



• Research Development

Office of the Vice Chancellor for Research

[Home](#) / [News & Events](#) / [News](#)

RESEARCH ENTERPRISE NEWSLETTER

March 29, 2017

Inside this issue:

- [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](#)
- [Recent External Awards](#)
- [Current External Funding Opportunities](#)

ANNOUNCEMENTS

Dr. Kacena takes bone healing study into space

Melissa Kacena, PhD, associate professor of orthopedic surgery, returned to NASA's Kennedy Space Center last weekend to guide astronauts aboard the International Space Station through reconstructive surgery as part of the #RodentResearchIV mission. Dr. Kacena and her team sent dozens of mice into space on the SpaceX rocket, which launched Feb. 19, to test a form of bone-healing therapy



Dr. Melissa Kacena sent mice to space to test a new form of bone-healing therapy

with the potential to help people with traumatic bone injuries.

For the past several years, Dr. Kacena has worked with the U.S. Department of Defense and the U.S. Army to study the therapy, which could prove effective in treating soldiers injured in IED explosions. For more, view this [WTTV TV news story](#).

2018-19 Fulbright U.S. Scholar Program Competition Now Open

Deadline: August 1, 2017

The 2018-2019 competition for the [Fulbright U.S. Scholar Program](#) is now open. The Fulbright U.S. Scholar Program offers teaching, research and combination teaching/research awards in over 125 countries for the 2018-2019 academic year. Opportunities are available for college and university faculty and administrators as well as for professionals, artists, journalists, scientists, lawyers, independent scholars and many others. Interested faculty and professionals are encouraged to learn more about core Fulbright U.S. Scholar opportunities by visiting the online Catalog of Awards. Sign up for upcoming webinars to learn about region and discipline specific opportunities.

You may also contact IUPUI Fulbright Scholar Liaison Leslie A. Bozeman, Director of Curriculum Internationalization, lbozeman@iupui.edu for assistance.

Regional Webinars:

- [Fulbright Opportunities in the Middle East and North Africa](#) (March 8)
- [Fulbright Opportunities Across Asia](#) (March 15)
- [What's New in Europe](#) (March 21)
- [Fulbright Opportunities in Sub-Saharan Africa](#) (March 28)
- [Fulbright Opportunities in the Western Hemisphere](#) (April 5)

Discipline Webinars:

- [Fulbright Opportunities in Political Science](#) (March 22)
- [Fulbright Opportunities in American Studies](#) (March 29)
- [TEFL and Applied Linguistics with the Fulbright Scholar Program](#) (April 12)
- [Fulbright Opportunities: Business, Economics & Entrepreneurship](#) (April 25)
- [Fulbright Opportunities in Education](#) (April 26)

The Fulbright Program, sponsored by the U.S. Department of State's Bureau of Educational and Cultural Affairs, is the U.S. government's flagship international exchange program and is supported by the people of the United States and partner countries around the world. For more information, visit eca.state.gov/fulbright

Notice for Updated NIH Salary Limitation

A notice has been issued (Release Date: March 17, 2017) regarding the Executive Level II salary limitation increasing from the 2016 level of \$185,100 to \$187,000 effective January 8, 2017. Please use the pending updated level for proposal budgeting purposes.

For awards issued in those years that were restricted to Executive Level II (see Salary Cap Summary, FY 1990 thru FY 2016), including competing awards already issued in FY2017, if adequate funds are available in active awards, and if the salary cap increase is consistent with the institutional base salary, grantees may rebudget to accommodate the current Executive Level II salary level. However, no additional funds will be provided to these grant awards. The NIH has not received a FY2017 Appropriation and is currently working under a Continuing Resolution. Once the Department of Health and Human Services Appropriation for FY 2017 is enacted, NIH will publish the annual Notice of legislative mandates to provide information on any statutory provisions that limit the use of NIH grant funds in FY 2017. Additional guidance on the salary cap will also be provided at that time. NIH Notices as they relate to continued operations under a Continuing Resolution and the applicability of the NIH Salary Limitation:

NIH Operates Under a Continuing Resolution

NOT-OD-17-048

Interim Guidance on Salary Limitation for Grants and Cooperative Agreements

NOT-OD-17-049

The Office of Research Administration will update the (http://www.researchadmin.iu.edu/GrantContract/gc-gfo/gfo_effort.html) as soon as the appropriation is confirmed.

[Back to top of page](#)

INSTITUTE SPOTLIGHT

IU, Purdue scientists design epigenetic 'key' to editing stem cells in the brain



Scientists at Indiana University School of Medicine and Purdue University have developed a novel way to turn a gene on and off in the brain—a finding that could lead to new therapies for cancers and other genetic diseases.

