### IUPUI INDIANA UNIVERSITY-PURDUE UNIVERSITY INDIANAPOLIS

# Research Enterprise

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

Research Offices:

Development
Administration
Compliance
Enterprise Archive

**Editor**: Etta Ward

**Layout:** Fred Haver

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. July 23, 2014

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### **FEATURE STORY**

# New Diabetes and Kidney Research Centers at IUPUI Win Signature Centers Initiative Funding

Indiana University-Purdue University Indianapolis has named two new centers -- one dedicated to diabetes research and the other focused on developing imaging methods for the diagnosis and treatment of kidney disease -- as 2014 recipients of initial funding under the <u>IUPUI Signature Centers Initiative</u>.

The IUPUI Signature Centers Initiative fosters the development of centers unique to IUPUI that can lead the way in world-class research and creative activities, and make a difference in the real world. The initiative provides each selected center with initial funding for a period of three years. This year's recipients were selected from a pool of five applications.

The 2014 initial funding recipients are the Indiana Diabetes Research Center, directed by Dr. Raghu Mirmira; and the Research Center for Quantitative Renal Imaging, codirected by Dr. Gary Hutchins and Dr. Bruce Molitoris.

The overall mission of the <u>Indiana Diabetes Research Center</u> is to support training and promote research in diabetes, obesity and related metabolic disorders.

"With the alarming rise in diabetes, the center will play a key role in combatting this disease," said Mirmira, Lilly Foundation Professor in Pediatric Diabetes at the IU School of Medicine.

The mission of the Research Center for Quantitative Renal Imaging is for the development of quantitative imaging methods to diagnose and monitor kidney disease, and the evaluation of therapeutic intervention, said Hutchins, the John W. Beeler Professor of Radiology at the IU School of Medicine.

"The establishment of this center represents a novel resource within the global nephrology and medical imaging communities," said Molitoris, professor of medicine at the IU School of Medicine.

Currently, there is no comprehensive research center within the United States that is solely dedicated to achieving the center's mission, he said.

"I am delighted that through the Signature Centers Initiative we have been able to support the realization of these two distinctive centers, both of which aim at making significant contributions to the prevention and cure of debilitating diseases afflicting our society," said Dr. Kody Varahramyan, IUPUI vice chancellor for research.

#### Indiana Diabetes Research Center

#### Raghu Mirmira, M.D., Ph.D.

The mission of this center is to foster knowledge, support training, and promote basic and translational research in diabetes and obesity, related metabolic disorders, and their complications. A strong diabetes and obesity research environment is already in place at IUPUI, and the Indiana Diabetes Research Center aims to further build the diabetes research base through:

- \*Establishing a pilot and feasibility program to fund innovative research and to encourage new investigators to enter or establish themselves in the field of diabetes, obesity and metabolism.
- \*Supporting a Diabetes Research Core, which will serve to establish and accelerate the research proposed by recipients of the pilot and feasibility funds.



Raghu Mirmira, M.D., Ph.D.

\*Supporting an enrichment program to promote education, interdisciplinary interaction and training of all members of the IUPUI diabetes research community.

## Research Center for Quantitative Renal Imaging

Gary Hutchins, Ph.D.

Bruce Molitoris, M.D.

The mission of this center is to develop, implement and disseminate innovative quantitative imaging methods designed to diagnose kidney disease and evaluate efficacy of therapeutic interventions. The primary goals are to:

- \*Identify, develop and implement innovative imaging methods that provide quantitative imaging biomarkers for assessing and inter-relating renal structure, function, hemodynamics and underlying tissue microenvironmental factors contributing to kidney disease.
- \*Establish an environment that facilitates and encourages interdisciplinary collaborations among investigators; helps advance the research careers of junior faculty; and offers research support to investigators focused on developing and utilizing innovative quantitative imaging methods in support of kidney disease research.
- \*Provide a pilot and feasibility resource to inform the greater research and health care communities



Gary Hutchins, Ph.D.

of advances in quantitative renal imaging and its potential for enhanced patient management and care.

\*Offer an imaging research resource to pharmaceutical companies, medical device manufacturers and imaging contrast material companies engaged in product development associated with the diagnosis and treatment of kidney diseases.



Bruce Molitoris, M.D.

## ANNOUNCEMENTS

#### **IU Cancer Researcher Earns Conquer Cancer Foundation Grant**

An Indiana University cancer researcher has been awarded a \$200,000 grant from the Conquer Cancer Foundation of the American Society of Clinical Oncology.

Dr. Costantine Albany, assistant professor of clinical medicine at the IU School of Medicine and a researcher at the Indiana University Melvin and Bren Simon Cancer Center, is among nine recipients of the foundation's Career Development Award. The three-year award provides funding to clinical investigators who have recently received a faculty appointment at an academic center to perform patient-oriented cancer research.

Dr. Albany is studying whether the drug SGI-110 makes resistant testis cancer respond again to cisplatin chemotherapy. Metastatic testis cancer is highly curable with the use of a combination of chemotherapy drugs that contains a drug called



Costantine Albany, M.D.

cisplatin. However, about 10 percent to 20 percent of metastatic testis cancers are resistant to cisplatin chemotherapy. Dr. Albany's work has the potential to change resistant incurable testis cancer to a curable disease.

Dr. Albany's primary expertise is in testicular cancer and prostate cancer. His research focuses on identifying new therapeutic targets.

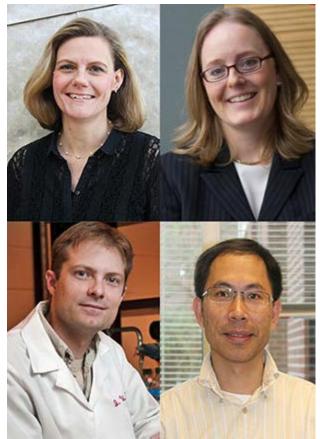
He earned his medical degree from Techreen University, Lattakia, Syria. He completed residencies at the American University, Beirut, Lebanon, and St. Luke's Roosevelt Hospital Center, New York. He completed his fellowship at the IU School of Medicine.

#### Four Faculty Researchers Named 2014 Showalter Scholars

The IU School of Medicine recently announced the new class of Showalter Scholars, which honors four outstanding young scientists each year for their strong records of research and external awards.

This year's Showalter Scholars, who exemplify excellence at the IU School of Medicine, are:

- \*Rebecca Chan, M.D., Ph.D., associate professor of pediatrics and of medical and molecular genetics, who joined the school in 2002. An investigator with the Herman B Wells Center for Pediatric Research, Dr. Chan's research centers on the etiology of phenotypic abnormalities found in Noonan syndrome and the childhood leukemia known as juvenile myelomonocytic leukemia.
- \*Melissa Kacena, Ph.D., associate professor of orthopaedic surgery, who joined the school in 2007. Dr. Kacena specializes in research into the regulation of bone mass and bone healing by megakaryocytes.



