



• Research Development

Office of the Vice Chancellor for Research

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RESEARCH ENTERPRISE NEWSLETTER

June 28, 2017

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FEATURE STORY

Anila Agha wins Cincinnati Art Museum's Schiele Prize

Pakistani-American artist Anila Quayyum Agha



Anila Agha

has been named the recipient of Cincinnati Art Museum's 2017 Schiele Prize which recognizes the finest works of art and design by living artists. This prize honors the legacy of Marjorie Schiele, a Cincinnati artist whose

generous bequest of the Hanke-Schiele Fund makes this award possible.

Agha's *All the Flowers are for Me (Red)* is the first purchase with the museum's recent \$11.75 million [Alice Bimel Endowment for Asian Art](#).

The museum's recent acquisition is a five-foot laser-cut steel cube displayed suspended from the ceiling and lit from within. Light emanates from the red lacquered cube, enveloping the gallery in intricate shadows that ripple and change as visitors move through the space.

Inspired by Islamic architectural forms, the geometric and floral patterns cast upon the walls, floor and ceiling create an immersive experience.

"Anila Quayyum Agha's artworks create interactive environments imbued with beauty and textured meaning. Her works are both

contemplative and exhilarating to behold," said Ainsley Cameron, Cincinnati Art Museum's new Curator of South Asian Art, Islamic Art & Antiquities. "All the Flowers are for Me (Red) reflects the museum's mission to support our community by inviting all people to come together and participate in this shared gallery experience."

Cameron Kitchin, the Cincinnati Art Museum Louis and Louise Dieterle Nippert Director, said: "We are honored to present Agha the Schiele Prize for her dedication to creating culturally-relevant, conversation-starting art.



The Hanke-Schiele Fund has allowed us to give special recognition to one of the most captivating working artists today. In addition, through the generosity of the Bimel family, we have the privilege of adding this visually stunning work to our permanent collection and displaying it for the entire community to view."

Agha's light-based installations have been exhibited nationally and internationally in more than 20 solo shows and 50 group shows. She currently resides and works out of Indianapolis.

Born in Pakistan in 1965, Agha moved to the United States in 1999 and, in 2004, completed her MFA in fiber arts at the University of North Texas. In 2008, she moved to Indianapolis to take up a professorship at the Herron School of Art & Design/ IUPUI.

Agha began experimenting with large-scale installation works in 2010, and in 2012 received a New Frontiers Research and Travel Grant from Indiana University. Her travels inspired a profound shift in her artistic practice. In 2013, Agha created *Intersections*—her first laser-cut steel work—to explore the design of the Alhambra Palace through abstraction, light, and transmitted light. *Intersections* was awarded the Public Vote Grand Prize and split the Juried Grand Prize at the 2014 ArtPrize competition in Grand Rapids, MI.

Cincinnati Art Museum's exhibition *Anila Quayyum Agha: All the Flowers are for Me* will also include a selection of Agha's drawings that complement her lighted artwork. The exhibition will premiere at the museum's ticketed fundraising event *A Taste of Duveneck Presents the Art of Wine* on June 16. The exhibition is free to the public from June 17–October 15. Photography is encouraged. On social media use [#anilaincincy](#) [#anilaquayyumagha](#).

The museum will celebrate the exhibition's final days during Cincinnati's BLINK celebration, an experience of light, street art, murals and live performance spread across 20 blocks of downtown Cincinnati from the Banks to Findlay Market, October 12–15.

About the Cincinnati Art Museum

The Cincinnati Art Museum is supported by the generosity of individuals and businesses that give annually to ArtsWave. The Ohio Arts Council helps fund the Cincinnati Art Museum with state tax

dollars to encourage economic growth, educational excellence and cultural enrichment for all Ohioans. The Cincinnati Art Museum gratefully acknowledges operating support from the City of Cincinnati, as well as our members.

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ANNOUNCEMENTS

Latinx Community-University Research Coalition of Indiana looks to join campus with Latino community



From left, coalition founding members Cindy Gil, Silvia Garcia, Khaula Murtadha, Silvia Bigatti and Monica Medina, and student assistants Michelle Ramirez and Jocelyne Hernandez. Latinx Community-University Research Coalition.

Silvia Bigatti remembers her early years as a faculty member at

Indiana University-Purdue University Indianapolis and how difficult it was to connect with the Latino community.

She was trying to do it alone. Some 17 years later, she wants to make sure others have an easier time.

The newly formed Latinx Community-University Research Coalition of Indiana strives to make those connections, bringing together faculty and staff, policy leaders, community organizations, and community leaders interested in the well-being of Latino populations across Indiana. Those connections will advance community-engaged research and programmatic collaborations that are respectful of the needs, cultural identity and interests of the Latino population while removing barriers.