The interdisciplinary team of neurologists and biological engineers discovered they could use a toolbox of light-sensitive proteins and enzymes, combined with a blue light, to alter the epigenetic state of the gene *Ascl1*, which acts as a switchboard telling stem cells in the brain what to turn into.

Their findings, [recently published in Nature's Scientific Reports](#), could have implications for a variety of genetic diseases, said [Feng C. Zhou, PhD](#), a neuroscientist and professor of anatomy and cell biology at IU School of Medicine.

Feng C. Zhou, PhD

Epigenetics is the study of chemical reactions that activate and deactivate parts of the genome, which is the complete set of DNA and hereditary information in an organism. While a person's genome is the same in every cell, their epigenome responds to environmental factors such as stress, diet and toxins, and therefore can change and trigger diseases, he said.

"The ability to determine the fate of neural stem cells may one day be applied to produce neurons in Down syndrome or to reduce the malignancy of brain tumors," Dr. Zhou said. "Our research presents one more hope that, if caught in an early stage, these diseases can be reversed in the future."

Dr. Zhou, co-corresponding author on the study, said the research team's new epigenetic editing technique is similar to "designing a beacon and a missile to deliver to the cells."

The ability to locate a precise section of a gene and modify it on command makes all the difference, he said.

"We've found that a reaction in a very small number of functional epigenetic codes—three to four out of thousands—can be used to turn a gene on and off," Dr. Zhou said. "This has greatly scaled down the work, making it possible to design a key to the precise keyhole that opens or closes the door to genes that could cause a disease."

Dr. Zhou said the research is still in the early stages. The team plans to further study their new technique in mouse brains.

Authors in addition to Dr. Zhou are Joseph Irudayaraj, PhD, a professor of agricultural and biological engineering at Purdue; Chiao-Ling Lo, PhD, a research associate in Dr. Zhou's lab at IU School of Medicine; and Samrat Roy Choudhury, PhD, a former postdoctoral researcher at Purdue.

Their research was supported by the W.M. Keck Foundation, the National Institutes of Health and the Indiana Clinical and Translational Sciences Institute.

[Back to top of page](#)

FACULTY SPOTLIGHT



Leslie Ashburn-Nardo

IUPUI study finds participants feel moral outrage toward those who decide to not have children

Data representing individuals from across the United States indicates that U.S. adults are increasingly delaying the decision to have children or forgoing parenthood entirely. Yet evidence suggests that voluntarily child-free people are stigmatized for this decision, according to a study published in the March 2017 edition of *Sex Roles: A Journal of Research*.

Leslie Ashburn-Nardo, an associate professor of psychology at Indiana University-Purdue University Indianapolis, recently investigated this bias against those who choose to not have children.

"What's remarkable about our findings is the moral outrage participants reported feeling toward a stranger who decided to not have children," Ashburn-Nardo said. "Our data suggests that not having children is seen not only as atypical, or surprising, but also as morally wrong."

"What's remarkable about our findings is the moral outrage participants reported feeling toward a stranger who decided to not have children," Ashburn-Nardo said. "Our data suggests that not having children is seen not only as atypical, or surprising, but also as morally wrong."

Ashburn-Nardo believes these findings offer the first known empirical evidence that parenthood is seen as a moral imperative.

"Having children is obviously a more typical decision, so perhaps people are rightfully surprised when they meet a married adult who, with their partner, has chosen to not have children. That they are also outraged by child-free people is what's novel about this work."

Participants read a vignette about a married adult person and then rated their perceptions of the person's degree of psychological fulfillment and their feelings toward the person. The vignette varied only in terms of the portrayed person's gender and whether they had chosen to have children.

"Consistent with many personal anecdotes, participants rated voluntarily child-free men and women as significantly less fulfilled than men and women with children," Ashburn-Nardo said. "This effect was driven by feelings of moral outrage -- anger, disapproval and disgust -- toward the voluntarily child-free people."

"Other research has linked moral outrage to discrimination and interpersonal mistreatment," Ashburn-Nardo said. "It's possible that, to the extent they evoke moral outrage, voluntarily child-free people suffer similar consequences, such as in the workplace or in health care. Exploring such outcomes for this demographic is the next step in my research."

[Back to top of page](#)

STUDENT SPOTLIGHT

'Ecopatch' concept takes top prize in JagStart student entrepreneur competition



Autumn Fox pitches at the IUPUI JagStart competition, sponsored by the Office of the Vice Chancellor for Research.

