

# Research Enterprise

November 14, 2013

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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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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

### Indiana Clinical and Translational Sciences Institute Receives \$30 million Grant Renewal

The Indiana Clinical and Translational Sciences Institute, a partnership among Indiana University, Purdue University and the University of Notre Dame, has received nearly \$30 million from the National Institutes of Health to continue its mission accelerating research discoveries across Indiana and beyond.

The Clinical and Translational Sciences Award from the NIH's National Center for Advancing Translational Sciences renews the grant that established the Indiana CTSI five years ago, guaranteeing the institution will advance innovative health care programs and biomedical research into at least 2018.

"We are pleased and honored to earn this grant support from the NIH," said Anantha Shekhar, M.D., Ph.D., director of the Indiana CTSI and associate dean for translational research and Raymond E. Houk Professor of Psychiatry at the IU School of Medicine. "I regard this award as a powerful vote of confidence in the Indiana CTSI's success over the past five years, as well as a promise on our part to achieve even greater heights going into the next phase of this project."

He added the grant is made all the more significant as it arrives at a time when the federal landscape includes overall reductions in scientific research dollars, as well as steep competition from more than 30 highly regarded research institutions across the U.S., all which vied for this same award.

The IU School of Medicine received its first \$25 million NIH award to establish the Indiana CTSI in 2008, plus about \$25 million in matching grants from IU and Purdue, the state of Indiana and public-private partners such as Eli Lilly and Co. Additional support arrived a year later as Notre Dame joined the partnership, as



Anantha Shekhar, M.D., Ph.D.

well as several multimillion-dollar "supplemental" awards from the NIH granted to create tuition support and fellowship programs to prepare new scientists to engage in clinical and translational research. The CTSA program represents the NIH's largest single investment in clinical research.

"The CTSA Consortium is leading national efforts to enhance the efficiency, quality and safety of translational research, no matter the disease or condition," said NCATS Director Christopher P. Austin, M.D. "This aligns with the NCATS mission to create new technologies and methods that can be applied widely to streamline development and implementation of interventions that improve human health."

The Indiana CTSI's mission is to act as a statewide laboratory to advance translational research -- the practice of taking results from research labs and clinics into safe and innovative treatments and therapies used in medical practice. Since 2008, Indiana CTSI-funded researchers at the three partner universities have advanced discoveries in areas such as Alzheimer's disease, Parkinson's disease, autism, traumatic brain injury, polycystic kidney disease, and osteoporosis and osteoarthritis.

Moreover, it's estimated that the Indiana CTSI pilot funds generated a 1,900 percent return on investment from 2008 to 2012, with \$3.5 million in grants to scientists across the state attracting \$65 million in federal research dollars and private investment over the same period. Indiana CTSI-funded researchers have also produced six technology licenses, 18 discovery disclosures, 22 patents and eight start-up companies. In addition, Indiana CTSI estimates it supports more than 80 full-time equivalent professional jobs across Indiana.

"In 2009 alone, Indiana CTSI invested \$1.1 million in scientists whose work later attracted more than \$30 million in outside investment," Dr. Shekhar said. "These numbers show that our institute has become a powerful magnet to attract innovation and research dollars to Indiana. Our focus on partnerships with groups such as Eli Lilly and Company, Roche Diagnostics and Cook Medical Group -- as well as the patents, licenses and spinoffs we've fostered -- illustrate we're also playing a vital role fueling the state's economy."

These results have been achieved through three major efforts to strengthen the translational research pipeline across Indiana.

First, Indiana CTSI established expert consultant panels to help researchers consider how a proposed study could impact a disease's treatment from the earliest stages -- a new, highly practical approach to academic medicine. Second, it created programs to smooth every phase of the research process, such as easy access to advanced laboratory technologies, biostatistical analysis and anonymous medical records; patient recruitment services to ensure adequate participation in clinical research studies; and legal and business services to encourage entrepreneurship.

Third, it developed education programs to foster the next generation of translational scientists -- ranging from summer internships for high school students to tuition support and fellowships for Ph.D. students and young faculty members.

