

Research Enterprise

December 12, 2014

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.

INSIDE THIS ISSUE:

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

HOLIDAY MESSAGE



Dear Colleagues and Friends,

The Office of the Vice Chancellor for Research wishes you a joyous holiday season and a peaceful and prosperous New Year!

Happy Holidays!

FEATURE STORY

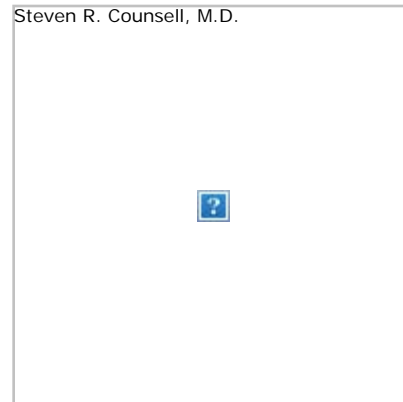
IU-led team earns \$3.3 million NIH grant to study HPV, cervical cancer in Kenyan women

An international team of oncology research specialists led by Indiana University has been awarded a \$3.3 million grant from the National Institutes of Health to study HPV and cervical cancer in Kenyan women with HIV/AIDS.

The grant will enable the researchers to create a sustainable approach to education, clinical care and research, with the goal of providing early detection screenings for human papillomavirus and cervical cancer.

The five-year National Institutes of Health/ National Cancer Institute grant (1U54CA190151) was awarded to the [AMPATH-Oncology Institute](#) in Eldoret, Kenya. The three lead scientists on the project are Patrick Loehrer, M.D., director of the Indiana University Melvin and Bren Simon Cancer; Darron Brown, M.D., professor of medicine and of microbiology and immunology from the IU School

Steven R. Counsell, M.D.



Steven R. Counsell, M.D.

of Medicine; and Elkanah Omengo Orango, M.D., from Moi University School of Medicine.

Dr. Brown was instrumental in developing the HPV vaccine.

Aaron Ermel, M.D., assistant research professor of medicine in the division of infectious diseases at the IU School of Medicine, was responsible for the development of a biobank that will be critical for the project. He and his Kenyan co-investigators – Kirtika Patel, Ph.D., and John Michael Ong'encha, Ph.D. -- will provide the laboratory testing and specimen banking that will allow for future projects to be developed as a result of this grant.

Researchers from Brown University, the University of Toronto and the University of Massachusetts along with the Miriam Hospital and Kenya Medical Research Institute, known as KEMRI, are also involved in the study.

These partners, in addition to AMPATH's corporate and philanthropic partners -- Eli Lilly, Pfizer, Celgene, AbbVie, Walther Foundation and Levinson Family Foundation -- helped to create the AMPATH Oncology Institute and enabled the IU Simon Cancer Center to compete successfully for this grant.

Cervical cancer, a preventable disease, is the No. 1 cause of cancer death in Kenyan women. Each year in Africa, about 80,000 women are diagnosed with cervical cancer and 60,000 die from the disease. Early detection screenings, which are common in the United States, are rare in western Kenya.

Cervical cancer is linked to HPV and HIV in sub-Saharan Africa. Overall, sub-Saharan Africa has 70 percent of the world's diagnosed cases of HIV. Studies have shown that HIV is a contributing factor for developing cervical cancer and that HIV-infected women have a greater incidence and persistence of HPV infections and suffer from higher incidences of cervical cancer and precancerous cervical lesions.

"With this grant, we expect to build a sustainable, multi-institutional and transdisciplinary mentoring program that will foster the development of new cancer researchers in Kenya," Dr. Loehrer said. "By training Kenyan nurses, technicians, physicians and scientists, our goal is to significantly reduce the prevalence of HPV and cervical cancer among women by studying the various subtypes of HPV in HIV-positive and HIV-negative women. We hope to optimize future vaccination efforts in developing nations."

ANNOUNCEMENTS

IU researcher publishes "landmark" results for curing hepatitis C in liver transplant patients

A new treatment regimen for hepatitis C, the most common cause of liver cancer and transplantation, has produced results that will transform treatment protocols for transplant patients, according to research published online today in the *New England Journal of Medicine*.

The investigational three-drug regimen, which produced hepatitis C cure rates of 97 percent, is an oral interferon-free therapy. Previously, the typical treatment for hepatitis C after a liver transplant was an interferon-based therapy, usually given for 48 weeks. It had a much lower response rate, had a risk of organ rejection, and was poorly tolerated because of the immunosuppressants required to prevent rejection. The new oral regimen -- ABT-



Paul Kwo, M.D.

450, ombitasvir and dasabuvir (with or without ribavirin) -- produces significantly fewer side effects and is prescribed for 24 weeks.

First author Paul Kwo, M.D., professor of medicine at the [Indiana University School of Medicine](#), called the results of the international clinical study a "landmark achievement."

Dr. Kwo, who is medical director of liver transplantation at the IU School of Medicine and IU Health, said that cirrhosis caused by hepatitis C is the leading reason for liver transplantation in the U.S., and those patients have lower survival rates than patients transplanted for other causes of cirrhosis.