Photo by Liz Kaye



The winners of the 2017 IUPUI JagStart student pitch competition.

Photo by Liz Kaye

Walking through the green areas on her campus at Indiana University-Purdue University Columbus, Autumn Fox saw more than just grass. She saw potential.

What if, she asked, those wide-open spaces could host a garden maintained by students? And not just the kind of garden you'd find outside a science classroom, but one that could be a feast for the senses, engaging one's sight, smell, touch, sound and taste?

That idea turned into "Ecopatch," judged the best of 15 ideas presented by students at Indiana University-Purdue University Indianapolis' annual JagStart competition on March 3. In the competition, sponsored by the IUPUI Office of the Vice Chancellor for Research, entrepreneurially minded students sell their innovative ideas for solutions to pressing social and economic issues via three-minute "elevator pitches" to judges.

The 15 entries, from a wide range of schools including the Kelley School of Business, the School of Informatics and Computing, the School of Science, and the School of Engineering and Technology, were vetted prior to the competition by technology managers at the [Indiana University Research and Technology Corp.](#)

A total of \$5,500 in prizes was awarded, divided among the top three entries as selected by the judging panel and the top pitch as chosen by an audience ballot.

The winners are as follows:

First place, \$2,500: "Ecopatch," Autumn Fox, IUPUC senior in biology.

Project description: "A sensory garden is designed with the purpose of engaging the senses of sight, smell, touch, sound and taste, which is beneficial for people with disabilities and helps to focus the attention of young students. A garden is normally associated with a science curriculum, but a garden that stimulates the senses can be utilized across the curriculum. While the installation of a garden can be intimidating and confusing to many, if a specific and simplified

The machine-learning model predicts the time it will take to sell a home. Mohammad Al Hasan, IUPUI

What is the probability that the house you want to sell -- or buy -- will be sold within a month, two months, three months or more? Computer scientists from Indiana University-Purdue University Indianapolis have developed what they believe to be the first data-based answer to how long it will take for a house to sell.

Their machine-learning solution innovatively draws upon methodology used to predict length of disease survival in patients with life-threatening medical conditions.

"We went to the websites that homebuyers and sellers visit -- Trulia, Zillow and Redfin," said [Mohammad Al Hasan](#), associate professor of computer and information science in the School of Science, who led the house-selling probability study. "There was a lot of information to help in the decision-making process for both buyers and sellers, but what was missing was the answer to 'how long does it take for a house to be sold after it first appears in the listing?'"

In addition to predicting the probability of how long a specific house will remain on the market, the algorithms developed and validated by Hasan and Mansurual Bhuiyan, a former IUPUI graduate student now with IBM Research, also account for how changing a feature -- such as lowering the price of the home or adding a bathroom -- influences the length of time the house remains unsold.

Hasan and Bhuiyan "trained" their computer with three months' worth of data on 7,216 houses on the market in five Central Indiana cities and towns: Indianapolis, Carmel, Fishers, Noblesville and Zionsville. In addition to the details on homes typically found in real estate listings, the data included the dates of the initial listing and the sale. This information enabled the computer to study features and patterns, with the goal of being able to make predictions on how long homes that come on the market in the future will remain on the market. The scientists then evaluated and validated the approach.

Drawing upon methodology used to determine the probability that a patient with a certain disease stage will live for a specific length of time, called survival analysis, the researchers designed a machine-learning model that can determine, based on a given set of features such as price, location, age, size, number of bedrooms, number of bathrooms, school ratings and local crime information, the probability that a house will sell within a certain time frame.

Information generated by the house-selling probability model could provide the seller with recommendations on what can be done -- reducing the asking price or remodeling, for example -- to expedite the sale within the time frame in which the family needs to sell the home. A potential buyer could find the same information helpful to inform the timing and amount of a purchase offer.

"As long as there is a steady stream of data so we know how long houses are on the market and the features of those houses, our model can provide valuable information to homebuyers and sellers," Hasan said. "We can expand beyond the three months of our study to account for the seasonality of a real estate market, if it exists. We can use the methodology to look at other geographic areas with different real estate dynamics and predict the probability that a home will sell in a specific time period, adjusting that probability when changes in a feature, like a drop in price, occur."

"[Waiting to be Sold: Prediction of Time-Dependent House Selling Probability](#)" is published online ahead of print in 2016 IEEE International Conference on Data Science and Advanced Analytics. The study was supported by the National Science Foundation through a CAREER award to Hasan.