The institute also significantly expanded clinical research space at IU, including a new 18,500-square-foot Children's Clinical Research Center at Riley Hospital for Children at IU Health and the Neurosciences Clinical Research Center at the IU Health Neurosciences Center adjacent to IU Health Methodist Hospital. It also reached an agreement with Covance Inc., a leading global drug development services company, to increase clinical trials conducted on behalf of biotechnology and pharmaceutical companies at IU using a newly renovated 33,000-square-foot patient center at IU Health University Hospital, in addition to older space in the same building.

Looking ahead, Dr. Shekhar said the Indiana CTSI will maintain past programs as well as shift attention to projects that "break beyond the walls of academia" to

tackle real-world issues such as health care delivery, drug development and public health policy. He cited programs in the works to analyze and improve health care delivery at local hospitals; to support joint projects between Midwestern medical schools and pharmaceuticals companies; and to improve health among urban youth in Indianapolis and immigrant populations in rural Indiana as models for other communities.

"The next five years will build upon our history of success to create a vehicle that breaks beyond the academic wall and starts to impact the health of the community," Dr. Shekhar said. "It's not only a natural growth in the scope of our goals but also the urgency of our mission."

## ANNOUNCEMENTS

### **IU Psychiatrist John Nurnberger Presented with Lifetime Achievement Award**

Dr. John I. Nurnberger Jr. has been awarded the Snow and Ming Tsuang Lifetime Achievement Award from the [International Society of Psychiatric Genetics](#) at the World Congress on Psychiatric Genetics in Boston.

Dr. Nurnberger is the [Joyce and Iver Small Professor of Psychiatry](#) and director of the [IU Institute of Psychiatric Research](#) at Indiana University School of Medicine. He also is vice chair for research in the [IU Department of Psychiatry](#) and a professor of neurobiology and of medical and molecular genetics.

Dr. Nurnberger's research specializes in psychiatric genetics. A Fellow of the [American College of Neuropsychopharmacology](#) and of the [American Psychopathological Association](#), he has developed methods for the identification of genes important in human behavior and is involved in national and international collaborative efforts to identify genes associated with affective disorders, alcohol dependence and autism. He has a particular interest in studies of adolescents from families with multiple cases of psychiatric illness.



John I. Nurnberger Jr., M.D., Ph.D.

### **Call for Summer 2014 Multidisciplinary Undergraduate Research Institute (MURI) Proposals (Deadline: December 6)**

The Center for Research and Learning welcomes proposals for the [Summer 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. For more information, go to:

<http://www.crl.iupui.edu/programs/MURI/callforproposalsAYSummer2014.asp>.



## 2013 Indiana University Undergraduate Research Conference (IUURC)

This year marks the nineteenth annual Indiana University Undergraduate Research Conference (IUURC), which is designed to be an excellent opportunity for students to present their research findings to an engaged and diverse set of peers, to learn more about research opportunities and to network with other undergraduate researchers from around the state. The symposium is dedicated to promoting undergraduate research, scholarship and creative activity in various fields of study, which is performed in partnership with faculty or other mentors from IU. The theme for this year's symposium is "Learning through Research", which expresses Indiana University's mission to provide outstanding academic programs. The IUURC will be held Friday, November 22, 2013, from 9:00 a.m. to 4:00 p.m. at the Indiana University Memorial Union in Bloomington, IN.

A charter bus departs IUPUI's campus at 7:15 a.m. and returns at the end of the event.

<http://www.crl.iupui.edu/events/iuurc/>

## Requests for Applications Sought for Pilot grants; Access to Business Assistance

**The Indiana CTSI - IU Kelley MBA Business Management Assistance Program** is seeking applications from cores, resources and units who need business planning assistance. **Due November 20, 2013.**



**The Indiana Alzheimer Disease Center** is seeking proposals for translational research projects focused on Alzheimer's disease, frontotemporal dementia, or diffuse Lewy body disease as well as other neurodegenerative or vascular dementias. **Due December 16, 2013.**

**The Neuroscience Strategic Research Initiative** is seeking proposals for clinical and translational research projects in all areas associated with the IU Health Neuroscience Service Line and to the broader neuroscience community. **Due December 20, 2013.**

