

Research Enterprise

April 23, 2012

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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FEATURED STORIES

IUPUI Celebrates Excellence in Research and Scholarly Activity



April 13, the Office of the Vice Chancellor for Research and its affiliated units (Center for Research and Learning and Solution Center) hosted the 2012 IUPUI Research Day. This exciting open-house event allowed hundreds of participants to interact with IUPUI's researchers and scholars, allowing them to see and hear how IUPUI's high-caliber research and creative activity is reaching across the city, state, nation and the world to create change and improve lives.

Research Day began with undergraduate, graduate and professional student poster presentations. New to Research Day, undergraduate student oral presentations were also part of the morning activities, Faculty poster presentations, a community research showcase and a networking reception were offered in the afternoon. To access a complete list of poster presentations, visit

<http://research.iupui.edu/events/researchday2012/schedule.php>.

The top student presentation winners were:

UNDERGRADUATE POSTER Presentation WINNERS

1st place:

Oaksoon Callahan, Samantha Adamson, Amanda Jolisse (Advisors: Susan Hyatt, Drew Klacik) - [Super Bowl City: The Real Faces Of XLVI Unmasked](#)

2nd place:

Cornelius Audu (Advisor: Jingzhi Pu) - [How Maltose Binding Proteins Recognize Substrates: Insights From Computer Simulations](#)

3rd place:

Ahmed Malik - (Advisor: Randall J. Roper) [Embryonic Bone Development And NFAT Expression In The TS65DN Mouse Model For Down Syndrome](#)

UNDERGRADUATE ORAL PRESENTATION WINNERS

1st place:

Floyd Timm (Advisor: Feng C. Zhou) - [Head Circumference, As Predicted By Facial Measures In Mouse Model Of FASD](#)

2nd place:

Tsungai Chingombe (Advisor: Mary Beth Brown) - [Effect of Treadmill Running on Cardiac and Skeletal Muscle Metabolism and Right ventricle Inflammation in Rats with Pulmonary Arterial Hypertension](#)

3rd place:

Alyssa Gutierrez (Advisor: Kathleen A. Stanton-Nichols) - [Effectiveness of an At-home Based, Physical activity Program for Families who have Children with Intellectual Disabilities](#)

4th place:

Sonya Waterhouse (Advisor: Joseph Defazio) - [Characteristics of Museum Exhibit Learning Objects in the 21st Century?](#)

GRADUATE POSTER WINNERS

1ST place:

Alyssa Sprouse (Advisor: Brittney-Shea Herbert) - [Effects Of Resveratrol On Paclitaxel-Sensitive And-Resistant Triple Negative Breast Cancer Cells](#)

2nd place:

Allyson Dir (Advisor: Melissa A. Cyders) - [Sexting Behaviors, Alcohol Use, And Impulsivity](#)

3rd place:

Jie Xie (Advisors: Irina Petrache, Hal E. Broxmeyer, Keith L. March) - [Human Adipose-Derived Stem Cells Attenuate Cigarette Smoke Induced Bone Marrow Injury Via Secretion Of Anti-Inflammatory Cytokine TSG-6](#)

The afternoon program kicked off with a welcome and opening remarks by Dr. Kody

Varahramyan, Vice Chancellor for Research, followed by the poem, "Invisible Movements," recited by Dr. Karen Kovacic, author, Indiana Poet Laureate, and IUPUI professor of English in the School of Liberal Arts. The [2012 IUPUI Research Impact video](#) was also premiered and fittingly conveyed the breadth and depth of research and scholarly activity being conducted by IUPUI faculty and students.

This year's featured Research Frontiers Distinguished Lecture, **Perspectives on Science and Education: Building the Future**, was presented by Dr. Joan Ferrini-Mundy, Assistant Director at the National Science Foundation.

Winners of the Research Frontiers Trailblazer Award were also recognized at Research Day. This year's awardees are Dr. Malaz Boustani from the School of Medicine, Dr. Anna Malkova from the School of Science, Dr. Alexander Niculescu from the School of Medicine, and Dr. Alexander Robling from the School of Medicine.

As the Office of the Vice Chancellor begins planning for the fifth annual IUPUI Research Day event April 5, 2013, participants and the broader IUPUI community are encouraged to send feedback and suggestions to OVCR@iupui.edu.

Indiana University Researchers Take Steps toward Prevention of Diabetes

Early signals that insulin processing cells are developing problems that result in type 1 diabetes may lead to tests to predict who will develop the disease and possibly how to prevent it, according to Indiana University School of Medicine researchers.

