

Research Enterprise

February 14, 2013

INSIDE THIS ISSUE:

- [Feature Story](#)
- [Announcements](#)
- [Faculty Spotlight](#)
- [Student Spotlight](#)
- [Translational Research Impact](#)
- [OVCR Internal Grant Deadlines](#)
- [OVCR Events and Workshops](#)
- [Current External Funding Opportunities](#)
- [Identifying Funding Opportunities](#)

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.

Research Offices:

[Development](#)
[Administration](#)
[Compliance](#)
[Enterprise Archive](#)

Editor:

Etta Ward

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 publication, but each item will be carefully considered.

FEATURE STORY

National Science Foundation Grant to Engage Undergraduate Students in Multidisciplinary Research

The National Science Foundation has awarded Drs. Jeremy Wilson (Anthropology, School of Liberal Arts, Indiana University-Purdue University Indianapolis) and G. William Monaghan (Glenn A. Black Laboratory of Archaeology, Indiana University-Bloomington) a three-year \$267,204 Research Experiences for Undergraduates (REU) grant that will immerse students in a multidisciplinary research project at Angel Mounds State Historic Site in southwestern Indiana.



Dr. Jeremy Wilson with IUPUI students at an archeological site in the Central Illinois River Valley

Nationally-recruited undergraduates from the arts and humanities, social sciences and science, technology, engineering, and mathematics disciplines will be provided with field and laboratory research training in archaeology, geophysics, geoarchaeology and geochemistry. "The goal of this project is to foster a new generation of scholars that can work across disciplinary boundaries to craft cogent, meaningful and empirically-sound interpretations about the Native peoples that inhabited the site between the 11th and 15th centuries," said Dr. Wilson. Over three years, REU participants will develop paleoenvironmental reconstructions for the region, investigate earthwork construction episodes, and explore the timing and relationship between fortification construction, settlement development and subsequent site abandonment.

Beginning with Eli Lilly and Glenn Black, the research history at Angel Mounds highlights changes and innovations in American archaeology and allied disciplines that have undergone several "revolutions" in theory, methods, tools, and technology since the 1930s. "If this past is predictive, the theoretical and methodological landscapes will continue to transform regardless of discipline, and students need to be ready to accept new ideas and perspectives," said Dr. Monaghan.

Over eight weeks, the educational programming will promote professionalization of undergraduate students and enhance skills by providing training in multidisciplinary

field methods and hands-on use of sophisticated geophysical and mapping instruments. In laboratory settings, students will learn to process, analyze, and curate the artifacts, ecofacts, and data collected. Analytical techniques taught in the laboratory will include basic identification and quantification of artifacts and other field data, as well as advanced methods of geochemical detection and estimation. Through the diverse and multidisciplinary training provided during the REU implementation period, students will gain a solid foundation in field and laboratory research and begin to form peer and professional relationships that will serve them for the rest of their careers.

According to Drs. Wilson and Monaghan, students from various backgrounds in the social and natural sciences will learn how to navigate, communicate and apply their training within a multidisciplinary framework. This will be accomplished by professional modeling of research approaches in the field and laboratory through direct, side-by-side mentoring of students within a complex, real-world research environment. Through a project-based learning structure and collaborative learning processes, we will develop knowledge and expand the specific skills of students. By completing the grant projects individually and in cohort teams, the professors will create a learning environment that focuses on developing skills appropriate for the next generation of researchers

The development of the REU was supported by the IUPUI Office of the Vice Chancellor for Research and the IUPUI Center for Research and Learning (CRL). Dr. Richard Ward, Director of the CRL notes that "The REU program is highly competitive and it is exciting to have our campus involved in this prestigious research opportunity for undergraduate students."

The National Science Foundation is an independent federal agency that supports fundamental research and education across all fields of science and engineering. In fiscal year 2012, its budget was \$7 billion. NSF funds reach all 50 states through grants to nearly 2,000 colleges, universities and other institutions. Each year, NSF receives over 50,000 competitive requests for funding and makes about 11,000 new funding awards. NSF also awards nearly \$420 million in professional and service contracts yearly.

ANNOUNCEMENTS

2013 IUPUI Research Day: Come and Imagine the Future

Research and creative activity matters at IUPUI and is making an impact every day, locally and throughout the world. The growing advancements in technology and the realization of exciting innovations mean that the skills needed to solve today's problems and to take advantage of current opportunities are changing at a faster rate than ever before. Now...imagine the future in our globalized job and economic market, highlighting emerging fields of study and celebrating the cutting-edge research and creative activities that fuel economic development in Central Indiana and beyond. The IUPUI Office of the Vice Chancellor for Research announces the 5th Annual IUPUI Research Day, an event that will allow participants to do just that...***Imagine the Future!***



Loren Field, Ph.D.
School of Medicine

Research Day will be held on Friday April 5, 2013, in the IUPUI Campus Center. The keynote speaker this year is IUPUI's own Dr. Loren Field. Dr. Field's presentation will occur during the morning plenary session from 9:30 am to 10:50 am. This daylong celebration of research and creative activities at IUPUI will also include two poster sessions

showcasing the research of our students (graduate, professional and undergraduate) and faculty, recognition of the 2013 Research Frontiers Trailblazer Award recipients, and a networking reception.