For more information, go to

<https://www.indianactsi.org/news/nov2013opps#kelleymba>

## National Conference on Undergraduate Research (NCUR) Accepting 2014 Abstracts

The University of Kentucky welcomes the 28th annual National Conference on Undergraduate Research (NCUR) to its campus on April 3-5, 2014. The mission of NCUR is to promote undergraduate research, scholarship and creative activity done in partnership with faculty or other mentors as a vital component of higher education. This symposium presents undergraduates with an excellent opportunity to gain exposure for their research, to receive helpful feedback and to network with graduate-school representatives. Students can apply to give oral, poster, visual-arts or performing-arts presentations.



The deadline for applications and abstracts is 11:59 p.m. on December 6, 2013. For more information on NCUR, please visit [www.cur.org/ncur\\_2014](http://www.cur.org/ncur_2014).

## Sign Up for IUPUI Lab Reagents List

The IUPUI Lab Reagents List (an email list, formerly known as a LISTSERV), enables researchers to share lab reagents (plasmids, cell lines, odd chemicals, etc.) across the IUPUI campus.

Signing up is easy. Simply send an email from an IU-affiliated email account to: [iupui\\_reagents-l-subscribe@iupui.edu](mailto:iupui_reagents-l-subscribe@iupui.edu)

There is no need for a subject or message body. Note that if you were a previous subscriber whose email address has changed recently, you may need to sign up again.

All those involved in laboratory research are encouraged to subscribe! Safeguards are in place to avoid spam, and the list is monitored for inappropriate use.

Questions can be directed to Dr. Tim Corson in the Eugene & Marilyn Glick Eye Institute at [tcorson@iupui.edu](mailto:tcorson@iupui.edu)

## Applications Sought for Michelson Grants & Prize

The Found Animals Foundation offers [Michelson Grants](#) of up to \$750,000 USD for research in pursuit of a single-dose, permanent, nonsurgical sterilization product or technology for use in male and female cats and dogs. To qualify for a Michelson Grant, a proposed project must pursue a technology, mechanism, or pathway representing an innovative approach to nonsurgical sterilization. Investigators are encouraged to submit for "proof of concept" studies in cell culture, rodents, and/or target species. Scientists from a wide range of fields are encouraged to apply.

The first step to apply for a Michelson Grant is submission of a [letter of intent](#). Letters of intent are accepted and reviewed on an ongoing basis and, if approved, researchers are invited to submit grant proposals for a March, July, or November deadline.

[The Michelson Prize](#)

The winning entry for the \$25 million Michelson Prize will have, at minimum, the following characteristics:

- Single-dose, permanent, nonsurgical sterilant
- Safe and effective in male and female cats and dogs
- Ablates sex steroids and/or their effects
- Suitable for administration in a field setting
- Viable pathway to regulatory approval
- Reasonable manufacturing process and cost

For more information, visit <http://michelson.foundanimals.org/research>

## CENTER SPOTLIGHT

**Pediatric Cancer Researchers 'Hope on Wheels' Receive Grant**

Three Indiana University School of Medicine faculty members are recipients of a \$250,000 Hyundai Hope Grant for pediatric cancer research.

The grant will support the work of Mark Kelley, Ph.D., Betty and Earl Herr Professor of Pediatric Oncology Research and associate director of the Herman B Wells Center for Pediatric Research, and colleagues Sandeep Batra, M.D., assistant professor of clinical pediatrics, and Angelo Cardoso, M.D., Ph.D., adjunct assistant professor of pediatrics. Their research seeks a new therapeutic strategy to treat T-cell leukemia, namely for children with relapsed acute lymphocytic leukemia or ALL.



Drs. Kelley, Cardoso and Batra, right to left, wear white lab coats marked with the handprints of children, who dipped their hands in colorful paint to commemorate their brave battles with cancer. Every handprint tells a story, and this ceremony celebrates the courageous lives of children facing cancer.

ALL is the most frequent childhood cancer. Although notable progress has been achieved in caring for children, significant challenges remain with ALL in infants as well as leukemia relapse and refractory disease. Relapsed leukemia is the second leading cause of childhood death.

