provide insights on the policies and processes involved in the life span of a sponsored program.

**March 10, 2010: Research Misconduct: Threat to Research Integrity**

The responsible conduct of research requires that investigators maintain the trust, confidence and support of their peers, their funding sources, and the public at large. Failing to deal with suspected or actual scientific misconduct represents a threat to this enterprise.

**April 14, 2010: Research with Human Subjects**

The involvement of human subjects in research is a basic feature of a wide range of academic disciplines, including research conducted within the biomedical sciences, social/behavioral sciences, education, and the humanities. The aim of this workshop is to explore the responsibilities, commitments and obligations of the researcher who engages in research with human subjects.

**FEATURE STORY**

**IUPUI Leads National Initiative to Promote Biomedical Sciences Curriculum in the High School**

In November 2009, four Indianapolis Public School (IPS) students from Arsenal Tech High School, along with their Project Lead the Way master trainer, Beverly Ransdell, gave research presentations reflecting their biomedical education at Project Lead the Way's annual symposium in Austin, Texas. Dr. Jeffrey Watt, Associate Dean of the School of Science at IUPUI and the state of Indiana Director for Project Lead the Way (PLTW) Biomedical Sciences accompanied the delegation to the conference titled "The Power of People and Partnership."

Project Lead the Way aims to prepare students to be innovative and productive leaders in Science, Technology, Engineering, and Mathematics (STEM) careers through curricula training in both the engineering and biomedical sciences. The program partners with middle schools and high schools to provide "an engaging, and hands-on curriculum by encouraging the development of problem-solving skills, critical thinking, creative and innovative reasoning, and a love of learning." The educators and teachers who administer these programs are vital to PLTW's mission.

IUPUI is one of only three national teacher training sites. To date the School of Science at IUPUI has educated 250 high school teachers and instructors from 32 states to become master teachers in a four course biomedical sciences elective track including: The Principles of Biomedical Sciences, Human Body Systems, Medical Interventions and a capstone/research project. Through Project Lead the Way, these teachers are trained to act as coaches in their home school, promoting biomedical science education to fellow instructors. These 250 teachers provide a grassroots network in addressing a national workforce shortage of trained scientists in the biomedical sciences.

Funded by the Governor's Office and built in partnership with the Indiana

Department of Workforce Development, Project Lead the Way Biomedical Sciences is an example of how the state and higher education have successfully partnered together at IUPUI to address workforce development preparedness through curricular development and teacher training in the sciences.

Indiana is the only state in the nation to have approved high school credit for Project Lead the Way classes towards graduation accreditation. Since the program's founding three years ago, IUPUI training sessions have reached teachers from 54 Indiana high schools. At least two of the Arsenal Tech participants have been awarded scholarships worth \$40,000 at Purdue University. These biomedical science courses have succeeded in achieving first steps toward creating greater access to higher education in the Sciences for Indiana students.

**STEM Efforts, Community Outreach and Research**

As part of her ongoing commitment to improving science education, Dr. Kathleen Marrs is presently the Director of the Woodrow Wilson Indiana Teaching Fellowship program; Director of UCASE, the Urban Center for the Advancement of STEM Education; Biology and Pre-Pharm Club advisor; and Associate Professor of Biology. Marrs leads efforts to educate teachers and students alike through several grant awards from the National Science Foundation and Lilly Endowment. Specifically, she either directs or has been awarded more than \$7 million to conduct research and implement programs in STEM education initiatives over the next few years:



Kathleen Marrs, Ph.D.  
Department of Biology  
School of Science

- Woodrow Wilson Indiana Teaching Fellowship
- The GK-12 Urban Educators Program
- Advance Urban Learning: Robert Noyce Teach Science
- Robert Noyce Summer Internship Program
- Urban Educators: Robert Noyce Scholarship
- The Leadership Collaborative: Science and Mathematics Teacher Imperative

"Dr. Marrs is an invaluable faculty member at IUPUI leading efforts to reform science education through providing opportunities for science teachers and young scientists throughout the state," said Dr. Bart Ng, Dean of the IUPUI School of Science. "She has played an integral role in securing grant awards to continue research and development in science and education, positively impacting our students and the science community as a whole." The School of Science announced Dr. Kathleen Marrs as the new Associate Dean of Academic Affairs. Dr. Marrs is known in the academic community for her efforts in science education and outreach for the university.