In a study published in the March 22 issue of the journal *Diabetes*, Raghu Mirmira, M.D., Ph.D., Eli Lilly and Co. Professor of Pediatric Diabetes, and Sarah Tersey, Ph.D., assistant research professor of pediatrics, reported that using a mouse model of type 1 diabetes, they had been able to identify problems in insulin-producing cells before the mice actually developed symptoms of diabetes.

They were also able to identify elevated levels of a protein in mice resulting from the cellular dysfunction that might serve as a biomarker for a simple blood test to identify who is actually in the process of developing diabetes.

The dysfunction identified, called endoplasmic reticulum stress, or ER stress, has previously been linked to type 2 diabetes, the form of diabetes that generally appears first in adults. ER stress had not been previously shown as occurring before the development of type 1 diabetes, often called juvenile diabetes.

Insulin enables the body's cells to use glucose for energy. Type 1 diabetes occurs when the body's immune system attacks insulin-producing beta cells in the pancreas. Researchers are uncertain why the immune system targets the cells. Taking insulin enables people with type 1 diabetes to live, but they are at risk of serious complications such as heart and kidney disease, nerve damage and vision problems.

"We could have a much greater impact preventing diabetes in the first place, but the problem is identifying people who are developing the disease before it's diagnosed and applying the appropriate preventive therapies," said Dr. Mirmira, director of the basic diabetes research group at the [Herman B Wells Center for Pediatric Research](#). Certain traits, such as having a close relative with diabetes and



Raghu Mirmira, MD, PhD
Department of Pediatrics
School of Medicine

having elevated levels of particular antibodies, indicate an increased risk. But many of the people at risk won't develop diabetes, so it wouldn't be appropriate to give all of them preventive treatments, Dr. Mirmira said.

The endoplasmic reticulum is an organelle in the cell that processes proteins that will be excreted from the cell — in this case, insulin. With a variety of laboratory tests, Drs. Tersey and Mirmira said they found clear signs of ER stress, including the release of a precursor to insulin called proinsulin. As the prediabetic mice progressed into a state of ER stress, the researchers were able to measure significantly elevated levels of proinsulin, Dr. Mirmira said.

Although Dr. Mirmira cautioned that these studies were done in laboratory animals, and that it is difficult to know whether they apply to humans, he suggested that they are a first step toward identifying and possibly treating humans who might progress to type 1 diabetes. Dr. Mirmira noted that most such treatments, which would attempt to prevent the body's immune system from attacking insulin-producing cells, are still in the experimental stage.

More generally, Dr. Mirmira said, "This makes us think even more that the two diseases (type 1 and type 2 diabetes) are not as different as once thought. There's a lot at the molecular and cellular level that the diseases share in common."

Other authors contributing to the paper were Yurika Nishiki, Ph.D., postdoctoral fellow in pediatrics; Andrew T. Templin, Ph.D., graduate student in cellular and integrative physiology; Susanne M. Cabrera, M.D., postdoctoral fellow in pediatrics; Natalie D. Stull, research technician in pediatrics; Stephanie C. Colvin, Ph.D., postdoctoral fellow in pediatrics; Carmella Evans-Molina, M.D., Ph.D., assistant professor of medicine; and Bernhard Maier, Ph.D., assistant research professor of pediatrics, all of the [IU School of Medicine](#), and Jenna L. Rickus, Ph.D., associate professor of biomedical engineering at [Purdue University](#).

The research was supported by grants from the [Juvenile Diabetes Research Foundation](#), the [National Institutes of Health](#) and the [Indiana Clinical and Translational Sciences Institute](#).

ANNOUNCEMENTS

2012 Research Frontiers Trailblazer Award Winners Announced at Research Day

Established in 2010, the Research Frontiers Trailblazer Award recognizes outstanding IUPUI researchers who are showing great promise in becoming nationally and internationally known for their accomplishments in advancing the frontiers of knowledge. Specifically, the award is for outstanding research and scholarly activity accomplishments by an Associate Professor, within the first three years of promotion or appointment in the given rank.

The winners of the 2012 Research Frontiers Trailblazer Awards were announced at the IUPUI Research Day on April 13th and represented research on the care of older adults with dementia, DNA repair mechanisms, the genomics and phenomics of psychiatric disorders, and skeletal biology in areas related to



IUPUI 2012 Research Frontiers Trailblazer Award Winners (left to right):
Anna Malkova, PhD.; Alexander Robling, Ph.D.; Alexander Niculescu, MD., PhD;
and Malaz Boustani, MD

mechanobiology. Associate Professor of Medicine Malaz Boustani, Associate Professor of Biology Anna Malkova, Associate Professor of Psychiatry Alexander Niculescu, and Associate Professor of Anatomy and Cell Biology Alexander Robling each were recognized for their trailblazing research.