Patients with hepatitis C who receive a liver transplant have a 20 to 30 percent chance of developing recurrent cirrhosis within five years after transplant. Hepatitis C, which is usually asymptomatic until severe liver damage occurs, is transmitted by exposure to contaminated blood. The most common way to get hepatitis C is through intravenous drug use, with the Centers for Disease Control and Prevention estimating that 3.2 million individuals in the United States have contracted the hepatitis C virus.

In 2013, 6,400 liver transplants were performed in the U.S., according to the [Organ Procurement and Transplantation Network](#), and nearly 50 percent of those patients had hepatitis C with or without liver cancer.

The phase 2, multi-center trial enrolled 34 liver transplant recipients with hepatitis C who did not have cirrhosis. Of those, 33 patients or 97 percent exhibited no sign of hepatitis C virus at 24 weeks after treatment with the new drug regimen, and none suffered transplant rejection. Of those, 93 percent remained virus free at six months after treatment, and none suffered transplant rejection. In a similar trial of liver transplant patients with cirrhosis, a historically difficult patient group to treat, the same treatment regimen produced a 96 percent cure rate for hepatitis C.

"Recurrent hepatitis C post liver transplantation has historically been difficult to treat, and we have considered post-liver-transplant patients a special population in need of new treatment strategies," Dr. Kwo said. "What this study showed is that this special population is no longer special. We can treat them as successfully as if they haven't had a liver transplant with drugs that are well tolerated and without risk of rejection."

This international research study was funded by [AbbVie](#). The results from this study and a phase 3, multi-center randomized study was presented November 11 at the 2014 the American Association for the Study of Liver Disease annual meeting in Boston.

2015 IUPUI Research Day



SAVE THE DATE
IUPUI RESEARCH DAY

FROM INNOVATION TO IMPACT...FULFILLING THE PROMISE

DATE: APRIL 17, 2015
TIME: 9 AM – 3 PM
LOCATION: IUPUI CAMPUS CENTER
420 UNIVERSITY BLVD. INDIANAPOLIS, IN, 46202

OFFICE OF THE VICE CHANCELLOR FOR RESEARCH
INDIANA UNIVERSITY PURDUE UNIVERSITY

The banner features a collage of images showing students and faculty engaged in research activities, including a student in a lab coat, a group of students working together, and a student presenting. The text is overlaid on a dark background with a red header and a yellow banner.

New CRL Executive Director Search Underway

The Office of the Vice Chancellor for Research is formally launching the search for the Executive Director of the Center for Research and Learning, which is currently headed by Dr. Rick Ward, who will be retiring this July. Please share the position announcement with colleagues in your schools who would be interested to know about this search, including those who would be good candidates to apply or be nominated for consideration.

The position search announcement is located at:

<http://www.iupui.edu/~oeo/academicjobs/IN-ACSP14005htm.HTM>

Deadline for Summer 2015 Multidisciplinary Undergraduate Research Institute (MURI) Faculty Proposals Extended Until December 22

The Center for Research and Learning welcomes proposals for the Summer 2015 Multidisciplinary Undergraduate Research Institute (MURI) at IUPUI. Proposals should represent two or more disciplines and should offer undergraduate students the opportunity to engage in a substantive research experience focused on a significant research problem.

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

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

- *Faculty writing proposals are encouraged to review the document entitled [MURI FAQs for Faculty Submitting Proposals](#).
- *Proposals must be submitted by using the current version of the [MURI Project Proposal Form](#).
- *The MURI Review Committee will review the submitted proposals using the [MURI Proposal Evaluation Form](#) (log in with IUPUI username and password).
- *Projects must include faculty mentors from more than one discipline.
- *Eligible graduate students and post-doctoral trainees may also serve as co-mentors on a team.
- *Proposals are due by midnight on December 22, 2014, to the following address: CRLGrant@iupui.edu.
- *The Proposal Review Committee meetings have been rescheduled to January 15, 2015.

*The announcement regarding funded proposals is currently scheduled for January 16, 2015.

*Students may apply to MURI and rank their project choices beginning January 16, 2015 with a deadline of March 1, 2015.

*The summer program begins on June 1, 2015, and continues through July 31, 2015.

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

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

INSTITUTE SPOTLIGHT

Study: Volunteer advocacy program benefits the incapacitated with no family or friends

A Regenstrief Institute and Eskenazi Health study reports on an innovative program that trains and supervises volunteers who act as advocates for adults and seniors who are unable to make their own decisions due to conditions like Alzheimer's disease or coma, but have no family or friends to help them. The study found that the program could serve as a national model to replace or complement the frequently overwhelmed guardianship services provided by state agencies from coast to coast.

Incapacitated patients who lack surrogates present a complex problem for health care providers as well as for the hospitals and nursing facilities. A study of the design and first two years of the new program appears online in advance of publication in the Journal of the American Geriatrics Society.

