

Research Enterprise

February 23, 2015

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.

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FEATURE STORY

\$2.2M grant enables IUPUI to study depression-cardiovascular disease link in HIV patients

Jesse Stewart, associate professor of psychology in the School of Science at Indiana University-Purdue University Indianapolis, and two colleagues have received a \$2.2 million National Institutes of Health grant to investigate the links between depression, depression treatment and cardiovascular disease in adults with HIV. With the success of antiretroviral therapy, cardiovascular disease is now the leading cause of death in HIV-infected adults.

The four-year grant from the National Heart, Lung and Blood Institute to clinical health psychologist Stewart and the two other principal investigators -- infectious disease specialist Samir Gupta, M.D., associate professor of medicine in the IU School of Medicine, and internist Matthew Freiberg, M.D., associate professor of medicine in the Vanderbilt University School of Medicine -- supports two projects.

The first is an observation study of 1,525 HIV-infected adults from the national [Veterans Aging Cohort Study](#). To examine how depression may increase the risk of cardiovascular disease in HIV-infected individuals, the investigators will test whether depression is associated with high blood levels of inflammatory and clotting proteins that are known to predict future heart attacks. They will also test whether depressed adults treated with



Jesse Stewart, Ph.D.



Samir Gupta, M.D.

antidepressants or psychotherapy have lower levels of these proteins than those who did not receive treatment for their depression.

The second project supported by the grant explores whether depression treatment could be effective in reducing the risk of cardiovascular disease in HIV-infected adults. In a randomized controlled trial of 110 depressed adults treated with antiretroviral therapy, half will receive usual depression care while the others will also receive an evidence-based, computerized, cognitive-behavioral therapy for depression called Beating the Blues, used by England's National Health Service and recently adapted for use in the U.S. In previous work, Stewart and his collaborators have validated this computerized psychotherapy for depression, which can be confidentially and inexpensively administered.

During the newly-funded study, two IUPUI clinical psychology doctoral students will coordinate the delivery of Beating the Blues. They also will track depression progress in the HIV-infected participants.

Depression is common among HIV-infected patients, with rates ranging from 20 to 40 percent. Cognitive-emotional symptoms of depression include sadness and loss of interest or pleasure. Fatigue, appetite changes, and sleep disturbance are among the physical symptoms.

"We are excited because, if these two projects are successful, we may be able to provide clinicians caring for HIV-infected patients with a potent new tool -- depression treatment -- to lower the risk of or prevent heart attacks and strokes," said Stewart, who has had a long-term research interest in the link between depression and cardiovascular disease.

In 2008, he reported that the strength of the association between depression and future cardiovascular disease is similar to that of traditional risk factors like smoking, high blood pressure and high cholesterol in the general population. In 2014, he published a study that found that treatment of depression before any apparent signs of cardiovascular disease can decrease the risk of future heart attacks and strokes by almost half in depressed primary care patients.

"We are expanding our work from primary care patients -- a general population -- to a specific group -- adults with HIV," Stewart said. "In the future, we may extend this line of research to determine if depression treatment can help prevent cardiovascular disease in other patient groups."

ANNOUNCEMENTS

National Institutes of Health Deputy Director to headline 2015 Research Day in celebration of IUPUI research and creative activity

Hundreds of participants will convene to share their research and creative activity on Friday, April 17, during the 2015 IUPUI Research Day. The annual event will take place from 9:30 a.m. to 3:00 p.m., in the IUPUI Campus Center, 420 University Blvd. The IUPUI Office of the Vice Chancellor for Research is hosting the event in celebration of IUPUI's multifaceted and vanguard research and creative activities portfolio.

IUPUI Research Day events begin in the morning with presentations by the 2015 Research Frontiers Trailblazer Award winners, followed by the keynote presentation from Sally J. Rockey, National Institutes of Health (NIH) Deputy Director for Extramural Research (DDER). Rockey has a Ph.D. in Entomology from The Ohio State University and has spent the majority of her career in the area of research administration and information technology. Rockey leads or is active on a number of Federal committees related to science, research administration, and electronic government. She works most closely with other Federal science and university administrators, small businesses, professional societies and the scientific communities here and around the world. Rockey is the author of the widely read "Rock Talk" blog and has been recognized for her numerous professional accomplishments including receiving the Presidential Rank Award in 2004, the Joseph F. Carrabino Award in 2013, and the AIRI Public Service Award in 2014.



Keynote Speaker: Sally J. Rockey, Ph.D.
National Institutes of Health (NIH) Deputy
Director for Extramural Research (DDER)

Other IUPUI Research Day activities include poster sessions featuring undergraduate, graduate and professional student poster presentations coordinated by the [Center for Research and Learning](#).

In addition, faculty research poster presentations will highlight the groundbreaking research conducted on and beyond the IUPUI campus, including a community showcase. For poster abstract guidelines and submission instructions, go to <http://iu.infoready4.com/CompetitionSpace/#manageCompetitionsDetail/1730807>.

Back by Popular Demand: Research Day JagTalks and Research Roundtable Discussions

IUPUI faculty are invited to sign up early to attend the joint sessions of JagTalks and the lunch research roundtable discussions. Both sessions offer opportunities for meaningful engagement among IUPUI faculty members but seats are limited.

JagTalks is a series of short but dynamic presentations that illuminate the breadth of research and creative activity happening at IUPUI and beyond and are open to all Research Day attendees (11:10 – 12:00 pm) in Campus Center Room 405. Faculty are asked to attend the JagTalks as a prelude to the lunch research roundtable discussions. **Faculty must [register](#) and select a topic to participate at the lunch roundtable discussions. Space is limited and reservations are first come/first served.**

Far-ranging topics will be offered during the research roundtables, and the active discussions will be facilitated by IUPUI faculty and community members (12:10 pm – 1:10 pm), in Campus Center Room 409. The assisted conversations will focus on ways that new and ongoing collaborative relations can be optimized to develop stronger and mutually beneficial campus/community partnerships. Ultimately the discussions will help to further advance the IUPUI Grand Challenge Initiative, which is designed to contribute to the "Urban Health and Wellbeing" of our local, regional, state and global communities. **Lunch will be provided at each table, so faculty should [register](#) soon as reservations are first come/first served.**

IUPUI Research Day offers something for everyone and provides an opportunity for IUPUI faculty, staff and students, and their academic, industrial and governmental partners, along with the broader community, to learn how IUPUI impacts lives through innovation and creativity, to explore new research collaborations, and to lay the foundation for new partnerships.

For additional information about Research Day, go to <http://research.iupui.edu/events/researchday2015/index.php>

Call for 2015 IUPUI Research Day Poster Abstracts – DEADLINE: March 23



Research Day, April 17, 2015, provides an opportunity for the IUPUI faculty, staff, and students, and their academic, industrial, governmental partners, and the broader community, to come together and learn more about the research enterprise at IUPUI, explore new collaborations, and lay the foundation for new partnerships.

Faculty, postdoctoral fellow, professional student, graduate student and staff are eligible to submit poster presentations.
(<http://iu.infoready4.com/CompetitionSpace/#manageCompetitionsDetail/1730807>).

Guidelines

- *Abstracts will be competitively selected for poster presentation on the basis of scholarship, research and creative activity
- *There is no limit on the number of abstracts you may submit, but only one will be accepted.
- *Accepted abstracts will be published as received on the Research Day website unless specified otherwise on the submission page. Ensure you have permission to publish!
- *Poster sessions are 90 minutes.
- *Presenters are responsible for setting up and taking down posters at designated times.
- *Posters may be landscape or portrait and approximately 36" x 60". Backer boards 40"x 60" are provided, as are easels and push pins.
- *Display tables and electrical outlets are available for select presenters and must be pre-approved.
- *Have 2-3 minutes of talking points prepared to "present" your work as attendees view your poster.