In 2014, Bigatti and Monica Medina, a clinical associate professor in the School of Education at IUPUI, began talking about the concept and envisioning some kind of organization. Then the Office of Community Engagement at IUPUI became looped into the discussion, and from that office Associate Vice Chancellor Khaula Murtadha, Assistant Director for Research Silvia Garcia and Director of Latino Affairs Cindy Gil became founding members of the coalition.

"We are all interested in increasing research collaborations with community partners focused on Latino health," said Bigatti, a native of Argentina who is an associate professor in clinical psychology in the Richard M. Fairbanks School of Public Health at IUPUI. "And because

quality education leads to more health, we call it quality of life and well-being."

The group held its first conference in April, with community leaders in attendance as well as researchers from other universities around the state including IU Bloomington, Purdue, Marian, DePauw and Indiana Wesleyan.

"We're hoping that Latinx not only facilitates and increases research with the community, but actually attracts Latino faculty -- who are more likely to do research with Latinos -- to the campus," Bigatti said. "Latino faculty attract Latino students, and Latino students attract Latino staff, so if we get the ball rolling, it's going to increase this population and its presence at IUPUI. "Then it kind of starts all over again -- they do research with the community, which attracts more faculty, and then we have a vibrant and diverse community of researchers that's connected to the community outside of the campus, doing work that impacts the community immediately."

As for the name "Latinx," it's a more gender-neutral term that is catching on at the national level and, for the organization, helps to distinguish it in the community.

"There's a lot of Latino-this and Latina-that, but there's only one Latinx," Bigatti said. "It's inclusive and has turned out to be a really good idea in terms of marketing. Nationally, young activists are using 'Latinx.'"

The coalition has its next conference scheduled for March 27, 2018, and in the meantime encourages anyone interested to visit its [Facebook](#) page.



Moreno-Madriñán

Community competition to prevent Islamophobia offers \$10,000 in awards!

The [Millennium Chair of the Liberal Arts at IUPUI](#) announces ten awards of \$1,000 each to prevent [Islamophobia](#), or anti-Muslim prejudice, discrimination, and violence, in Greater Indianapolis. Highly original projects are sought from local writers, community activists, artists, religious congregations, public school teachers,

dancers, community volunteers, philosophers, amateur historians, linguists, musicians, healers, social workers, poets, non-profit groups, and others.

Projects can include performance, social media, debate, dialogue, the production of objects, sound, consciousness-raising, teaching, websites, and so on. They might focus on the political, social, cultural, or religious roots of Islamophobia, including anti-Muslim think tanks, federal surveillance and counter-intelligence, media bias, U.S. foreign policy, and cultural and religious stereotypes.

Collaborations between Muslims and non-Muslims are especially welcome. All individuals who are not currently employed by or enrolled at IUPUI are eligible to apply. Applicants must submit three- to four-page, double-spaced, carefully crafted proposals that outline (1) what the project is, (2) who will be involved, (3) who the audiences will be, (4) how the project will be accomplished, (5) where it will take place, (6) how it will be marketed, and (7) why it is likely to reduce anti-Muslim prejudice and discrimination. A timeline should be included.

Proposals are due by Sept. 1, 2017, with notification of awards expected by Sept. 15, 2017. All projects must be implemented sometime between October 1, 2017, and May 1, 2018. Please send inquiries and/or final proposals to Prof. Edward Curtis, ecurtis4@iupui.edu. Proposals must be sent as a Microsoft Word file or PDF attachment to an email. The email must include the applicant's address and phone number.

Half of the award will be payable immediately, with the other half contingent upon completion of the project.

In collaboration with his students and colleagues Dr. Moreno-Madriñán from the Fairbanks School of Public Health has recently published three articles with the results of his research project funded by an IUPUI Chancellor for Research—Research Support Funds Grant. Using remote sensing, Dr. Moreno's research project studies the temporal and geographical suitability for incidence of diseases

caused by mosquito-transmitted viruses such as dengue and Zika. With his graduate student, Jeffrey Ashby, as the first author; on his most recent published article Dr. Moreno and colleagues used remote sensing and Boosted Regression Tree (BRT) analysis to quantify the risk of dengue fever in Colombia. To view the full article, go to <http://www.mdpi.com/2072-4292/9/4/328/pdf>

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INSTITUTE SPOTLIGHT

IUPUI lands project to continue work with Toyota on autonomous and connected vehicle technologies



The drive toward putting autonomous cars on the road is in full gear, with most major automobile manufacturers vowing to release such vehicles in the next decade or so.