Nationwide, public guardianship programs struggle with case overloads. They often are responsible for tens or even hundreds of at-risk individuals. As reported in the JAGS study, the volunteer advocates are responsible for one or, at most, two individuals. Several advocates accepted multiple sequential cases. The program had no problem recruiting volunteer advocates.

The JAGS study followed the first 50 patients in the Wishard Volunteer Advocates Program. The volunteers protect the interests of the incapacitated patients they serve while they are in the hospital. The volunteers are supervised by the program director, who is an attorney, and legal guardianship is formally assigned to the Volunteer Advocates Program. The program continues to serve patients after they have been transitioned to health care facilities or returned home. In the study, more than 90 percent of those who survived hospitalization were transferred to nursing facilities.

"Adults who cannot make decisions for themselves because of developmental problems, injury or dementia and who are without family or other surrogate decision-makers are among the most vulnerable individuals in any community," said Robin J. Bandy, J.D., M.A., the program's founding director. "Many do not have family or are estranged from them, and may be neglected or abused. They are alone and at risk for receiving inappropriate medical treatment and not getting



Alexia Torke, M.D.

government benefits for which they qualify.

"The volunteer model provides patients with someone who has the same compassion and better training and support than that of most loving family members," she said. "I am in awe of how these volunteers who included law, medical and social work students as well as employed and retired individuals with a variety of backgrounds dug in and made genuine committed efforts to get to know the patient to whom they were assigned. They did their best to both understand them and to make the difficult decisions the patients couldn't make for themselves."

Volunteer advocates in the program made health care decisions, including end-of-life decisions; facilitated post-hospitalization placement to nursing facilities; were often the only person to follow care in the nursing home after hospital discharge; tracked down important but often elusive paperwork needed for Medicare and Medicaid eligibility; and made limited financial decisions.

The patients in the study ranged in age from 22 to 90, with an average age of 67. All but one of the patients had at least four medical conditions at the time of hospitalization, indicating the need for complex medical care and difficult decision-making.

Among those assigned volunteer advocates after hospitalization were:

- An 85-year-old woman with dementia who had been living alone with her dead cat in an uninhabitable apartment.
- A 65-year-old woman with dementia removed from her son's care after he broke her arm.
- A 90-year-old man removed from his home, malnourished and covered in urine, feces and bedbugs; "caregivers" were exploiting him and not allowing access to food, medicine or appropriate medical care.

"A growing number of adults are all alone. The need for surrogate decision-makers is increasing as our population ages, as divorce becomes more common, as families are geographically dispersed," said the study's senior author, Alexia Torke, M.D., a Regenstrief Institute and Indiana University Center for Aging Research investigator and an associate professor of medicine at the IU School of Medicine.

"The default of the American medical system is aggressive care with its high personal and health system costs. The volunteer advocate model promotes thoughtful consideration of what is best for the patient," said Dr. Torke, an internist and medical ethicist who has conducted a number of studies on surrogate decision-making. "Adults and especially older adults without surrogates are at risk for receiving medical overtreatment due to fears of legal consequences if interventions are withheld, or under-treatment, as interventions are delayed or not performed at all due to lack of consent. In previous studies we have shown that patients need and physicians welcome surrogate decision-makers and the volunteer advocates perform this function admirably."

In addition to providing voices for these patients, the volunteer advocates afforded institutional value by completing Medicaid applications resulting in \$297,481.62 in reimbursement for hospital services. Securing Medicaid as a payer source also facilitated quicker placement in nursing facilities.

The Volunteer Advocates Program was developed at Wishard Health Services, now known as Eskenazi Health, an urban, public safety-net health care system that is among the busiest safety-net hospitals in the United States. The individuals followed in the study from 2010 to 2012 were patients of both Wishard and Indiana University Health. In May 2013, the volunteer advocates program moved to the nonprofit Center for At-Risk Elders and is expanding to serve other health care systems in Indiana.

The Retirement Research Foundation of Chicago provided grant funding for this study. In addition to Bandy, now with the Charles Warren Fairbanks Center for Medical Ethics at Indiana University Health, and Dr. Torke, authors of the JAGS study are Regenstrief Institute investigator Greg A. Sachs, M.D., professor of medicine and director of the Division of General Internal Medicine and Geriatrics at the IU School of Medicine; Kianna Montz, M.A., and Lev Inger, B.S., of the Regenstrief Institute; and Robert W. Bandy, M.S., who volunteered his time and statistical expertise to the program.

FACULTY SPOTLIGHT

IUSM researcher-founded startup teams with development firm

An IU startup that won a \$194,575 federal grant to develop a video game that treats emotional deficits linked to brain injuries has taken the next step toward that goal by partnering with a Broad Ripple design and development firm.

In collaboration with EmotEd LLC, along with faculty at the IU School of Medicine and the School of Informatics and Computing, DeveloperTown has assembled a "wireframe" model of how EmotEd's Emotion Builder platform will function. Planned applications go beyond the initial focus on traumatic brain injuries and include therapies for stroke patients, people with autism, schizophrenia sufferers, and military veterans who experience post-traumatic stress disorder.



Dawn Neumann, Ph.D.