In addition to other grant awards, Marrs participated in a strategic collaboration with other researchers at IUPUI to successfully secure an NSF grant to adapt the Just-in-Time Teaching (JiTT) method, a renowned program focusing on active learning for science education in high school. As part of the grant award, she helped adapt the program from physics to include biology and other sciences and academic areas.

"I'm very deeply committed to helping students discover their own potential for success and professional growth and believe that creating community and opportunities to work and practice in a chosen discipline enhances the learning of science," said Marrs. "I'm excited for this opportunity to continue working with such a talented group of scientists and faculty members to not only improve our local community but to enhance the science community as well."



## CENTER SPOTLIGHT

### Nanosystems Research Institute Creates Possibilities across Diverse Disciplines



Researchers in INDI Cleanroom Laboratory

At Indiana University-Purdue University Indianapolis (IUPUI), the expertise and resources in nanoscale science and engineering, coupled with the desire by the IUPUI researchers from diverse disciplines to develop nanotechnology-based systems that address major societal and economic needs, have constituted the main driving forces for the establishment of the Integrated Nanosystems Development Institute (INDI).

The words defining the Institute's name best describe its main goals and objectives. Specifically, *Integrated* stands for three levels of integration, or that of 1) people and 2) resources, resulting in 3) *Integrated Nanosystems*, the *Development* of which for biomedical, energy, environmental, information technology, and other targeted application areas constitutes the main aim of the *Institute*. Some examples of the practical implications of the research conducted through the INDI lab include, but are not limited to, the development of nanotechnology based solar cells, breast cancer imaging devices and biosensors.

Realization of nanotechnology-based systems requires interdisciplinary approaches, which are realized through the confluence of disciplines, including science, engineering, and medicine. On the IUPUI campus, the convergence of expertise and know-how from these and other disciplines has resulted in the existence of INDI.

In addition to its research mission, INDI supports the realization of courses and curricula in nanotechnology. In the current academic year, two new interdisciplinary courses have been developed and offered by the Schools of Engineering & Technology and Science. Specifically, the *Nanosystems Principles* course was offered in Fall Semester and the *Integrated Nanosystems Processes and Devices* course is being offered during the Spring Semester. Combined, over 60 undergraduate seniors and graduate students have enrolled in these two courses.



Participants in the Poster Session Associated with the Nanosystems Principles Course

For more information about INDI, including its participants, resources, and research projects visit [www.iupui.edu/~indi](http://www.iupui.edu/~indi)

## FACULTY SPOTLIGHT

### Assistant Professor Applies Math and Medicine to Explore Parkinson's Disease

By Jill Meadows

It's not second nature for everyone to relate mathematical science to Parkinson's Disease, but for School of Science Mathematical Sciences Department Assistant Professor Leonid Rubchinsky, the two have shaped his career.

For the past several years, Rubchinsky has collaborated with Neurosurgery professor Robert Worth in the IU School of Medicine to conduct fundamental research, using mathematics to help answer

questions about the inner workings of the brain. In the case of Parkinson's Disease, Rubchinsky's work – although a precursor to any clinical application – aims to determine why brain cells aren't able to communicate in a normal manner.

"I view my research as a way to gain a better understanding of how neural cells communicate with each other and how this communication translates into our behavior – the way we think, the way we understand the world, the way we create things and do things," explains Rubchinsky. "Using differential equations, nonlinear dynamics, numerical analysis, time-series analysis and other mathematical theories and methods my work helps put clinical observations into a coherent framework so we can explain why brain cells aren't acting the way they should."