Hyundai Hope On Wheels® and Indianapolis-area Hyundai dealers presented the award to the faculty members at Riley Hospital for Children at Indiana University Health on Thursday, Sept. 26. During the event, Indianapolis-area children battling cancer placed their handprints dipped in colorful paint on white canvases and physicians' lab coats to commemorate their brave battles with cancer.

In all, Hope On Wheels will award \$10.25 million in grants this month. The donation is part of Hope On Wheels' annual September campaign celebrating National Childhood Cancer Awareness Month, as well as an effort by Hyundai to thank its millions of owners who have helped Hope On Wheels raise more than \$72 million in pediatric cancer research funding the past 15 years.

"Hope On Wheels is our fight to end pediatric cancer, and is at the soul of our work at Hyundai. With each car we sell, we make a contribution with our dealers to end this disease," said John Krafcik, president and CEO of Hyundai Motor America. "We've now donated over \$72 million dollars, and ask everyone to join us this September on Facebook to raise awareness about this cause."

For more information about Hyundai Hope On Wheels, please visit [www.HyundaiHopeOnWheels.org](http://www.HyundaiHopeOnWheels.org).

## FACULTY SPOTLIGHT

### Vera Bradley Foundation for Breast Cancer Honors Physician Scientist

Dr. Bryan Schneider, a physician scientist at the IU School of Medicine, has been named the Vera Bradley Investigator in Oncology.

Dr. Schneider is a breast cancer physician scientist who joined the school's faculty in 2005 and conducts research in the Vera Bradley Foundation for Breast Cancer Research Laboratories at the [Indiana University Melvin and Bren Simon Cancer Center](#). He is one of nearly 40 members of the IU Simon Cancer Center's breast cancer program, which is recognized for



Bryan Schneider, M.D.

excellence in research by the National Cancer Institute.

"Bryan Schneider is the obvious choice to hold the Vera Bradley title. Through his collaborative spirit, passion for the work and pure brilliance, he personifies what makes the whole team great," said Catherine Hill, executive director of the [Vera Bradley Foundation for Breast Cancer](#).

Dr. Schneider's research focuses on personalized medicine: giving the right medicine to the right patient at the right time based on genetic and other factors. With past Vera Bradley support, he has developed a first-of-its kind clinical study for women diagnosed with triple negative breast cancer, a very aggressive form of the disease.

Through a controlled scientific study, Dr. Schneider will test whether the use of DNA sequencing to identify specific disease drivers and to select treatments for women based on these genetic markers actually improves survival rates. And it will move the timing of Phase I clinical trials from the metastatic setting -- when all other options have failed -- to earlier in the disease process when there is the potential to cure women.

Dr. Schneider -- an associate professor of medicine and of medical and molecular genetics at the IU School of Medicine, a researcher at the IU Simon Cancer Center and associate director of the [Indiana Institute for Personalized Medicine](#) -- has already made a significant impact in the world of breast cancer research. In 2011, just six years into his career at the IU School of Medicine, his research was recognized as one of the top clinical cancer research advances that year by the [American Society of Clinical Oncology](#), the largest and most prestigious organization of its kind in the world. Also in 2011, the Conquer Cancer Foundation of the American Society of Clinical Oncology named Dr. Schneider the recipient of the Advanced Clinical Research Award in Breast Cancer. Recipients are selected based on their unique patient-oriented approaches to research. He also is a recipient of the Conquer Cancer Foundation's 2006 Career Development Award and 2002 and 2003 Merit Awards.

A native of Jasper, Indiana, Dr. Schneider graduated summa cum laude from the University of Evansville. He then graduated from the IU School of Medicine, completing a residency in internal medicine and an extended fellowship in oncology that allowed him to concentrate his time in the research laboratory.

"It is a privilege and a great honor to hold the title of Vera Bradley Investigator," Dr. Schneider said. "The enthusiasm and passion that Vera Bradley Foundation volunteers and professionals have for curing this disease inspires me as I work to help women live longer, healthier lives after a diagnosis of breast cancer."