Dr. Field is internationally renowned for his work in genetics and cellular biology, including pioneering efforts in cardiac stem cell research. He is professor of medicine and pediatrics at the School of Medicine and has an appointment in the Department of Cellular and Integrative Physiology. Prior to his recruitment to Indiana University, Dr. Field was a Senior Staff Investigator at the Cold Spring Harbor Laboratory in New York.

Dr. Field has served on numerous grant review programs for the National Heart, Lung and Blood Institute, and on the editorial board of a number of journals focused on cardiovascular research. He is an Established Investigator of the American Heart Association (1992-1997), a Founding Fellow of the International Society of Heart Research (2001), a participant of several American Heart Association Science Writers Forums, and a recipient of the Bristol Myers Squibb Unrestricted Grant Award (1996-2000).

Dr. Field is also the recipient of the 2012 Glenn W. Irwin, Jr., M.D. Research Scholar Award. The award is IUPUI's highest recognition of outstanding, continuing research, scholarship or creative activity by a faculty member. Dr. Field has a long-standing interest in the regenerative capacity of the adult heart; his research efforts are focused on enhancing this regenerative activity with the hopes of developing interventions to treat failing hearts. The success of this research would offer the potential for seriously ill patients whose tissue has been damaged by heart attack to "re-grow" their own hearts. Imagine what the future holds for this critically important field of inquiry and practice.

For more details about the Research Day activities and to RSVP, please go to <http://research.iupui.edu/events/researchday2013/index.php>. Questions can be directed to Etta Ward at emward@iupui.edu or 278-8427.

Call for 2013 IUPUI Research Day Student Poster Abstracts

All undergraduate, graduate, and professional students are invited to submit research poster abstracts for the 2013 IUPUI Research Day event, to be held on Friday, April 5th. Selected participants will have the opportunity to showcase their research and creative accomplishments to IUPUI and IUPUC faculty, staff, and students as well as business, nonprofit, and government organizations.

The **abstract submission deadline is March 1, 2013**. Selection will be determined by IUPUI faculty and based on abstract clarity and project quality. Students will be notified of a decision on their submitted abstract no later than March 15, 2013. Imagine the opportunity to discuss your research with a large audience!

For abstract submission guidelines visit:

<http://crl.iupui.edu/assets/documents/AbstractFormattingGuidelines.pdf>

Abstracts must be saved as a PDF, and will not be accepted in any other format. For more information, go to <http://www.crl.iupui.edu/events/index.asp>. To submit an abstract, go to [Research Day 2013 Student Abstract Submissions](#).

Indiana Researchers Spend a Day with National Science Foundation Reps at IUPUI



The National Science Foundation and IUPUI Office of the Vice Chancellor for Research presented a successful one-day workshop on Monday, February 4, 2013. This daylong workshop, which was primarily designed for researchers and educators less experienced in proposing to the NSF, provided participants from universities throughout Indiana an opportunity to hear from and engage with representatives from the seven NSF directorates.

The attendees received important information about the Foundation's mission, priorities, and budget. The NSF representatives also held breakout sessions for discussions of potential research proposals and to answer questions about the proposal and merit review process. In addition, participants received tips on common mistakes to avoid.

As a follow up to this event and to help move IUPUI researchers forward in their efforts to seek and secure NSF funding, staff members from the Office of the Vice Chancellor for Research are available to consult with those interested. Requests for assistance and consultation should be sent to ovcr@iupui.edu. Please include "NSF Day Follow-up" in the subject line.

Inaugural Bantz-Petronio Translating Research Into Practice Faculty Award Nomination Deadline: March 1

Nominations are now welcome for the inaugural Bantz-Petronio Translating Research Scholarship Into Practice Faculty Award—the "TRIP Award." This faculty award is established with a gift from IUPUI Chancellor Charles Bantz and Professor Sandra Petronio and is intended to recognize outstanding work in translating research into practice by a faculty member at IUPUI. This recognition includes a monetary award. The TRIP Award will recognize IUPUI faculty whose interdisciplinary or cross-disciplinary research and scholarship is intentionally directed toward making an impact on people's lives in Indiana and beyond. In addition to generating knowledge through scientific inquiry or humanistic scholarship, nominees should have actively endeavored to transform knowledge into practices or solutions, demonstrating innovative ways to improve the lives of individuals and the communities in which they live.