The 2014 Showalter Scholars are Rebecca Chan, M.D., Ph.D.; and Melissa Kacena, Ph.D., left to right, top row, and William Sullivan, Ph.D., and Mingjiang Xu, M.D., Ph.D., bottom row.

- \*William Sullivan, Ph.D., professor of pharmacology and toxicology and of microbiology and immunology. Dr. Sullivan, who joined the school in 2000, focuses his work on the parasite Toxoplasma gondii, which both poses health threats to humans and serves as a model for malaria parasite research.
- \*Mingjiang Xu, M.D., Ph.D., associate professor of pediatrics and of medical and molecular genetics. Dr. Xu, an investigator with the Wells Center for Pediatric Research who joined the school in 2011, focuses on the molecular mechanism of myeloid malignancies.

Each Showalter Scholar will receive \$75,000 over three years to support their research programs, with \$25,000 the first year from the Showalter Trust, \$25,000 the second year from the nominating department or center and the third year's installment from the School of Medicine.

This is the second class of Showalter Scholars. The inaugural class of scholars last year Aaron Carroll, M.D., associate dean for research mentoring and professor of pediatrics; Alex Robling, Ph.D., associate professor of anatomy and cell biology; Robert Stahelin, Ph.D., associate professor of biochemistry and molecular biology at IUSM-South Bend; and Kenneth White, Ph.D., David D. Weaver Professor of Genetics and professor of medical and molecular genetics.

There will eventually be 12 Showalter Scholars at any given time, as each year one group comes to the end of its three-year term and another group begins.

The Showalter Scholars Program is made possible by the Ralph W. and Grace M. Showalter Research Trust Fund.

The deadline for the next round of nominations is the first business day of February 2015. Department chairs and center directors are encouraged to submit their nominations via the <u>Showalter Scholars submissions site</u> (IU login required).

#### 2014-2015 IUPUI Conference Fund

The Office of Academic Affairs is pleased to announce matching support for academic conferences or symposia organized by faculty members or professional staff and convened in Indianapolis [preferably at IUPUI] between July 1, 2014, and June 30, 2015. Those events that bring external audiences to IUPUI will be given preference. Awards will be made up to \$1,500 if matched equally by the school or department.



Requests must predate the conference or symposium by at least one month. The Office of Academic Affairs will review submissions and make awards. Successful applicants will acknowledge IUPUI support in all publicity and in any publications resulting from the conference or symposium.

Brief proposals (not exceeding two pages) should be submitted with the completed application form, and should include:

- \*topic, objectives, and description of the conference or symposium
- \*venue
- \*summary (up to one paragraph) of the background of each prospective and/or confirmed speaker or key participant
- \*expected outcomes of the conference (impacts across the IUPUI campus, press releases, proceedings, publications)
- \*budget: categories include honoraria, food, lodging, travel, and supplies (awardees should consult with the Office of Research Development to determine allowable expenses for receptions or social events)

Please submit IUPUI Conference Fund applications to Melissa Lavitt, Ph.D., Senior Associate Vice Chancellor for Academic Affairs [mlavitt@iupui.edu] in the Office of Academic Affairs, AO126.

The 2014-2015 IUPUI Conference Fund Proposal Form is available here.

## Kuali Coeus IRB Phase IV Coming July 31: What Phase III did for Exempt Studies, Phase IV will do for Expedited and Full Board Studies!

Just as Phase III resulted in the elimination of forms for Exempt studies, Phase IV will result in the elimination of forms for Expedited and Full Board studies, as well as deferral requests and Humanitarian Use Device (HUD) applications. At the same time, the Human Subjects Office (HSO) will roll out a newly-designed website which will integrate KC IRB information with current submission information to better serve investigators.

Phase IV will mark a significant milestone in the implementation of KC IRB. As such, HSO staff decided that it's time to revise the current HSO website to provide more streamlined information for investigators. New features to watch for:

- \*Step-by-step design allowing investigators to quickly find information, relevant to where they fall in the research lifecycle
- \*New decision-making tool to help investigators determine the appropriate level of review for their studies
- \*Streamlined submission information, including tips and tricks
- \*Pages with information dedicated specifically to subjects and sponsors
- \*Updated guidance page with new content
- \*Training page with a list of training opportunities, including current office hours, and how to request training from HSO staff

For more information regarding KC IRB and this newsletter, please visit:

### **INSTITUTE SPOTLIGHT**

#### Research to Prevent Blindness Grant Expands Scientific Program at Glick Eye Institute

The Department of Ophthalmology at the IU School of Medicine has received a five-year unrestricted grant from Research to Prevent Blindness, providing flexibility in developing and expanding the department's research programs at the Glick Eye Institute.

RPB's annual \$115,000 grant, awarded only to departments of ophthalmology at academic medical institutions, provides opportunity for creative planning that goes beyond the scope of typical research



Eugene and Marilyn Glick Eye Institute

projects, explained Michael Boulton, Ph.D., director of basic science and translational research and Merrill Grayson Professor of Ophthalmology.

"This award is in recognition of our rapidly expanding research program which over the last 12 months has realized awards in excess of \$15 million," said Dr. Boulton. Much of the funding is to support Dr. Boulton's research and the research of Maria Grant, M.D. The researchers and their teams joined the Glick Eye Institute and the IU School of Medicine faculty last year.

Dr. Boulton said the unrestricted grant gives the department the potential to provide "development" awards to junior and mid-level faculty to facilitate new projects, to enhance the bioimaging core and to attract new faculty. This award opens the door for the department to apply for other grants available through RPB which were previously unavailable.

"This is an important step forward in achieving our strategic plan for vision research and will facilitate our long term aim to develop new treatments for diseases such as glaucoma, diabetic retinopathy and age-related macular degeneration," said Louis B. Cantor, M.D., chairman of the Department of Ophthalmology and the Jay C. and Lucile L. Kahn Professor of Glaucoma Research. "Additionally, it confirms the belief in the department that Eugene and Marilyn Glick had when they donated the significant funds that allowed construction of the Glick Eye Institute."

The eye institute opened in 2011.

"I fully believe that we are now on track to becoming one of the leading vision research institutes in the United States," Dr. Boulton said. "An RPB unrestricted grant will help us further the expansion of the department's dynamic research portfolio by providing stability and flexibility in the development and expansion of our vision research programs."

"The IU Department of Ophthalmology, already internationally recognized for clinical research, will benefit from this generous RPB grant as it allows for further development of the basic and translational science program," said Dr. Cantor.