Abstract Format

Title
Authors
Affiliations
Indiana University-Purdue University Indianapolis

- *No limit on title length
- *List authors and their affiliations in the style appropriate for your discipline
- *Center justify the heading
- *The abstract should be no more than one page

Submission Process

- ***go to this web address to begin.**
<https://iu.infoready4.com/#competitionDetail/1730807>
- *Select the **Apply** button in the right hand column then login
- *If you are already logged in, select **Application Form**

- *Enter name of person presenting on Research Day if different than the applicant
- *Select a category most suited to your abstract
- *Select a poster session time
- *Select whether to publish your abstract on the Research Day website
- *Upload your abstract in PDF or Word
- *Include the name of the presenter in the file name

These abstracts are due **March 23, 2015**. Applicants will be notified of the status of their submission after March 27, 2015. Questions should be directed to Alicia Gahimer (algahime@iupui.edu).

School of Engineering and Technology to host open labs on IUPUI Research Day

On Friday April 17th at 2.30 pm, the School of Engineering and Technology (799 Michigan Street) will offer, in conjunction with Research Day, hands-on experiences and stimulating demonstrations of trailblazing technologies. Also the new Science and Engineering Laboratory Building (350 N. Blackford Street) and the laboratories of the engineering will offer tours of research centers including:

- *Transportation Active Safety Institute
- *Richard Lugar Center for Renewable Energy
- *Integrated Nanosystems Development Institute
- *Biomechanics & Biomaterials Research Center



Science and Engineering Laboratory Building

Learn what IUPUI's technical researchers are doing to enable safe self-driving cars, to slow down climate change, to personalize medicine and manufacturing, and to safeguard our security. Find ways to realize your ideas as robust devices, to begin new research collaborations, or to accelerate your business innovations.

For more information and to RSVP your attendance at the open labs, please contact Amber Nichols at ammcdo@iupui.edu.

IUPUI Arts and Humanities Institute Welcomes Inaugural International Research Fellow

This semester the IUPUI Arts & Humanities Institute is pleased to host its first International Research Fellow, Dr. Rosie Read. Dr. Read is a Senior Lecturer at Bournemouth University in the United Kingdom, where she coordinates and teaches in the Bachelor of Arts with Honors program for Sociology and Anthropology. As a social anthropologist, Read's research over the past 15 years has explored the gendered politics of care work in the Czech Republic, in the context of transforming health and welfare provision. Her fieldwork has explored the relatively new development of volunteer programs within the Czech Republic's healthcare system and how gender shapes volunteers' experience.



Dr. Rosie Read

In the United Kingdom, Dr. Read conducts research on volunteering and teaches classes on social policy, welfare, and community development. Dr. Read's work at IUPUI will focus on developing new pedagogies for training students in ethnographic research with community organizations in Bournemouth. Having been inspired by Susan B. Hyatt's (IUPUI Department of Anthropology) work in this area, Dr. Read will be in residence at the IUPUI Arts & Humanities Institute during Spring 2015 to observe and participate in Hyatt's classes. Dr. Read plans to learn from the rich

experiences and collaborative research projects of Hyatt and other IUPUI colleagues as they engage with students and community groups of various kinds.

To learn more about Dr. Rosie Read's research, please visit:

<http://staffprofiles.bournemouth.ac.uk/display/rread>

IUPUI Student Pitch Competition Highlights Innovative Ideas to Solve Social and Economic Challenges



The IUPUI Office of the Vice Chancellor for Research, in partnership with the Center for Research and Learning, will host the fourth annual Ideas Solving Social and Economic Challenges Idea Competition (ISSEC). The competition will be held in the Lily Auditorium at the IUPUI University Library, from 11:00am to 1:00 on Friday, March 6, 2015. This event is open to the public, and everyone is invited to attend.

ISSEC is an annual competition, established to encourage IUPUI students (as individuals or in teams) to propose new products and/or ventures, within both for profit or nonprofit sectors. Ultimately, ISSEC is a competition designed to encourage and reward innovative "ideation" from students to pursue and develop innovative ideas of all kinds.

Finalists have three minutes to present to a panel of judges from the business community, their concept or solution in an "elevator pitch" format—without the benefit of slides or other props. This time constraint challenges the students to present themselves, and their idea, in a concise and persuasive manner, a skill that they will find invaluable in their professional lives, and as future innovators and entrepreneurs.

The objective of each pitch is to convince the judges that this is an absolutely incredible venture or opportunity! The students with the most innovative ideas as determined by the panel of judges will be awarded cash prizes. Audience members will also have a chance to cast a ballot for their own favorite idea in an "Audience Choice" category for a prize of \$1,000.

Past finalists have pitched ideas for a wide range of potential new products and proposed startups or social ventures. Likewise, this year's finalists will represent a broad cross section of fields and ideas. Examples include a product to support neonatal thermoregulation, a secure and effective means of public and personal motorcycle storage, a professional networking organization for local musicians, and many more! Everyone is encouraged to attend as this year's finalists take the stage to share their ideas, and perhaps take the first step in making them a reality.

For more information, go to <http://www.crl.iupui.edu/issec/>.

Online Registration: <https://crm.iu.edu/CRMEvents/ISSEC2015/>

Questions can be directed to Karen White at kfwhite@iupui.edu or (317) 274-1083.

Call for AY 2015-2016 Innovation to Enterprise Commercialization (ITEC) Proposals

The Center for Research and Learning welcomes proposals for the AY 2015-2016 Innovation to Enterprise Commercialization (ITEC) program at IUPUI. Proposals should be 1) from faculty or staff mentors with projects that offer students the

opportunity to engage in a new venture development or commercialization strategy project related to work arising from the mentor's research, or 2) from full time students (open to undergraduates, graduate, and professional degree students) who have an idea for a new product or venture, and are seeking guidance and support in commercial development of the idea.

This is a unique opportunity provided to IUPUI faculty and researchers to collaborate with students while conducting pilot projects, validating product design or upgrading prototypes, or to engage in market research

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

- *Faculty and students writing proposals are encouraged to review the document entitled [ITEC Proposal FAQs](#).
- *Proposals must be submitted by using the current version of the [ITEC Project Proposal Form](#). (Log in with IUPUI username and password). Proposals are due by midnight on March 31, 2015.
- *The project selection committee will review the submitted proposals using the [ITEC Proposal Evaluation Form](#). Eligible graduate students and post-doctoral trainees may also serve as co-mentors on a team.
- *The Proposal Review Committee meetings are currently scheduled for April 9-10, 2015.
- *The announcement regarding funded proposals is currently scheduled for April 27, 2015.
- *The academic year ITEC program begins on September 9, 2015, and continues through April 29, 2016.
- *ITEC is offered by the Center for Research and Learning, a division of the Office of the Vice Chancellor for Research. Project proposals from all disciplines on the IUPUI campus are encouraged. Students who are interested in submitting a proposal for their own project can also attend one of the Q&A sessions for assistance with their proposal.

These will be held Friday mornings at 9:00-9:30 am in University Library, Rm 1180F on the following dates:

February 27, 2015
March 13, 2015

Questions regarding ITEC proposal submissions should be directed to Karen White, Development and Commercialization Facilitator, at kfwhite@iupui.edu or itec@iupui.edu.