Faculty nominations are due March 1, 2013. The TRIP Award winner will be announced in May and will present at the annual TRIP Showcase in fall, 2013.

Nomination materials, including three letters of support, should be submitted to William Blomquist, Dean, IU School of Liberal Arts, CA 441, IUPUI, blomquis@iupui.edu. For more information, see <http://go.iu.edu/6G1>.

Competition Rewards Students' Innovative Solutions to Pressing Social, and Economic Challenges

The IUPUI Office of the Vice Chancellor for Research will host the second annual "pitch" competition that rewards IUPUI students for innovative solutions to what ails society.

The 2013 Ideas Solving Social and Economic Challenges competition takes place from 3:00 p.m. to 5:30 p.m., Tuesday, Feb. 26, 2013, in the IUPUI Campus Center Theater, 420 University Blvd.

The ISSEC competition challenges IUPUI students -- individuals or teams -- to propose original, even groundbreaking, solutions to pressing social and economic challenges facing Indiana, the nation and the world. It is designed to encourage IUPUI students to provide ideas by presenting cash awards for the most innovative ideas.

The emphasis of the competition is on providing answers to real-world problems, through new approaches, products, services or ventures. Contestants have three minutes to pitch their proposals to judges without the use of slides or other props.

The time constraint of the competition's "elevator pitch" format challenges the competitors to present themselves, and their idea, in a concise and persuasive manner. This provides participants with invaluable experience in a fundamental skill for professional success -- presenting an idea in a short but effective format, to a potential investor, partner or supporter at a moment's notice.

The event is open to the public. Audience members will also have a chance to cast a ballot for their own favorite idea or team in an "Audience Choice" category.

For additional information, go to <http://www.crl.iupui.edu/issec/>. Questions can be directed to Karen White at kfwhite@iupui.edu or (317) 274-1083.

Multidisciplinary Undergraduate Research Institute (MURI) Funded Teams for Summer 2013 Announced

The Multidisciplinary Undergraduate Research Institute (MURI) will fund eight project teams during summer of 2013.

For more information regarding the funded proposals, please see <http://www.crl.iupui.edu/programs/MURI/2013summerfundedproposals.asp>

Students can apply to participate in the MURI projects at www.crl.iupui.edu. The deadline for applications is March 1, 2013.

Call for AY 2013-20014 Multidisciplinary Undergraduate Research Institute (MURI) Proposals

The Center for Research and Learning welcomes proposals for the AY 2013-2014 Multidisciplinary Undergraduate Research Institute (MURI) at IUPUI. Proposals should represent two or more disciplines and should offer undergraduate students the opportunity to engage in a substantive research experience focused on a significant research problem.

This is a unique opportunity provided to IUPUI faculty and researchers for mentoring students while conducting pilot projects or testing new techniques and designs.

Some key points regarding this year's program are as follows:

- Faculty writing proposals are encouraged to review the document entitled [MURI FAQs for Faculty Submitting Proposals](#).
- Proposals must be submitted by using the current version of the [MURI Project Proposal Form](#).
- The MURI Review Committee will review the submitted proposals using the [MURI Proposal Evaluation Form](#) (log in with IUPUI username and password).
- Graduate students and post-doctoral trainees may also serve as co-mentors on a team.
- Proposals are due by midnight on March 22, 2013, to the following address: CRLGrant@iupui.edu
- The Proposal Review Committee Meeting is currently scheduled for April 12, 2013
- The announcement regarding funded proposals is currently scheduled for April 16, 2013.
- Students may apply to MURI and rank their project choices beginning April 30, 2013 with a deadline of September 10, 2013.
- The Academic Year program begins on October 4, 2013, and continues through April 30, 2014.

MURI is jointly funded by the Center for Research and Learning, a division of the Office of the Vice Chancellor for Research, and the School of Engineering and Technology.

Project proposals from all disciplines on the IUPUI campus are encouraged. For more information contact Elizabeth Rubens erubens@iupui.edu

The Multidisciplinary Undergraduate Research Institute (MURI) will fund eight project teams during summer of 2013. For more information regarding the funded proposals, please see <http://www.crl.iupui.edu/programs/MURI/2013summerfundedproposals.asp>

Students can apply to participate in the MURI projects at www.crl.iupui.edu. The deadline for applications is March 1, 2013.

FACULTY SPOTLIGHT

IU Physician Researcher Testing Novel Surgical Technique for Uterine, Cervical Cancer Patients

A technique initially used to spare breast tissue during surgery is being researched by an Indiana University School of Medicine physician to improve prognosis, reduce complications and spare lymph nodes in women with gynecological cancer.