### FACULTY SPOTLIGHT

Exposure to TV Violence Related to Irregular Attention and Brain Structure

Young adult men who watched more violence on television showed indications of less mature brain development and poorer executive functioning, according to the results of an <a href="Indiana University\_School of Medicine">Indiana University\_School of Medicine</a> study published online in the journal <a href="Brain and Cognition">Brain and Cognition</a>.

The researchers used psychological testing and MRI scans to measure mental abilities and volume of brain regions in 65 healthy males with normal IQ between the age of 18 and 29, specifically chosen because they were not frequent video game players.

Lead author <u>Tom A. Hummer</u>, Ph.D., assistant research professor in the <u>IU Department of Psychiatry</u>, said the young men provided estimates of their television viewing over the past year and then kept a detailed diary of their TV viewing for a week. Participants also completed a series of



Tom Hummer, Ph.D.

psychological tests measuring inhibitory control, attention and memory. At the conclusion, MRI scans were used to measure brain structure.

Executive function is the broad ability to formulate plans, make decisions, reason and problem-solve, regulate attention, and inhibit behavior in order to achieve goals.

"We found that the more violent TV viewing a participant reported, the worse they performed on tasks of attention and cognitive control," Dr. Hummer said. "On the other hand, the overall amount of TV watched was not related to performance on any executive function tests."

Dr. Hummer noted that these executive functioning abilities can be important for controlling impulsive behaviors, including aggression. "The worry is that more impulsivity does not mix well with the behaviors modeled in violent programming."

Tests that measured working memory, another subtype of executive functioning, were not found to be related to overall or violent TV viewing.

Comparing TV habits to brain images also produced results that Dr. Hummer and colleagues believe are significant.

"When we looked at the brain scans of young men with higher violent television exposure, there was less volume of white matter connecting the frontal and parietal lobes, which can be a sign of less maturity in brain development," he said.

White matter is tissue in the brain that insulates nerve fibers connecting different brain regions, making functioning more efficient. In typical development, the amount or volume of white matter increases as the brain makes more connections until about age 30, improving communication between regions of the brain. Connections between the frontal and parietal lobes are thought to be especially important for executive functioning.

"The take-home message from this study is the finding of a relationship between how much violent television we watch and important aspects of brain functioning like controlled attention and inhibition," Dr. Hummer said.

Dr. Hummer cautions that more research is needed to better understand the study findings.

"With this study we could not isolate whether people with poor executive function are drawn to programs with more violence or if the content of the TV viewing is responsible for affecting the brain's development over a period of time," Dr. Hummer said. "Additional longitudinal work is necessary to resolve whether individuals with

poor executive function and slower white matter growth are more drawn to violent programming or if exposure to media violence modifies development of cognitive control," Dr. Hummer said.

Funding for this research was provided through a grant from the Center for Successful Parenting.

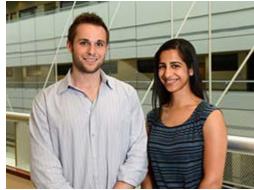
IU School of Medicine co-authors of the research are William G. Kronenberger, Ph.D., Vincent P. Mathews, M.D., and Yang Wang, M.D.,; and Caitlin C. Anderson from Iowa State University.

## STUDENT SPOTLIGHT

#### **IU Medical Students Earn Hester Fellowship**

Two IU School of Medicine students interested in pursuing careers in pediatric oncology research are recipients of the Indiana University Melvin and Bren Simon Cancer Center's Merilyn Hester Fellowship for the upcoming 2014-15 academic year.

Jeff Gehlhausen and Richa Sharma received the award -- which supports students pursuing M.D. or M.D./Ph.D. degrees in the medical sciences -- thanks to their outstanding academic achievements, their potential for success and the professional goals they outlined in personal essays submitted to the selection committee.



Jeff Gehlhausen and Richa Sharma are the recipients of the 2014-15 IU Simon Cancer Center's Merilyn Hester Fellowship.

Sharma, an M.D. student, will receive \$8,000 to be applied toward her tuition. As an M.D./Ph.D. candidate, Gehlhausen, will receive \$4,000 to supplement his stipend, \$2,000 for travel to scientific meetings and \$2,000 for lab supplies and expenses. Both students spoke about what the fellowship means to them and their plans for the future.

"There are a lot of excellent students at the IU School of Medicine -- that's an understatement -- and so I'm surprised that I have been awarded this," Sharma said. She's also a recipient of the IU Simon Cancer Center's William J. Wright Scholarship -- another award for students who demonstrate an interest in oncology.

In 2012-13, Sharma was honored with a medical research fellowship at the Howard Hughes Medical Institute in Maryland, where she studied neurofibromatosis type 1; NF1 is a genetic disorder that predisposes patients to cancers of the nervous system. She intends to spend a month-long rotation this summer at either the Children's Hospital of Philadelphia or Boston Children's Hospital and said the Hester Fellowship will help immensely with travel and housing expenses as she lays the foundation for her life after medical school following graduation in May 2015. Her ultimate goal is to become a physician scientist who divides her time between medical research and practice.

"I love the research aspect of medicine; and when certain experiments don't go as planned, interaction with and taking care of patients is a great way to rejuvenate interest," she said. "By the same token, there will be times where the in-patient service or clinic is emotionally or medically challenging, where the research will supplement your clinical knowledge and give a sense of contributing to patient care and making a difference."

Sharma's passion for her work is evident in the way she discusses her reasons for wanting to study pediatric oncology.

"One, there is so much exciting and innovative research that is highly supported; and two, it is so easy to get up in the morning when you are working toward providing care for innocent children with very challenging and life-altering disease processes," she said. "These kids didn't choose their genetic makeup and didn't choose to be in these situations."

Whereas Sharma came to medical school from a fairly traditional path -- majoring in biology as an undergraduate and obtaining a master's degree in medical science, both from IU -- Gehlhausen studied computer science as an undergraduate at IU Bloomington.

"I went through undergrad, and I hadn't thought so much about what I'm actually going to be doing on a 9-to-5 basis every day," he said. "Computer science was awesome as an academic pursuit, and I really enjoyed it, but I enjoyed it as a hobby."

Starting a graduate program in computational biology led Gehlhausen to realize that his true interest lay in the life sciences. A couple of years into the M.D. program, he joined the lab of Dr. Wade Clapp, a prominent NF1 researcher whom he praises as not only a mentor but an outstanding role model.

"As a physician/scientist mentor, I couldn't find a better one," Gehlhausen said. "But beyond that, he's a great person and a friend."

Like Dr. Clapp and Sharma, Gehlhausen studies neurofibromatosis but his research focuses on neurofibromatosis type 2, a genetically distinct disease that predisposes patients to a similar type and distribution of tumors. NF2 patients primarily develop tumors called schwannomas that grow in association with structures of the nervous system, including the cranial nerves and brainstem.