IUPUI's Transportation Active Safety Institute, or TASI, has worked with Toyota's Collaborative Safety Research Center on advanced test targets for bicyclist pre-collision systems. Its next project will explore driving features called "road-departure detection and control." Photo courtesy of TASI

When that happens, research by the [School of Engineering and Technology](#) at Indiana University-Purdue University Indianapolis will have played a significant part. The school's [Transportation Active Safety Institute](#), or TASI,

has studied crash-prevention technologies, traffic data and overall driving safety since 2006, and last month it extended its work with

Toyota's Collaborative Safety Research Center. The automaker announced its CSRC Next research effort, focusing on the challenges and opportunities of autonomous and connected vehicle technologies that will arise over the next decade.

CSRC Next will direct \$35 million through 2021 toward research designed to support a safe transition to self-driving cars. Eight projects at six schools, including IUPUI, will explore driving features called "road-departure detection and control."

Due to distractions or other reasons, drivers sometimes drift off the road. It may be just a split-second moment when tires move inches outside a lane, or a far more severe situation in which a driver veers completely off the road and lands in a ditch, hits a tree or even has a rollover accident.

"Autonomous vehicles have no drivers, so those vehicles must be equipped with sensors that can detect a road's edge in case anything happens," said Yaobin Chen, Chancellor's Professor of Electrical and Computer Engineering in the School of Engineering and Technology and director of TASI at IUPUI. "Then, autonomous control will take over, correct the error and put a car back in the lane on the road."

With the help of high-resolution Google imagery, the team at IUPUI has studied road edges and boundaries in all 50 states. The types of roads vary greatly (interstates, U.S. highways, state roads, rural roads, suburban streets), as does what lies just off them (guardrails,

curbs, grasses, trees). That information will allow researchers to create and test methodologies for roadside-departure systems.

"You detect it through sensors such as radar and cameras, and then correct it with a control algorithm," Chen said.

Eventually, the National Highway Traffic Safety Administration will come up with rules and standards for such active safety systems -- with help from IUPUI research.

Toyota's Collaborative Safety Research Center was created in 2011 with a mission unique in the automobile industry: collaborating with leading North American universities, hospitals and research institutions on projects aimed at reducing traffic casualties and sharing the results publicly.

It has since completed 44 research projects with 23 partner universities, publishing more than 200 papers and presenting at multiple industry conferences. Toyota vehicle safety has been enhanced, but CSRC research has also had broader impacts, as its results have contributed to standards development at international bodies like the Society of Automotive Engineers.

Key projects have included groundbreaking programs to develop test platforms for collision-avoidance systems, in which IUPUI played a role by creating advanced test targets for pedestrian and bicyclist pre-collision systems that featured radar cross-sections matching those of

pedestrians and bicyclists.

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FACULTY SPOTLIGHT

Kennedy Space Center turns to IUPUI active-gaming researcher for help with slips and falls



Kennedy Space Center

If you don't believe active gaming produces results when it comes to physical fitness or rehabilitation from injuries, talk to employees at NASA's Kennedy Space Center in Florida.

The Kennedy Space Center has served as America's spaceport, hosting all of the federal government's manned spaceflights since the late 1960s. KSC RehabWorks provides injury assessment and musculoskeletal rehabilitation services to employees at the center.

When KSC RehabWorks launched an initiative about three years ago to reduce the number of lost work days stemming from injuries caused by slips, trips and falls, leaders wanted active gaming to be among the mix of services provided to employees to address balance-related issues.

KSC RehabWorks turned to Keith Naugle, a clinical assistant

professor in the School of Physical Education and Tourism Management at Indiana University-Purdue University Indianapolis, to help make that happen.

Naugle was contacted because of his research into active gaming and its various uses in physical activity, rehabilitation and pain in the school's Physical Activity and Pain Laboratory. He joined the school's faculty in 2014 after serving eight years as a clinical assistant professor and clinical education coordinator in the University of Florida's athletic training education program and exercise physiology/fitness wellness programs

Active gaming occurs in games like Nintendo's Wii Sports, such as boxing and tennis games, or the Wii Fit Balance Games where movement occurs. Rather than just sitting, players actually swing an arm or throw a punch. There are also active games that focus on balance in which a player stands on a plate that measures postural sway.

"The idea is that you're moving side to side, keeping within your limit of stability without toppling over," Naugle said. "You're learning how far you can go."

"They wanted to incorporate the Nintendo Wii into what they called 'balance zones,'" Naugle said. "They set up balance zones throughout the Kennedy Space Center so that any employee could work on different balance tasks anytime they wanted."

Naugle joined discussions at the center about how to incorporate Wii games as a tool in the balance zones. Now, a wide range of employees use them.

KSC RehabWorks' initiative has broadened, encouraging employees to be physically active in general. "Being physically active kind of goes hand in hand with improving your balance and reducing the amount of injuries," Naugle said.

Naugle has visited Kennedy Space Center several times, including twice this year to provide health and safety presentations.

Balance training through active gaming produces similar results to other forms of balance training using equipment like a wobble board (a wooden board with a ball on the bottom of it), according to Naugle.