## STUDENT SPOTLIGHT

### Student Research on the Relationship between Skin Conductance and Pain Disorders

Evgeny "Jenya" Chumin, an IUPUI senior double majoring in psychology and neuroscience, is also actively participating in the Undergraduate Research Opportunities Program (UROP). Dr. Karmen K. Yoder, Associate Professor of Radiology and Imaging Sciences, serves as his mentor. Jenya noted, "Working with her, I have learned not only how to do research, but also how to make myself a strong candidate for graduate school and how to conduct myself as a researcher."



Evgeny "Jenya" Chumin,  
Undergraduate Research  
Opportunities Program (UROP)

Jenya hopes that his research topic, "Examining skin conductance and its possible relationships to measures of pain and cognitive strain," will be significant to others. "My work will benefit researchers who seek to study pain disorders and are interested in alternative measures such as [how] skin conductance relates to pain." He has presented at the psychology capstone poster session and the Society for Neuroscience Indianapolis Chapter annual meeting.

Participating in the UROP program has been beneficial to Jenya in several ways. He stated, "UROP allows me to work independently and show that I am able to carry out research from start to finish. It shows graduate programs that you are committed and able to succeed in a lab."

What's next for Jenya? He is planning to attend graduate school and focus on neuroscience, brain imaging, and neurostimulation.

## TRANSLATIONAL RESEARCH IMPACT

### The Community Mobility and Participation in Society Lab (COMPASS)

Transportation is an essential requirement for independent community living and participation in society. It has a powerful equalizing influence on opportunities for people with disabilities to live, learn, and earn. Yet, according to the *National Disability Policy: A Progress Report*, 34% of people with disabilities report they have inadequate transportation. Many in the rehabilitation community are keenly aware of the challenges people with disabilities encounter when they try to learn and use complicated mass transit systems that demand significant cognitive, motor, and sensory skills.



Jeffrey L. Crabtree, OTD, MS, FAOTA

Paratransit services are most often seen as the "solution" to these barriers, but according to the Paratransit Peer Report in 2011, among 15 large public transportation authorities, these services are costly. The total cost per paratransit trip ranges from \$26 to \$69 while fixed trip fares range from \$1 to \$12. This does not even consider quality issues surrounding delays, errors, and systemic problems of paratransit services that permeate the daily conversations of people with disabilities. And perhaps most disconcerting is that many people with disabilities opt out of using public transportation altogether and thus are unwillingly excluded from participating in the community and living independently.

To address these transportation barriers to community living and participation in society, Dr. Jeffrey Crabtree, Director of the COMPASS Lab, in collaboration with Dr.



Roger O. Smith, Director, Rehabilitation Research Design & Disability (R2D2) Center, University of Wisconsin-Milwaukee, are developing a suite of computer data collection and analysis web-based and mobile responsive applications called TransFACT Enhanced Transportation Assessments (TransFACT ETA). This suite will include: a) a computerized assessment of cognitive, motor, and sensory transit skills that will yield an immediate decision and recommendation for paratransit eligibility and/or travel training; b) an app for travelers who are disabled to enter data about their travel experience such as the accessibility of a bus, placement of a bus shelter, or effectiveness of an assistive device; c) a computerized assessment of transit deficits that would help therapists identify interventions and what assistive technology can be developed and/or delivered to support effective community mobility; and finally d) an app that will store the identified deficits as well as recommendations to enable individual assisted or augmented travel, associated assistive technology, and travel-related universal design solutions. These data would be available for research and for policymakers to enable effective transportation despite deficits.

## OVCR EVENTS AND WORKSHOPS

### **IUPUI Innovation to Enterprise Showcase & Forum**

When: Tuesday, November 19, 2013 | 4:00pm - 6:00pm  
Where: Campus Center, Room 450 A and B

The Office of the Vice Chancellor for Research and the Indiana University Research & Technology Corporation (IURTC) cosponsor the IUPUI Innovation to Enterprise Showcase & Forum. This event highlights the research and creative successes of our faculty, research scientists, and students as they relate to technology transfer and commercialization, noticeably supporting the economic development of Indiana and the nation. Explore the many opportunities for partnering with IUPUI or learn about the exciting entrepreneurial ventures being launched.