"A number of mortalities and morbidities are related to where [these tumors] grow," Gehlhausen said.

Gehlhausen is four years into the M.D./Ph.D. program and expects to finish in June 2017. He's already received three pre-doctoral fellowships and has co-authored several papers. In June 2013, he attended the Children's Tumor Foundation Neurofibromatosis Conference, an experience he wrote about in the personal statement he submitted to the Hester Fellowship committee.

"Not only did I have an opportunity to meet and network with other NF researchers, but I was also able to meet NF2 patients," he wrote. "It was a remarkable and motivating experience, as I was able to see the disease and its effect on people beyond what I have read in papers. NF2 is a real disease that affects real people, and these people are the inspiration for my daily work with mice, cells and proteins. It was an honor to see how the patients supported our research and truly see our work as the key to helping cure this disease for future generations."

Gehlhausen said the funds from the Hester Fellowship will allow him to pay down student-loan debt, travel to another conference and purchase state-of-the-art lab equipment and software licenses that will aid his study of NF2. And like Sharma, he views the award as validation for hard work and sacrifice.

"It's very gratifying to be recognized ... and know that other people believe you are doing important work and will at some point make valuable contributions to the field," he said.

The Merilyn Hester Fellowship was established with memorial donations upon Hester's death in 2004. It was originally held and administered by the Walther Cancer Foundation, and the foundation gifted the fund to the IU Simon Cancer Center in 2009. The fellowships are awarded to medical and/or Ph.D. students pursuing degrees in the biomedical sciences with a demonstrated interest and potential for conducting pediatric hematology or oncology research.

### TRANSLATIONAL RESEARCH IMPACT

# Q-and-A with Dr. NiCole Keith, Vice President of the American College of Sports Medicine

Dr. NiCole R. Keith, a scientist with the IU Center for Aging Research and investigator with the Regenstrief Institute, was recently elected to a two-year term as vice president of the American College of Sports Medicine.

The largest sports medicine and exercise science association in the world, the American College of Sports Medicine has more than 50,000 members representing a variety of medical specialties, allied health and scientific disciplines. A longtime member of the ACSM, Dr. Keith directs the organization's Leadership and Diversity Training Program and has been an ACSM fellow since 2007.

Dr. Keith is also a founder of Physically Active Residential Communities and Schools, a collaborative effort between Eskenazi Health, the School of Physical Education and Tourism Management at IUPUI, the Chase Near Eastside



NiCole R. Keith, Ph.D.

Legacy Center, and the Indianapolis Public Schools. She is an IUPUI associate professor of kinesiology.

## How did you get into the field of physical activity research? What is the focus of your work?

I was working on my Ph.D. at the University of Connecticut during Operation Desert Storm, and the Department of Defense awarded funds to study how birth control influenced thermoregulation during physical exertion in extreme environments. My job was to recruit and train college-aged women, just like boot camp. Poor fitness was an inclusion criteria and most of the women were overweight or obese. For three years, we started training in August and by each March women had amazing transformations – physically, academically and socially. I saw what physical activity could do to make people healthier in so many ways. I knew I no longer wanted to be a bench scientist but instead, a physical activity researcher. My research focus is to close the health disparities gap through physical activity as a method of health promotion.

## What does your work involve at the Regenstrief Institute and IU Center for Aging Research?

My affiliation with the IU Center for Aging and Regenstrief Institute began when I arrived on campus in 2002 under the mentorship of IUSM faculty members Christopher Callahan, M.D.; Daniel Clark, Ph.D.; and Douglas Miller, M.D. Since the beginning, Dr. Clark and I have done research around an Eskenazi Health clinic-based program called Healthy Me (previously called Take Charge Lite at Wishard). Overweight and obese patients are referred to Healthy Me and are coached to lose weight. Additionally, Drs. Callahan, Clark, and Miller served as primary mentors on a NHLBI K01 that was completed in May 2013. I am in the process of revising a R01 for a resubmission later this year.

# Why did you found Physically Active Residential Communities and Schools? What does this group do?

During my interaction with Healthy Me providers, I asked why they didn't refer

patients to exercise programs. They said their main reason was they lacked confidence in the patient's ability to overcome barriers to exercise, including cost, transportation, comfort and knowledge. At the same time, I noticed that my students in the School of Physical Education and Tourism Management at IUPUI, where I teach students to be health and fitness professionals, were not well prepared to create exercise programming or fitness assessments appropriate to most people since they had very little experience working with anyone beyond their classmates. (Kinesiology majors typically don't look like the general population in terms of fitness and health.) Their lack of experience with "real people" also made it difficult to place them in internships.



Dr. Keith tests a fitness assessment pod at the Near Eastside Legacy Center

Physically Active Residential Communities (PARCS) addresses both issues. Providers refer patients with multiple medical conditions (or "comorbidities") to exercise and students, overseen by faculty members, perform fitness assessments, create exercise programming and guide individual and group fitness training with those who are referred. About 200 students do service learning in PARCS each semester and the program currently serves about 1,200 adult members, with 70 percent referred from Healthy Me. Costs remain low because the fitness professionals are students who receive academic credit for service learning at PARCS. The program is located on the properties of three Indianapolis high schools near Eskenazi clinics and the cost remains low. We've been going strong for 11 years!

#### How is the country's lack of physical activity

#### impacting health?

Physical activity can be inexpensive or free and positively influences several diseases including diabetes, coronary artery disease and cancer. Still, only 30 percent of the US population meets the US Physical Activity Guidelines. Last month I was at the American College of Sports Medicine Annual Meeting where the Acting US Surgeon General, Boris Lushniak, M.D., named physical activity a major public health problem. Getting people to be active is a challenge, but making this happen would positively influence the physical and fiscal health of Americans.

#### How are IUSM researchers contributing to solve this challenge?

The US Physical Activity Guidelines resulted from decades of research that focused on the amount and intensity of physical activity necessary to impact health. The next step is to determine best ways to get people, especially those who are most sedentary, active. Healthy Me is one example. Other faculty members with whom I collaborate in the IU School of Medicine include David Marrero, Ph.D., and Mary de Groot, Ph.D., in the <u>Diabetes Translational Research Center</u>.

## What is your role as the director of the Leadership and Diversity Training Program at the American College of Sports Medicine?

ACSM is strategically increasing the diversity of the organization's leaders. The purpose of the Leadership and Diversity Training Program is to mentor graduate students and junior faculty who are underrepresented minorities into ACSM Fellowship and leadership. Only fellows can be nominated to the Board of Trustees, and I was the first African American to be elected to the Board of Trustees. Only former trustees can be elected to higher offices. LDTP participants are matched with fellows who have similar research interests so this helps with academic and professional development activities at their academic institutions or medical facilities as well.