"It strategically positions us to conduct market research, build a comprehensive commercialization plan and, importantly, seek and ascertain investments," said Dawn Neumann, Ph.D., founder of EmotEd and assistant research professor of physical medicine and rehabilitation at the IU School of Medicine. "As a rehabilitation research scientist, my knowledge about software development is pretty limited. Working with DeveloperTown has opened my eyes and extended my original vision of the Emotion Builder exponentially."

EmotEd seeks to treat disorders that stem from alexithymia, or difficulties in recognizing emotion. The model created by DeveloperTown is "very sophisticated," said Dr. Neumann, allowing potential investors to easily see EmotEd's vision for treating emotion deficits and the value of its approach. She added that DeveloperTown's expertise in software development and startup companies has "catapulted" expectations of what EmotEd can become and the level of product it hopes to deliver.

DeveloperTown began working with EmotEd shortly after the company received a Phase I Small Business Technology Transfer award from the National Institutes of Health in June. The grant has since been met with \$50,000 in matching funds from Elevate Ventures, a nonprofit organization that provides state dollars to promising, early-stage entrepreneurs who have received funding through small business grants.

Dr. Neumann also directs the IU Interactive and Functional Assessment of Communication and Emotion Center at the Rehabilitation Hospital of Indiana.

STUDENT SPOTLIGHT

Burning curiosity propels freshman to award-winning discovery

It took Phillip Witcher less than a year at IUPUI before garnering accolades for his original research. Immediately delving into undergraduate research his first semester in college, Phillip served on an AY 2013-2014 Multidisciplinary Undergraduate Research Institute (MURI) team mentored by Richard L. Gregory, Ph.D., Associate Dean for graduate education, Interim Associate Dean for Research, Professor of Oral Biology and Pathology and Laboratory Medicine, IU Schools of Dentistry and Medicine; L. Jack Windsor, Ph.D., associate professor of oral biology in the IU School of Dentistry,



Phillip Witcher

adjunct associate professor of anatomy and cell biology in the IU School of Medicine and Director of the Tobacco Cessation and Biobehavioral Signature Center; and Fengyu Song, D.D.S., M.S., Ph.D., assistant professor, Department of Oral Biology, IU School of Dentistry. For their MURI project, Phillip and his fellow undergraduate researchers, Ali Tahir, Emily Parker, Ghayasul Syed and Mark Botros, pursued the "Determination of the Effect of Fulvic Acid on Oral Bacteria and Human Tissues." Now a sophomore biochemistry major, Phillip is minoring in biology, mathematics and philosophy. Interested in cancer and microbiology, he aspires to entering an M.D.-Ph.D. program.

Phillip's research question, "Evaluating the Effect of Fulvic Acid on Oral Bacteria and Cancerous Oral Cells," for which he was first author, involved investigation into an active component of shilajit, a homeopathic remedy. Gregory described this chemical as, "large molecules, bigger than any acid I've ever seen," adding that it was, "harvested from Himalayan peat bogs." Phillip evaluated the effect of fulvic acid on a common cause of dental caries, *Streptococcus mutans* (*S. mutans*), determining that fulvic acid indeed does inhibit the growth of *S. mutans*, both as newly forming biofilm at fulvic acid concentrations greater than 1.25% (volume %) and as established biofilm at fulvic acid concentrations greater than 5% (volume %). He further treated squamous cell carcinoma (SCC-25) cells, determining that fulvic acid inhibits the growth of SCC-25 cells at concentrations of fulvic acid above 2% (volume %). Phillip and his mentors concluded that fulvic acid could improve overall oral health.

Phillip's project won first place in the undergraduate category at the 2014 Indiana Branch of the American Society of Microbiology (IBASM) meeting in March, as well as the Johnson & Johnson Undergraduate Research Award at the IU School of Dentistry Research Day in April. He also will be an author on a manuscript resulting from a side project this past summer in professor Gregory's laboratory, the tentative title being "Influence of tea polyphenols and nicotine on *Streptococcus mutans* growth."

TRANSLATIONAL RESEARCH IMPACT

IU researchers find inconsistencies in doctors' counseling about premature birth

Physicians counseling women faced with giving birth to extremely premature babies may be offering inconsistent and sometimes misleading information, according to researchers at the [Indiana University School of Medicine](http://www.indiana.edu/).

In a simulation study involving 15 neonatologists and 16 obstetricians, a scenario was created in



Brownsyne Tucker Edmonds, M.D., M.P.H.

which the physicians met with "standardized" patients portraying pregnant women with ruptured membranes at 23 weeks' gestation. The researchers recorded the sessions and tabulated the physicians' numerical risk estimates and other statements.

"The estimates provided by physicians varied substantially, and obstetricians and neonatologists used different terms to describe the chances of surviving without disability," said study author

[Brownsyne Tucker Edmonds, M.D., M.P.H.](#), assistant professor of obstetrics and gynecology and a Robert Wood Johnson Foundation [Harold Amos Medical Faculty Development Program](#) scholar.

The [results of the study](#) were reported in the early online edition of the *Journal of Maternal-Fetal and Neonatal Medicine*.