[Back to top of page](#)

OVCR INTERNAL GRANT DEADLINES

Research Support Funds Grant (RSFG):

The Research Support Funds Grant (RSFG) program is designed to enhance the research mission of IUPUI by supporting research projects and scholarly activities that are sustainable through external funding. The next RSFG application deadline is April 15. Apply to this program through the [InfoReady portal](#). Download the Guidelines and Application. Applications are to be submitted as one pdf file.

[Back to top of page](#)

OTHER INTERNAL GRANT DEADLINES

Apply for Indiana CTSI core pilot funding by April 24

The Indiana Clinical and Translational Sciences Institute is accepting applications for pilot funding for research use of core facilities. The Indiana CTSI core pilot funding program promotes the use of technologies and expertise afforded by the CTSI core facilities available at all partner institutions.

Examples of eligible projects include:

- obtaining critical preliminary data for a grant application (either new award or competing renewal)
- obtaining a critical reagent or resource for new studies (a new transgenic or knockout mouse model, for example)
- pilot experiments to test a new idea or establish a new line of research

The CTSI Core Pilot Grants program has the specific goal of funding projects with outstanding scientific merit that can be linked to generating extramural funding or novel intellectual property (IP). Proposals will be judged on the likelihood of generating new IP or extramural grant support along with scientific merit.

Applications to this program are expected to have a maximum requested amount of \$10,000. Application deadline is Monday, April 24. For details, visit legacy.indianactsi.org.

STEM Education Innovation & Research Institute Seed Grants (SSG) Request for Proposals

The STEM Education Innovation and Research Institute (SEIRI) at IUPUI is pleased to announce the 2017 SEIRI Seed Grant (SSG). The goal of this competition is to facilitate and support STEM education innovation and research by growing the body of Discipline-Based Education researchers at IUPUI.

Specifically, this opportunity provides faculty within science, technology, engineering, and mathematics (STEM) departments, with funding to develop, implement, and evaluate the impact of pedagogical innovations across multiple STEM courses at Indiana University Purdue University Indianapolis (IUPUI). As a long-term goal, this grant is intended to enable faculty competitiveness for external funding with agencies such as the National Science Foundation (NSF), Spencer Foundation, and the National Institute for Health (NIH), or other internal funding such as the IUCRG. As such, we strongly encourage that interested STEM faculty partner with an educational research or design expert within fields related to the learning sciences, such as (but not limited to) IUPUI's Department of Psychology or School of Education.

The Principal Investigator (PI) must be an IUPUI full-time faculty within the School of Science, the School of Engineering and Technology, or the School of Informatics and Computing (tenured, tenure track, and non-tenure track).

SEIRI will fund up to \$150,000 for 18 to 24 months. Teams can apply for up to \$30,000. Submit all application materials by 11:59PM EST on May 15, 2017.

Direct your SSG-related questions to seiri@iupui.edu, 317-278-0168, or by visiting SEIRI at room 1123 in the University Library. SEIRI will hold an information session prior to the submission deadline. To find dates and in order to register, check the SEIRI webpage (<http://www.seiri.iupui.edu>). This session will provide information about the SSG, including eligibility, guidelines, proposal writing expectations, and post-award expectations.

Submit the proposal and a letter of support from your department or program chair at https://iu.co1.qualtrics.com/SE/?SID=SV_1Y3BdVnMqyEYHwV by the deadline. Late submissions will not be considered.

[Back to top of page](#)

OVCR EVENTS AND WORKSHOPS

NSF Research Experiences for Undergraduates

Target Audience: IUPUI and IUPUC Faculty interested in mentoring undergraduate researchers

Friday, April 14, 2017

11:30am - 1:30pm

University Library Room 1126

This session will focus on the NSF Research Experiences for Undergraduates (REU) program, which supports active participation by undergraduate students in any of the areas of research funded by the National Science Foundation. The next submission deadline is expected to be August 23, 2017. Proposals for REU Sites are for independent projects that engage several undergraduate students in research on a well-defined common theme. Proposals for REU Supplements are for support of one or two undergraduate students to participate in research under the auspices of a new or ongoing NSF-funded project. Discussion will cover proposal strategies, campus resources, and budgetary considerations. Participants are welcome to bring a lunch to the session.