Register: <https://crm.iu.edu/CRMEvents/InnovationShowcase/>

### **IUPUI Arts and Humanities Internal (IAHI) Grants Information Session**

When: Tuesday, December 3, 2013 | 1:00pm - 3:00pm  
Where: University Library, Room 1126

This session will provide participants with an overview of the IAHI internal funding opportunity, how to apply, and more importantly how to develop a competitive proposal. Members of the IAHI grant advisory group will be present to answer questions, as well as IUPUI faculty who have received IAHI funding and who have reviewed arts and humanities proposals.

Register: <https://crm.iu.edu/CRMEvents/IAHIGrantSession/>

## RECENT EXTERNAL FUNDING AWARDS

The Office of the Vice Chancellor for Research recognizes and congratulates all IUPUI faculty and researchers for recent awards they have received and that help

to advance the IUPUI research enterprise. The following table highlights those receiving \$100,000 or more in external grants.

### Grants and Awards - October 2013

PI	Agency	Project Title	School	Department	Total
Hainline, Bryan E.	INDIANA STATE DEPARTMENT OF HEALTH	ISDH/NS 200-16/#613 Newborn Screening/Biochemical Services: Statewide Program for the Identification, Prevention and Treatment of Inborn Errors of Metabolism	MEDICINE	MEDICAL & MOLECULAR GENETICS	\$1,700,000
Gusic, Maryellen E	AMERICAN MEDICAL ASSOCIATION	IUSM's Virtual Health Care System: Creating a Learning Environment that Prepares Future Physicians	MEDICINE	DEAN MED-EDUCATIONAL SUPPORT	\$1,077,872
Anglen, Jeffrey O	U.S. ARMY MEDICAL RESEARCH AND MATERIEL COMMAND	Novel Therapy for Bone Regeneration in Large Segmental Defects	MEDICINE	ORTHOAEDIC SURGERY	\$389,945
Chu, Tien-Min Gabriel	U.S. DEPARTMENT OF DEFENSE	Bone Healing Using Romipolstim & Thrombopoietin (TPO) Study	DENTISTRY	DENTISTRY-RESEARCH	\$389,944
Kacena, Melissa Ann	U.S. ARMY MEDICAL RESEARCH AND MATERIEL COMMAND	Surgical Interventions and Socket Designs with Transfemoral Amputations	MEDICINE	ORTHOAEDIC SURGERY	\$389,944
Sturek, Michael S	CARDIOMETABOLIC DISEASE RESEARCH FOUNDATION	Epicardial Fat and Coronary Artery Disease 2	MEDICINE	CELLULAR & INTEGRATIVE PHYSIO	\$331,557
Schneider, William H.	NATIONAL ENDOWMENT FOR THE HUMANITIES	The Emergence of HIV/AIDS	LIBERAL ARTS	MEDICAL HUMANITIES	\$290,000
Storniolo, Anna Maria V	THE BREAST CANCER RESEARCH FOUNDATION	Development of a Molecular Encyclopedia of the Normal Human Breast	MEDICINE	?	?
Yoshida, Ken	AALBORG UNIVERSITY	Natural sensory feedback for phantom limb pain modulation and therapy	ENGINEERING AND TECHNOLOGY	BIOMEDICAL ENGINEERING	\$239,978
Rohr-Kirchgraber, Theresa M	INDIANA STATE DEPARTMENT OF HEALTH	Women of Excellence Make Healthy Choices RESPECT Grant	MEDICINE	OBSTETRICS AND GYNECOLOGY	\$225,320
Miller, Kathy D.	THE BREAST CANCER RESEARCH FOUNDATION	Impact of Breast Cancer Treatment on Energy Expenditure Pilot Trial	MEDICINE	HEMATOLOGY/ONCOLOGY	\$219,727
Paczesy, Sophie	NATIONAL MARROW DONOR PROGRAM	Proteome of chronic graft vs. host disease	MEDICINE	PED-CLINICAL TRANSLAT RESEARCH	\$138,000
Boulton, Michael E	DOHENY EYE INSTITUTE	A non-canonical role for b-secretase in AMD	MEDICINE	OPHTHALMOLOGY	\$100,000