Dr. Emma Rossi, assistant professor of obstetrics and gynecology at the School of Medicine and a physician researcher at the Indiana University Melvin and Bren Simon Cancer Center, was the first to describe a



Emma Rossi M.D.
Department of Obstetrics and Gynecology
School of Medicine

novel technique for sentinel lymph node mapping in uterine and cervical cancer patients.

Sentinel lymph node mapping uses an injected dye to identify the path of cancer cells in the lymph system. If cancer spreads from the primary tumor, it travels through the lymph system, and the first lymph node it reaches is known as the sentinel lymph node. If the cancer cells do not appear in the sentinel node, physicians know the malignant, or cancerous, cells have not traveled outside the primary tumor to spread through the lymph system.

Dr. Rossi is testing a novel technique for sentinel node mapping in a study comparing the detection of metastatic disease to routine lymphadenectomy, a more invasive surgical procedure in which the lymph nodes are removed and a sample of tissue is checked under a microscope for signs of cancer.

The fluorescing dye indocyanine green, or ICG, is injected into study participants in the cervix or endometrium before their cancer staging surgery. Dr. Rossi then uses an endoscope -- a thin, tube-like instrument used to look at tissues inside the body -- and a robotic camera that is capable of detecting the dye. The dye clearly identifies the nodes that receive drainage of cancer cells from the tumor.

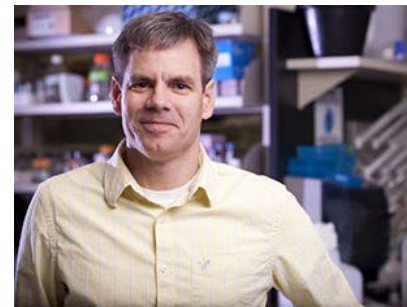
"By using this technique, we only have to remove the sentinel nodes. Therefore, there is less cutting and potentially fewer complications," said Dr. Rossi, who is the principal investigator for the IU study. "And we hope this technique will lead to an increased detection of cancer and save lives."

The IU Simon Cancer Center is one of three sites where the study is being conducted. The others are the University of North Carolina at Chapel Hill and Summerlin Hospital Medical Center, Las Vegas. Dr. Rossi said the sites will enroll 1,000 patients over the next two to three years.

To learn more about this study, contact research coordinator Melissa Ade at 317-944-7026 or made@iupui.edu.

Researcher Receives Grant from Mary Kay Foundation to Advance Cancer Research

Dr. John Turchi, professor of medicine and professor of biochemistry and molecular biology in the School of Medicine, will receive \$100,000 to support a project involving the development of novel agents to treat ovarian cancer with a focus on agents that can be used to treat recurrent cancers. Dr. Turchi is one of 13 respected doctors and medical scientists nationwide to receive a total of \$1.3 million in grant



John Turchi, Ph.D.
Department of Medicine
School of Medicine

support from the Mary Kay Foundation to reduce cancers affecting women.

"I am honored to be selected by the review committee," Dr. Turchi said. "The support provided by the Mary Kay Foundation enables us to pursue a crucial series of experiments that are critical toward developing novel anti-cancer therapies."

Dr. Turchi's laboratory studies the ability of tumor cells to repair following treatment with Cisplatin, the first in a class of chemotherapy drugs derived from the heavy metal platinum. By turning off that repair mechanism, Turchi aims to prove these tumors will die. He has discovered three molecules -- potential drugs -- that show promise in the laboratory. Two have received provisional patents, and he's working to move them along to patient trials.

Developed in the 19th century, Cisplatin wasn't approved as a standard treatment for cancer until the 1970s, when its potential was confirmed by Lawrence Einhorn, M.D., Distinguished Professor and Lance Armstrong Foundation Professor of Oncology. Today, Cisplatin and subsequent generations of platinum drugs are used either alone or in combination to treat a host of cancers. A biochemist who has studied platinum-based drugs for 15 years, Dr. Turchi left the Wright State University School of Medicine in 2004 to further research in this area under Einhorn at the IU School of Medicine.

The Mary Kay Foundation research review committee, composed of prominent doctors who volunteer their time to help the foundation select the best recipients across the nation, selected Dr. Turchi as a candidate for their annual award based on his reputation in the field. After reviewing these candidate recommendations, the board of directors selects the grant recipients.

"We are committed to eliminating cancers affecting women by supporting top medical scientists who are searching for a cure for breast, uterine, cervical and ovarian cancers," said Jennifer Cook, executive director of the Mary Kay Museum and member of the board of directors for the Mary Kay Foundation. "Providing options to women who are suffering from cancer and saving their lives brings us one step closer to eliminating cancer.