Call for AY 2015-2016 Multidisciplinary Undergraduate Research Institute (MURI) Faculty Proposals

The Center for Research and Learning welcomes proposals for the AY 2015-2016 [Multidisciplinary Undergraduate Research Institute \(MURI\)](#) at IUPUI. Proposals should be from faculty mentors representing two or more disciplines and should offer undergraduate students the opportunity to engage in a substantive research experience focused on a significant research question.

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).

- *Projects must include faculty mentors from more than one discipline.
- *Eligible graduate students and post-doctoral trainees may also serve as additional co-mentors on a team.
- *Proposals are due by midnight on March 23, 2015, to the following address: CRLGrant@iupui.edu.
- *The Proposal Review Committee meetings are currently scheduled for April 9-10, 2015.
- *The announcement regarding funded proposals is currently scheduled for April 27, 2015.
- *Students may apply to MURI and rank their project choices beginning May 1, 2015, with a deadline of September 11, 2015.
- *The academic year program begins on October 3, 2015, and continues through April 29, 2016.

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 or Steve Higbee sjhigbee@iupui.edu.

IRB Procedure Changes: Investigator Brochures, Closeouts

As part of ongoing efforts to increase efficiency, the Human Subjects Office (HSO) has implemented procedural changes regarding the review and approval of Investigator Brochures and Closeout Reports effective February 1, 2015.

Investigator Brochures

As of February 1, 2015, the IU IRBs will no longer review Investigator Brochure (IB) updates unless the revisions result in changes to additional study documents. The IB is a technical document which is provided to the IRB for informational purposes only; as such, review of stand-alone IB updates does not offer additional protection to human subjects. The IB should still be submitted to the IRB at time of initial review, and the most updated version should be submitted by the study team upon each renewal. If a change to the IB results in revisions to other study documents, such as a changed risk profile requiring updates to the informed consent, the revised IB should be included with the amendment as supporting documentation only. Click [here](#) for more information.

Closeout Reports

As of February 1, 2015, the HSO will not provide an approval signature on Closeout Reports. There is no regulatory requirement that the IRB review and approve study closure information, and the KC IRB system offers a mechanism by which HSO can acknowledge receipt of this information. Study teams should continue to submit Closeout Reports to the HSO via irb@iu.edu when previously-approved, expedited and full Board studies are discontinued or completed, or will not be initiated. Documentation of acceptance of the closure information will be provided via the KC IRB Closure Notice. The Closure Notice is available on the KC IRB Protocol Actions tab, in the Summary & History panel.

Please note that Closeout Reports are not required for exempt research. An updated version of the Closeout Report is available for use with expedited and full Board studies on the HSO [website](#). Click [here](#) for more information about closeout submission, or [here](#) for more information regarding document retrieval from KC IRB.

INSTITUTE SPOTLIGHT

High Profile Journal Publishes Research of IUPUI Professor and Institute

IUPUI recently announced that technology and materials developed by Dr. Jian Xie, Associate Professor of the Department of Mechanical Engineering and member of Integrated Nanosystems Development Institute, in conjunction with Argonne National Laboratory (ANL), are featured in *Nature Communications*, an open access journal that publishes high-quality research from all areas of the natural sciences. The journal is publishing Professor Xie's paper entitled, "Graphene-modified nanostructured vanadium pentoxide hybrids with extraordinary electrochemical performance for Li-ion batteries."

Professor Xie, a faculty member with the Purdue School of Engineering and Technology, and his research team have developed graphene materials and technology that will significantly impact electronics and electric vehicles. The paper indicates that this technology shows great promise in helping redefine the size and efficiency of a wide array of products, particularly batteries.

These nano-structured materials have applications in energy storage (batteries and super capacitors) and energy conversion (fuel cells), among others.

Possible examples of the technology's future impact include much thinner cell phones (one-third of the thickness of current cell phones) and significantly longer driving ranges for electric vehicles (three times farther).



Jian Xie, Ph.D.

"Technology breakthroughs in today's world rely on our deep understanding of the fundamentals of materials, particularly on a nano-scale," explained Professor Xie.

"This collaborative work is a great example of how we can benefit from understanding the properties and structure of graphenes and metal oxides as well as their fundamental issues (single sheet graphene, electronic/ionic conductivity, structural stability, etc.) in order to solve engineering problems and develop applications. I am thrilled that this new approach will benefit the scientific community."

Professor Xie's start-up company, CE Helios, will commercialize this advanced technology. His approach will be used to develop next generation battery technology that will have three times the current battery capacity (from 145 mAh/g of LiFePO₄ to 438 mAh/g of V₂O₅).

"In order to understand the extraordinary performance of the novel materials, the researchers carried out *in situ* high energy x-ray diffraction and *in operando* x-ray absorption spectroscopy measurements at the X-ray Science Division's beamlines 11-ID-C and 20-BM-B, respectively," explained APS/ANL Physicist Yang Ren.

"Such a combined application of two powerful and complementary hard X-ray techniques at the U.S. Department of Energy's Advanced Photon Source (APS) not only elucidated the fundamental knowledge of the underlying mechanism at the atomic and electronic levels, but also provided guidelines for future development of this new class of energy materials," he continued.

Papers published by *Nature Communications*, a journal of the Nature Group, represent important advances of significance to specialists within each field. The journal has an Impact Factor of 10.742, according to the 2013 *Journal Citation Reports*® Science

Edition.

FACULTY SPOTLIGHT

IUPUI awarded \$1.1 million grant to develop tools to predict physical appearance from DNA

Susan Walsh, a forensic geneticist in the School of Science at Indiana University-Purdue University Indianapolis, has been awarded a \$1.1 million grant from the U.S. Department of Justice's National Institute of Justice to develop and improve "DNA intelligence" tools that may help identify unknown suspects, perpetrators and missing persons.



Susan Walsh, Ph.D.

Walsh's work, formally known as forensic DNA phenotyping, focuses on the prediction of externally visible characteristics such as eye, hair or skin color from genetic material.

Using DNA from biological samples such as blood, Walsh's new "DNA intelligence" tools will help forensic scientists determine physical appearance information. The tools will be especially useful in cases where conventional DNA profiling is non-informative and an investigation cannot move forward.

"Predicting quantitative color -- not just blue or brown but the precise shade or pigment -- in terms of eye, hair or skin color of an unknown individual provides law enforcement, archaeologists and other investigators with information that can help identify a specific person or determine a potential pool of suspects that may or may not be of interest," Walsh said.

"The tools we are developing will be especially useful in cases where conventional DNA profiling does not provide useful information and an investigation stalls because it's the individual's first crime or the first crime where DNA has been found, hence a profile is not in the DNA database. These new tools will help investigators that lack genetic clues."

DNA profiling -- typically used by law enforcement to identify a suspect and by archaeological researchers such as those who identified the remains of Russian Tsar Nicholas and his family -- compares DNA discovered at a crime scene or archaeological find with DNA stored in a reference database. But DNA profiling is not helpful when no reference DNA exists to test a sample against. The new genetic phenotyping tools that Walsh is developing will let the discovered DNA act as a "biological witness that can do the talking."

Walsh is an assistant professor of biology in IUPUI's School of Science. Her appointment to the IUPUI faculty in 2014 followed a year as a post-doctoral associate at the Yale Molecular Anthropology Laboratory at Yale University. Originally from Ireland, Walsh earned her Ph.D. in forensic genetics from Erasmus University in The Netherlands under Manfred Kayser, a pioneer in forensic DNA phenotyping work. She also holds a master's degree in DNA profiling from the University of Central Lancashire in England.