[Click here to register](#)

NSF Graduate Research Fellowship Program

Target Audience: IUPUI and IUPUC First-year graduate students in STEM and STEM education, undergraduate juniors and seniors planning to enroll in STEM or STEM education graduate programs

Friday, April 21, 2017

1:00pm – 2:30pm

University Library Room 1126

This session will introduce interested students to the National Science Foundation (NSF) Graduate Research Fellowship Program (GRFP). The GRFP is an NSF-wide program that provides fellowships to students in the earliest stages of their graduate careers to pursue non-medical research in science, technology, engineering, or mathematics (STEM) or in STEM education. Topics to be discussed include details of the support provided by the fellowship, eligibility requirements, application requirements and procedures, and strategies for developing strong proposals. Submission deadlines for fellowship applications will be the week of October 23, 2017, the specific day dependent on discipline. NOTE: Eligibility for the NSF GRFP is limited to students who are U.S. citizens, nationals, and permanent residents. This session is sponsored by the following OVCR units: Proposal Development Services and the STEM Education Innovation and Research Institute.

[Click here to register](#)

[Back to top of page](#)

OTHER EVENTS AND WORKSHOPS



Ann E. Austin

Professor of Higher, Adult, and Lifelong Education, Michigan State University; Associate Dean for Research, College of Education; and Assistant Provost for Faculty Development—Academic Career Paths, Michigan State University

STEM Education and Innovation Research Institute Seminar – Save the Date!

Strategies for Increasing Involvement of Women Scholars in STEM Fields: Lessons from ADVANCE Institutions

Date: Monday, October 23rd 2017

Time: 3:00 P.M.- 4:00 P.M.

Location: Lilly Auditorium

What strategies have been used in universities across the country to create institutional environments that encourage the success of women scholars? Which strategies work most effectively, and why? Leading organizational change in higher education to create more inclusive environments and to support a more diverse faculty requires strategic choices about appropriate levers for change that are effective in complex organizations.

First Conference for the Latinx Community – University Research Coalition of Indiana

Date: April 7, 2017

Time: 8:30 A.M.- 4:30 P.M.

Location: Krannert Park, 605 South High School Road, Indianapolis, IN 46241

[Click here to register](#)

The Latinx Community-University Research Coalition of Indiana aims to connect university faculty, students and staff interested in working with Latinos, with community organizations that serve this population. The ultimate purpose of the Coalition is to address equity and wellbeing across the state of Indiana through interdisciplinary collaborations for research and programmatic service aimed at improving the well-being of the Latino population in Indiana.

Purpose:

- Address equity and wellbeing across the state of Indiana through interdisciplinary collaborations for research and programmatic service aimed at improving the well-being of the Latino population in Indiana.
- Engage key stakeholders across the state of Indiana in the development and participation in research and programming involving Latino populations.
- Share knowledge that increases the capacity of researchers, scholars, community organizations, community leaders and policy leaders to develop and advocate for effective, evidence-informed interventions in Latino communities
- Create awareness of the issues that impact Latino populations in Indiana, how they are being addressed by different stakeholders, and what unattended needs have been identified.
- Provide a platform for coordinating and strengthening the responses to the most important issues impacting Latino populations in Indiana.

Conference Objectives:

This First Conference of the Latinx Community-University Research Coalition of Indiana will bring together faculty, staff, policy leaders, community organizations, community leaders interested in the well-being of Latino populations across Indiana to catalyze and advance community-engaged research, and programmatic collaborations that are respectful of the needs, cultural identity, and interests of the Latino population and help remove barriers to resources and/or services.

Coalition Special Interest Groups:

At this free conference you will be able to meet with others who are already working in or have interests in working in the special interest areas of the Coalition, which include: K-12 and higher education, physical health (all areas), mental health, employment, integration (acculturation/assimilation), arts & humanities (for example history or theatre) and business development. We expect to provide opportunities for discussions, networking, partnering and advancing future research, programming and advocacy. We will have Special Interest Group Areas for each of these topics to encourage networking and the development of community-university partnerships.

Conference Program:

Registration will begin at 8:30. The Conference will begin promptly at 9:00 a.m. We will serve breakfast and lunch. You will have the opportunity to learn about community-university research partnership results/findings (or share your own), as well as network with others in your area of interest. Our Keynote Speaker will be Dr. Aida Giachello from the University of Illinois at Chicago. There she established in 1993 the UIC Midwest Latino Health Research, Training & Policy Center and conducted health disparities research with a focus on chronic conditions such as diabetes, hypertension, asthma; injury prevention, tobacco, obesity and occupational health. She also engaged in community mobilization, advocacy and policy work emerging from the research findings. The UIC Latino Research Center developed community interventions models that are being used in U.S., Puerto Rico, US-Mexico borders and other Latin American countries and Virgin Islands.