Rubchinsky, who holds master's and doctoral degrees in physics, first became interested in biological applications while in college. His post-doctoral fellowship at the University of California Davis focused on clinical neurophysiology in a lab where there was extensive collaboration between clinicians and mathematicians. The experience sparked an interest in interdisciplinary biomedical research, which for Rubchinsky, continues today. In fact, IUPUI's collaborative environment was one of the reasons the Russian native chose to join the School of Science faculty in 2004.

With no formal educational path for the work Rubchinsky conducts through his joint assignment with the School of Science and the Indiana University School of Medicine, his expertise is highly unique and noteworthy. Rubchinsky is one of the few mathematicians in the nation to receive a National Institutes of Health (NIH) grant for his research. The \$728,749 award is part of the NIH's Collaborative Research in Computational Neuroscience program, which recognizes theorists whose collaborations with clinicians help explain how the brain works and treat brain disorders.

"When you research very fundamental science, it's important to answer philosophical questions, but it's also even better to see where you can make a more practical difference, such as improving the quality of life for people with diseases like Parkinson's."



Leonid Rubchinsky, Ph.D.  
Department of Mathematical Sciences  
School of Science

## TRANSLATIONAL RESEARCH IMPACT

### Super Efficient Jet Engine and Gas Turbine Combustion Research

The scarcity and environmental costs of burning fossil fuel for transportation and other energy needs is a growing

concern. Disruptive technology changes are needed to reduce fuel consumption in aircraft and peak power generation, and cut greenhouse gas emissions sharply. The gas turbine has been an enormously successful power plant for aircraft and marine propulsion, and electric power generation, due to its light weight, smooth and reliable operation, low emissions, and varied applications. Nevertheless, it is not very efficient in converting fuel energy to useful work due to fundamental thermodynamic limitations.



Razi Nalim, PE, PhD  
Department of Mechanical Engineering  
School of Engineering and Technology

Dr. Razi Nalim, Professor and Associate Chair of Mechanical Engineering in the Purdue School of Engineering and Technology at IUPUI, has investigated alternative thermodynamic cycles and pulsed combustion systems for propulsion and gas turbine applications resulting in the development of a key new component called a wave rotor combustor. Because fuel represents half the weight of a commercial airplane at takeoff, this invention would allow for the redesign of the entire airplane, ultimately leading to NASA's goal of a 70% reduction in fuel use per passenger mile, and a correspondingly reduced aviation 'carbon skyprint'. Beyond commercial aviation, the wave rotor combustor could also help make hypersonic flight to the earth's orbit more feasible.

Laboratory experiments and computer simulations are underway to verify the wave rotor combustor's application and usefulness in industry. This research involves the collaboration of experts from IUPUI and industry in various disciplines. A joint research effort between Rolls Royce, IUPUI, and Purdue University to design, test, and commercialize the combustion wave rotor is under way. In 2009, their wave rotor combustion rig was operated successfully, and demonstrated ignition and combustion with pressure rise.

RECENT EXTERNAL FUNDING AWARDS

The Office of the Vice Chancellor for Research recognizes and congratulates all IUPUI faculty and researchers for recent awards received and helping to advance the IUPUI research enterprise. The following highlights those receiving \$100,000 or more in external grants.

Grants and Awards - December 2009

PI	Agency	Project Title	School	Department	Total
BRATER,DONALD CRAIG	LILLY ENDOWMENT, INCORPORATED	Translational Science Initiative at the Indiana University School of Medicine	MEDICINE		\$60,000,000
LOEHRER, PATRICK J.	WALTHER CANCER FOUNDATION, INC.	Walther Scholars Program	MEDICINE	CANCER CENTER	\$5,306,186
KIOVSKY, RICHARD DEAN	INDIANA STATE DEPARTMENT OF HEALTH	2010 Indiana Area Health Education Centers Program Operating Support	MEDICINE	AREA HEALTH EDUCATION CENTERS	\$1,318,125
TIERNEY, WILLIAM MICHAEL	FOGARTY INTERNATIONAL CENTER	An East African Center of Excellence for Informatics Training	MEDICINE	GENERAL INTERNAL MEDICINE	\$1,237,265