As a doctoral student in 2013, she was awarded the prize for best oral presentation at the 25th Congress of the International Society for Forensic Genetics in Melbourne, Australia, for her presentation "Predicting skin color from DNA using a model based approach." She has also been invited to present her work at the next international conference in 2015 in Krakow, Poland.

Walsh is a co-author of a much-discussed study published in December 2014 in the journal *Nature Communications*. The study confirmed that bones found in 2012 in Leicester, England, are indeed those of King Richard III, who died on the battlefield in 1485. She is a co-developer of HIRisPlex, a forensic DNA phenotyping test used to analyze 11 genes known to contribute to hair and eye color that was used to predict the king's hair and eye color from ancient bones.

"Our work funded by the National Institute of Justice will be conducted with contributions from undergraduate and graduate students at IUPUI as well as collaborators in the Netherlands, Ireland and Greece," Walsh said. She is a faculty member of the School of Science's highly respected Forensic and Investigative Sciences Program.

STUDENT SPOTLIGHT

Undergraduate Research Inspires Budding Geneticist to Help the Underserved

After graduating from secondary school in her native Guyana, senior Kimberly T. Ho-A-Lim devoted a year to acquiring computer skills before immigrating to the U.S. in 2009. Residing with an aunt in New Jersey, she worked various jobs before coming to the Circle City in 2011 to start college at IUPUI as an Olaniyan scholar. Pursuing a premedical B.S. in biology with minors in chemistry and Africana studies, Kimberly looks forward to graduating in May 2016.



Kimberly T. Ho-A-Lim presents a research poster at the 2014 IUPUI Research Day event

"In high school," she reflects. "I participated in research activities for students preparing for the Caribbean Examinations Council (CXC) exams, though I'd never really thought of a research career." She credits Olaniyan Scholars Program Director Dr. Ronda Henry Anthony as having "kind of pushed us into [Center for Research and Learning] programs." Kimberly's Olaniyan work has led to her presenting on IUPUI Research Day in 2012 on *Health disparities: The genetic contribution in the African American community* and in 2014 on the *Association of diethylstilbestrol exposure and uterine leiomyoma in African American women*.

As a summer 2012 Louis Stokes Alliances for Minority Participation (LSAMP) scholar under Purdue School of Science Department of Biology mentors Jiliang Li, Ph.D., and graduate student Evan Himes, she investigated *The role of osteoclast-specific inactivation of STAT3 in bone modeling and remodeling*. Kimberly continued her pursuit of genetics during AY 2012-2013 as a Life-Health Sciences Internship Program (LHSI) intern, studying *Telomeres as a function of human ovarian carcinoma* under the direction of David P. Gilley, Ph.D., in the IU School of Medicine, Department of Medical and Molecular Genetics.

Since summer 2014 Kimberly has been a scholar in the NSF-funded IUPUI Undergraduate Research Mentoring in the Biological Sciences (URM) Program in the laboratory of Jason S. Meyer, Ph.D., who is affiliated with the Department of Biology, Purdue School of Science; IU Center for Regenerative Biology and Medicine; Stark Neurosciences Research Institute; and the Department of Medical and Molecular Genetics, IU School of Medicine. In November Kimberly won one of several 2014 Best Poster Presentation awards at the Indiana University Undergraduate Research Conference (IUURC) in Bloomington for her work on *Comparison of viral and mRNA-reprogrammed human induced pluripotent stem cells for retinal pigment epithelium differentiation*.

"Research," she observes, "equips me with a toolbox that increases my competitiveness in applying to graduate school. It also allows you to contribute new knowledge while using your own perspectives to contribute to your field." Kimberly continues, "Being involved in research has opened my eyes to other opportunities such as becoming a physician-scientist or pursuing an M.D.-M.P.H. Whatever path I choose, my time and resources will be used for the uplift of underserved populations."

TRANSLATIONAL RESEARCH IMPACT

SPARC consortium provides \$1.9 million for autoimmune disease research

The first grants from the [Strategic Pharma-Academic Research Consortium for Translational Medicine](#) (SPARC) will provide over \$1.9 million to advance research on autoimmune disease at several medical research universities across the Midwest.

The research consortium, led by the [Indiana Clinical and Translational Sciences Institute](#), will support research on multiple sclerosis, lupus, Crohn's disease, and two chronic connective tissue disorders: dermatomyositis and scleroderma. The consortium will focus on other research areas in future grants.



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

Members of SPARC include four institutions supported by the National Institutes of Health Clinical and Translational Research Awards: Indiana CTSI, which includes Indiana University, Purdue University and the University of Notre Dame, and institutions at Northwestern University, The Ohio State University and Washington University in St. Louis.

The awards are supported by the consortium's industry partners: Eli Lilly and Co. and Takeda Pharmaceuticals International Inc.

"There's a true wealth of expertise on autoimmune disorders across our membership, but there really was not a large-scale group in the region focused on the topic until the creation of this consortium," said Anantha Shekhar, M.D., Ph.D., director of the Indiana CTSI, associate dean for translational research at the IU School of Medicine and associate vice president for university clinical affairs at IU. "We're eager to help these scientists advance their critical work on these diseases -- many of which are poorly understood despite their impact on millions in the U.S. and worldwide -- and hope they may quickly translate into meaningful advances in treatment and therapy."

The selected research teams, which were chosen by an independent governance council with equal representation for each member of the consortium, will receive up to \$400,000 to advance their research. The consortium will support the funded research for two years. Award recipients are:

* [Anthony R. French](#), M.D., Ph.D., associate professor of pediatrics, pathology and immunology and biomedical engineering at Washington University in St. Louis, and collaborator [Lauren M. Pachman](#), M.D., professor of pediatrics-rheumatology at Northwestern University, whose work will advance basic understanding about the root causes of juvenile dermatomyositis, the most common inflammatory muscle disease in children.

*[Gwendalyn Randolph](#), Ph.D., professor of pathology and immunology, immunobiology and internal medicine at Washington University in St. Louis, and collaborator [Razvan Arsenescu](#), M.D., Ph.D., associate professor of internal medicine at The Ohio State University, whose work will focus on intestinal fibrosis, a complication of Crohn's disease that often requires surgery. Crohn's disease, a type of inflammatory bowel disease, is estimated to affect as many as 700,000 Americans.

*[Brad H. Rovin](#), M.D., professor of internal medicine and pathology at The Ohio State University, and collaborators [David A. Flockhart](#), M.D., Ph.D., Harry and Edith Gladstein Professor of Cancer Epidemiology and Genetics, and [Michael T. Eadon](#), M.D., assistant professor of medicine, both at the Indiana University School of Medicine, whose work will advance the ability to predict patients' response to treatment for kidney inflammation caused by lupus, an autoimmune disorder affecting 1.5 million Americans and millions more worldwide.

*[John Varga](#), M.D., John and Nancy Hughes Distinguished Professor of Rheumatology at Northwestern University, and collaborators [John P. Atkinson](#), M.D., professor of internal medicine and molecular biology, and [Elisha Roberson](#), Ph.D., instructor in medicine, both at Washington University in St. Louis, whose work will seek to advance basic science and identify potential future drug targets for scleroderma (also known as systemic sclerosis), a complex autoimmune disease with no currently approved therapy.