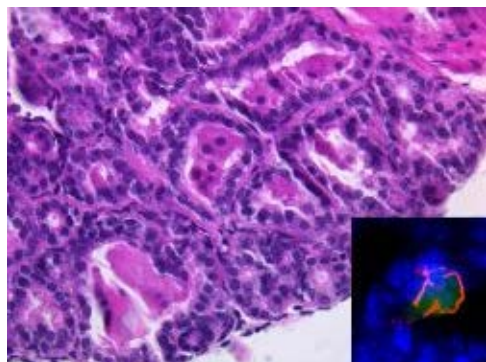
"What we've found is that the results are similar, but training with active gaming is more fun," he said. "People are more likely to come in and do their exercises if they know they are going to start with 10 to 15 minutes of video game play.

"It is a mode of exercise that helps get people who have not been physically active up and moving."

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STUDENT SPOTLIGHT

Researchers find a common parasite that can infect, promote disease in prostate



Caption: Toxoplasma gondii parasitic cyst (inset picture) identified in region of microglandular hyperplasia of the prostate.

A new study led by graduate student Darrelle Colinot at Indiana University School of Medicine and [published in the journal The Prostate](#) may have found yet another cause of inflammation in the prostate--the common parasite *Toxoplasma gondii*. Inflammation of the prostate is closely associated with benign prostate hyperplasia (BPH) and prostate cancer. BPH affects nearly half of men by age 50 and is the leading cause of lower urinary tract symptoms. How BPH develops and what determines its severity is not fully understood, but it has become clear that inflammation is tightly associated with BPH symptoms.

In experiments performed in mice, researchers found that *Toxoplasma gondii*, a common single-celled parasite, disseminates to the prostate within two weeks after infection. Once in the prostate, it remains in the form of latent tissue cysts for at least 60 days and can persist for the rest of the host's life. The presence of these parasitic cysts results in chronic inflammation in the prostate.

[Read the full article](#) on the IU School of Medicine Research Updates blog.

TRANSLATIONAL RESEARCH IMPACT

Web-based search data is a new key to understanding public reaction to major societal events



Web-based search data

Analyzing millions of internet searches tied to major societal events offers a new way to understand public reaction to those events, according to new research from the Richard M. Fairbanks School of Public Health at Indiana University-Purdue University Indianapolis.

In what's believed to be the first study to examine the issue, the IUPUI researchers focused on the public's reaction to the Sandy Hook Elementary School shootings in 2012 in Newtown, Connecticut, to test their approach.

Nir Menachemi, a professor and the department chair of health policy and management in the School of Public Health, and researchers Saurabh Rahurkar and Mandar Rahurkar analyzed 5.6 million firearm-related search queries from the Yahoo search engine that occurred two weeks before and two weeks after the shootings.

"We wanted to understand how firearm-related information-seeking, such as looking up relevant laws and learning about advocacy, and web-based behavior, such as visits to firearm retailers, changed

immediately after the event," Menachemi said.

Given the amount of data involved, this approach was unimaginable in the past. The researchers went through the 5.6 million firearm-related searches several times to get to the queries used in the study.

"This data is a hidden gem to be added to the arsenal of public health," Menachemi said.

One of the key findings of the analysis was that firearm-related searches more than doubled immediately after the Sandy Hook shooting incident.

Overall, retail websites were the most visited sites, followed by searches for gun types and ammunition. Gun type and ammunition searches had a two- to threefold increase after the shooting incident.

The researchers discovered that most people were getting information from entities that advocate -- either pro-gun or pro-gun control -- rather than from more neutral entities like government or educational websites.

Understanding firearm-related search trends to gain insight into how Americans responded to the Sandy Hook incident can enhance societal debates and inform policy development related to firearms, Menachemi said.

"Now that we have this information, the question is, what can we do with it?" he said.

In the Sandy Hook study, queries can be matched with particular states or smaller geographic areas to see whether searches from politically conservative, or "red," states differ from searches from "blue" states.

"That creates an opportunity to better understand what might be influencing behavior, allowing advocates to intervene with appropriate education content or be better able to react to what information people need," Menachemi said.

Menachemi noted that there are many different areas in which this type of information may improve public health and public health education.

"When we had fears around Ebola, understanding what people worried about could have been extremely helpful to a public health response," Menachemi said. "More recently with Zika, this type of data would give valuable information about what doctors, nurses and front-line clinical staff -- and policymakers -- could do or use to improve their responses to what people are experiencing." The study, "Using Web-Based Search Data to Study the Public's Reactions to Societal Events: The Case of the Sandy Hook Shooting," was published in JMIR Public Health and Surveillance.

EVENTS AND WORKSHOPS

Write Winning Grant Proposals



John D. Robertson, Ph.D.
Associate of Grant Writers'
Seminars and Workshops, LLC

Tuesday, August 22 | 8:30 a.m. - 5:00 p.m.