"The best part of my job is learning about the women we have helped through cancer, like Independent Beauty Consultant Betty Savoretti and her daughter, Alisa, who are both cancer survivors," she added.

For every three women, one will develop some type of cancer in their lifetime, according to the American Cancer Society.

Since 1996, the [Mary Kay Foundation](#) has donated more than \$18 million to support researching new cancer treatments and new findings on hereditary breast cancer.

STUDENT SPOTLIGHT

Research Delivers the Full College Experience for Physics Student

Torri Roark still remembers feeling scared and overwhelmed the first time she walked in to

volunteer in a research lab in the Department of Physics.

She had just changed her major from chemistry to physics. She knew she loved science but didn't know exactly where her education would take her. Roark still recalls with clarity the advice her advisor and now mentor, Associate Professor Horia Petrache, gave her those early days.

"I was terrified when I began research. He told me, 'It's OK if you don't know something,'" said Roark, a senior physics student from Noblesville, Ind.

"Later that semester, I was presenting my research at IUPUI Research Day," she said. "I couldn't have done that without the help of Dr. Petrache and the other scientists and collaborators who were willing to sit down and talk about my research.

"That's one of the greatest things about the physics department. I know all my classmates and instructors, and I can walk into the physics offices and get help whenever I need it," Roark said.

What Roark lacked in research experience as an underclassman she has made up for with determination and a genuine interest in physics and its applications.

"I tutor students in the physics learning space, and a lot of the students get really nervous about physics and math classes," said Roark, who also is earning a minor in mathematics. "I tell them that once you get past your early courses and start studying more of the applied physics, it becomes more interesting and you get to see really how cool it is."

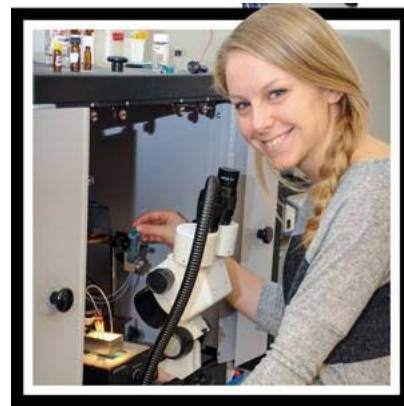
Roark says some of the early courses intimidated her as well. After more than a year in the physics lab, however, she now has the confidence to present her ongoing research in biophysics at the National Institute of Health (NIH) in Maryland (where she also served as an intern) and the Biophysical Society's Annual Conference, where she will return in February for the second time. She plans to pursue her Ph.D. in biophysics after graduating from the School of Science in May 2013.

"Had I not been doing research, it's almost like I wouldn't have gotten the full college experience. Just taking classes doesn't give you the whole perspective," Roark said.

Her research involves the study of the interactions between ions and surfaces, specifically between ions and lipid membranes embedded with proteins. Although there are times when the work becomes tedious, she still gets excited when she obtains a good measurement and usable data in the lab.

"Physics encompasses everything else you learn in science," Roark said. "I still get to use chemistry and biology everyday in the lab, but, more than that, I am learning how to work independently and solve problems."

When not in the lab or in class, Roark still finds time to work part-time at a shoe store. She enjoys jogging, traveling and spending time with her dog and family.



Torri Roark
Undergraduate, Physics Major
School of Science

TRANSLATIONAL RESEARCH IMPACT

IUPUI Lab Gets \$328,000 for Energy Research Project

The National Science Foundation (NSF) has awarded the School of Engineering and Technology a \$328,120 grant to advance the study of wave rotor combustion technology used with gas turbine engines.

The research promises better fuel efficiency and less pollution from aircraft and power plants, and could also lead to the development of more vehicles operating on domestic natural gas instead of imported petroleum fuels.

Wave rotors are energy conversion devices that harness pressure waves to compress gases and burn fuel more efficiently. Under the grant, Dr. Razi Nalim and other researchers at the Combustion and Propulsion Research Laboratory at IUPUI, in collaboration with Rolls-Royce Corporation in Indianapolis, will seek to better understand the complex interaction of the physical and chemical processes that occur during the reignition phase of combustion in a novel pressure-boosting wave rotor.

Rolls-Royce will supplement the NSF grant with a paid internship, valued at \$90,000, for a doctoral student researcher.

"We are extremely excited about this NSF award and the continued collaboration with Rolls-Royce," said Dr. David Russomanno, dean of the School of Engineering and Technology. "This type of interaction between industry and academic research is critical to our strategic plan and allows our faculty and students to compete at increasingly higher levels."

Wave rotor technology has great promise of more fuel efficiency and reduced emissions from aircraft engines and electric power plants. The goal is concurrently reducing fuel consumption, carbon emissions and the weight of gas turbines by about 20 percent each.