At a relatively early stage in his researcher and scholastic career, Dr. Boustani has established himself as an exceptionally talented scientist with acknowledged expertise in studies targeting care of older adults with dementia. He has become a leading authority in the field of population-based screening for cognitive deficits, and is frequently consulted by various federal and non-federal agencies/organizations to help establish clinical guidelines and an agenda for future research in dementia.

Since joining the faculty at IUPUI in 2003, Dr. Malkova has been advancing research in the area of fundamental mechanisms of DNA repair – mechanisms that are crucial to the maintenance of normal genome integrity. Failure to repair breaks in DNA strands (particularly double-strand breaks) contributes to cancer and a number of genetic diseases. Her laboratory has found new ways to use yeast as a model system to study these mechanisms; studies that have given profound new insight into this important process. This system elegantly exploits the power of yeast genetics to uncover the details of the molecular mechanisms involved in this process. This has made her an acknowledged leader in this area of research.

Dr. Niculescu joined the IU School of Medicine in 2004 and has since made considerable contributions in the area of Genomics and Phenomics of Psychiatric Disorders research. With a particularly broad interest in genetic and clinical comorbidities and overlap between disorders, his research is offering new and exciting proof of principle for an approach to identify blood biomarkers for disease state. Such biomarkers can serve as a basis for objective clinical laboratory tests.

Dr. Robling is a young investigator who, even this early in his career, has had a profound impact on skeletal biology in areas related to mechanobiology, Wnt signaling in bone, and the interaction of the mechanical and biological environments in skeletal adaptation. His work has evolved into a completely independent direction that ties the Wnt pathway to mechanotransduction. In his early work, he devised several very clever experiments that were used to determine the optimum way that loading should be applied to the skeleton to maximize that anabolic potential.

IUPUI Announces Winners of Inaugural Ideas Solving Social and Economic Challenges Students Pitch Competition

On April 18, 2012, the Indiana University-Purdue University Indianapolis Office of the Vice Chancellor for Research held its first Ideas Solving Social and Economic Challenges (ISSEC) student “pitch” competition. The ISSEC is designed to reward IUPUI students with scholarships for their innovative ideas to solve social and economic challenges facing the nation and the world.



ISSEC Winners (left to right) Cora Griffin, James Plew, Ajay Bohra, Tirajeh Saadatzaheh, and Danielle Hall

The emphasis of the competition was on providing answers to real-world problems through new approaches, products, services or ventures. The competition challenged IUPUI students – individuals or teams – to propose original solutions to pressing social and economic challenges. “I am very pleased with the student response to this initiative. We had an impressive group of students presenting quite insightful ideas addressing social and economic challenges and

opportunities," said Dr. Kody Varahramyan, Vice Chancellor for Research at IUPUI.

The competition attracted some of the most unique and compelling ideas. Students were allowed three minutes to present to judges their concept or solution—without the benefit of slides or other props. The goal was to convince the judges, in a concise and persuasive manner, that their idea was an absolutely incredible opportunity for potential investors. This "elevator pitch" style of presentation challenged the students to tell their story in a short format to effectively communicate an innovative idea or intervention at a moment's notice.

Student competitor Tirajeh Saadatzadeh comments, "I absolutely loved participating in the ISSEC competition because it gave me the chance to experience the work and creativity that goes into producing and presenting an idea. I've never done anything like this before so, for me, the entire experience was incredibly eye-opening and educational. This is a brilliant contest that really gives a voice to emerging entrepreneurs of all ages."

Winners of the inaugural ISSEC student pitch competition received scholarships awards ranging from \$500 to \$2500.

1st Team Positive Farming – Tirajeh Saadatzadeh and Danielle Hall

2nd Kitch-On – James Plew and Ajay Bohra

3rd Project Place Indianapolis – Cora Griffin and Frank Giammaria

Audience Choice: Team Positive Farming, Tirajeh Saadatzadeh and Danielle Hall

To learn more about all of the ISSEC student competitor concepts, go to <http://www.crl.iupui.edu/issec/>. Questions can be directed to Karen White at kfwhite@iupui.edu or (317) 274-1083.

IUPUI Computer Science Researcher Receives NSF CAREER Award

Dr. Mohammad Al Hasan, assistant professor of computer science at the School of Science at Indiana University-Purdue University Indianapolis (IUPUI) has received the National Science Foundation (NSF) CAREER Award, its top award for teaching scholars early in their career.

The five-year, \$547,000 grant is the most prestigious award issued by the NSF in support of junior faculty members who excel in the integration of both research and teaching for their universities. Hasan plans to use this grant to discover new algorithms for mining subgraphs from large graphs in the life and social science fields, specifically in systems biology research.