[Back to top of page](#)

RECENT EXTERNAL FUNDING AWARDS

Grants and Awards – February 2017

PI	Agency	Project Title	School	Department	Total
Lamb, Bruce Timothy	NATIONAL INSTITUTE ON AGING	The IU/JAX Alzheimer's Disease Precision Models Center	MEDICINE	STARK NEUROSCIENCES RES INST	\$25,000,000
Firulli, Anthony B	NATIONAL HEART, LUNG AND BLOOD INSTITUTE	Morphogenesis and growth of the ventricular wall in development and disease	MEDICINE	PEDIATRICS	\$11,910,358
	NATIONAL HEART,	Mobile Critical Care Recovery Program (m-			

Khan, Babar Ali	LUNG AND BLOOD INSTITUTE	CCRP) for Acute Respiratory Failure (ARF) Survivors	MEDICINE	PULMONARY	\$3,229,974
Grant, Maria Bartolomeo	NATIONAL EYE INSTITUTE	Human iPSC for repair of vasodegenerative vessels in diabetic retinopathy	MEDICINE	OPHTHALMOLOGY	\$2,167,663
Bell, Richard L	NATIONAL INSTITUTE ON ALCOHOL ABUSE AND ALCOHOLISM	Rat Animal Models & Gene Testing Core (RAM-GTC)	MEDICINE	PSYCHIATRY	\$1,865,490
Econs, Michael J.	NATIONAL INSTITUTE ARTHRITIS MUSCULOSKELETAL SKIN	Mechanistic and Therapeutic Studies of Autosomal Dominant Osteopetrosis	MEDICINE	ENDOCRINOLOGY	\$1,731,125
Field, Loren J.	NATIONAL HEART, LUNG AND BLOOD INSTITUTE	Cardiomyocyte cell cycle activity in injured hearts	MEDICINE	CARDIOLOGY	\$1,560,000
		WeCare Plus: An			

Litzelman, Debra K	INDIANA STATE DEPARTMENT OF HEALTH	Innovative, Community- Based Collaborative Initiative to Decrease Infant Mortality	MEDICINE	GENERAL INTERNAL MEDICINE	\$769,539
Newhouse, Robin P	METHODIST HEALTH FOUNDATION	Inclusive Inquiry with Impact	NURSING	NURSING	\$300,000
Druschel, Gregory K	CITIZENS ENERGY GROUP	Taste and Odor compounds in Eagle Creek Reservoir: Developing spatial and temporal tools for early identification of antecedent conditions and problem microbial blooms	SCIENCE	GEOLOGY	\$300,000
Grant, Maria Bartolomeo	JDRF	Novel Insights on the Link Between Diabetic Retinopathy and the Splenic Clock.	MEDICINE	OPHTHALMOLOGY	\$285,000
	AMERICAN ACADEMY				

Kloepfer, Kirsten M.	OF ALLERGY, ASTHMA & IMMUNOLOGY FOUNDATION	Microbial Influence on Airway Immune Response and Airway Function	MEDICINE	PED-PULM CRITICAL CARE/ALLERGY	\$240,000
Shekhar, Anantha	CENTRAL INDIANA CORPORATE PARTNERSHIP FOUNDATION	Indiana CTSI and Biocrossroads Initiatives	MEDICINE	CLINICAL TRANSLAT SCI (CTSI)	\$200,000
Wek, Ronald C.	RUTGERS UNIVERSITY	Homeostatic Responses to Amino Acid Insufficiency	MEDICINE	BIOCHEMISTRY/MOLECULAR BIOLOGY	\$197,572
Rawl, Susan M.	THE ROBERT WOOD JOHNSON FOUNDATION	Future Nursing Scholars - Indiana University	NURSING	NURSING	\$150,000
Mukhopadhyay, Snehasis	OREGON STATE UNIVERSITY	INFEWS/T2: Collaborative: iFEWCoordNet - a secure decision support system for coordination of adaptation planning	SCIENCE	COMPUTER SCIENCE	\$138,447

		among FEW actors in the Pacific Northwest			
Schubert, Peter J	GREEN FORTRESS ENGINEERING	STTR Phase I: Hydrogen Storage in Catalytically-Modified Porous Silicon	ENGINEERING & TECHNOLOGY	ELECTRICAL & COMPUTER ENGR	\$134,226
White, Fletcher A	ST. VINCENT FOUNDATION	The Study of Cytokines in Patients with Mild Traumatic Brain Injury	MEDICINE	ANESTHESIA	\$115,848
Zieger, Michael A J	PURDUE UNIVERSITY	A Flexible Smart Wound Dressing with Integrated On-Demand O ₂ -Release and Sensing Capability	MEDICINE	PLASTIC SURGERY	\$100,000

[Back to top of page](#)

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 links below to search online tools.