FELDBAUS, CHARLES R.	INDIANAPOLIS PRIVATE INDUSTRY COUNCIL	STEM Opportunities in the Workforce System Initiative	E&T	ORG LEADERSHIP & SUPERVISION	\$944,348
WRIGHT, ERIC REANEY	INDIANA FAMILY AND SOCIAL SERVICES ADMINISTRATION	State Epidemiology and Outcomes Workgroup - SEOW	PUBLIC & ENVIRONMENTAL AFFAIRS	PUBLIC & ENVIRONMENTAL AFFAIRS	\$645,680
SAYKIN,ANDREW J	NORTHERN CALIFORNIA INSTITUTE FOR RESEARCH & EDU	Amyloid Imaging, VMCI, and Analysis for ADNI	MEDICINE	RADIOLOGY & IMAGING SCIENCES	\$507,318
TEDESCO,LENORE P	INDIANA DEPARTMENT OF ENVIRONMENTAL MANAGEMENT	Eagle Creek Watershed Implementation Project	SCIENCE	GEOLOGY	\$393,225
MCDANIEL,ANNA M	GABRIEL GROUP	An Anti-Smoking video Game for Pre- Adolescent Girls	NURSING	NURSING	\$301,750
PEACOCK,MUNRO	CREIGHTON UNIVERSITY	Vitamin D in Older Subjects (VIDOS)	MEDICINE	ENDOCRINOLOGY	\$275,000
SLEDGE JR ,GEORGE W	SUSAN G. KOMEN BREAST CANCER FOUNDATION	Proj 1:Examination of the human kinome for novel genome-specific therapeutic targets in triple-negative breast cancer; Proj 2:Association of genetic variability with receptor activation of tumor angiogenesis inhibitors: an in vitro genetic biomarker	MEDICINE	HEMATOLOGY/ ONCOLOGY	\$250,000
SMITH,JOSHUA S.	BD OF SCHOOL COMMISSIONERS OF CITY OF INDIANAPOLIS	Evaluation of the Indianapolis Public Schools Stimulus Support	EDUCATION	EDUCATION	\$165,000

OVCR INTERNAL GRANT DEADLINES

Signature Centers Initiative (SCI) Round 3 Call for Proposals – *Deadline Extended*

The deadline for the submission of proposals under the Round 3 Signature Centers Initiative has been extended to April 1, 2010. This is also the deadline for Round 1 center third and final year activity reports and for any Round 1 centers wishing to submit a proposal for receiving extended funding past their first 3 years. Deadline for the submission of Round 2 center second year activity reports is July 15, 2010. For more information and to apply, please go to <http://research.iupui.edu/funding/>.

**DEVELOPING DIVERSE RESEARCHERS WITH INVESTIGATIVE EXPERTISE (DRIVE):** The Developing Diverse Researchers with InVestigative Expertise (DRIVE) program is designed to enhance the diversity and research and creative activity mission of IUPUI. Faculty from historically underrepresented populations, usually defined as African-American, Latino-American, Native American, Pacific Islanders, and women are particularly encouraged to apply. The next IDF application deadline is February 15, 2010. For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

**RELEASE TIME FOR RESEARCH:** The Release Time for Research (RTR) internal funding mechanism was developed to support faculty in having adequate time to prepare competitive proposals. The RTR funding allows IUPUI faculty a “buy out” of teaching time to prepare high quality grant/contract proposals for submission to external funding agencies. Application deadline is February 15, 2010. For grant



guidelines and application forms, go to <http://research.iupui.edu/funding/>.