Mohammad Al Hasan, PhD
Department of Computer Science
School of Science

He plans to develop methods to more efficiently analyze large amounts of data. User feedback and interaction also will be used to develop the algorithms that produce the most effective outcomes for researchers.

Hasan is one of three faculty members at the School of Science at IUPUI who holds a current NSF CAREER Award.

[For a synopsis of his research proposal, please visit here.](#)

IUPUI Offers Nanotechnology Summer Camp for High School Students

It's that time of year again, and

many high school students are planning to participate in exciting activities for the summer...including educational summer camps. Even though there are plenty of options from which to choose, few summer camps provide the type of hands-on and engaged learning experience that the IUPUI Nanotechnology Discovery Academy (INDA) Summer Camp offers.



The INDA Summer Camp program provides a unique opportunity for high-school students entering their sophomore, junior, and senior years to explore the interdisciplinary field of nanotechnology on the IUPUI campus. This cutting-edge field is rapidly becoming an essential part of science, engineering, medicine, and many other disciplines. During the summer camp, participating high-school students will work with faculty mentors to:

- *Discover innovative technologies
- *Gain hands-on laboratory experience
- *Engage in research and learning activities
- *Earn one college-credit hour

The camp fee (\$295) covers all camp materials and supplies and includes daily lunch and the cost of one IUPUI course credit. Need-based scholarships may be available; housing and transportation unavailable. Application Deadline (postmarked): May 7, 2012.

Camp Dates:

Cohort 1: June 11-15, 2012, from 9:00 a.m. to 5:00 p.m.

Cohort 2: June 25-29, 2012, from 9:00 a.m. to 5:00 p.m.

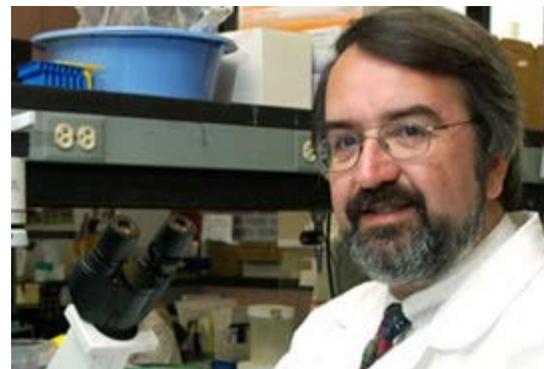
For more information and to access the application form, please visit <http://crl.iupui.edu/programs/INDA/nanotechnologyForStudents.asp>.

CENTER SPOTLIGHT

Indiana University to Receive Stem Cell Research Funding

Physician scientists at the Indiana University School of Medicine have been selected to join the nationwide Cardiovascular Cell Therapy Research Network and will begin a new round of tests of adult stem cell treatments for peripheral artery disease this summer.

The IU School of Medicine is one of seven members of the network, which will receive \$63 million from the National Heart, Lung and Blood Institute of the National Institutes of Health to study the use of adult stem cells to treat heart and blood vessel disease.



Keith L. March, MD, PhD
School of Medicine

"This selection highlights the accomplishments of our centers in the field of translating vascular stem cell research from the laboratory into patient trials," said Dr. Keith L. March, director of the Vascular and Cardiac Adult Stem Cell Therapy

Center and the Roudebush Veterans Affairs Center for Regenerative Medicine.

The clinical trial in Indianapolis will begin recruiting patients June 1, said Michael P. Murphy, M.D., assistant professor of surgery and co-primary investigator with Dr. March, and co-director of the centers.

Participation in the Cardiovascular Cell Therapy Research Network, which is funded for seven years, will bring IU between \$550,000 and \$1 million per year to support the research, depending on the number of patients participating in the trials.

An estimated 10 million Americans are affected by the poor blood circulation – generally in the legs – of peripheral artery disease. It is caused by atherosclerosis, the clogging and hardening of arteries that can lead to heart attacks. Although about half of those with peripheral artery disease have no symptoms, others report varying levels of pain and other symptoms including numbness and sores on the legs and feet. Moreover, 30,000 to 50,000 people in the U.S. undergo amputations annually due to peripheral artery disease.

The cardiovascular network trial in Indianapolis will focus on patients with moderate severity peripheral artery disease who have pain while walking. The trial will test whether adult stem cells, when injected into the patient's leg, will stimulate the production of new blood vessels and reduce the symptoms of peripheral artery disease.

Dr. Murphy is also leading a separate clinical trial of stem cell therapy to treat more severely affected peripheral artery disease patients who have pain while at rest and are at risk of amputation. That trial is being conducted at 30 sites around the country, including Indianapolis.