The study evaluated physician counseling regarding periviable neonates -- those born between 22 to 25 weeks' gestational age, compared with a normal pregnancy of 40 weeks. As many as half of such neonates do not survive, and about two-thirds of those who do survive suffer moderate to severe neurological disability, the study authors noted. Therefore physicians need to counsel families about the prognosis and help them make resuscitation decisions and delivery management plans.

Comparing the two specialties, 80 percent of the neonatologists provided numeric estimates of survival, while just over a third of the obstetricians did, frequently deferring a discussion of "exact numbers" to neonatologists. However, the neonatologists' estimates of survival chances ranged from 3 percent to 50 percent, and half of them provided more than one estimate in a single patient encounter.

Along with other numerical inconsistencies, the researchers found "noteworthy" differences in the apparent meaning given by obstetricians to the term "intact" survival, which is understood by many practitioners to mean "without impairment." However, to neonatologists -- none of whom used that term in the study -- it may mean the child is not classed as "moderate to severe" or "profoundly" impaired, the researchers said.

The researchers said they believe that the varying estimates given by neonatologists were due to the inherent difficulty in offering precise survival estimates as opposed to lack of knowledge.

"There's just tremendous uncertainty surrounding outcomes for any given child," Dr. Tucker Edmonds said.

Nonetheless, the researchers said, such differences are concerning and pose a threat to quality and patient-centered care.

"We need to develop better tools and training to improve the quality of communication to women and families in these situations," Dr. Tucker Edmonds said.

Additional researchers involved in the study were Fatima McKenzie, M.S., and Janet Panoch, M.A., of the Department of Obstetrics and Gynecology, IU School of Medicine; and Richard M. Frankel, Ph.D., of the Mary Margaret Walther Center for Research and Education in Palliative Care, IU Simon Cancer Center, Roudebush

Veterans Affairs Medical Center and the Regenstrief Institute.

The research was supported by Grant Number KL2 TR000163 from the National Institutes of Health, National Center for Advancing Translational Sciences, Clinical and Translational Sciences Award and the Robert Wood Johnson Foundation's Harold Amos Medical Faculty Development.

OVCR INTERNAL GRANT DEADLINES

Release Time for Research (RTR): IUPUI maintains a robust research enterprise. To support faculty with adequate time to prepare competitive proposals, the IUPUI Office of the Vice Chancellor for Research has developed the Release Time for Research (RTR) internal funding mechanism. This funding program allows IUPUI faculty a "buyout" of teaching time to prepare high quality grant/contract proposals for submission to external funding agencies. It also supports non-tenure track faculty who are full-time senior lecturers or clinical track faculty possessing terminal degrees relevant to their fields, and who have a desire to engage in research or creative activity in an area that directly relates to their teaching or service mission. *The next RTR application deadline is **February 1, 2015**.* For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

IUPUI ARTS AND HUMANITIES INTERNAL GRANT (IAHI): The IAHI Grant Program exists to support campus-wide attainment of excellence in research and creative activity in arts and humanities. It is designed to enhance the research and creative activity mission of IUPUI by supporting research projects and scholarly activities that are conducted by arts and humanities faculty. *The IAHI application deadline is **February 15, 2015**.* For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

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

Funding Opportunities for Research Commercialization and Economic Success (FORCES): The FORCES program is designed to support IUPUI researchers in the successful transformation of their research findings into commercially viable outcomes. The key goals of FORCES are to support: 1) realization of short-term projects that will enhance commercial value of IUPUI intellectual property assets, by facilitating commercialization of inventions, technologies, or other intellectual property derived from existing research projects; and 2) development of research initiatives that show great promise for commercialization of the research outcomes. *The next FORCES application deadline is **March 15, 2015**.* For grant guidelines and application forms, go to <http://research.iupui.edu/funding/>.

OTHER INTERNAL GRANT DEADLINES

Young investigator awards in clinical-translational research applications due January 21

Applications for the Indiana Clinical and Translational Sciences Institute (CTSI) Young Investigator Awards in Clinical and Translational Research are due **4 p.m. Wednesday, January 21, 2015**.

These awards are designed to provide promising junior investigator faculty with the opportunity to be mentored in research-intensive multi-disciplinary settings toward the goal of developing careers in clinical-translational research.

Eligible candidates are clinician-scientists with a doctoral degree (physicians, nurses, dentists, pharmacists, clinical psychologists, optometrists, veterinarians, allied health care professionals, etc.) or basic scientists with a Ph.D. engaged in translational research with high potential for early translation into impacting patient care.

Benefits include partial salary support, as well as tuition and fees for required and elective coursework, pilot research monies and travel funds. Awards will begin May 1.

Complete application guidelines are online. To apply, visit the Indiana CTSI [grants portal](#) and enter your institutional username and password. Applications instructions are located under "CTSI Young Investigator Award in Clinical - Translational Research - 2015.01 (KL2)."

Questions to Donna Burgett at dfburget@regenstrief.org.