Dr. Nalim's earlier research on wave rotor technology during his doctoral studies and his work at NASA led to the close collaboration between IUPUI and Rolls-Royce and a successful demonstration of wave rotor combustion technology in 2009. In developing the grant proposal, Nalim drew on his many years of industry research experience in reducing emissions from internal combustion engines that burn natural gas. The new grant will provide deeper insight into how fuel could be rapidly and reliably ignited by a puff of hot gas, especially in diluted fuel concentrations that prevent the formation of nitrogen oxide pollution.

"In researching wave rotor technology, we have been privileged for over a decade to work with support from Rolls-Royce, a global leader in aircraft engines and gas turbine power plants, with manufacturing and research facilities here in Indianapolis," Dr. Nalim said. "The planned research will allow a mechanical engineering doctoral student to work as an intern at Rolls-Royce for three summers, while earning a Purdue engineering doctorate at IUPUI and helping us translate our research to practice in industry."

The success of the IUPUI/Rolls-Royce project will lead to novel combustion methods that create a pressure boost in aircraft and electric power generation engines. By retrofitting or redesigning power generation gas turbines and aircraft jet engines with pressure-boost combustors, the United States can save an estimated \$10 billion in fuel and 100 megatons of carbon dioxide emissions each year.

The project also enables more reliable ignition in trucks and locomotives using internal-combustion engines, allowing the substitution of less expensive domestic gas fuels for diesel refined from imported petroleum. Additionally, the project can



Razi Nalim, P.E., Ph.D.
Department of Mechanical Engineering
School of Engineering and Technology

enable innovative medium- and small-scale power generators as well as more efficient hybrid vehicles and portable power units.

OVCR INTERNAL GRANT DEADLINES

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, 2013**. For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

Funding Opportunities for Research Commercialization and Economic Success (FORCES): The FORCES program is designed to support IUPUI researchers in the successful transformation of their research findings into commercially viable outcomes. The key goals of FORCES are to support: 1) realization of short-term projects that will enhance commercial value of IUPUI intellectual property assets, by facilitating commercialization of inventions, technologies, or other intellectual property derived from existing research projects, and 2) development of research initiatives that show great promise for commercialization of the research outcomes. The next RTR application deadline is **March 15, 2013**. For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

OVCR EVENTS AND WORKSHOPS

National Science Foundation Faculty Early Career Development Program

The Faculty Early Career Development (CAREER) Program is an NSF-wide activity offering prestigious awards in support of junior faculty who exemplify the role of teacher-scholars through outstanding research, excellent education and the integration of education and research within the context of the mission of their organizations.

The NSF deadlines for submission of proposals are July 22, 23, and 24, 2013, depending on discipline. If you are interested in applying and would like assistance by OVCR staff, be sure to **register for and attend all of the following sessions**.

Note: Faculty who submit an NSF CAREER proposal in 2013 are eligible to be considered for an OVCR CAREER Project Seed Grant related to that submission. Up to three awards may be made.

» Information & Determining Eligibility Session

When: Friday, February 1, 2013 | 10:00 AM-12:00 PM
Where: University Library, Room 1126

A brief review of the guidelines and eligibility requirements will be presented. Attendees will also learn what resources are available to support development of a competitive proposal to the National Science Foundation CAREER program.

[Click here to register](#)

» Panel of Successful NSF CAREER Applicants

When: Friday, March 8, 2013 | 10:00 AM-12:00 PM
Where: University Library, Room 1126

As a follow-up to the initial introductory session in February, recent NSF CAREER awardees will share tips on securing funding through this program and answer questions from attendees.

[Click here to register](#)

» **Commitment and Match Day for Faculty and OVCR Staff**

When: Friday, April 12, 2013 | 10:00 AM-12:00 PM

Where: University Library, Room 1140P

The Office of the Vice Chancellor for Research Proposal Development team will provide one-to-one support for developing and submitting NSF CAREER proposals. Attendees at this session will present their proposal concepts and be matched with an experienced professional writer/editor who will work with them through submission.

IUPUI Arts & Humanities Workshop: Research Commercialization, Intellectual Property, and Entrepreneurship

When: Thursday, February 28, 2013 | 12:00 PM-1:30 PM

Where: University Library, Room 1126

IUPUI faculty and students from across the disciplines are involved in innovative and exciting research projects -- some of which might lead to inventions, technologies, software programs, or businesses. This workshop introduces faculty and students to the basics of research commercialization, intellectual property, and entrepreneurship in the IU system.

Representatives from the IUPUI Office of the Vice Chancellor for Research and the IU Research and Technology Corporation will outline the steps from research idea to commercial implementation in this informative session. They will answer such questions as: What are IU's intellectual property policies? Should my software be open source or proprietary? Are there other researchers or community partners that can help me develop my idea? How do I translate my university research into a commercial product?