*[Yanjiao Zhou](#), Ph.D., instructor in medicine at Washington University in St. Louis, and collaborators [Laura Piccio](#), M.D., Ph.D., assistant professor of neurology at Washington University in St. Louis, and [Amy Lovett-Racke](#), Ph.D., associate professor of microbial infection and immunology at The Ohio State University, whose work will investigate the role of gut bacteria in multiple sclerosis, a disease of the central nervous system that affects 2.3 million people worldwide.

Translational medicine is the art of turning results from medical research conducted in the lab and academic clinic into safe and innovative new treatments and therapies for patients in general medical practice. The Strategic Pharma-Academic Research Consortium for Translational Medicine unites the strengths of the public and private academic research sectors to tackle large-scale translational medicine projects that require multi-instructional, multi-expert collaborations. By connecting business and other CTSA-funded institutions across the region, SPARC creates a translational research pipeline across the Midwest. The creation of SPARC was supported in part by [Biocrossroads](#), an Indianapolis-based organization that connects corporations, academic institutions and philanthropic organizations to advance the state's strengths in the life sciences.

Dr. Shekhar is also Raymond E. Houk Professor of Psychiatry and professor of neurobiology and pharmacology and toxicology at the IU School of Medicine.

OVCR INTERNAL GRANT DEADLINES

Developing Diverse Researchers with InVestigative Expertise (DRIVE): The Developing Diverse Researchers with InVestigative Expertise (DRIVE) program is designed to enhance the diversity and research and creative activity mission of IUPUI. Faculty from historically under-represented populations, usually defined as African-American, Latino-American, Native American, Pacific Islanders, and women, are particularly encouraged to apply. The DRIVE program supports projects that have the potential for sustainability through external funding. *The next DRIVE application deadline is **March 1, 2015**.* 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 FORCES application deadline is **March 15, 2015**.* For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

OTHER INTERNAL GRANT DEADLINES

IU Health Values Grand Challenges Grant -- letters of intent due March 27

Applications are sought for the IU Health Values Grand Challenge Grant, a new component of the IU Health Values Fund for Research and Education grant program.

The IU Health Values Grand Challenges Grant will support the conduct of clinically relevant population health research and education that is scientifically meritorious, medically sound and has a clear benefit to IU Health and the population it serves. The project should lead to one of the following:

*Discovery of new knowledge and the development of new population health research and education models to improve outcomes.

*Promotion of health in the population and the provision of health care of the highest quality to the patients and are cost-effective, efficient, leaner and effective in serving its customers.

Proposals should be limited to \$250,000 per year and up to a maximum of \$500,000 for two years. Letters of intent are due **Friday, March 27**. Complete proposals are due **5 p.m. Monday, April 27**.

For additional application instructions or to apply, visit the [Indiana CTSI grants portal](#) and log in using your institutional username and password. Applications instructions are located under " Indiana University Health Values Fund: Pilot and Feasibility Research Program - 2015.04."

Submission questions to Anne Nguyen at ictsi@iu.edu. Questions on financial issues, eligibility and budgeting to Peter M. Michael at pmichael@iuhealth.org or Rob Clark at rclark16@iuhealth.org.

OVCR EVENTS AND WORKSHOPS

National Science Foundation Research Experiences for Undergraduates

Target Audience: Faculty Interested in Mentoring Undergraduate Researchers
When: Thursday, March 5, 2015 | 2:00pm - 3:30pm
Where: University Library, Room 1126

The NSF REU opportunity focuses on ventures designed specifically to initiate and conduct projects that engage a number of undergraduate students in thematically-linked, ongoing research projects in meaningful ways. For those with existing NSF funding, supplemental grants to add undergraduate researchers to currently-funded NSF projects will also be discussed. The NSF deadline for submission of site proposals is expected to be August 28, 2015. If you are interested in applying and would like assistance by OVCR staff, be sure to attend.

Register: <https://crm.iu.edu/CRMEvents/NSFREU030515/>

Ideas Solving Social and Economic Challenges (ISSEC) Student Competition

2015

Target Audience: General

When: Friday, March 6, 2015 | 11:00am - 1:00pm

Where: University Library, Lilly Auditorium

ISSEC is an elevator pitch competition to reward IUPUI students for their innovative ideas to solve social and economic challenges facing the nation and the world. The emphasis of the competition is on finding answers to real-world problems through new approaches, products, services, or ventures. ISSEC challenges IUPUI students--individuals or teams--to propose original solutions to pressing social and economic challenges. Join us for the final competition event to hear the students make their pitches!

Prizes for Top Ideas!

1st Place: \$2,500 **2nd Place:** \$1,500 **3rd Place:** \$500 "Audience Choice" Award of \$1,000 selected on basis of Audience Ballots!

Register: <https://crm.iu.edu/CRMEvents/ISSEC2015/>

How to Write a Winning NSF CAREER Proposal

Target Audience: Early Career Faculty in Disciplines Funded by NSF

When: Tuesday, March 24, 2015 | 2:00pm - 4:00pm

Where: University Library, Room 2115J

Webinar for faculty on how to write a successful proposal to NSF's [Faculty Early Career Development Program \(CAREER\)](#) presented by *Academic Research Funding Strategies, LLC*. Topics to be covered are:

- *How to decide when and if to apply for a CAREER grant
- *How to position yourself and your research to be competitive for a CAREER
- *How to structure your proposal
- *How to develop an education plan
- *Addressing diversity
- *Keys to success and common mistakes to avoid
- *A step-by-step discussion of each section of the proposal and what it needs to tell the reviewers
- *How to analyze reviews and decide whether to revise and resubmit
- *Questions and Answers

A package will also be provided to participants that includes annotated excerpts from successful proposals and helpful resources.

Register: <https://crm.iu.edu/CRMEvents/NSFCAREERWebinar032415/>

Developing Complex, Multi-Investigator, Multi-Institutional Proposals

Target Audience: Senior Faculty with Previous or Current External Funding

When: Thursday, March 26, 2015 | 4:00pm - 5:30pm

Where: University Library, Room 1126

The current funding environment favors large, complex, multi-institutional, multi-investigator projects. However, organizing a successful submission takes a great deal of planning and teamwork. What works best in which situation? Should you use a "Red Team Review?" What role does the RFP serve to organize the writing efforts? Professional proposal writers and editors will discuss these and a number of related issues at this session (limited to 20 registrants).

Register: <https://crm.iu.edu/CRMEvents/ComplexProposals032615/>

Nine Golden Rules to Succeed in Research and Scholarship

Target Audience: Faculty

When: Friday, March 13, 2015 | 11:00am - 1:00pm
Where: University Library, Room 1126

This session will reveal the Nine Golden Rules on how to succeed in research and scholarship. It is focused toward new and early career investigators; however, mid-career faculty should find information of interest as well.

Register: <https://crm.iu.edu/CRMEvents/NineGoldenRules031315/>

Working with Industry on Applied Research & Creative Activity

Target Audience: Faculty
When: Friday, April 24, 2015 | 1:00pm - 2:30pm
Where: University Library, Room 1126

This session will provide participants with an overview of services provided by the Office of the Vice Chancellor for Research that help link faculty researchers to industry partners for potential collaborations. Although this information session is geared toward new to mid-career faculty/researchers with a desire to work with industry, all faculty are welcome to attend. The following topics will be discussed: Research vs. applied research; Benefits of collaboration; How much industry research is currently being conducted at IUPUI; What industry looks for in applied research; What industry looks for in an applied researcher.