Neuroscience Building, Goodman Hall 1030 Auditorium

Write Winning Grant Proposals

This seminar comprehensively addresses both conceptual and practical aspects that are associated with the grant writing process. Emphasis is given to idea development, identification of the most appropriate granting agency, how to write for reviewers, and tips and strategies that are of proven value in presenting an applicant's case to reviewers. All participants will receive light breakfast, boxed lunch, and a copy of *The Grant Application Writer's Workbook*.

Tuesday, August 22

8:30 a.m. - 5:00 p.m.

Neuroscience Building, Goodman Hall 1030 Auditorium

[Register >>](#)

Communicating Science Series

Connecting with your Audience

Wednesday, August 23

4:30 p.m. - 6:30 p.m.

Distilling your Message

Wednesday, September 6

**Media Training for
Scientists and Physicians**

Wednesday, September 20



Communicating Science Series

Back by popular demand! This three-session series is designed to train participants to communicate complex scientific topics more effectively to non-experts like patients, learners, lawmakers, and funders. This program is free and open to all IUSM and IUPUI faculty and graduate students. Please note, if you register for this event, you will be registered for all three sessions.

Wednesday, August 23

Wednesday, September 6

Wednesday, September 20

[Register >>](#)

National STEM Education Events

2017 Special Symposia Series - Evolution & Core Processes in Gene Expression

DATE: July 13-16, 2017

PLACE: Kansas City, MO

For more information, [click here](#)

Transforming Undergraduate Education in the Molecular Life Sciences

DATE: July 20-23, 2017

PLACE: Tampa, FL

For more information, [click here](#)

Making Meaning Through Modeling: Problem Solving in Biology

DATE: July 23-28, 2017

PLACE: Michigan State University, East Lansing

For more information, [click here](#)

2017 Special Symposia Series - Membrane-Anchored Serine Proteases

DATE: Sept. 14-17, 2017

PLACE: Potomac, MD

For more information, [click here](#)

Save the Dates

Ann Austin - Strategies for Increasing Involvement of Women Scholars in STEM Field: Lessons from Advance Institutions



Ann Austin

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.

DATE: Mon, Oct 23, 2017

TIME: 3:00 PM - 4:30 PM EST

PLACE: IUPUI, Lilly Auditorium

Isiah Warner - Reflections on STEM Programs within the Office of Strategic Initiatives



Isiah Warner

In the United States, less than half of the students who enter into science, technology, engineering, and mathematics (STEM) undergraduate programs as freshmen will graduate with a STEM degree. On this basis, there is a clear need for innovative initiatives that promote undergraduate retention and achievement within STEM. The LSU Office of Strategic Initiatives (OSI) has developed a stable of such initiatives.

DATE: Wed, Mar 28, 2018

TIME: 3:00-5:30 PM EST

PLACE: Campus Center Theater, CE 002

[Back to top of page](#)**RECENT EXTERNAL FUNDING AWARDS****Grants and Awards – May 2017**

PI	Agency	Project Title	School	Department	Total
Khan, Babar Ali	NATIONAL INSTITUTE ON AGING	Decreasing Alzheimer's Disease and Related Dementias after Delirium-Exercise and Cognitive Training (DDD-ECT)	MEDICINE	GENERAL INTERNAL MEDICINE	\$ 4,187,291
Mitchell, Alice Marina	NATIONAL HEART, LUNG AND BLOOD	The contribution of contrast media exposure to acute kidney injury in patients evaluated for pulmonary	MEDICINE		

	INSTITUTE	embolism in the emergency care setting: a prospective, randomized trial			
Mitchell, Alice Marina	NATIONAL HEART, LUNG AND BLOOD INSTITUTE	The contribution of contrast media exposure to acute kidney injury in patients evaluated for pulmonary embolism in the emergency care setting: a prospective, randomized trial	MEDICINE	EMERGENCY MEDICINE	\$2,845,924
Walczak, Claire E	NATIONAL INSTITUTE OF GENERAL MEDICAL SCIENCES	Mechanisms of Mitotic Fidelity	MEDICINE	MEDICAL SCIENCES PROGRAM	\$2,334,479
Hollenhorst, Peter C	NATIONAL CANCER INSTITUTE	Molecular mechanisms specific to ETS transcription factors	MEDICINE	MEDICAL SCIENCES PROGRAM	\$2,159,542

		that drive oncogenesis			
Pang, Peter S	NATIONAL HEART, LUNG AND BLOOD INSTITUTE	B-lines Lung Ultrasound Guided ED Management of Acute Heart Failure (BLUSHED-AHF)	MEDICINE	EMERGENCY MEDICINE	\$1,158,604
Nelson, David E	NATIONAL INSTITUTE ALLERGY & INFECTIOUS DISEASES	Genetic analysis of mechanisms of chlamydial immune evasion	MEDICINE	MICROBIOLOGY & IMMUNOLOGY	
Nelson, Rick F	NATIONAL INSTITUTE ON DEAFNESS AND OTHER COMM. DIS	Genetically Mediated Hair Cell Degeneration in 3D Inner Ear Organoids	MEDICINE	OTOLARYNGOLOGY & H/N SURGERY	\$1,072,980
	U.S. DEPARTMENT OF	Therapeutic Targeting using Tumor Specific Peptides Inhibits long Non-Coding		MEDICAL SCIENCES	