**IUPUI ARTS AND HUMANITIES INTERNAL GRANT (IAHI):** The IAHI Grant Program exists to support campus-wide attainment of excellence in research and creative activity in arts and humanities. It is designed to enhance the research and creative activity mission of IUPUI by supporting research projects and scholarly activities that are conducted by arts and humanities faculty. The first IAHI application deadline is March 1, 2010. For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

**INTERNATIONAL DEVELOPMENT FUND (IDF) GRANT:** The IDF grant was developed to enhance the international research and scholarly activity focus of the IUPUI academic mission. Generally, the IDF grant serves as venture capital to stimulate additional funding for international research and scholarly activity, which have strong potential to generate indirect cost recovery from extramural sources. The next IDF application deadline is April 15, 2010. For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

**RESEARCH SUPPORT FUNDS GRANT (RSFG):** The IUPUI Research Support Funds Grant (RSFG) program is designed to enhance the research mission of IUPUI by supporting research projects and scholarly activities that are sustainable through external funding. The next RSFG application deadline is April 2, 2010. For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

## OVCR WORKSHOPS AND EVENTS

### Finding Funding

When: Tuesday, February 02, 2010 | 02:00 PM-03:30 PM  
Where: University Library 0106

This session will provide an overview of the various types of external funding sources, identify tools to locate funding opportunities, explain how to design a funding search, and demonstrate a few knowledge management systems that contain thousands of funding opportunities available by the university subscription.

Register: <http://ctl.iupui.edu/events/eventsRegistration.asp?id=1861>

### Community of Science (Find Funding and Collaborators)

When: Thursday, February 11, 2010 | 10:00 AM-11:30 AM  
Where: University Library Room 0106

Indiana University is a member of the Community of Science (COS). Whether your work is in the arts or the sciences, COS funding and expertise search tools and services can help support and advance your research and scholarly activity. Learn how to take full advantage of these services and help our institution promote its work. This event is a hands-on open lab session.

Register: <http://ctl.iupui.edu/events/eventsRegistration.asp?id=1862>

## OTHER WORKSHOPS AND EVENTS

### Scholarship at Lunch Time (SALT) Series

The SALT event series is aimed at showcasing interdisciplinary research efforts, promoting IUPUI research center activities, and encouraging new collaborative partnerships. This highly interactive event provides an opportunity to meet fellow researchers in an informal setting on a monthly basis at the Faculty Club. The event is open to non-members of the Faculty Club. Due to limited seating it is

recommended that you sign-up prior to each scheduled presentation by calling Stephanie at 317-274-7014 or by sending an email to [facclub@iupui.edu](mailto:facclub@iupui.edu). Lunch is a buffet that includes soup, a salad bar, two warm entrees with side dishes, and desert for \$12.90 (includes tax and gratuity).

The following is the next scheduled presentation.

### ***Mood, Stress, and Decision Making in a Virtual World***

When: Friday, February 24, 2010 | 12:00 PM-01:00 PM

Presenter: Mark Pfaff, Ph.D., School of Informatics

Dr. Pfaff's research explores the intersection of people, information, and technology in computer-supported cooperative work environments through the use of experimental simulations and mixed-methodological approaches. The focus of this talk will be on applied cognitive psychology, with some discussion of the systems used in complex work environments.

Register: <http://faa.iupui.edu/events/eventsRegistration.asp?id=1779>

## **CURRENT EXTERNAL FUNDING OPPORTUNITIES**

Funding opportunities in this section include selected current grant announcements from federal agencies for new initiatives and changes to existing programs. Announcements with limited scope are not listed here but are, instead, sent directly to IUPUI School Deans. For comprehensive coverage of funding opportunities please use the on-line search tools listed below.