OVCR EVENTS AND WORKSHOPS

Basic Proposal Development

Target Audience: Faculty and department or school grants administrators

When: Wednesday, January 14, 2015 | 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 arts, humanities, philanthropy, business, law, and education. 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 (limited to 20 faculty attendees).

Register: <https://crm.iu.edu/CRMEvents/BasicPropDev011415/>

Center Proposals for Signature Centers Initiative

Target Audience: Faculty interested in Signature Center Proposals

When: Friday, January 16, 2015 | 1:00pm - 3:00pm

Where: University Library, Room 1126

This workshop is intended for established investigators who are interested in submitting high quality center proposals to the Signature Centers Initiative program. The intent is to provide the participants with a better understanding of what constitutes a research center and its desired attributes. In addition, the review process and review criteria for Signature Centers Initiative applications will be discussed. Ample time will be given for questions.

Register: <https://crm.iu.edu/CRMEvents/SCI011615/>

National Science Foundation Faculty Early Career Development Program

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

The NSF deadlines for submission of proposals are expected to be July 22, 23, and 24, 2015, depending on discipline. If you are interested in applying and would like assistance by OVCR staff, be sure to attend the following sessions.

Session 1: General Information & Eligibility

Target Audience: Early Career Faculty in Disciplines Funded by NSF

When: Friday, February 6, 2015 | 10:30am - 1:00pm

Where: University Library, Room 1126

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

Register: <https://crm.iu.edu/CRMEvents/NSFCAREERSession1020615/>

Session 2: Panel of Successful Applicants

Target Audience: Early Career Faculty in Disciplines Funded by NSF

When: Friday, March 27, 2015 | 11:30am - 1:00pm

Where: University Library, Room 1126

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

Register: <https://crm.iu.edu/CRMEvents/NSFCAREERSession2032715/>

Ins and Outs of Applying for NSF Funding

Target Audience: Faculty and grant administrators

When: Friday, February 13, 2015 | 9:00am - 12:00pm

Where: University Library, Lilly Auditorium

How to prepare and submit grant proposals to the National Science Foundation (NSF) is the focus of presentations by representatives of the Office of the Vice Chancellor for Research, the Office of Research Administration, and NSF awardees on the IUPUI faculty. The workshop will provide an overview of the Foundation, its mission, priorities, and NSF 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 NSF reviewers who will provide an in-depth look into the peer review process.

Register: <https://crm.iu.edu/CRMEvents/NSFFunding021315/>

National Science Foundation Research Experiences for Undergraduates

Target Audience: Faculty Interested in Mentoring Undergraduate Researchers

When: Thursday, March 5, 2015 | 2:00pm - 3:30pm

Where: University Library, Room 1126

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

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

Developing Complex, Multi-Investigator, Multi-Institutional Proposals

Target Audience: Senior Faculty with Previous or Current External Funding

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

Where: University Library, Room 1126

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

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

Nine Golden Rules to Succeed in Research and Scholarship

Target Audience: Faculty

When: Friday, March 13, 2015 | 11:00am - 1:00pm

Where: University Library, Room 1126

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

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

Working with Industry on Applied Research & Creative Activity

Target Audience: Faculty

When: Friday, April 24, 2015 | 1:00pm - 2:30pm

Where: University Library, Room 1126

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

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

OTHER EVENTS AND WORKSHOPS

Grant Writing Workshop: IAHI and New Frontiers Grants Programs

When: Thursday, January 15, 2015 | 12:00pm - 1:00pm

Where: University Library 4th Floor, IAHI Office Suite

This session will provide participants with an overview of the IUPUI Arts and Humanities Grant Program and 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 grants' advisory groups will be present to answer questions.

IUPUI Arts and Humanities Institute (IAHI) Fall 2015 Lineup

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

CURRENT EXTERNAL FUNDING OPPORTUNITIES

Funding opportunities in this section include selected current grant announcements from federal agencies for new initiatives and changes to existing programs. Announcements with limited scope are not listed here but instead are sent directly to IUPUI School Deans. For comprehensive coverage of funding opportunities, please use the online search tools listed below.

DEPARTMENT OF DEFENSE

Medical Practice Initiative Team Communications Training Research Program (MPI-TCT): The primary purpose of the MPI-TCT 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. Research funded through the MPI-TCT BAA is intended and expected to benefit and inform both military and civilian medical practice and knowledge. 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.*
<http://www.grants.gov/web/grants/view-opportunity.html?oppId=249255>

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 vpr@iu.edu. 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, akratz@iupui.edu.

National Aeronautics & Space Administration (NASA)

Planetary Science and Technology through Analog Research (PSTAR): The PSTAR program is a science-driven exploration program that is expected to result in new science and operational/technological capabilities to enable the next generation of planetary exploration. Proposals must demonstrate fidelity to at least two of the following three objectives:

- 1) Science: PSTAR seeks science investigations designed to further planetary research in terrestrial extreme environments that may be analogous to those found on other planets, past or present. Of particular interest are investigations that increase our understanding of the limits of and constraints on life in extreme environments and lead to a better understanding of how to seek, identify, and characterize life and life-related chemistry that may exist or have existed on other solar system bodies.
- 2) Science Operations: PSTAR seeks systems-level terrestrial field campaigns that are

conducted with complete systems and in a manner that approximates operations during an actual planetary mission, providing an opportunity to understand the performance, capabilities, and efficiencies associated with the tested systems, while enabling human participants to gain operational experience with those systems in the field. Fidelity in this area means that the constraints placed on the execution of science tasks in the field are functionally similar to those of an actual mission, enabling the testing, validation, or development of new concepts of operations that may impact the design of surface infrastructure or ground support.