## What are your main goals or priorities as the new vice president of the ACSM?

As vice president for education and credentialing, I am assigned oversight of 10 committees. I haven't previously served on any of these committees so I hope to provide fresh eyes and useful input. I am working with other leaders to improve membership engagement within the ACSM and engagement with the national and international populations that need our service and care the most. This includes increasing the number of underrepresented minorities and women who are Fellows. Influencing diversity in providers and fitness professionals is an important part of ACSM's strategic plan.

#### Do you participate in any sports, or did you in college or high school?

While I've always been physically strong and super competitive, I was never very athletic. I played club soccer in college and loved to run until about two years ago when my hips said, "No more." I'm a second degree black belt in karate and try to get to the dojo one to two days each week. I still do cardio and resistance training five to six days a week -- practicing what I preach.

### **OVCR Internal Grant Deadlines**

Enhanced Mentoring Program with Opportunities for Ways to Excel in Research (EMPOWER): The Enhanced Mentoring Program with Opportunities for Ways to Excel in Research (EMPOWER) has been developed to support IUPUI faculty who are historically underrepresented and/or excluded populations in their discipline or area of scholarship and historically denied admission to higher education or that discipline, 1) to become successful in sponsored research and scholarly activity, and 2) to achieve significant professional growth and advancement. The program sustains mentorship opportunities through the EMPOWER Grant Program, supporting achievement of excellence in research and scholarly activity, and optimal attainment of academic career goals and objectives. The next EMPOWER application deadline is September 5, 2014. For grant guidelines and application forms, go to <a href="https://research.iupui.edu/funding/">https://research.iupui.edu/funding/</a>.

Funding Opportunities for Research Commercialization and Economic Success (FORCES): The FORCES program is designed to support IUPUI researchers in the successful transformation of their research findings into commercially viable outcomes. The key goals of FORCES are to support: 1) realization of short-term projects that will enhance commercial value of IUPUI intellectual property assets, by facilitating commercialization of inventions, technologies, or other intellectual property derived from existing research projects, and 2) development of research initiatives that show great promise for commercialization of the research outcomes. The next RTR application deadline is **September 15, 2014.** For grant guidelines and application forms, go to <a href="https://research.iupui.edu/funding/">https://research.iupui.edu/funding/</a>.

## OVCR Events and Workshops

#### **OVCR Research Orientation**

Target Audience: Faculty

When: Wednesday, August 27, 2014 | 1:00pm - 3:00pm

Where: University Library, Room 1116

This session will provide an overview of research resources, services and support offered to IUPUI faculty by the Office of the Vice Chancellor for Research. Participants will also meet with some current IUPUI faculty members to hear how they were able to achieve success in the early stages of their tenure at IUPUI.

Register: <a href="https://crm.iu.edu/CRMEvents/OVCROrientation082714/">https://crm.iu.edu/CRMEvents/OVCROrientation082714/</a>

#### **OVCR Research Orientation (Repeat Session)**

Target Audience: Faculty

When: Friday, September 5, 2014 | 10:00am - 12:00pm

Where: University Library, Room 1126

This session will provide an overview of research resources, services and support offered to IUPUI faculty by the Office of the Vice Chancellor for Research. Participants will also meet with some current IUPUI faculty members to hear how they were able to achieve success in the early stages of their tenure at IUPUI.

Register: https://crm.iu.edu/CRMEvents/OVCROrientationRepeat090514/

#### **Finding Funding**

Target Audience: Faculty, Staff, Graduate Students

When: Tuesday, September 23, 2014 | 2:00pm - 3:30pm

Where: University Library, Room 0106

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

Register: <a href="https://crm.iu.edu/CRMEvents/FindingFunding092314/">https://crm.iu.edu/CRMEvents/FindingFunding092314/</a>

#### **Basic Proposal Development**

Target Audience: Faculty and department or school grants administrators

When: Thursday, September 25, 2014 | 11:30am - 1:00pm

Where: University Library, Room 1126

This workshop will focus on the basic essentials of building a successful grant proposal for agencies that fund in health, science, engineering, informatics, technology, and social sciences. A wide-range of topics will be covered from developing a strong foundation for your application to key components of the narrative, the basic budget, writing styles, and interpreting agency guidelines, the necessity for knowing how your proposal will be reviewed, funding limitations, and how to communicate complex ideas in a limited space. You are welcome to bring your lunch.

Register: https://crm.iu.edu/CRMEvents/BasicProposalDev092514/

#### Nine Golden Rules to Succeed in Research and Scholarship

Target Audience: Faculty

When: Friday, October 31, 2014 | 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: <a href="https://crm.iu.edu/CRMEvents/NineGoldenRules103114/">https://crm.iu.edu/CRMEvents/NineGoldenRules103114/</a>

#### Ins and Outs of Applying for NIH Funding

Target Audience: Faculty and grant administrators

When: Friday, November 7, 2014 | 9:00am - 12:00pm

Where: University Library, Lilly Auditorium

How to prepare and submit grant proposals to the National Institutes of Health (NIH) is the focus of presentations by representatives of the Office of the Vice Chancellor for Research, the Office of Research Administration and NIH awardees on the IUPUI faculty. The workshop will provide an overview of the Institutes, their mission, priorities and NIH programs that cut across disciplines. Specific topics include a description of the various funding mechanisms and their appropriateness for each career stage, attributes of high quality proposals, and resources available within the University to support proposal development. Highlighting the event is a panel discussion by current NIH reviewers who will provide an in-depth look into the peer review process.

Register: <a href="https://crm.iu.edu/CRMEvents/NIHFunding110714/">https://crm.iu.edu/CRMEvents/NIHFunding110714/</a>

#### Developing Complex, Multi-Investigator, Multi-Institutional Proposals

Target Audience: Senior Faculty with Previous External Funding

When: Thursday, November 13, 2014 | 11:30am - 1:00pm

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. You are welcome to bring your lunch.

Register: <a href="https://crm.iu.edu/CRMEvents/ComplexProposals111314/">https://crm.iu.edu/CRMEvents/ComplexProposals111314/</a>

## Other Events and Workshops

#### Scientific Writing from the Reader's Perspective with Dr. George Gopen

Tuesday, August 5, 2014 | Neuroscience Building, Goodman Hall 1030 | 8:00 a.m. - 5:00 p.m.

Register» | Presenter: Dr. George Gopen

Wednesday, August 6, 2014 | School of Nursing (NU) 103 | 8:00 a.m. - 5:00 p.m.