Nephew, Kenneth P	DEFENSE	RNA HOTAIR Oncogenic Activity in High Grade Serous Ovarian Cancer	MEDICINE	PROGRAM	\$706,500
Arciero, Julia Concetta	NATIONAL SCIENCE FOUNDATION	CAREER: Integrating theory and experiment to assess the contribution of distinct vascular segments in arterial insufficiency	SCIENCE	MATHEMATICS	\$599,278
Loehrer, Patrick J.	PURDUE UNIVERSITY	Walther Bioinformatics Core	MEDICINE	CANCER CENTER	\$500,000
Loehrer, Patrick J.	PURDUE UNIVERSITY	Walther Cancer Foundation -- Oncology Physical Sciences & Engineering Research Embedding	MEDICINE	CANCER CENTER	\$499,941

		Program			
Parker, Jason G	WRIGHT STATE UNIVERSITY	Alternate Tinnitus Management Techniques Developed Using Blood-Oxygen- Level-Dependent MRI with Neurofeedback	MEDICINE	RADIOLOGY & IMAGING SCIENCES	\$370,961
Asirwa, Fredrick Chite	INDIANA HEMOPHILIA & THROMBOSIS CENTER	Indiana Hemophilia & Thrombosis Support 2016	MEDICINE MEDICINE	CANCER CENTER	\$238,855
Johns, Shelley A.	INDIANA UNIVERSITY HEALTH	Mindfulness to Enhance Quality of Life and Support Advance Care Planning (MEANING): A Randomized Controlled Pilot Trial for Adults with Metastatic Cancer and Their Family	MEDICINE	GENERAL INTERNAL MEDICINE	\$200,000

		Caregivers			
Lei, Zhigang	INDIANA STATE DEPARTMENT OF HEALTH	The Role of Sestrin 3-Regulated Inflammatory Pathways in Post- Traumatic Epilepsy	MEDICINE	ANATOMY & CELL BIOLOGY	\$160,000
Xu, Xiao-Ming	INDIANA STATE DEPARTMENT OF HEALTH	Targeting vascular disruption after spinal cord injury	MEDICINE	NEUROLOGICAL SURGERY	\$160,000
Obukhov, Alexander G	INDIANA STATE DEPARTMENT OF HEALTH	Mechanisms of endothelial dysfunction in traumatic brain injury	MEDICINE	CELLULAR & INTEGRATIVE PHYSIO	\$160,000
Tan, Zhiyong	INDIANA STATE DEPARTMENT OF HEALTH	Role of hyperpolarization- activated cyclic nucleotide-gated channels in chronic neuropathic pain	MEDICINE	PHARMACOLOGY & TOXICOLOGY	\$160,000

		following spinal cord injury			
Hornby, T George	INDIANA STATE DEPARTMENT OF HEALTH	Task-specificity for Locomotor Recovery following SCI	MEDICINE	PHYSICAL MEDICINE & REHAB	\$159,670
Massie, Crystal	INDIANA STATE DEPARTMENT OF HEALTH	Improving functional ability in chronic TBI with intensive rehabilitation robotic gait training	HEALTH/REHABILITATION SCIENCES	HEALTH/REHABILITATION SCIENCES	\$158,698
Osili, Una O	BILL & MELINDA GATES FOUNDATION	Global Philanthropy Indices	LILLY FAMILY SCHOOL OF PHILANTHROPY	PHILANTHROPY	\$150,000
Biondich, Paul G	PALLADIUM INTERNATIONAL, LLC	Kenya - Health Informatics Governance and Data Analytics (HIGDA)	MEDICINE	PED-HEALTH SERVICES RESEARCH	150,000

Rodgers, Richard B	UNIVERSITY OF CALIFORNIA, SAN FRANCISCO	Transforming Research and Clinical Knowledge in Traumatic Brain Injury	MEDICINE	NEUROLOGICAL SURGERY	\$100,000
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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.

AMERICAN ASSOCIATION FOR CANCER RESEARCH (AACR)

Stand Up to Cancer Dream Team Translational Research Grant:

This opportunity will fund a translational cancer research project that will address critical problems in patient care, including prevention

strategies for those at risk, and deliver near-term patient benefit through investigation by a multidisciplinary, multi-institutional, collaborative Dream Team of expert investigators.