Register: <https://crm.iu.edu/CRMEvents/WorkingwithIndustry042415/>

OTHER EVENTS AND WORKSHOPS

Roundtable: The Value and Values of Public Scholarship

When: Tuesday, February 24, 2015 | 12:00pm - 1:30pm
Where: University Library, Room 4115

The 21st century research university is no ivory tower. It is a vibrant space that cultivates creativity and experiment — a space that encourages and supports multiple ways of knowing and doing. Public scholarship is an essential pillar of the 21st-century university, building bridges and partnerships between the institution and the many public communities with which its members engage. This roundtable will engage in the following questions. What is public scholarship? What roles does it play in research, creative activity, and teaching? What misconceptions do people have about public scholarship? How should the universities evaluate public scholarship in promotion and tenure? How does one become a public scholar?

*Dr. Laura Holzman is an Assistant Professor and Public Scholar of Curatorial Practices and Visual Art in Art History in the Herron School of Art and Design and in Museum Studies in the IU School of Liberal Arts at IUPUI.

*Dr. Modupe Labode is an Assistant Professor and Public Scholar of African American History and Museums in History and Museum Studies in the IU School of Liberal Arts at IUPUI.

*Dr. Mary Price is the Faculty Development Director in the IUPUI Center for Service and Learning and an Associate Faculty member in Anthropology in the IU School of Liberal Arts at IUPUI.

Registration: <http://www.iupui.edu/~iahi/?event=the-value-and-values-of-public-scholarship-laura-holzman-modupe-labode-mary-price>

Data Topics Series: Spring 2015

These workshops will provide an overview of funding agency and publisher data policies, as well as resources and options for compliance.

Format: 20-minute lecture with examples, 20-30 minute activity, 10-15 minute discussion

Audience: Any faculty, staff, or student engaged in research

Questions can be directed to Heather Coates at hcoates@iupui.edu or 317-278-7125.

Register for any or all of the following data topics at <https://www.surveymonkey.com/s/datatopicsspr15>.

Topic: Documenting your data with codebooks and data dictionaries

Date: Tuesday, February 17

Time: 4:30-5:45pm

Location: University Library, 2120

Topic: Documenting your data with protocols and procedures manuals

Date: Wednesday, March 11

Time: 4:30-5:45pm

Location: University Library, 2120

Topic: Documenting your data with lab notebooks and readme files

Date: Wednesday, April 8

Time: 4:30-5:45pm

Location: University Library, 2120

Topic: Documenting your data with metadata

Date: Thursday, April 23

Time: 4:30-5:45pm

Location: University Library, 2120

Data Policy Workshops: Funding agency & publisher policy

These workshops will provide an overview of funding agency and publisher data policies, as well as resources and options for compliance.

Format: 30-45 minute lecture with examples, 15-20 minute discussion

Audience: Any faculty, staff, or students engaged in research

Questions can be directed to Heather Coates at hcoates@iupui.edu or 317-278-7125.

Register for any or all of the following data workshops at <https://www.surveymonkey.com/s/datapolicyspr15>.

Topic: What you need to know about the NIH Data Sharing Policy

Date: Tuesday, February 24

Time: 1:00-2:00pm

Location: University Library, 2120

Topic: Meeting the NSF Data Management Plan requirement: What you need to know

Date: Wednesday, March 4

Time: 12:00-1:00pm

Location: University Library, 2120

Topic: Meeting publisher data availability policies

Date: Tuesday, May 5

Time: 12:00-1:00pm

Location: University Library, 2120

Topic: What you need to know about the NIH Data Sharing Policy

Date: Thursday, May 14

Time: 1:00-2:00pm
Location: University Library, 2120

Award-winning novelists and poets headline Reiberg Reading Series at IUPUI

The Spring 2015 [Rufus & Louise Reiberg Reading Series](#) at IUPUI kicks off Thursday, March 5, 2015 with Emily Gray Tedrowe reading from her works, including the recently published second novel, "Blue Stars."

Tedrowe's first novel, "Commuters," was listed as a Best New Paperback by Entertainment Weekly, an IndieNext Notable pick, and a Target Breakout Book. Tedrowe also has published work in the *Chicago Tribune's Printers Row Journal*, "Fifty-Two Stories, and Other Voices."

All readings will take place at 7:30 p.m. in the University Library Lilly Auditorium, unless otherwise noted.

Other series events, open to students, faculty, staff and the general public, include:

***Thursday, March 12** -- 16th annual "International Women's Day: A Celebration" with poetry, music and visual art to honor the creativity of women around the world. Program includes an opening reception at 6:30 p.m. followed by featured performers at 7 p.m. and a multicultural, multilingual open mic at 8:20 p.m.

***Thursday, April 2** -- Essayist and fiction writer Michelle Herman, whose works include a collection of novellas, "A New and Glorious Life." Her essay collection "The Middle of Everything, Stories We Tell Ourselves" was longlisted for the 2014 PEN/Diamonstein-Spielvogel Award for the Art of the Essay.

***Thursday, April 16** -- Dana Roeser, the author of three books of poetry including her latest, "The Theme of Tonight's Party Has Been Changed." Roeser is also author of "In the Truth Room" and "Beautiful Motion," each winners of the Samuel French Morse Prize and nominated for the 2010 Poets' Prize.

The Reiberg series was founded in 1997 by the Department of English in the IU School of Liberal Arts at IUPUI to honor department chair Professor Emeritus Rufus Reiberg and his wife, Louise. The series annually brings national and regional writers to the IUPUI campus to present their work.

Visitor parking for the readings is available in the North Street Garage, 819 W. North St.; the Vermont Street Garage, 1004 W. Vermont St.; and the Sports Complex Garage, 875 W. New York St.

The Spring 2015 Rufus & Louise Reiberg Series,



Emily Gray Tedrowe



Michelle Herman



Dana Roeser

hosted by the Department of English, is made possible by the support of the Reiberg family; and IUPUI's Office of Academic Affairs; University Library; University College; Office for Women; and Women's Studies Program.

For additional information, contact Terry Kirts at tkirts@iupui.edu or 317-274-8929. Facebook users can "like" the series page at [The Rufus & Louise Reiberg Reading Series @ IUPUI](#).

IUPUI Arts and Humanities Institute (IAHI) Spring 2015 Lineup

For details and to register, visit http://www.iupui.edu/~iahi/?page_id=39.