Register» | Presenter: Dr. George Gopen

As competition for external funding becomes more challenging, getting one's scholarly work successfully published is more important than ever. Dr. Gopen's approach is based on a single idea: learning to write for the reader allows the writer to control what readers learn.

This year, Dr. George Gopen will present this workshop in a SINGLE DAY format.

As in past years, Dr. Gopen will also conduct hour-long, individualized consultations. ONLY faculty members who participate in the day-long event will have access to the individual consultation registration. Instructions will be sent to participants after their registration for the workshop is complete.

More about Dr. Gopen's original approach to scientific writing can be found in his article, *The Science of Scientific Writing*.

#### IUPUI Arts and Humanities Institute (IAHI) Fall 2014 Lineup

For more details and to register, visit <a href="http://www.iupui.edu/~iahi/?page\_id=39">http://www.iupui.edu/~iahi/?page\_id=39</a>.

**IU Center for Civic Literacy Conference** 

The Indiana University Center for Civic Literacy, a research center at Indiana University-Purdue University Indianapolis, has announced that its second annual conference will take place August 22 - 24 at the Crowne Plaza Union Station in Indianapolis. The public is invited to attend.

"The data is depressing," said Sheila Kennedy, director of the Center for Civic Literacy and professor of law and public policy at the School of Public and Environmental Affairs at IUPUI, which houses the center. "Only 36 percent of Americans can name the three branches of government. Only 21 percent of high school seniors can list two privileges that United States citizens have that noncitizens don't. Fewer than a quarter of the nation's 12th-graders are proficient in civics. How



Sheila Kennedy, Ph.D.

can uninformed people make the informed decisions that are critical in our society? That is what the Center for Civic Literacy addresses, and what we will discuss at our conference."

The Center for Civic Literacy pursues an aggressive research agenda to identify and address the causes and civic consequences of Americans' low levels of constitutional, economic and scientific knowledge. It hosts a website and blog, and publishes a quarterly newsletter and an online, peer-reviewed interdisciplinary journal.

The theme of this year's conference, held in conjunction with the annual meeting of the Center's National Advisory Committee, is "Connecting the Dots: The Impact of Civic Literacy Gaps on Democracy, the Economy and Society, and Charting a Path Forward."

The program will open with a welcome from former Indiana Supreme Court Justice Theodore Boehm, who chairs the <u>center's National Advisory Committee</u>, and will include addresses from Ted McConnell, executive director of the Civic Mission of Schools Campaign; David Schultz, professor of political science at Hamline University; Dallas Dishman, executive director of the Geffen Foundation; and Kim McLaurin, director of the Marshall-Brennan Constitutional Literacy Project, among others.

## Grant Writing Workshop: IU New Frontiers in the Arts and Humanities Grant Program

DATE: September 3, 2014 TIME: 12:00 PM - 1:30 PM

LOCATION: IUPUI Arts and Humanities Institute, Conference Room, University Library 4th Floor

This session will provide participants with an overview of the IU New Frontiers in the Arts and Humanities Grant Program. It will offer information on how to apply and, more importantly, on how to develop a competitive proposal. Faculty recipients and members of the New Frontiers grants advisory groups will be present to answer questions.

#### Register

#### Sixth Annual Indiana CTSI Meeting -- September 26

Mark your calendars! The sixth annual meeting of the Indiana Clinical and Translational Sciences Institute will be Friday, September 26, at the <u>Hine Hall Auditorium</u> on the IUPUI campus in Indianapolis.

This free event is an opportunity to learn more about the Indiana CTSI, participate in poster presentations and breakout sessions, and meet new colleagues and

collaborators. Anyone who wants to learn more about the Indiana CTSI is welcome.

Additional information will be posted to the Indiana CTSI HUB. Questions can be directed to info@indianactsi.org

### 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 DEFENSE

Minerva Research Initiative: The Office of Naval Research (ONR) is interested in receiving proposals for the Minerva Research Initiative, a DOD-sponsored, university-based social science research program initiated by the Secretary of Defense. This program is a multi-service effort. The program focuses on areas of strategic importance to U.S. national security policy. It seeks to increase the Department's intellectual capital in the social sciences and improve its ability to address future challenges and build bridges between the Department and the social science community. Minerva brings together universities, research institutions, and individual scholars and supports multidisciplinary and cross-institutional projects addressing specific topic areas determined by the DOD. The Minerva Research Initiative aims to promote research in specific areas of social science and to promote a candid and constructive relationship between DOD and the social science academic community. The Minerva Research Initiative competition is for research related to the 4 topics listed below. Innovative proposals related to these research topics are highly encouraged. White papers and full proposals are solicited which address the following topics: 1. Belief Formation and Movements for Change; 2. Models of Societal Resilience and Change; 3. Theories of Power and Escalation; 4. **Emerging Topics in Conflict and Security.** 

Additional proposal topics will be considered both for single-investigators as well as larger teams. The research questions addressed should extend across a fairly broad range of linked issues where there is clear potential synergy among the contributions of the distinct disciplines represented on the team. Team proposals must name one Principal Investigator as the responsible technical point of contact. Similarly, one institution will be the primary recipient for the purpose of award execution. The relationship among participating institutions and their respective roles, as well as the apportionment of funds including sub-awards, if any, must be described in both the proposal text and the budget. *Deadlines: white paper: November 18, 2014; full proposal: February 14, 2015.* http://www.onr.navy.mil/en/Contracts-Grants/Funding-Opportunities/Broad-Agency-Announcements.aspx

Medical Practice Initiative Team Communications Training Research Program (MPI): This opportunity seeks to advance the state of research under the MPI initiative. The MPI is primarily focused on the research and, ultimately, the development of medical training methods, technologies, systems, and competency assessment tools for the attainment and sustainment of military medical readiness. The MPI advances these goals through research and development projects related to the practice of medicine.

The primary purpose is to solicit research that will improve communication skills and team performance in medical settings with the goal of reducing medical errors and improving medical care. Results are expected to inform the Government (DOD and civilian agencies) on the potential viability of a software simulation, technology and/or programming gaps, and on evaluation criteria and/or metrics to improve performance in this domain.

This announcement is soliciting research into methods and technology that would support future development of a prototype medical communications skills and/or medical team performance team-training simulation system. Under this announcement, a proof of concept or prototype of the proposed technical high risk work is being sought. A prototype system that undergoes validation may be proposed and developed, provided that it is supported by critical research and analysis of data regarding the nature and extent of improving communication skills and team performance in medical settings that a prototype purports to address and it is supported by valid metrics that support efficacy. *Deadline: April 15, 2015*. <a href="http://www.grants.gov/web/grants/view-opportunity.html?oppld=249255">http://www.grants.gov/web/grants/view-opportunity.html?oppld=249255</a>

**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 two-page summary of their research project and a CV or bio sketch to the VP for Research Office at <a href="mailto:vpr@iu.edu">vpr@iu.edu</a>. Prior to submission, the IUPUI Office of the Vice Chancellor for Research is offering preparation assistance with the two-page summaries. For more information, contact Ann Kratz, <a href="mailto:akratz@iupui.edu">akratz@iupui.edu</a>.