NATIONAL INSTITUTES OF HEALTH

NIDCD: Translating Basic Research into Clinical Tools (R01): This opportunity provides an avenue for basic scientists, clinicians, and clinical scientists to jointly initiate and conduct translational research projects which translate basic research findings into better clinical tools. The scope includes a range of activities to encourage translation of basic research findings which will impact the diagnosis, treatment and prevention of communication disorders. Connection to the clinical condition must be clearly established and the outcomes of the grant must have practical clinical impact. Research conducted under this is expected to include human subjects.

Possible goals include the following 5 examples:

- 1) Biochemical, electrophysiological and behavioral assays to improve diagnostics;
- 2) Toxicity and pharmacokinetic studies for therapeutics;
- 3) Preclinical animal research for dosage studies/toxicity when a Phase I/II clinical trial is planned;
- 4) Efficacy testing of highly promising interventions in animal models; and
- 5) Better drug delivery devices, neuro-electrical stimulators, and recording devices.

Deadline: October 18, 2017. <https://grants.nih.gov/grants/guide/pa-files/PAR-17-184.html>

NIDCR: Neoantigen-Based Therapeutic Targeting of Head & Neck Cancers (R01): This opportunity invites applications for basic and preclinical research in developing novel immunotherapeutic targets for head and neck cancers (HNC), including salivary gland cancers. NICDR-supported research will identify human HNC-specific neoantigens, and will test the utility of these neoantigens as targets for eliciting anti-tumor immune responses in affected patient populations.

Topics of interest to NICDR include the following 5 examples:

- 1) Identification/functional testing of human HNC neoantigens as effective immunotherapeutics in preclinical models, such as humanized transgenic mice that express human HLA class I and II molecules;
- 2) Analysis of HLA molecule downregulation on cancer cells for the identification of HLA class I negative tumors in immunotherapy unresponsive tumor microenvironment (TME);
- 3) Identification and functional comparison of human HNC neoantigens among patients with common risk profiles;
- 4) Analysis of efficacy of combination therapies that couple human HNC neoantigen-based immunotherapy with immune checkpoint inhibitor blockade;
- 5) Analysis of efficacy of combination therapies that couple human HNC neoantigen-based immunotherapy with manipulation of TME in appropriate preclinical model systems.

Applicants are encouraged to use existing bioinformatics tools and computational algorithms for their data analysis.

Deadlines: Letter of Intent: May 19, 2017;

Application: June 19, 2017. <https://grants.nih.gov/grants/guide/rfa-files/RFA-DE-18-004.html>

NIMH: From Genomic Association to Causation: A Convergent Neuroscience Approach for Integrating Analysis Levels to Delineate Brain Function in Neuropsychiatry (U01): The primary objective of this opportunity is to stimulate innovative Convergent Neuroscience (CN) approaches to establish causal and/or probabilistic linkages across contiguous levels of analysis (gene, molecule, cell, circuit, system, behavior) in an explanatory model of psychopathology. In particular, applicants should focus on how specific constituent biological processes at one level of analysis contribute to quantifiable properties at other levels, either directly or as emergent phenomena. Although not required, it is preferable that applications link at least three levels of analysis and include an emphasis on genetics. Funded projects will develop novel methods, theories, and approaches through a CN team framework, bringing together highly synergistic inter/transdisciplinary teams from neuroscience and "orthogonal" fields (data/computational science, physics, engineering, mathematics, or environmental sciences). Successful teams will combine, expand upon, or develop conceptual frameworks and theoretical approaches, and build explanatory computational models that connect contiguous levels of analysis. Such frameworks, theories, and computational explanatory models should be validated through experimental approaches to elucidate biological underpinnings of complex behavioral outcomes in psychopathology. Another goal of this program is to advance research in CN by creating a community resource framework so data can be used by the broader research community. Successful teams will have robust plans for sharing data and other resources.

Deadlines: Letter of Intent: September 05, 2017;

Application: October 05, 2017. <https://grants.nih.gov/grants/guide/pa-files/PAR-17-179.html>

NATIONAL SCIENCE FOUNDATION

CISE Research Infrastructure (CRI): The CRI program drives discovery and learning in the core CISE disciplines of the three participating CISE divisions by supporting the creation and enhancement of world-class research infrastructure that will support focused research agendas in computer and information science and engineering. This infrastructure will enable CISE researchers to advance the frontiers of CISE research. Further, through the CRI program CISE seeks to ensure that individuals from a diverse range of academic institutions, including minority-serving and predominantly undergraduate institutions, have access to such infrastructure.