## 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.

### AMERICAN HEART ASSOCIATION

**National Fellow-to-Faculty Transition Award:** This program provides funding for trainees with outstanding potential for careers as physician-scientists in cardiovascular or stroke research during the crucial period of career development that spans the completion of research training through the early years of the first

faculty/staff position. The award provides a supportive mentored experience during this period of transition. The award will 1) greatly enhance the awardee's chances of obtaining a high-quality faculty/staff appointment; 2) improve the awardee's success and retention in an investigative career in cardiovascular science; and 3) develop the mentoring skills of the awardee as a potential future sponsor. Individual awardees may take the award from the institution providing the research training component to another institution for the career development component (first faculty/staff appointment). The intent is to make the awardee a "free agent" who is empowered to stay at or move from the training institution while retaining the award. The sponsor during the faculty stage of the award may or may not be the same person who was the sponsor during the training phase. Science focus is on research broadly related to cardiovascular function and disease and stroke, or to related clinical, basic science, bioengineering or biotechnology, and public health problems, including multidisciplinary efforts. Applications will not be accepted for work with funding to be administered through any federal institution or work to be performed by a federal employee, except for Veterans Administration employees. The training component of the award may be completed at any accredited institution in the United States, although U.S. citizens or permanent residents may complete this training portion at a non-U.S. institution. All awardees must complete the faculty component at an institution in the United States. *Deadlines: January 17 and July 15, 2014.*

## DEPARTMENT OF DEFENSE

**Care for the Critically Injured Burn Patient II:** The objective of this announcement is to explore innovative approaches to accelerate the translation of advances in knowledge into new standards of care for the treatment of the injured warfighter who sustains burn injuries. The results of the research are expected to increase the body of knowledge available to professionals and practitioners in health, medical science and related fields. *Deadline: October 16, 2014.*

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**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](mailto: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](mailto:akratz@iupui.edu).

## NATIONAL INSTITUTES OF HEALTH

**NEI Translational Research Program on Therapy for Visual Disorders (R24):** This program focuses on the development of novel therapies to treat visual diseases and disorders. In the context of this program, an expert develops a multidisciplinary research team that applies an integrative approach to develop rapid and efficient translation of innovative laboratory research findings into clinical therapeutic development. It involves collaborative teams of scientists and clinicians with expertise in multiple disciplines, operating according to a clear leadership plan. Such a collaborative approach is particularly appropriate for research focused on pathways that will likely be targeted by biological intervention, such as gene therapy, cell-based therapy, and pharmacological approaches. The intention is to make resources available to scientists from several disciplines to address scientific and technical questions that would be beyond the capabilities of any one research group. *Deadline: January 28, 2014.*

**Interpreting Variation in Human Non-Coding Genomic Regions Using Computational Approaches and Experimental Assessment (R01)**: This announcement solicits applications to develop highly innovative computational approaches for interpreting sequence variants in the non-protein-coding regions of the human genome. The goal is to develop methods that analyze whole-genome sequence data by integrating data sets, such as ones on genome function, phenotypes, patterns of variation, and other features, to identify or substantially narrow the set of variants that are candidates for affecting organismal function leading to disease risk or other traits. The accuracy of the computational approaches developed should be assessed using experimental data. The scale of analysis should be genome-wide interpretation of the variants that may contribute to the trait or disease being studied, rather than variants found in a particular gene, gene family, or chromosome region. The initial approaches should start with the entire genome and narrow the focus to sets of regions for more analysis, such as by using data from whole-genome sequencing studies, GWAS studies, or scans for natural selection. Applications may identify one or more organismal traits or diseases to study, such as a human disease, disease resistance, pharmacologic responses, or physiological traits. *Deadlines: Letter of Intent, December 21, 2013; Submission, January 21, 2014.*