#### GORDON & BETTY MOORE FOUNDATION

**Data-Driven Discovery Investigator Competition (DDD):** The DDD seeks to advance the people and practices of data-intensive science to take advantage of the increasing volume, velocity, and variety of scientific data to make new discoveries. Data-intensive science is inherently multidisciplinary, combining natural sciences with methods from statistics and computer science.

The goal of the DDD Investigator awards is to fund individuals who exemplify this new kind of data-driven discovery. These innovators are striking out in new directions and are willing to take risks with the potential of huge payoffs in some aspect of data-intensive science. Successful applicants must make a strong case for developments in the natural sciences (biology, physics, astronomy, etc.) or science enabling methodologies (statistics, machine learning, scalable algorithms, etc.), and applicants that credibly combine the two are especially encouraged.

It is intended that Foundation funding will be used to primarily support people in the successful applicant's research group. These personnel are anticipated to be at various career stages such as undergraduates, graduate students, staff, and post-doctoral fellows, and salary for the applicant is allowed. The awards are not intended for major equipment, or to support experiments to obtain new data sets. **Deadline:** pre-application February 24, 2015.

http://www.moore.org/programs/science/data-driven-discovery/ddd-investigators

#### NATIONAL INSTITUTES OF HEALTH

Clinical Trials of Therapeutics for Substance Use Disorders (R01): This FOA encourages applications from researchers that propose to develop non-invasive or minimally invasive methods to support outpatient clinical trials of pharmacotherapies for Substance Use Disorders (SUDs). The announcement has two main aims. The first aim is to encourage the development of devices/techniques that will improve estimations of a subject's consumption of an abused drug (i.e., both quantity and frequency of consumption) during an outpatient clinical trial. Such a system would allow the objective assessment of whether a medication reduces drug abuse, even if abstinence is not achieved. Proposed solutions should be able to assess systemic drug levels and be safe, portable, affordable and simple enough for subjects to take multiple samples at home and return them to the clinic for batch analysis. The second aim of this FOA is to develop new, improved markers to evaluate a subject's

adherence to the study medication. The goal is for investigators to be able to determine the level of systemic medication exposure throughout a study. Assays should be applicable to at least one of the following situations: 1. Assessment of medication adherence in a manner suitable for use in a clinical setting. Candidate systems should be affordable and produce rapid results, as well as being imperceptible to subjects with no impact on their daily activities. 2. The quantitative assessment of medication adherence throughout an outpatient clinical trial. **Deadline: October 5, 2014**. http://grants.nih.gov/grants/guide/pa-files/PAR-12-239.html

Multidisciplinary and Collaborative Research Consortium to Reduce Oral Health Disparities in Children: A Multilevel Approach (UH2/UH3): The overall goal of this initiative is to establish effective interventions or programs to reduce or eliminate oral health disparities and inequalities in vulnerable U.S. children who are between 0 and 21 years of age. Multidisciplinary teams of investigators will refine and test an intervention or evaluate outcomes of an existing program or policy intended to reduce health disparities and inequalities. Community engagement and other partnerships are essential for the holistic, multilevel approaches required by this FOA. This research is intended to lead to identification, validation, dissemination and implementation of effective approaches to prevent disease or facilitate treatments, helping to reduce and ultimately eliminate oral health disparities and inequalities in children.

This FOA will use the UH2/UH3 cooperative agreement award mechanism and runs in parallel with a companion FOA that solicits applications for the Data Coordinating Center (RFA-DE-15-007). Funding for an exploratory UH2 stage will be used for planning, feasibility testing, and developing study documents, including the study protocol and Manual of Procedures. UH2 projects that have met milestones will be administratively considered for transition to the UH3 implementation phase. Applicants responding to this FOA must address objectives for both the UH2 and UH3 phases. *Deadlines: Letter of Intent: November 9, 2014; application: December 9, 2014*. <a href="http://grants.nih.gov/grants/guide/rfa-files/RFA-DE-15-006.html">http://grants.nih.gov/grants/guide/rfa-files/RFA-DE-15-006.html</a>

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

Each project should have a well-defined end-point, achievable within a 5-year time frame, of developing a specific treatment for a specific ocular disease. The steps towards this goal should be clearly delineated in a series of milestones that support the development of a therapeutic, which can then be tested in a clinical trial. Highest programmatic priority will be given to applications aligned with NEI's audacious goal initiative. If successful, a project funded under this program could lead to filing an IND and a subsequent application for an NEI U10 Clinical Vision Research Grant or an R34 Clinical Study Development Grant. *Deadline: January 28, 2015.* http://grants.nih.gov/grants/guide/pa-files/PAR-13-370.html

**Social Neuroscience and Neuroeconomics of Aging (R01):** This FOA is issued with special review to stimulate interdisciplinary aging-relevant research in the social, affective and economic neurosciences. The NIA invites applications examining social, emotional and economic behaviors of relevance to aging, using approaches

that examine mechanisms and processes at both (a) the social, behavioral or psychological (emotional, cognitive, motivational) level, and (b) the neurobiological or genetic level. Proposals are encouraged that have an overriding emphasis on economic, social or emotional processes and associated genetic or neurobiological processes. Applications should demonstrate either relevance for aging or for age differences or age-related changes in these processes. Aging-relevant applications can address issues of importance to the well-being and health of either mid-life or older adults, and can include data spanning the entire life course.

The NIA also encourages research projects that propose advances in measurement of economic and social phenotypes. Research is needed to identify core psychological and behavioral constructs and intermediary neurobiological phenotypes responsible for individual differences in economic and socioemotional behaviors, to enhance the potential for their application to life course genetic studies. There is an increasing need for measures that are harmonizable (to enable data pooling and cross-study comparisons) and flexible (capable of application across laboratory and field contexts). *Deadline: February 5, 2015.*http://grants.nih.gov/grants/guide/pa-files/PAR-11-337.html

#### NATIONAL SCIENCE FOUNDATION

Resilient Interdependent Infrastructure Processes and Systems (RIPS): The goals of the Resilient Interdependent Infrastructure Processes and Systems (RIPS) solicitation are: 1) to foster an interdisciplinary research community that discovers new knowledge for the design and operation of infrastructures as processes and services; 2) to enhance the understanding and design of interdependent critical infrastructure systems (ICIs) and processes that provide essential goods and services despite disruptions and failures from any cause, natural, technological, or malicious; and 3) to create the knowledge for innovation in ICIs to advance society with new goods and services.