The ideas may focus on particular organ sites, patient populations (such as pediatrics) or on innovative methods of treatment. Projects must be designed to accelerate the application of new preventive, diagnostic or therapeutic approaches to the clinic (lead to patient involvement within 2-3 years from the beginning of grant). Proposals for Dream Team research projects must present plans indicating how the work will be translated into the clinic. The ideas should be based on perceived opportunities for success as well as high-priority areas with a critical need for rapid progress beyond current medical care.

Through a partnership with leading health care research and innovation collaborative OptumLabs, each team will have the ability to conduct research using OptumLabs' proprietary database of de-identified claims and electronic health record data, analytic tools, and research support to pursue the proposed goals of the Dream Team. Appendix A in the Program Guidelines provides more information on OptumLabs.

Deadlines: Registration: August 1, 2017; Letter of Intent: September 05, 2017; Application: January 16, 2018

<http://www.aacr.org/Funding/Pages/Funding-Detail.aspx?ItemID=69#.WUBJNNyQxVw>

NATIONAL ENDOWMENT FOR THE HUMANITIES

Next Generation Humanities PhD Implementation Grants: In recent years, research published by Humanities Indicators, among others, has revealed that humanities PhDs pursue careers in many different professions--both inside and outside academia. Yet most humanities PhD programs in the United States still prepare students primarily for tenure-track professor positions at colleges and universities. The increasing shortage of such positions has changed students' expected career outcomes. NEH therefore hopes to assist universities in implementing a new model of doctoral education, which can both transform the understanding of what it means to be a humanities scholar and promote the integration of the humanities in the public sphere.

This opportunity supports universities in instituting wide-ranging changes in humanities doctoral programs. Humanities knowledge and methods can make an even more substantial impact on society if students are able to translate what they learn in doctoral programs into a multitude of careers. Next Generation PhD Implementation Grants are designed to produce plans that will transform scholarly preparation in the humanities at the doctoral level. Students will be prepared to undertake various kinds of careers, and humanities PhD programs will increase their relevance for the 21st century.

NEH will support activities specific to each institution's needs: these may include (but are not limited to) multi-departmental collaboration, transformations in curricula, modifications in stipend structures,

altered formats for dissertations, commitment to collection of alumni career information and outcomes, partnerships with non-university entities, as well as a pledge to encourage doctoral students to explore and prepare for multiple career trajectories.

Deadline: November 29, 2017

<http://www.neh.gov/grants/challenge/next-generation-humanities-phd-implementation-grants>

NATIONAL INSTITUTES OF HEALTH

Global Brain & Nervous System Disorders Across the Lifespan

(R01): This opportunity encourages grant applications for the conduct of innovative, collaborative research projects between U.S. and low- and middle-income country (LMIC) scientists, on brain and other nervous system function and disorders throughout life, relevant to LMICs. Scientists in upper middle-income LMICs (UMICs) are also eligible to partner directly with scientists at other LMIC institutions w/ or w/o a US partner.

The collaborative research programs are expected to contribute to the long-term goals of building and strengthening sustainable research capacity in LMICs to address nervous system development, function and impairment throughout life and to lead to diagnostics, prevention, treatment and implementation strategies. The proposed work will also contribute to developing a base for research networking and evidence-based policy beyond the specific research project.

Deadline: November 07, 2017

<https://grants.nih.gov/grants/guide/pa-files/PAR-17-314.html>

Bioengineering Partnership (BRP): Non- or Minimally-Invasive Methods to Measure Biochemical Substances During Neonatal & Perinatal Patient Care & Research (R01):

This opportunity invites bioengineering and biomedical scientists to collaborate in developing non- or minimally-invasive methods for measuring biochemical substances in connection with the care of perinatal patient populations. Lab-on-a-chip methods for rapid diagnostic or prognostic purposes are also encouraged. It also encourages developing non- or minimally-invasive methods for testing analytes and physiological variables, including but not limited to: serum electrolytes; liver function tests; renal functions; biomarkers of infection & inflammation; metabolic drugs by-products of; concentrations of drugs used in clinical care/research and physiological variables affected by cardiopulmonary & metabolic systems. Sources for the monitoring could include, but are not limited to: trans-epidermal; transcutaneous using nano-sized electrodes; saliva & other body fluids.

Deadline: October 05, 2017

<http://grants.nih.gov/grants/guide/pa-files/PAR-15-285.html>

The Role of Mobile Genetic Elements of Cancer (R01): The overall goal of this opportunity is to encourage applications to investigate mechanisms regulating the expression and activity of mobile genetic elements, including long terminal repeat (LTR) and non-LTR retroelements, in cancer. For example, although long interspersed element-1 (LINE-1 or L1) retroelements are active in many cancers

whether somatic L1 insertions lead to cancer cell heterogeneity and/or adaptive phenotypes that confer growth or survival advantages during cancer evolution or response to therapy is not clear. Similarly, how human endogenous viruses (HERVs) affect cancer processes is also not well understood. In an effort to address this knowledge gap, this opportunity invites research applications that specifically investigate mechanisms regulating the expression and activity of mobile genetic elements in the context of cell transformation and assess the impact of their activity on tumor heterogeneity, cancer evolution, and response to therapy.