"This grant builds on seven years of research by investigators in our center, and it points the way for us to tackle future clinical studies of stem cells to treat such diseases as stroke, arthritis, diabetes, emphysema and renal failure," Dr. March said.

In addition to peripheral artery disease, the national network is evaluating the benefits of using adult stem cells to treat heart attack and heart failure. Other members of the cardiovascular research network are at Stanford University, Texas Heart Institute, the University of Louisville, University of Florida, University of Miami and Minneapolis Heart Institute / Mayo Clinic.

For more information about the IU clinical trials, call 317-278-6585.

FACULTY SPOTLIGHT

Faculty Member Honored with National Award

Brian Culp, an assistant professor of physical education in the School of Physical Education and Tourism Management, was recently recognized with the Mabel Lee Award by the American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) at its national convention in Boston, Massachusetts. The Mabel Lee award is given to its younger members who have demonstrated outstanding potential in scholarship, teaching, and/or professional leadership.

Culp, who has been with the Department of Physical Education since 2006, has worked to make physical activity viable for all through his work with the Physically Active Residential Communities and Schools (PARCS) program, garnering funds for physical activity programs



Brian Culp, EdD
Department of Physical Education
School of Physical Education and
Tourism Management

for children in Indianapolis. His efforts have also extended to East Africa where he visits to promote physical activity and wellness through sport development.

Culp's scholarship, which has been featured in several publications and presentations, focuses on culturally responsive pedagogy, social justice, and creating equitable environments for physical activity. He is the creator and webmaster of www.culturenmotion.org and www.physicaleducationlab.com, websites dedicated to addressing the perspectives of diverse learners in physical activity.

Culp's professional affiliations include AAHPERD, the International Council for Health, Physical Education, Recreation, Sport and Dance (ICHPERD-SD), and the National Association for Physical Education in Higher Education (NAKPEHE). He has also served on the NASPE Diversity & Inclusiveness Task Force and as a member of the planning committee for the 2012 PETE Conference in Las Vegas, NV. Most recently, Culp was named to the National Board for Professional Teaching Standards (NBPTS) where he was nominated and chosen from a field of 250 educators nationwide. One of two higher education professionals on the 13-person board, Culp compiled the research bibliography for the organization.

STUDENT SPOTLIGHT

Biology Student to Present Research before Congress

A senior biology student in the School of Science at Indiana University-Purdue University Indianapolis will showcase his research before Congress in April as he represents the university at the 16th annual Posters on the Hill session in Washington, D.C. Daniel Popoola will join 73 other undergraduate students selected from across the country to participate in the April 24 event. More than 850 student researchers applied for the program. He is the only student selected from Indiana.

This latest honor follows his selection in November to present at the Annual Biomedical Research Conference for Minority Students and a presentation planned for March 29 at the annual National Conference on Undergraduate Research.



Daniel Popoola, IUPUI Ronald E. McNair
Program Scholar
Department of Biology
School of Science

"This really represents the hallmark of my undergraduate achievement," said Popoola, originally from Nigeria. "I never dreamed I could have this opportunity. It's

a great honor and privilege, and I feel blessed and so proud to represent IUPUI.”

The poster presentation titled: *“When a Fire Leads to a Drink: Enhancement of Alcohol-Seeking by Microinjection of Nicotine Directly Into the Reward Neurocircuitry,”* contains findings from Popoola’s current research under Dr. Zachary Rodd, his research advisor, and Dr. Sheketha Hauser, both of the IU School of Medicine. The research examines how nicotine affects alcohol intake in rodents, which could ultimately have applications in human alcohol consumption.

“Daniel represents the best of Indiana and is a great example of the type of research opportunities available at IUPUI,” said Dr. Kathryn Wilson, assistant vice chancellor for research and the McNair Program Director at IUPUI. “These events allow our best and brightest students to interact with members of Congress and discuss the importance of continuing to support research initiatives at the undergraduate level.”

Popoola participates in the Ronald E. McNair Program. Administered through the IUPUI Center for Research and Learning, the McNair program works to provide research opportunities for undergraduate students seeking admission to Ph.D. programs. He hopes to complete medical school in the United States and one day travel the world as a neurosurgeon.

In addition to being heavily involved in research, Popoola is a member of the School of Science Ambassador Leadership Team and the IUPUI African Student Association. He also mentors high school and other undergraduates through the 21st Century Scholars program at IUPUI, the pre-college program at Crispus Attucks Medical Magnet High School and the International Peer Mentoring Program.