### **NATIONAL INSTITUTES OF HEALTH**

#### **Recovery Act Limited Competition: Behavioral Economics for Nudging the Implementation of Comparative Effectiveness Research (CER) - Pilot Research (RC4)**

The focus is on investigating whether the principles of behavioral economics could be used to enhance the uptake of the results CER among health care providers and also enhance the maintenance of such treatments in patient populations. *Application deadline is March 19, 2010.*

#### **Recovery Act Limited Competition: Methodology Development in Comparative Effectiveness Research**

The focus is on enhancing, developing, or evaluating methodologies to improve the efficiency, validity, and credibility of comparative effectiveness research (CER) studies. CER encompasses a wide array of methodologies, including technology assessment, meta-analysis, systematic reviews, observational studies, and experimental trials. Each of these methodologies suffers from substantial weaknesses that limit their ability to rapidly provide information sought by patients, clinicians, and other stakeholders to make robust evidence-based decisions on clinical practice and public policy. *Application deadline is February 26, 2010.*

#### **School Nutrition and Physical Activity Policies, Obesogenic Behaviors and Weight Outcomes**

The focus is on fostering multidisciplinary research that will evaluate how policies (federal, state and school district levels) can influence school physical activity and nutrition environments, youths obesogenic behaviors (e.g., nutrition and physical activity behaviors), and weight outcomes; understanding how schools are implementing these policies and examine multi-level influences on adoption and implementation at various levels (e.g., federal, state, school district, and school); and understanding the synergistic or

counteractive effect of school nutrition and physical activity policies on the home and community environment and body weight. *Standard application deadlines apply*  
(<http://grants1.nih.gov/grants/funding/submissionschedule.htm>).

**Shared Instrument Program:** The NCRR Shared Instrument Grant (SIG) program encourages applications from groups of NIH-supported investigators to purchase or upgrade a single item of expensive, specialized, commercially available instrumentation or an integrated system that costs at least \$100,000. The maximum award is \$600,000. Types of instruments supported include confocal and electron microscopes, biomedical imagers, mass spectrometers, DNA sequencers, biosensors, cell sorters, X-ray diffraction systems, and NMR spectrometers among others. Mechanism of Support. This funding opportunity will use the NIH S10 mechanism. Funds Available and Anticipated Number of Awards. The NCRR intends to commit approximately \$43 million in FY2011 to fund approximately 125 new awards. *Application deadline is March 23, 2010.*



## NATIONAL SCIENCE FOUNDATION

**Integrative Graduate Education and Research Traineeship Program (IGERT)**: The focus is on catalyzing 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. **LIMITED COMPETITION Internal Deadline:** *February 1, 2010.*

## CENTERS FOR DISEASE CONTROL AND PREVENTION

**Developing a Prospective Assessment of the Development, Health, and Condition Progression in Young Children with Spina Bifida**: The focus is on refining methods to investigate and to collect baseline information on the development, health, and condition progression in young children who were born with Spina Bifida. *Application deadline is February 27, 2010.*

## DEFENSE ADVANCED RESEARCH PROJECTS AGENCY (DARPA)

**Information in a Photon Broad Agency Announcement**: The focus is on proposals addressing the basic science and the associated unifying physical and mathematical principles that govern the information capacity of optical photons, exploiting all relevant physical degrees of freedom. *Proposal Abstract submission deadline is 4:00PM January 28, 2010.*

## DEPARTMENT OF JUSTICE

**Research and Development on Pattern and Impression Evidence**: The focus is on research and development to enhance crime laboratories' ability to identify, characterize, capture, visualize, analyze and preserve impression evidence and pattern evidence. *Application deadline is February 16, 2010.*

## NATIONAL ARCHIVES AND RECORDS ADMINISTRATION

**Strategies and Tools for Archives and Historical Publishing Projects**: The focus is on developing new strategies and tools that can improve the preservation, public discovery, or use of historical records. Projects may also focus on techniques and tools that will improve the professional performance and effectiveness of those who work with such

records, such as archivists, documentary editors, and records managers. *Application deadline is June 3, 2010.*

**Publishing Historical Records:** The focus is on promoting the preservation and use of America's documentary heritage essential to understanding our democracy, history, and culture. *Application deadline is June 3, 1020.*

**Professional Development Grants for Archives and Historical Publishing:** The focus is on improving the training and education of professionals in the archival and historical publishing communities. Projects can be for professional education curriculum development; for basic and advanced institutes; or research seminars. Application deadline is June 3, 2010.