Deadline: October 05, 2017

<http://grants.nih.gov/grants/guide/pa-files/PAR-16-227.html>

NATIONAL SCIENCE FOUNDATION

Plant Biotic Interactions (PBI): The PBI program supports research on the processes that mediate beneficial and antagonistic interactions between plants and their viral, bacterial, oomycete, fungal, plant, and invertebrate symbionts, pathogens and pests. This joint NSF-NIFA program supports projects focused on current and emerging model and non-model systems, and agriculturally relevant plants. The scope extends from fundamental mechanisms to translational efforts, with the latter seeking to put into agricultural practice insights gained from basic research on the mechanisms that govern plant-biotic interactions. Projects must be strongly justified in terms of fundamental biological processes and/or relevance to agriculture and may be purely fundamental or applied, or include aspects of both

perspectives. All types of symbiosis are appropriate, including commensalism, mutualism, parasitism, and host-pathogen interactions. Research may focus on the biology of the plant host, its pathogens, pests or symbionts, interactions among these, or on the function of plant-associated microbiomes. The program welcomes proposals on the dynamics of initiation, transmission, maintenance and outcome of these complex associations, including studies of metabolic interactions, immune recognition and signaling, host-symbiont regulation, reciprocal responses among interacting species and mechanisms associated with self/non-self recognition such as those in pollen-pistil interactions. Explanatory frameworks may include molecular, genomic, metabolic, cellular, network and organismal processes, with projects guided by hypothesis and/or discovery driven experimental approaches.

Deadline: October 30, 2017

https://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505267

Sedimentary Geology & Paleobiology (SGP): This opportunity supports the study of modern sedimentological and deep-time records as archived in Earth's sedimentary crust at all spatial and temporal scales. These records are fingerprints of the processes that produced them and continue to shape the Earth.

The SGP program supports studies of: 1) the changing aspects of life, ecology, environments, and biogeography in geologic time based on fossil plants, animals, and microbes; 2) all aspects of the Earth's sedimentary lithosphere--its insights into the geological processes

and rich organic/inorganic resources locked in rock sequences; 3) the science of dating & measuring the sequence of events and rates of geological processes as manifested in Earth's past sedimentary and biological (fossil) record; 4) the geologic record of the production, transportation, and deposition of modern/ancient physical & chemical sediments; and 5) Earth's deep-time (pre-Holocene) climate system.

Track 1: General Program (annual): Examples of projects supported by the SGP Program can be found using the NSF Award Search (Program Information) engine by entering Element Code 7459. This track is competed annually.

Track 2: Earth-Life Transitions (ELT): The ELT track will be held biennially. Projects should involve collaborations among investigators from different geoscience disciplinary specialties and PIs are encouraged to include a modeling component. Collaboration with other science fields is welcome and encouraged. ELT also strongly encourages the involvement of early-career investigators. ELT awards will be made for projects that bring together interdisciplinary teams of researchers to address a specific earth-life transitions research problem. Activities should address the research challenges identified in the program solicitation.

Deadline: Continuous

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=13691

Designing Materials to Revolutionize & Engineer our Future

(DMREF): This opportunity seeks proposals that span researchers in

materials science, chemistry, mathematics, computer science, and engineering. The complexity and challenge of activities addressed require a transformative approach to discovering/developing new materials, predicting/optimizing properties of materials, and informing the design of material systems. Accordingly, proposed research must be a collaborative and iterative process wherein theory guides computational simulation, computational simulation guides experiments, and experiments further guide theory. Strategies to advance synthesis/growth/processing techniques, characterization/testing methodology, and theory/data/computation/simulation approaches needed to develop predictive computational models must be included.

This opportunity requires a team of PIs with the requisite expertise. Accordingly, it is expected that proposed projects will be directed by a team of at least two Senior Personnel with complementary expertise. The proposal must provide a plan for enhanced data management that ensures transparency, data sharing, and open source software, including an explicit statement of which open source license(s), if applicable, will be used. Ties with industry, national laboratories, engineering partners, or other organizations are encouraged. Because this DMREF approach emphasizes an integrated approach to materials research, cross-disciplinary educational activities are encouraged, as are public outreach activities.

Deadline: January 17, 2018

http://www.nsf.gov/funding/pgm_summ.jsp?pims_id=505073&org=NSF&sel_org=NSF&from=fund

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 schin@iupui.edu.

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