CRI supports two award types: Institutional Infrastructure awards support the creation of new CISE research infrastructure or the enhancement of existing CISE research infrastructure to enable world-class CISE research opportunities. Community Infrastructure awards support the planning or creation of new CISE research infrastructure or the enhancement or sustainment of existing CISE infrastructure in order to serve broad CISE research communities well beyond academia and the awardee institutions. Each award may support the operation of such infrastructure, ensuring that the awardee institution(s) is (are) well positioned to provide a high quality of service to CISE community researchers expected to use the infrastructure to realize their research goals.

Deadline: November 14, 2017 http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=12810&org=NSF&sel_org=NSF&from=fund

Alan T. Waterman Award:

Congress established the Alan T. Waterman Award in 1975 to mark the 25th Anniversary of the NSF and to honor its first Director. The award recognizes an outstanding young researcher in any field of science or engineering supported by the NSF. In addition to a medal, the awardee receives a \$1M grant for scientific research or advanced study in the mathematical, physical, biological, engineering, social, or other sciences at the institution of the recipient's choice.

Deadline: February 10, 2018. <http://www.nsf.gov/od/waterman/waterman.jsp>

Algorithms for Threat Detection (ATD): The Algorithms for Threat Detection (ATD) program will support research projects to develop the next generation of mathematical and statistical algorithms for analysis of large spatiotemporal datasets with application to quantitative models of human dynamics. ATD will support research projects that aim to develop novel mathematical and statistical algorithms for analysis of large geospatial datasets. Means to quantify confidence levels are desired, as are insights into new spatiotemporal datasets and valuable means of assembling them. Models may range from those that address activities of individuals to those applicable to small groups or entire nations. These models may leverage mathematical research areas including, but not limited to, point processes, time series, dynamical systems, partial differential equations, and optimal control. Models that depend almost entirely on the spatial and temporal aspects of the data are of greatest interest. General applications of interest include threat detection, predictive analytics, human mobility, and human geography. The program is a partnership between the NSF and the National Geospatial Intelligence Agency.

Deadline: February 21, 2018. http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=503427

U.S. DEPT. OF DEFENSE

NAVY: Late-stage Software Customization & Complexity Reduction S&T for Legacy Naval Systems: Unchecked complexity and bloat are especially severe for the Commercial-off-the-shelf (COTS) software integral to many Naval systems. Virtually all Navy software products—from applications and libraries to low-level system OS software and even communications protocols—are affected. Current software development and deployment practices, which involve excessive use of indirection and abstraction, often encourage complexity and bloat. Modern architectures and practices that have evolved throughout software engineering history are the result of a series of individual decisions and approaches built upon one another all geared toward increasing a programmer's productivity. A major contributor to that increased productivity has been to maximize software reuse, which has resulted in a software structure with layers upon layers of abstraction, libraries, and indirections. The use of layers upon layers of libraries and indirections, deeply nested APIs, and procedure calls increases complexity and makes efforts to reason about the safety or security of that software even more intractable. Addressing customization and complexity reduction without requiring the availability of source code is critical in responding to this opportunity.

Deadline: May 01, 2017. <https://www.grants.gov/web/grants/view-opportunity.html?oppld=292109>

NOTE: All faculty, researchers, and scientists on continuing contracts at IU interested in applying for Department of Defense funding are eligible for assistance by the consulting firm--Cornerstone Government Affairs--arranged by the Vice President for Research. Those interested in securing assistance from Cornerstone must submit a 2 page summary of

their research project and a CV or biosketch to the VP for Research Office at vpr@iu.edu. Prior to submission, the IUPUI Office of the Vice Chancellor for Research is offering assistance with the 2 page summaries. For more information, contact Steven Chin at schin@iupui.edu.

[Back to top of page](#)

OFFICE OF THE VICE
CHANCELLOR FOR
RESEARCH
IUPUI

755 W. Michigan Street
UL 1140
Indianapolis, IN 46202-
5195
Main phone: 317-274-
1020
Fax: 317-274-1024
Email: ovcr@iupui.edu
Web: research.iupui.edu

Vice President for Research
Office of Research Administration
Office of Research Compliance
IU Research & Technology Corporation
Innovate Indiana
Undergraduate Research
Graduate Research

One.IU
Outlook Web Access
A-Z List
Campus Maps
AskIU
Emergency Information

Give Now