## OFFICE OF NAVAL RESEARCH

**Young Investigator Program:** The focus of this program is to attract outstanding faculty to the Department of the Navy's research program, to support their research, and to encourage their teaching and research careers. Proposals should address one of the research interests of the ONR Science and Technology (S&T) Department ([www.onr.navy.mil](http://www.onr.navy.mil)). *Application deadline is January 29, 2010.*

## DID YOU KNOW?

### Campus Facts

For the fiscal year to date, awards (\$259M) to IUPUI are up 73.9%. The amount (\$335M) requested in proposals submitted is up 26% for the year. For December, the amount (\$113M) requested in proposals submitted is up 390% compared to the previous December.

## IDENTIFYING FUNDING OPPORTUNITIES

On-line search tools are available to IUPUI investigators who are interested in identifying funding opportunities in their areas of interest.

**Community of Science (COS):** COS is a primary on-line search tool for identifying funding opportunities. To take advantage of this tool, register at <http://www.cos.com/login/join.shtml>. Once you have completed the short registration process, you can personalize your search by selecting the option entitled "launch your workbench". You can access federal, local, corporate, foundation, nonprofit and other funding opportunities using key terms and save the results of up to 20 searches and have them delivered to you weekly via email.

**National Institutes of Health (NIH) "NIH Guide":** To take advantage of this search tool, register at <http://grants.nih.gov/grants/guide/listserv.htm>. It allows you to receive discipline specific funding opportunities that are delivered to you weekly via email.

**National Science Foundation (NSF) "MyNSF":** To take advantage of this search tool, register at <http://www.nsf.gov/mynsf/>. It allows you to receive discipline specific funding opportunities that are delivered to you weekly via email.

**Federal Business Opportunities "FedBizOpps":** FedBizOpps is the single government point-of-entry for Federal government procurement opportunities over



\$25,000. To take advantage of this search tool, visit <http://vsearch1.fbo.gov/servlet/SearchServlet>. Opportunities found at this site include, but are not limited to, presolicitations and special notices for research and service contracts for specific projects and some national centers and surveys that would not be found in Grants.gov and may not be found in the Community of Science.

### **Limited Submission Funding Opportunities:**

Many federal agencies and foundations offer grants, awards and fellowships that limit the number of applications that can come from one institution or require special handling. In order to comply with agency and foundation guidelines and increase the chances of Indiana University (IU) succeeding in such limited submissions and special handling opportunities, IU policies and procedures are in place and are utilized by the Office of the Vice Chancellor for Research and other IU research offices to facilitate internal coordination and competitions.

Individuals interested in responding to limited submission opportunities must inform the Office of the Vice Chancellor for Research about their intent to apply to a given limited submission opportunity, such that they can be included in the internal review and selection process. Failure to do so may disqualify individuals from consideration for submission to the funding opportunity.

Individuals interested in a limited submission opportunity or have any questions about the internal coordination process, contact Etta Ward at [emward@iupui.edu](mailto:emward@iupui.edu) or 317-278-8427. For a description of upcoming limited submission funding opportunities, as well as guidelines and application forms, go to: <http://ovpr.indiana.edu/lmsub/lmsub.asp>. Please note that this is not a comprehensive list, and that any external funding opportunity that imposes any type of submission limitation is subject to the IU limited submission policy and procedures.

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Office of the Vice Chancellor for Research - [ovcr@iupui.edu](mailto:ovcr@iupui.edu)  
Indiana University?Purdue University Indianapolis  
755 West Michigan Street, UL1940, Indianapolis, IN 46202-2896  
Phone: (317) 278-8427

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