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 - January 2015

Shekhar, Anantha	INDIANA ECONOMIC DEVELOPMENT CORPORATION	Indiana Economic Development Corporation Twenty-First Century Research and Technology Fund-Indiana CTSI	MEDICINE	CLINICAL TRANSLAT SCI (CTS)	\$5,000,000
Gupta, Samir Kumar	NATIONAL HEART, LUNG AND BLOOD INSTITUTE	HIV, Depression, and Cardiovascular Risk	MEDICINE	INFECTIOUS DISEASES	\$2,917,578
Wiehe, Sarah Elizabeth	NATIONAL INSTITUTE ALLERGY & INFECTIOUS DISEASES	The HIV Care Continuum Among Recent Offenders	MEDICINE	PED-HEALTH SERVICES RESEARCH	\$2,011,926
Zhou, Baohua	NATIONAL INSTITUTE ALLERGY & INFECTIOUS DISEASES	TSLP in Th2 Immunity and Allergic Airway Inflammation	MEDICINE	PED-PULMONARY BASIC RESEARCH	\$1,950,000
Schwartz, Peter H.	PATIENT-CENTERED OUTCOMES RESEARCH INSTITUTE	Describing the Comparative Effectiveness of Colorectal Cancer Screening Tests: The Impact of Quantitative Information	MEDICINE	ETHICS CENTER	\$1,507,162
Ware, Stephanie	WAYNE STATE UNIVERSITY	Genotype-Phenotype Associations in Pediatric Cardiomyopathy	MEDICINE	PED-CARDIAC DEV BIOLOGY WELLS	\$780,365
Kroenke, Kurt	PATIENT-CENTERED OUTCOMES RESEARCH INSTITUTE	Incorporating PROMIS Symptom Measures into Primary Care Practice	MEDICINE	GENERAL INTERNAL MEDICINE	\$676,371
Osili, Una O	GIVING USA FOUNDATION	Giving USA: The Annual Report on Philanthropy	LILLY FAMILY SCHOOL OF PHILANTHROPY	PHILANTHROPY	\$500,000
DiMeglio, Linda A	UNIVERSITY SOUTH FLORIDA	Diabetes TrialNet Data Coordinating Center	MEDICINE	PED-ENDOCRINOLOGY BASIC RES	\$480,610
Elmendorf, Jeffrey S	AMERICAN DIABETES ASSOCIATION	Mechanisms of membrane cholesterol accumulation and insulin resistance	MEDICINE	CELLULAR & INTEGRATIVE PHYSIO	\$333,501
Wessel, Jennifer	AMERICAN HEART ASSOCIATION INCORPORATED	Using Childa's Genetic Risk to Stimulate Diabetes Risk Reducing Change in Families	PUBLIC HEALTH	EPIDEMIOLOGY	\$308,000
Manicke, Nicholas	NATIONAL INSTITUTE OF JUSTICE	Paper Spray Mass Spectrometry for Rapid Drug and Drug Metabolite Screening Directly from Postmortem Blood Samples	SCIENCE	CHEMISTRY	\$273,826
Sun, Yang	E. MATILDA ZIEGLER FOUNDATION FOR THE BLIND	2014 E. Matilda Ziegler Award Application	MEDICINE	OPHTHALMOLOGY	\$240,000
Watson, Dennis P	RICHARD M. FAIRBANKS FOUNDATION, INC.	Evaluation Proposal for the Richard M. Fairbanks Foundation School Health Program	PUBLIC HEALTH	CENTER FOR HEALTH POLICY	\$169,944
Foroud, Tatiana M	MICHAEL J FOX FOUNDATION FOR PARKINSONS RESEARCH	LRRK2 AJ Closed and Ongoing Sample Collections	MEDICINE	MEDICAL & MOLECULAR GENETICS	\$166,842
Foroud,	UNIVERSITY OF			MEDICAL &	\$157,315

Tatiana M	MASSACHUSETTS	Genomic Analysis of Parkinson's Disease	MEDICINE	MOLECULAR GENETICS	
Rooney, Patrick M.	CHARLES STEWART MOTT FOUNDATION	Philanthropy Panel Study	LILLY FAMILY SCHOOL OF PHILANTHROPY	PHILANTHROPY	\$150,000
Cummins, Theodore R	DRAVET SYNDROME FOUNDATION	Targeting resurgent sodium currents for treatment of Dravet syndrome	MEDICINE	PHARMACOLOGY & TOXICOLOGY	\$150,000
Connors, Bret A	PHOENIX SCIENCE AND TECHNOLOGY, INC.	New sparker array system	MEDICINE	ANATOMY & CELL BIOLOGY	\$129,723
Bodenhamer, David J	INDIANA DEPARTMENT OF NATURAL RESOURCES	IDNR RiskMAP Ph2 WO1: Sugar Creek Watershed Discovery	LIBERAL ARTS	POLIS	\$114,350
Saykin, Andrew J	UNIVERSITY OF WASHINGTON	Genetic Architecture of Memory and Executive Functioning in Alzheimer's Disease	MEDICINE	RADIOLOGY & IMAGING SCIENCES	\$101,225

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 instead are sent directly to IUPUI School Deans. For comprehensive coverage of funding opportunities, please use the online search tools listed below.

NATIONAL INSTITUTES OF HEALTH

Prevention Innovation Program (PIP): This Funding Opportunity Announcement (FOA), the Prevention Innovation Program (PIP), encourages Research Project Grant (R01) applications in non-vaccine biomedical prevention (nBP) research. The PIP is intended to support high-risk/innovative research and development efforts to establish and maintain a sustainable pipeline for the prevention of HIV acquisition/transmission. The PIP will support discovery and development of novel and under-explored nBP candidates/strategies, nBP delivery strategies, studies of the impact of nBP prevention strategies on genital and gastrointestinal (GI) mucosa function and emerging technologies that support microbicides, pre-exposure prophylaxis (PrEP), and Multipurpose Prevention Technologies (MPT) for prevention of HIV acquisition/transmission. *Deadlines: Letter of Intent: June 10, 2015; Application: July 10, 2015; February 05, 2015.*

<http://grants.nih.gov/grants/guide/rfa-files/RFA-AI-13-059.html>

Basic Cancer Research in Health Disparities Program (R01): This opportunity encourages grant applications from investigators interested in conducting basic, mechanistic research into the biological/genetic causes of cancer health disparities. These research project grants will support innovative studies designed to investigate biological/genetic bases of cancer disparities, such as (1) mechanistic studies of biological factors associated with cancer disparities, including those related to basic research in cancer biology or cancer prevention intervention strategies, (2) the development and testing of new methodologies and models, and (3) secondary data analyses. *Deadline: Application: June 17, 2015.*

<http://grants.nih.gov/grants/guide/pa-files/PAR-15-093.html>

Effects of Secondhand Smoke on Cardiovascular and Pulmonary

Mechanisms: This opportunity invites applications that propose to better characterize the dose-response relationship between secondhand smoke (SHS) exposure and the cardiovascular and pulmonary diseases by improving our understanding of the mechanisms by which SHS contributes to these diseases. The recent Institute of Medicine (IOM) report on *Second-hand Smoke Exposure and Cardiovascular Effects: Making Sense of the Evidence* serves as the basis for this initiative. A wide range of research including animal and human laboratory studies, cohort and case control studies, and natural experiments resulting from home, workplace, and/or community changes in SHS exposure are consistent with this initiative. Components of Participating Organizations: National Heart, Lung, and

Blood Institute (NHLBI) and National Institute of Environmental Health Sciences (NIEHS). *Deadline: June 05, 2015.* <http://grants.nih.gov/grants/guide/pa-files/PA-11-244.html>

Technologies for Improving Health and Eliminating Health Disparities

(R41/42): The purpose of this opportunity is to stimulate a partnership of ideas and technologies between innovative small business concerns (SBCs) and non-profit research institutions resulting in improving minority health and the reduction of health disparities by commercializing innovative technologies. Healthy People 2020 defines a health disparity as a particular type of health difference in the incidence, prevalence, morbidity, and burden of diseases and other adverse health outcomes that is closely linked with social, economic, and/or environmental disadvantage. NIH-defined health disparity population groups include racial/ethnic minorities, socioeconomically disadvantaged individuals, and individuals residing in rural areas. Appropriate technologies must be effective, affordable, culturally acceptable, and easily accessible to those who need them. *Deadlines: Letter of Intent: December 23, 2015; Application: January 23, 2016.* <http://grants.nih.gov/grants/guide/rfa-files/RFA-MD-15-003.html>