3) Technology: PSTAR seeks the development and application of technologies that support science investigations, particularly those that enable remote searches for, and identification of, life and life-related chemistry in extreme environments (including lunar and planetary surfaces). *Deadline: July 25, 2015.*

<http://nspires.nasaprs.com/external/solicitations/summary.do?method=init&solId={A9B4C186-50C3-6698-4CDF-16FAA5360A48}&path=open>

NATIONAL INSTITUTES OF HEALTH

Lab to marketplace: Tools for Biomedical and Behavioral Research (R43/44):

This opportunity encourages the translation of technologies for biomedical or behavioral research from academic and other non-small business research sectors to the marketplace. Small Business Concerns (SBCs) are encouraged to submit Small Business Innovation Research (SBIR) grant applications that propose to further develop, make more robust, and make more user-friendly such technologies in preparation for commercial dissemination. It is expected that this activity will require partnership and close collaboration between the original developers of these technologies and applicant SBCs, which may be accomplished in any of a number of ways, including the use of multiple principal investigators. **Components of Participating Organizations:** Office of Research Infrastructure Programs National Institute on Aging. *Deadline: April 05, 2015.* <http://grants.nih.gov/grants/guide/pa-files/PA-15-052.html>

Systems Science and Health in the Behavioral and Social Sciences (R01): This opportunity is intended to increase the breadth and scope of topics that can be addressed with systems science methodologies and calls for research projects that are applied and/or basic in nature (including methodological and measurement development), have a human behavioral and/or social science focus, and employ methodologies suited to addressing the complexity inherent in behavioral and social phenomena, referred to as systems science methodologies. Additionally, this opportunity seeks to promote interdisciplinary collaboration among health researchers and experts in computational approaches to further the development of modeling- and simulation-based systems science methodologies and their application to important public health challenges. **Components of Participating**

Organizations: Office of Behavioral and Social Sciences Research, National Cancer Institute, National Institute on Aging, National Institute on Alcohol Abuse and Alcoholism, National Institute of Biomedical Imaging and Bioengineering, Eunice Kennedy Shriver National Institute of Child Health and Human Development, National Institute of Dental and Craniofacial Research, National Institute of Environmental Health Sciences, National Institute of Mental Health, National Institute of Nursing Research, and Office of Disease Prevention. *Deadlines: Feb. 05, 2015.* <http://grants.nih.gov/grants/guide/pa-files/PAR-15-048.html>

Chronic Inflammation and Age-Related Disease (R01): The participating NIH Institutes and Centers invite applications to address both the origins and the effects of low-level chronic inflammation in the onset and progression of age-related diseases and conditions. Chronic inflammation, as defined by elevated levels of both local and systemic cytokines and other pro-inflammatory factors, is a hallmark of aging in virtually all higher animals including humans and is recognized as a major risk factor for developing age-associated diseases. The spectra of phenotypes capable of generating low-level chronic inflammation and their defining mediators are not clear. Further, a clear understanding of how chronic inflammation

compromises the integrity of cells or tissues leading to disease progression is lacking. The role of dietary supplements and/or nutritional status in chronic inflammation in age-related disease is also poorly studied. Thus, there is a critical need to establish the knowledge base that will allow a better understanding of the complex interplay between inflammation and age-related diseases. Applications submitted to this Funding Opportunity Announcement should aim to clarify the molecular and cellular basis for the increase in circulating inflammatory factors with aging, and/or shed light on the cause-effect relationship between inflammation and disease, using pre-clinical (animal or cellular based) models. **Components of Participating Organizations:** National Institute on Aging, National Cancer Institute, National Institute on Alcohol Abuse & Alcoholism, National Institute of Allergy and Infectious Diseases, Eunice Kennedy Shriver National Institute of Child Health & Human Development, National Institute of Environmental Health Sciences, National Center for Complementary and Alternative Medicine, National Institute of Arthritis and Musculoskeletal and Skin Diseases, Office of Dietary Supplements, and National Heart, Lung & Blood Institute. *Deadline: July 05, 2015.*