The objectives of this solicitation are: 1) Create theoretical frameworks and multidisciplinary computational models of interdependent infrastructure systems, processes and services, capable of analytical prediction of complex behaviors, in response to system and policy changes; 2) Synthesize new approaches to increase resilience, interoperations, performance, and readiness in ICIs; and 3) Understand organizational, social, psychological, legal, political and economic obstacles to improving ICI's, and identifying strategies for overcoming those obstacles.

\*\*Deadline: March 19, 2015.\*\* <a href="http://www.nsf.gov/funding/pgm\_summ.jsp?">http://www.nsf.gov/funding/pgm\_summ.jsp?</a>
<a href="mailto:pims\_id=504971&org=NSF&sel\_org=NSF&from=fund">pims\_id=504971&org=NSF&sel\_org=NSF&from=fund</a>

**Genealogy of Life (GoLife):** All of comparative biology depends on knowledge of the evolutionary relationships (phylogeny) of living and extinct organisms. Understanding biodiversity and how it changes over time is only possible when Earth's diversity is organized into a phylogenetic framework. The goals of the GoLife program are to resolve the phylogenetic history of life and to integrate this genealogical architecture with underlying organismal data.

The ultimate vision of this program is an open access, universal Genealogy of Life that will provide the comparative framework necessary for testing questions in systematics, evolutionary biology, ecology, and other fields. A further strategic integration of this genealogy of life with data layers from genomic, phenotypic, spatial, ecological and temporal data will produce a grand synthesis of biodiversity and evolutionary sciences.

Projects submitted to this program should emphasize increased efficiency in contributing to a complete Genealogy of Life and integration of various types of organismal data with phylogenies. This program also seeks to broadly train next generation, integrative phylogenetic biologists, creating the human resource infrastructure and workforce needed to tackle emerging research questions in comparative biology. Projects should train students for diverse careers by exposing

them to the multidisciplinary areas of research within the proposal. *Deadline: March 25, 2015.* <a href="http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=5129">http://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=5129</a>

<u>Dimensions of Biodiversity:</u> Despite centuries of discovery, most of the planet's biodiversity remains unknown. The scale of the unknown diversity on Earth is especially troubling given the rapid and permanent loss of biodiversity across the globe. With this loss, humanity is losing links in the web of life that provide ecosystem services, forfeiting an understanding of the history and future of the living world, and losing opportunities for future beneficial discoveries in the domains of food, fiber, fuel, pharmaceuticals, and bio-inspired innovation.

This campaign seeks to characterize biodiversity on Earth by using integrative, innovative approaches to fill the most substantial gaps in our understanding of the diversity of life on Earth. It takes a broad view of biodiversity, and currently focuses on the integration of genetic, taxonomic/phylogenetic, and functional dimensions of biodiversity. Successful proposals should integrate these three dimensions to understand interactions and feedbacks among them. While this focus complements several core NSF programs, it differs by requiring that multiple dimensions of biodiversity be addressed simultaneously, in innovative or novel ways, to understand their synergistic roles in critical ecological and evolutionary processes. **Deadline:**April 3, 2015. <a href="https://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=503446">https://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=503446</a>

Research Networks in the Mathematical Sciences: This program creates an award mechanism that supports researchers in ways that are intermediate in scale, scope, and duration to existing individual investigator awards and research institute awards. The RNMS Program recognizes that, over the past quarter century, mathematical research has become increasingly collaborative and interactive, because effectively overcoming core scientific challenges frequently requires the sharing of ideas and expertise. A Research Network is not a substitute for existing funding mechanisms. In particular, it is intended to complement (rather than replace) individual investigator awards by providing additional layers of interaction. Through the involvement of postdoctoral researchers and students and the promotion of international collaborations, the RNMS will not only focus on problems at the frontier of the mathematical sciences but also lead to robust and diverse training of the next generation of mathematicians and statisticians. *Deadline: July* 14, 2015. <a href="https://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=503461">https://www.nsf.gov/funding/pgm\_summ.jsp?pims\_id=503461</a>

#### U.S. DEPARTMENT OF ENERGY

Microgrid Research, Development, and System Design: This program is seeking applications for research and development (R&D) and testing of advanced commercial-grade microgrid controllers capable of managing/controlling microgrid systems consisting of between 1 and 10 megawatts (MW) of aggregated generation capacity. An overarching objective of this opportunity is that the developed controllers will enable communities in the U.S. to develop/design (and ultimately deploy) microgrid systems that will aid achievement of the DOE program targets as defined in this FOA and meeting specific objectives for energy resilience (including protection of critical infrastructure and public resources) as defined by the participating communities. While it is expected these objectives will vary depending on regional and other circumstances, the focus should be on strengthening the resilience of electrical infrastructure against adverse effects of future extreme weather phenomena and other unforeseen occurrences.

It is expected that the proposed controllers will be integral to operation of microgrid system designs/configurations that have between 1 and 10 megawatts (MW) of aggregated generation capacity. However, applications proposing development/testing of controllers capable of managing microgrid systems larger than 10 MW will also be considered. This FOA also encompasses testing of the commercial-grade microgrid controllers (developed during the planned effort) to validate that they are capable of managing and controlling the proposed microgrid systems, supporting achievement of the DOE program targets, and helping to

accomplish the community-defined objectives for electricity system resiliency. **Deadline: April 28, 2015**. <a href="http://www.grants.gov/web/grants/view-opportunity.html?oppld=250754">http://www.grants.gov/web/grants/view-opportunity.html?oppld=250754</a>

### 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 <a href="http://www.cos.com/login/join.shtml">http://www.cos.com/login/join.shtml</a>. 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 <a href="http://grants.nih.gov/grants/guide/listserv.htm">http://grants.nih.gov/grants/guide/listserv.htm</a>. 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 <a href="http://service.govdelivery.com/service/multi\_subscribe.html?">http://service.govdelivery.com/service/multi\_subscribe.html?</a> 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 <a href="https://www.fbo.gov">https://www.fbo.gov</a>. 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 <a href="mailto:emward@iupui.edu">emward@iupui.edu</a> or 317-278-8427. For a description of upcoming limited submission funding opportunities, as well as guidelines and application forms, go to: <a href="http://research.iu.edu/limited\_sub.shtml">http://research.iu.edu/limited\_sub.shtml</a>. Please note that this is not a comprehensive list, and that any external funding opportunity that imposes any type of submission limitation is subject to the IU limited submission policy and procedures.

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

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

IU Authentication is required to view the following attachments:

**IUF Special Handling List and Principal Gifts Review Template** 

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