NATIONAL SCIENCE FOUNDATION

Research Initiation Grants in Engineering Education (RIGEE): The RIGEE program enables engineering faculty who are renowned for teaching, mentoring, or leading educational reform efforts on their campus to initiate collaborations with colleagues in the learning and cognitive sciences to address difficult, boundary-spanning problems in how we educate engineers. The emphasis of RIGEE is on **initiating** research projects in engineering education rather than supporting research on any specific topic. Proposals are encouraged on any topic that explores engineering education from an interdisciplinary perspective. RIGEE projects should combine engineering approaches with those from learning and cognitive sciences, engineering education, social sciences, and related fields in synergistic ways and enable engineering faculty to develop expertise in engineering education research. The intent of the RIGEE program is to broaden participation of faculty in engineering education research rather than create an additional funding channel for established research. *Deadline: March 26, 2015.*

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503603

EarthCube: Developing a Community-Driven Data and Knowledge Environment for the Geosciences:

The goal of EarthCube is to create a well-connected and facile environment to share data and knowledge for all of the geosciences in an open, transparent, and inclusive manner and to accelerate our ability to understand and predict the Earth system. This opportunity solicits proposals in two focus areas that complement ongoing EarthCube activities in the Demonstration Phase. 1) EarthCube RCNs: Virtual Organizations for geoscientists to coordinate, plan and prioritize cyberinfrastructure activities, and 2) EarthCube Integrative Activities. *Deadline: March 19, 2015.*

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503584

Research in Engineering Education (REE): This opportunity supports creation of a more agile engineering education ecosystem that is open and available to all members of society, that dynamically and rapidly adapts to meet the changing needs of society and the nation's economy. Research is sought that will inform systemic change across all parts of the ecosystem. Areas of interest include, but are not limited to: 1. Diversifying pathways to and through engineering degree programs. 2. Exploring credentialing in engineering education. 3. Understanding how to scale engineering education innovations. 4. Advancing engineering learning in broader ecosystems such as innovation, globalization, or sustainability. 5. Developing engineering-specific learning theories. Theories on development of engineering epistemologies and identities, and the effect of novel learning environments (such as maker-spaces) on learning are particularly sought.

Proposals should clearly address why the proposed research fills gaps in existing

knowledge and address how evaluation will inform the research effort and allow assessment of the project's impact and effectiveness. *Deadline: September 18, 2015.* http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503603

Combustion and Fire Systems: The goal of this program is to generate cleaner global and local environments, enhance public safety, improve energy and homeland security, manufacture new materials, and create more efficient manufacturing. The program endeavors to provide basic engineering knowledge that is needed to develop useful combustion applications (such as flame-assisted synthesis of novel materials) and for mitigating the effects of fire. Broad-based tools - experimental, diagnostic, and computational - that can be applied to a variety of problems in combustion and fire systems are the major products of this program.

Research areas of interest for this program include: 1) Basic Combustion Science: Laminar and turbulent combustion of gas, liquid, and solid fuels in premixed, non-premixed, partially premixed, and homogeneous modes over a broad range of temperatures, pressures and length scales. Burning of novel and synthetic fuels. Development of models and diagnostic tools. 2) Combustion Science related to Climate-change: Increasing efficiency and reducing pollutants. Production and use of renewable fuels. Technologies such as oxy-fuel combustion and chemical looping combustion for carbon sequestration. 3) Fire Prevention: Improved understanding of fires to prevent their spread, inhibit their growth, and suppress them. 4) Turbulent Combustion Modeling and Validation: This is an NSF-AFOSR (Air Force Office of Scientific Research) joint funding area focusing on team efforts closely coordinating experimental and modeling efforts for validating fundamental turbulent combustion model assumptions. *Deadlines: October 20, 2015.* http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13366

U.S. DEPARTMENT OF DEFENSE (DOD)

Young Investigator Program: The Office of Naval Research announces its Young Investigator Program to identify and support academic scientists and engineers who have recently received Ph.D. or equivalent degrees and who show exceptional promise for doing creative research. The objectives of this program are to attract outstanding faculty members of institutions of higher education to the Navy's research program, to support their research, and to encourage their teaching and research careers. *Deadline: March 4, 2015.* <http://www.grants.gov/web/grants/view-opportunity.html?oppId=271460>

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.

U.S. DEPARTMENT OF ENERGY (DOE)

Vehicle Technologies: This opportunity supports a broad technology portfolio aimed at developing and deploying cutting-edge, advanced highway transportation technologies that reduce petroleum consumption and greenhouse gas emissions, while meeting or exceeding vehicle performance and cost expectations. Research, development, and deployment activities focus on reducing the cost and improving the performance of a mix of near-and-long-term vehicle technologies.

Specifically, these activities contribute to achieving the goals and objectives of the Electric Vehicle (EV) Everywhere Grand Challenge, with a focus on accelerating the development of advanced batteries, power electronics, and lightweight materials technologies. In addition, this opportunity supports technology development to

reduce petroleum consumption through fuel economy improvements: specifically, advancements in combustion engines, alternative fuels, and other enabling technologies. *Deadlines: Concept paper: Feb. 26, 2015; Application: April 10, 2015.* <https://eere-exchange.energy.gov/#FoalDde6e1324-adfd-430a-bfef-198efa7bd9b6>

Scientific Discovery Through Advanced Computing (SciDAC), Multiscale Integrated Modeling for Fusion Energy Science: Applications are solicited for the development of advanced multiphysics and multiscale integrated simulation capabilities for magnetically confined plasmas addressing problems of direct relevance to burning plasma science and ITER. While developing a full Whole Device Modeling (WDM) simulation capability is beyond the scope of this opportunity, this is intended to be a first step toward this goal. Responsive applications are expected to integrate the most critical physical processes across all relevant regions and on all relevant temporal and spatial scales, using an appropriately justified combination of first principles models and high physics fidelity reduced models. Simulation codes should be able to exploit the massive concurrency of the SC leadership class computing facilities and not merely their high capacity. Applications focused solely on the development of computational frameworks are not responsive to this FOA. However, since advanced computational frameworks are essential for enabling and facilitating the coupling and integration of component modules, allocation of resources to adapt, maintain, upgrade, and extend existing frameworks, including those developed by the Fusion Simulation Prototype Centers or "proto-FSPs", is permissible provided they satisfy the above stated requirement of exploiting the capabilities of the SC leadership computing facilities. *Deadlines: Letter of Intent: March 26, 2015; Application: May 2, 2015.* <http://science.energy.gov/fes/funding-opportunities/>

U.S. DEPARTMENT OF TRANSPORTATION (DOT)

Program Support - HIBS Structures and Structural Engineering Team: The Federal Highway Administration (FHWA) Office of Bridges and Structures (HIBS) develops regulations, policies, and guidelines to assure the successful delivery of the national bridge and tunnel program. The staff supports research of state-of-the-art technologies and provides leadership in the deployment of emerging technologies to improve the condition and durability of the Nation's bridges, tunnels, and other highway structures. Injecting new technologies during hands-on design and construction reviews of major and unusual bridge and tunnel projects, as well as geotechnical and hydraulics features is just one way the staff advances technology deployment. Technical leadership is provided through the development of manuals, guidance, and training on bridge and structure design, geotechnical and hydraulic feature design, construction, inspections, load ratings, system preservation and management. HIBS staff also advances the body of knowledge through active participation in technical committees of TRB and AASHTO. The HIBS staff is comprised of three teams: the Structural Engineering Team, the Hydraulics and Geotechnical Engineering Team, and the Inspection, Preservation, and Management Team. *Deadline: April 25, 2015.* See [Program Support ♦ HIBS Structures and Structural Engineering Team](#).

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.

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