TRANSLATIONAL RESEARCH IMPACT

Community and Scientists Team Up To Improve Local Health with Support from Indiana CTSI

The Indiana Clinical and Translational Sciences Institute Community Health Engagement Program ([Indiana CTSI CHEP](#)) will provide about \$120,000 in small grants to seven innovative partnership projects between local community groups and researchers at Indiana University, Purdue University and the University of Notre Dame. These partnerships will focus on improving health and health care in neighborhoods across the state.

Projects supported by the Indiana CTSI CHEP pilot grant program involve partners from the Indianapolis Urban League, Safe Kids Indiana, the Indiana Minority Health Coalition, La Plaza and HealthNet. They will seek to promote healthy habits, improve awareness on HIV, prevent obesity, curb smoking among expectant mothers, and explore water birth safety.

“We’re pleased to provide pilot funding to some of the many talented community groups and researchers who are engaged in improving health and health care throughout Indiana,” said Dr. Douglas K. Miller, co-director of the Indiana CTSI CHEP and Richard M. Fairbanks Professor of Aging Research at the [Indiana University School of Medicine](#). “These organizations and the partnerships they represent are the folks who go out in our communities every day to help people across the state experience better health care and achieve healthier lives.”



Douglas K. Miller, MD
Co-director of the Indiana CTSI CHEP
Richard M. Fairbanks Professor of Aging Research

Six of the seven community-based research projects selected by Indiana CTSI CHEP will use the funds to implement existing academic-community partnerships that involve members of the community at many different levels. These six projects each received up to a maximum of \$20,000 in funding. A seventh project will use the \$5,000 in awarded funds to lay the foundation for a larger project, by further developing the partnership and project objectives.

All projects were selected for their strong potential to gain additional support from other agencies after the one-year "cultivation" period provided by the pilot funds. "We see all these projects as the start of long-term collaborations with the Indiana CTSI CHEP program," Dr. Miller said.



CHEP Pilot Awardees and their research affiliates were recognized during the fourth annual Indiana CTSI CHEP Community Advisory Council on March 22nd.

The seven projects funded by the CHEP community-based research pilot program, including both the community and academic partner:

- Calvin Roberson, vice president of programs at the [Indiana Minority Health Coalition](#), and Mohan Dutta, Ph.D., professor of health communication and director of the [Center on Poverty and Health Inequities, Purdue University](#), will partner on a project titled "Culture-Centered Heart Health Promotion Among African-American Youth in Marion County."
- Jamie Smith, state coordinator at [Safe Kids Indiana](#), and Joseph O'Neil, M.D., associate professor of clinical pediatrics, IU School of Medicine, will partner on a project titled "A Partnership to Develop the Indiana Latino Child Passenger Safety Strategic Plan."
- Deidra Coleman, health and wellness coordinator and program director at the [Indianapolis Urban League](#), and Mary Ott, M.D., associate professor of pediatrics, IU School of Medicine, will partner on a project titled "Improving Adolescent HIV Awareness and Behavior: Evaluation and Expansion of the 'I Need You to Listen, Hear and Understand Me' Tour."
- Karl Nichols, executive director of the [St. Joseph County Minority Health Coalition](#), and Irene J. Kim Park, Ph.D., assistant professor of psychology, [University of Notre Dame](#), will partner on a project titled "Discrimination, Coping and Mental Health in Latino Families."
- Nancy Morales, health outreach coordinator at [La Plaza](#), and Lisa Staten, Ph.D., associate professor of public health, IU School of Medicine, will partner on a project titled "Compañeros en la Salud" (Partners in Health).
- Booker Thomas, CEO of [HealthNet](#), and Sarah Wiehe, M.D., associate professor of pediatrics, will partner on a project titled "The Avondale Health

Study: Community Engagement for Place-Based Patient-Centered Outcomes Research.”

- Jeanne Ballard, M.D., an obstetrician/gynecologist with HealthNet, and Michael Weiner, M.D., associate professor of medicine, IU School of Medicine, and investigator in health services research, IU School of Medicine, will partner on a project titled “Water Births: A Cost and Safety Analysis.”

The Indiana CTSI Community Health Engagement Program promotes collaboration among community partners throughout Indiana to improve research, health and health care. It fosters the development and work of community coalitions, individuals and organizations by aligning and developing a statewide coalition of stakeholders interested in improving the health and health care of the residents of Indiana and in evaluating health-related priorities, policies and programs. For more information, visit www.indianactsi.org/chep.

The Indiana Clinical and Translational Sciences Institute is a statewide collaboration between Indiana University, Purdue University and the University of Notre Dame, and public and private partnerships, that facilitates the translation of scientific discoveries in the lab into new treatments and therapies in Indiana and beyond. It was established in 2008 with a \$25 million [Clinical and Translational Science Award](#) from the [National Center for Advancing Translational Science](#) of the [National Institutes of Health](#), along with support from the state, the three member universities, and public and private partners. Indiana CTSI is a member of a [national network](#) of 60 CTSA-funded organizations across the United States. For more information, visit www.indianactsi.org.