[Click here to register](#)

Basic Proposal Development for Faculty

When: Wednesday, March 6, 2013 | 2:00 PM-3:30 PM

Where: University Library, Room 1126

Preparing a competitive, fundable grant proposal takes significant planning and skillful execution. This introductory session will focus on where to start the process, key components of a proposal, budget preparation, and what assistance is available. A Q&A session will follow the presentation.

[Click here to register](#)

National Science Foundation Research Experiences for Undergraduates

The NSF REU opportunity includes grant proposals designed specifically to initiate and conduct projects that engage a number of undergraduate students in your ongoing research in meaningful ways as well as supplemental proposals to add undergraduate researchers to currently funded NSF projects. The NSF deadline for submission of proposals is August 28, 2013. If you are interested in applying and would like assistance by OVCR staff, be sure to **register for and attend all of the following sessions.**

» Information Session

When: Wednesday, March 27, 2013 | 2:30 PM-4:00 PM
Where: University Library, Room 1126

A brief overview of the guidelines will be presented. Attendees will also learn what resources are available to support development of a competitive proposal to the National Science Foundation REU program.

[Click here to register](#)

» Panel of Successful NSF REU Applicants

When: Wednesday, May 8, 2013 | 2:30 PM-4:00 PM
Where: University Library, Room 1126

As a follow-up to the initial introductory session in March, recent NSF REU investigators will share tips on securing funding through this program and answer questions from attendees.

[Click here to register](#)

» Commitment and Match Day for Faculty and OVCR Staff

When: Wednesday, June 5, 2013 | 2:30 PM-4:00 PM
Where: University Library, Room 1126

The Office of the Vice Chancellor for Research Proposal Development team will provide one-to-one support for developing and submitting your NSF REU proposal. Attendees at this session will present their proposal concepts and be matched with an experienced professional writer/editor who will work with them through submission.

[Click here to register](#)

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.

AGENCY FOR HEALTHCARE RESEARCH AND QUALITY

Advances in Patient Safety Through Simulation Research (R18): The AHRQ is interested in funding a diverse set of projects that develop, test and evaluate various simulation approaches for the purpose of improving the safe delivery of health care. Simulation in health care predominately is a training technique that exposes individuals and teams to realistic clinical challenges through the use of mannequins, task trainers, virtual reality, standardized patients or other forms, and allows participants to experience in real-time the consequences of their decisions and actions. The principal advantage of simulation is that it provides a safe environment for health care practitioners to acquire valuable experience without putting patients at risk. Simulation also can be used as a test-bed to improve clinical processes and to identify failure modes or other areas of concern in new procedures and technologies that might otherwise be unanticipated and serve as threats to patient safety. Applications that address a variety of simulation techniques, clinical settings, provider groups, priority populations, patient conditions, and threats to safety are welcomed. *Application deadline is May 25,*

2013. Funding Opportunity: PAR-11-024.

NATIONAL ENDOWMENT FOR THE HUMANITIES

Bridging Cultures Through Film: The Bridging Cultures through Film: International Topics program supports documentary films that examine international and transnational themes in the humanities. These projects are meant to spark Americans' engagement with the broader world by exploring one or more countries and cultures outside of the United States. Proposed documentaries must be analytical and deeply grounded in humanities scholarship. The Division of Public Programs encourages the exploration of innovative nonfiction storytelling that presents multiple points of view in creative formats. The proposed film should range in length from a standard broadcast length of thirty minutes to a feature-length documentary. NEH invites a wide range of approaches to international and transnational topics and themes, such as 1) an examination of a critical issue in ethics, religion, or history, viewed through an international lens; 2) an exploration of a topic that transcends a single nation-state, with the topic being explored across borders; 3) a biography of a foreign leader, writer, artist, or historical figure; or 4) an exploration of the history and culture(s) of a specific region, country, or community outside of the United States. *Application deadline is June 12, 2013.* Sponsor ID: 20120627-TW.

NATIONAL INSTITUTES OF HEALTH

Genetic High-End Instrumentation Grant Program (S10): The ORIP High-End Instrumentation Grant (HEI) program encourages applications from groups of NIH-supported investigators to purchase a single major item of equipment to be used for biomedical research that costs at least \$750K. The maximum award is \$2M. Instruments in this category include, but are not limited to, biomedical imaging systems, NMR spectrometers, mass spectrometers, electron microscopes and supercomputers. *Application deadline: September 13, 2013.* Funding opportunity: PAR-13-101.