**Basic Research in the Pathogenesis of HIV-Related Heart, Lung, and Blood Diseases in Adults and Children (R01)**: This announcement invites basic research project grant (R01) applications to investigate the fundamental mechanisms underlying the pathogenesis of HIV-related heart, lung, and/or blood diseases (HLB) alone and in the context of antiretroviral therapy (ART). Investigations may be conducted on various primary cell types, biospecimens, computational models, and animal models, particularly those for HIV research. The goal is to provide the critical basic science foundation and guide the design of new therapeutic approaches for HIV-related HLB conditions in adults and children. *Deadlines: January 8 & May 8, 2014.*

## NATIONAL SCIENCE FOUNDATION

**National Robotics Initiative**: The goal is to accelerate the development and use of robots in the U.S. that work beside, or cooperatively with, people. Innovative robotics research and applications emphasizing the realization of such co-robots acting in direct support of and in a symbiotic relationship with human partners is supported by multiple agencies of the federal government including the National Science Foundation (NSF), the National Aeronautics and Space Administration (NASA), the National Institutes of Health (NIH), and the U.S. Department of Agriculture (USDA). The purpose of this program is the development of this next generation of robotics, to advance the capability and usability of such systems and artifacts, and to encourage existing and new communities to focus on innovative application areas. It will address the entire life cycle from fundamental research and development to manufacturing and deployment. Methods for the establishment and infusion of robotics in educational curricula and research to gain a better understanding of the long term social, behavioral and economic implications of co-robots across all areas of human activity are important parts of this initiative. Collaboration between academic, industry, non-profit and other organizations is strongly encouraged to establish better linkages between fundamental science and technology development, deployment and use. *Deadline: January 21, 2014.*

**Sedimentary Geology and Paleobiology**: This program supports the study of deep-time records of processes archived in the Earth's sedimentary carapace (crust) at all spatial and temporal scales. For 2013-2017, the Program will be a two track opportunity, consisting of the normal SGP competition (Track 1) and bi-annually, a new track termed Earth-Life Transitions (Track 2). **Track 1** supports general studies of: 1) the changing aspects of life, ecology, environments, and

biogeography in past geologic time based on fossil plants, animals, and microbes; 2) all aspects of the Earth's sedimentary carapace; 3) the science of dating and measuring the sequence of events and rates of geological processes as manifested in Earth's past sedimentary and fossil record; 4) the geologic record of the production, transportation, and deposition of physical and chemical sediments; and 5) understanding Earth's pre-Holocene climate systems. **Track 2** goals are: 1) address critical questions about Earth-Life interactions in deep-time through the synergistic activities of multidisciplinary science and 2) enable team-based interdisciplinary projects involving stratigraphy, sedimentology, paleontology, proxy development, calibration and application studies, geochronology, and climate modeling to understand major linked events of environmental, climate and biotic change at a mechanistic level *January 16 & July 17, 2014.*

**Interdisciplinary Behavioral and Social Science Research:** The goal support interdisciplinary research that brings together researchers from different Social, Behavioral, and Economic Sciences (SBE) disciplinary communities. It will focus on research problems that can be fully addressed only by interdisciplinary teams using approaches from multiple fields, and it will support research that promises results that will be meaningful across the contributing disciplines and that will explicitly advance science beyond existing intellectual boundaries. The competition invites proposals for two different kinds of projects: 1) Large Interdisciplinary Research Projects, and 2) Interdisciplinary Team Exploratory Projects, which are exploratory efforts by emerging multidisciplinary teams designed to facilitate the kinds of contact, interaction, and active research activities necessary to enable researchers from multiple disciplines to engage in effective interdisciplinary research. Emphasis is to be placed on the conduct of research and potential outcomes, not on the preparation of plans and proposals for future research. Proposals seeking support may address any topic, issue, or problem. Researchers are encouraged to pursue research on one of the four cross-cutting themes identified in the *Rebuilding the Mosaic* report (population change; sources of disparities; communication, language, and linguistics; and technology, new media, and social networks), but the IBSS competition will be open and receptive to other topics that address topics having theoretical and societal significance. *Deadline: December 2, 2014.*

## 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](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](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://research.iu.edu/limited\\_sub.shtml](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](#)

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