OVCR EVENTS AND WORKSHOPS

COS PIVOT

When: Wednesday, April 25, 2012 | 10:00 AM-11:30 AM
Where: University Library, Room 0106

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

[click here to register](#)

Nine Golden Rules to Succeed in Research and Scholarly Activity

When: Monday, April 30, 2012 | 1:00 PM-2:30 PM
Where: University Library, Room 1126

This highly acclaimed workshop provides a framework for succeeding in research and scholarship and distills this into Nine Golden Rules. While this interactive session is filled with practical advice for those in the early stages of their faculty careers, more senior faculty can also benefit.

[click here to register](#)

OTHER EVENTS AND WORKSHOPS

2012 Translational Informatics Conference

The Center for Computational Biology and Bioinformatics and the IU School of Informatics will present its 2012 Translational Informatics Conference from 9:15

a.m. to 5:30 p.m. Thursday, April 26, and 8 a.m. to 5:30 p.m. Friday, April 27, in the Health Informatics and Translational Science Building, room 1110.

This event will gather experts in the fields of medical informatics, bioinformatics, clinical science, basic science and computer science from across IU and beyond to discuss challenges and opportunities in translational informatics. The April 26 event will focus on issues related to biobanking, and the April 27 event on more general translational informatics research.

Registration is limited. To sign up, or to see a complete schedule, visit compbio.iupui.edu/2012translational.

This event will also be available via live web streaming. To watch, visit [this page](#).

Questions to Jennifer Brown at jkb@iupui.edu.

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 - March 2012

| PI | Agency | Project Title | School | Department | Total |
|-------------------------|--|---|--------------|--------------------------------|-------------|
| BROXMEYER, HAL E | NATIONAL HEART, LUNG AND BLOOD INSTITUTE | Enhancing Engraftment of Cord Blood by CD26 Inhibition | MEDICINE | MICROBIOLOGY & IMMUNOLOGY | \$3,706,255 |
| MURPHY, MICHAEL PATRICK | NATIONAL HEART, LUNG AND BLOOD INSTITUTE | Utility of autologous and allogeneic cell therapy for peripheral arterial disease | MEDICINE | VASCULAR SURGERY | \$2,769,559 |
| ALLEN, MATTHEW ROBERT | NATIONAL INSTITUTE OF ARTHRITIS AND MUSCULOSKELETAL SKIN | Enhancing bone strength using combination drug therapy | MEDICINE | ANATOMY & CELL BIOLOGY | \$2,166,033 |
| XU, MINGJIANG | NATIONAL HEART, LUNG AND BLOOD INSTITUTE | Role of TET2 in normal hematopoiesis and pathogenesis of myeloid malignancies | MEDICINE | PED-NEONATAL BASIC RESEARCH | \$1,949,166 |
| DONG, XIAOCHENG | NATIONAL INSTITUTE OF DIABETES, DIGESTIVE & KIDNEY | Regulation of hepatic lipid metabolism by a novel Foxo pathway | MEDICINE | BIOCHEMISTRY/MOLECULAR BIOLOGY | \$1,695,775 |
| KIOVSKY, RICHARD DEAN | INDIANA STATE DEPARTMENT OF HEALTH | Indiana AHEC Network 2011-12 Operating Support | MEDICINE | AREA HEALTH EDUCATION CENTERS | \$1,143,993 |
| EINTERZ, ROBERT MICHAEL | ABBOTT FUND | Academic Model Providing Access to Healthcare (AMPATH) 2012 | MEDICINE | GENERAL INTERNAL MEDICINE | \$800,000 |
| KASSAB, GHASSAN SLEEWA | 3DT HOLDINGS LLC | Venous Valve Project | E&T | BIOMEDICAL ENGINEERING | \$600,000 |
| HASAN, MOHAMMAD A | NATIONAL SCIENCE FOUNDATION | CAREER: A novel framework for mining graph patterns in large biological and social networks | SCIENCE | COMPUTER SCIENCE | \$547,427 |
| OSILI, UNA O | KRESGE FOUNDATION | Advancing Knowledge in Human Services Philanthropy and Nonprofit Organizations | LIBERAL ARTS | CENTER ON PHILANTHROPY | \$330,000 |
| INGRAM, DAVID A | INDIANA STATE DEPARTMENT OF HEALTH | Indiana National Development Center for Circles Out of Poverty | MEDICINE | PED-NEONATAL MEDICINE | \$250,000 |
| GATTONE II, VINCENT H | INDIANA UNIVERSITY HEALTH | Pathophysiology and histopathology of nephrolithiasis | MEDICINE | ANATOMY & CELL BIOLOGY | \$234,520 |
| REX, DOUGLAS KEVIN | BATTELLE MEMORIAL INSTITUTE | Study on Performance Characteristics of Immunochemical and | MEDICINE | GASTROENTEROLOGY | \$194,000 |