NATIONAL SCIENCE FOUNDATION

Centers for Chemical Innovation: The Centers for Chemical Innovation (CCI) Program supports research centers focused on major, long-term fundamental chemical research challenges. CCIs that address these challenges will produce transformative research, lead to innovation, and attract broad scientific and public interest. CCIs are agile structures that can respond rapidly to emerging opportunities and make full use of cyberinfrastructure to enhance collaborations. CCIs may partner with researchers from industry, government laboratories and international organizations. CCIs integrate research, innovation, education, and informal science communication and include a plan to broaden participation of underrepresented groups. Phase I awards will be standard grants. Phase II awards will be cooperative agreements. Estimated number of Phase I awards is up to four, each award is \$1.75M over 3 years. *Application deadline: March 26, 2013;* Sponsor opportunity ID: NSF 12-572.

Dimensions of Biodiversity: Despite centuries of discovery, most of our planet's biodiversity remains unknown. The scale of the unknown diversity on Earth is especially troubling given the rapid and permanent loss of biodiversity across the globe. With this loss, humanity is losing links in the web of life that provide ecosystem services, forfeiting an understanding of the history and future of the living world, and losing opportunities for future beneficial discoveries in the domains of food, fiber, fuel, pharmaceuticals, and bio-inspired innovation. This campaign seeks to characterize biodiversity on Earth by using integrative, innovative approaches to fill the most substantial gaps in our understanding of the diversity of life on Earth. It takes a broad view of biodiversity, and currently focuses on the

integration of genetic, taxonomic/phylogenetic, and functional dimensions of biodiversity. Successful proposals should integrate these three dimensions to understand interactions and feedbacks among them. While this focus complements several core NSF programs, it differs by requiring that multiple dimensions of biodiversity be addressed simultaneously, in innovative or novel ways, to understand their synergistic roles in critical ecological and evolutionary processes. *Application deadline: May 6, 2013; Sponsor opportunity ID: NSF 13-536.*

U.S. DEPARTMENT OF ENERGY

Multidisciplinary University Research Initiative: High Operating Temperature Fluids:

This FOA seeks to fund revolutionary, exploratory research to create highly disruptive concentrating solar power (CSP) technologies that will meet the SunShot installed system cost target of 6 cents per kilowatt-hour (6¢/kWh) or lower by the end of this decade. The Multidisciplinary University Research Initiative (MURI): High Operating Temperature Fluids ("HOT Fluids") Funding Opportunity Announcement (FOA) intends to support research into fluid materials development that will enable CSP systems to integrate with energy conversion devices capable of thermal to electric conversion efficiencies greater than 50%.e award supports new ideas that represent innovative approaches to prostate cancer research and have the potential to make an important contribution to eliminating death and suffering from prostate cancer. Although groundbreaking research often involves a degree of risk, applications should be based on a sound scientific rationale that is established through logical reasoning and/or critical review and analysis of the literature. PIs do not have to be U.S. citizens. *Pre-proposals due by April 24, 2013; full proposals due by August 9, 2013.* Funding opportunity: W81XWH-12-PCRP-IDA (Grants.gov).

NOTE: *All faculty, researchers, and scientists on continuing contracts at IU interested in applying for Department of Defense funding are eligible for assistance by the consulting firm--Cornerstone Government Affairs-- arranged by the Vice President for Research. Those interested in securing assistance from Cornerstone must submit a 2 page summary of their research project and a CV or biosketch to the VP for Research Office at vpr@iu.edu. Prior to submission, the IUPUI Office of the Vice Chancellor for Research is offering assistance with the 2 page summaries. For more information, contact Ann Kratz akratz@iupui.edu.*

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://service.govdelivery.com/service/multi_subscribe.html?code=USNSF&custom_id=823. 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 <https://www.fbo.gov>. 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 or 317-278-8427. For a description of upcoming limited submission funding opportunities, as well as guidelines and application forms, go to: http://research.iu.edu/limited_sub.shtml. 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.

The Special Handling list was created in order to communicate donor restrictions and/or preferences for managing solicitation requests from Indiana University. The list reflects special relationships that exist between donors and the university and includes corporations and foundations that the President's office wishes to review prior to submission in order to coordinate Indiana University's requests to these donors.

The Special Handling List was compiled and is maintained by the Indiana University Foundation office of Corporate and Foundation Relations. Please contact [Dee Metaj](#) at 317-278-5644 if you have any questions regarding this list.

IU Authentication is required to view the following attachments:

[IUF Special Handling List and Principal Gifts Review Template](#)

Office of the Vice Chancellor for Research - ovcr@iupui.edu
Indiana University Purdue University Indianapolis
755 West Michigan Street, UL1140, Indianapolis, IN 46202-2896
Phone: (317) 278-8427

[Subscribe](#) or [Unsubscribe](#)