<http://grants.nih.gov/grants/guide/pa-files/PA-13-233.html>

Morris K. Udall Centers of Excellence for Parkinson's Disease Research

(P50): The overarching goal of the specialized Udall Centers program is to establish a network of Centers that work collaboratively as well as independently to define the causes of and discover improved treatments for Parkinson's disease (PD). A more immediate goal for each Center is to rapidly advance synergistic, interdisciplinary research programs while serving as local resources and national leaders in PD research. The overall theme, proposed research projects, and associated cores must inform the etiology, pathogenesis or treatment of PD. Investigations on related synucleinopathies may be included, to the extent that these directly inform PD research. Required components include: 1) a minimum of three research projects; 2) research cores that are essential to accomplish the aims of proposed research projects, plus an Administrative Core; and 3) a specific plan for training of PD researchers. The National Institute of Neurological Disorders and Stroke (NINDS) Udall Centers program prioritizes innovative and integrative research with significant potential for discovery. A considerable degree of synergy must be evident among Center research projects and cores, such that successful completion of the aims could not be accomplished without the Center structure. The Udall Center Director (PD/PI) must be an established leader in scientific research with visionary leadership skills and proven expertise in research project and personnel management. Eligible institutions must demonstrate commitment to and support for the establishment and continuation of the proposed Udall Center. Funding decisions will focus on those applications most likely to make innovative contributions to PD research, as well as those with greatest potential to contribute new ideas to and collaborate effectively across the Centers program. *Deadlines: Letter of Intent, May 30, 2015; Submission, June 30, 2015.* <http://grants.nih.gov/grants/guide/rfa-files/RFA-NS-14-003.html>

NATIONAL SCIENCE FOUNDATION

NSF/Intel Partnership on Visual and Experiential Computing (VEC): Visual and experiential computing can translate the information contained in complex visual and non-visual data sets into intuitive modes of human perception and interaction and create accessible platforms for information capture, retrieval, analysis and knowledge discovery that enhance human decision making. Real-time access to this information can create capabilities that are akin to "super-human senses" and will enable the perception of our world in new and exciting ways, highlighted by the following select examples: 1) Real-time recognition of events and activities that extend human perception, profoundly improving our understanding of the world around us and simplifying the complexities of our interactions; 2) Immersive reconstructions of events and/or locations that provide revealing insight and mimic the ability of the human visual system to perceive the world; 3) Trusted autonomous navigation of large-scale environments using visual-based localization and mapping; 4) The expansion of one's vision by being able to "see" over a hill or around a corner while driving or walking, enabled by ubiquitous cameras capturing images and

providing a computational composite from any perspective of what is forthcoming; and 5) The creation of perspectives that are not visible to existing optical instruments, such as scattered micro-cameras around a surgery location or distributed instruments around a laboratory.

NSF and Intel seek disruptive yet pragmatic proposals for research that will drive game-changing advancement in this emerging field through tight collaboration between researchers in adjacent disciplines. Proposals responsive to this solicitation should seek to improve core capabilities in this emerging field and make advances to relevant areas. Suggested focus areas include but are not limited to: Computational Photography, Simultaneous Localization and Mapping, Augmented Reality, Image and Video Understanding, and 3D Scene Understanding. *Deadline: February 15, 2015.* http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505085&org=NSF&sel_org=NSF&from=fund

Resource Implementations for Data Intensive Research in the Social, Behavioral and Economic Sciences (RIDIR): As part of NSF's Cyberinfrastructure Framework for 21st Century Science and Engineering (CIF21) activity, the Directorate for Social, Behavioral and Economic Sciences (SBE) seeks to develop user-friendly, large-scale, next-generation data resources and relevant analytic techniques to advance fundamental research in SBE areas of study.

The goal of this competition is to produce one or both of two types of finished products:

1. Databases which may be a new large scale database, a substantial expansion or revision of an extant database, or the merging of extant databases. Databases might include traditional relational data in digital form, collections of historical data, images, video recordings, administrative data/records or any other form of structured sets of data. The database must be accompanied by a usable interface that allows for the application of extant analytic tools or analytical tools that are developed as part of the project.
2. Analytic tool(s) which would serve to enhance database use to address significant research questions within the SBE sciences. While a strong proposal would produce a tool of general utility, it is required that the applicant link and discuss the tool within the context of a specific named database or set of databases. The tool must be made readily available to a broad research community at no more cost than is necessary to cover the expenses of its provision.

Deadline: February 23, 2015. http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505168

Engineering for Natural Hazards (ENH): Research topics of interest to the ENH program include, but are not limited to: advances in system-level design concepts for new and existing sustainable civil infrastructure to achieve desired lifetime system-level performance under single or multi-hazard loadings; advances in geotechnical engineering for design and construction of natural hazard-resistant foundations and geostructures, liquefaction mitigation, soil-foundation-structure interaction, levee and earth dam stability, and landslide, mudflow and debris flow analysis and mitigation, with a focus on field or system performance; applications of decision theory for design concepts for civil infrastructure to achieve desired lifetime system-level performance for both multi-hazard resilience and sustainability; and advances in computational modeling and simulation that integrate theory, computation, experimentation, and data, as appropriate, to advance natural hazard mitigation for civil infrastructure. The ENH program encourages knowledge dissemination and technology transfer activities that can lead to broader societal benefit and implementation for natural hazard mitigation for civil infrastructure. *Deadlines: Feb. 17 and Sept. 15, 2015.*

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505177&org=NSF&sel_org=NSF&from=fund

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.

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

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