| | | Guaiac FOBT | | | |
|--------------------------|---------------------------------------|---|--------------|--------------------------------|-----------|
| BODENHAMER,DAVID JACKSON | RICHARD M. FAIRBANKS FOUNDATION, INC. | Fairbanks Foundation - SAVI Support | LIBERAL ARTS | POLIS | \$191,000 |
| CLARK,DANIEL LYNN | INDIANA UNIVERSITY HEALTH | Pathophysiology and histopathology of nephrolithiasis | MEDICINE | ANATOMY & CELL BIOLOGY | \$179,861 |
| PALAKAL,MATHEW J. | ALLEGIENT LLC | Automatic Acquisition of Knowledge for Senior Care Planning | INFORMATICS | INFORMATICS | \$175,500 |
| DAVIS,STEPHANIE DUGGINS | DUKE UNIVERSITY | Gastrin-Releasing Peptide and Bronchopulmonary Dysplasia | MEDICINE | PED-PULM CRITICAL CARE/ALLERGY | \$155,910 |
| DINSMORE,LISA | INDIANA STATE DEPARTMENT OF HEALTH | Indiana Spinal Cord and Brain Injury Research Fund - Administration Contract | MEDICINE | CLINICAL TRANSLAT SCI (CTS) | \$130,000 |
| ROONEY,PATRICK M. | KRESGE FOUNDATION | An Investment in People: Building the Nonprofit Sector through Education and Training | LIBERAL ARTS | CENTER ON PHILANTHROPY | \$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.

DEPARTMENT OF ENERGY

ARPA-E - Advanced Management and Protection of Energy-storage Devices (AMPED): AMPED seeks to develop breakthrough technologies that can be practically deployed for superior management of commercial battery systems. *Deadline for required letter of intent is May 14, 2012.*

DEPARTMENT OF JUSTICE

Violent Victimization among Racial and Ethnic Minorities: This solicitation seeks to fund proposals for research on the violent victimization experiences of racial and ethnic minorities. NIJ seeks to advance the body of research on this topic by examining the causes and correlates of differential victimization rates among these diverse populations, including demographic and socioeconomic risk factors. The research should take into account the argument that there is no single cause of violent victimization. Rather, it should consider multiple risk factors that contribute to racial/ethnic minorities' victimization, including individual, situational, family, school, peer, and community factors. *Application deadline is May 29, 2012.*

NATIONAL INSTITUTES OF HEALTH

U.S.-China Program for Biomedical Collaborative Research (R01): The purpose of the U.S.-China Program for Biomedical Collaborative Research is to stimulate collaborative basic, translational, and applied research between United States (U.S.)-based researchers and Chinese researchers in the areas of allergy, immunology, and infectious diseases including HIV/AIDS and its co-morbidities and co-infections, cancer, mental health, Parkinson's disease (PD), and stroke. *Application deadline is September 18, 2012.*

Early Detection and Prevention of Mild Cognitive Impairment (R01): The focus is on research into technologies that have the greatest future impact for pre-

symptomatic detection and preventive treatment and management of age- or treatment-related mild cognitive impairment (MCI), including those occurring in the setting of Life Limiting Illnesses (LLI). *Application deadline is May 22, 2012.*

NATIONAL SCIENCE FOUNDATION

Core Techniques and Technologies for Advancing Big Data Science & Engineering (BIGDATA)

The Core Techniques and Technologies for Advancing Big Data Science & Engineering (BIGDATA) solicitation aims to advance the core scientific and technological means of managing, analyzing, visualizing, and extracting useful information from large, diverse, distributed and heterogeneous data sets so as to: accelerate the progress of scientific discovery and innovation; lead to new fields of inquiry that would not otherwise be possible; encourage the development of new data analytic tools and algorithms; facilitate scalable, accessible, and sustainable data infrastructure; increase understanding of human and social processes and interactions; and promote economic growth and improved health and quality of life. *Full Proposal Deadline(s): June 13, 2012 Mid-Scale Projects July 11, 2012 Small Projects.*

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.

Special Handling: 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. Questions regarding this list can be directed to Bobbi Bosch at 317-278-5648 or bsbosch@indiana.edu.

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

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