

INSIDE **RESEARCH**

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LSU Health
SHREVEPORT®

The new **Biosafety Level 3 (BSL-3) lab at LSU Health Shreveport** will conduct research or work on infectious agents, either indigenous or exotic, along with toxins that can cause serious or potentially lethal infections through inhalation. Compared with a BSL-2 lab, additional security precautions are essential to include limiting access to the laboratory and requiring lab personnel to be placed under medical surveillance.



IN THIS ISSUE

Faculty, staff and students at LSU Health Shreveport are actively engaged in research in a variety of biomedical areas, with concentrations in cancer, cardiovascular sciences, virology, neuroscience, addiction and immunology. A core part of the institution's mission, research on campus ranges from basic science to translational research and testing the latest therapies in clinical trials. The School of Graduate Studies helps to train future scientists, and our six centers, four of which are Louisiana Board of Regents recognized Centers of Excellence, further elevate our research portfolio.

The Office of the Vice Chancellor for Research supports these endeavors and is comprised of the Office for Sponsored Programs and Technology Transfer, Research Development and Management, Human Research Protections Program (HRPP), the Institutional Review Board (IRB), and the Research Core Facility.

LSU Health Shreveport is an equal opportunity institution and adopts a definition of diversity that embraces a broad spectrum of human expression and characteristics that include but are not limited to race, ethnicity, gender/gender identity, social and cultural attributes, abilities, sexual orientation, religion, rural or metropolitan background, military or veteran status, and age. In addition, diversity also includes life experiences, record of service, and other talents and personal attributes that enhance the work and learning atmosphere. We are dedicated to building an inclusive and diverse community through the recruitment, enrollment, hiring, and retention/graduation of students, faculty, staff, and leadership who meet this definition of diversity.

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From the Vice Chancellor for Research



Chris Kevil, PhD

*Vice Chancellor for Research
Dean, School of Graduate Studies
Director/Principal Investigator,
Center for Redox Biology and
Cardiovascular Disease COBRE*

As the 2022-23 fiscal year is coming to a close, we are focused on wrapping up the year strong while planning for another productive and exciting year with the opening of our new BSL3 lab later this summer, which will be located in the 155,000 sq. ft. Center for Medical Education and Emerging Viral Threats. More details on the BSL3 lab, which will become the new home for the Center of Excellence for Emerging Viral Threats, will be forthcoming in the next issue of *Inside Research* magazine.

Another major development for our campus is the arrival of our new chancellor, David Guzick, MD, PhD, who joined LSU Health Shreveport on January 9. Dr. Guzick brings an impressive track record of shepherding academic medical centers into periods of significant growth and strategic advancement. In addition to the

information shared in the following Q & A with Dr. Guzick, I would be remiss if I did not share a small portion of his bio which can be found on page 4.

We are also very enthusiastic about being named as one of five U.S. sites participating in the Black and African American Connections to Parkinson's Disease (BLAAC-PD) Study in partnership with the Michael J. Fox Foundation for Parkinson's Research. Dr. Elizabeth Disbrow, the Principal Investigator (PI) for this global initiative has already enrolled more than fifty individuals in this trial in the first month. More details on this trial can be found on page 11.

This issue of *Inside Research* will highlight the latest remarkable work occurring at our institution. With continued support from our stakeholders, the best is yet to come.

Sincerely,

A handwritten signature in black ink that reads "Chris Kevil". The signature is fluid and cursive.

Chris Kevil, PhD

Vice Chancellor for Research

Q & A

with the NEW
LSU Health Shreveport
CHANCELLOR



David Guzick, MD, PhD

Why is research such a vital part of a vibrant academic medical center?

When academic medical centers are firing on all cylinders, a beautiful thing is created: a positive feedback loop between patient care, education and research. This loop forms a “virtuous circle” for the medical center that expands in size, scope and stature. Research that leads to the creation of new knowledge translates into clinical practice to improve patient outcomes, and at the same time stretches the minds of our students and trainees to think in new ways about the causes of diseases and their treatments. And as our research portfolio grows with dollars coming from outside the region, new jobs are created that have a multiplier effect on our local economy.

What do you see as the research strengths at LSU Health Shreveport? How can these strengths be leveraged?

LSU Health Shreveport has many research strengths that integrate our institutional missions of teaching, healing and discovery. In our response to the COVID-19 pandemic, our faculty and trainees led the state in sequencing mutations of the SARS-CoV2 virus, enabling real time surveillance of COVID-19 in the population. Coordinated efforts such as this can, and will, be leveraged to address other needs of our community and state for cancer, neurological and cardiovascular diseases. Moreover, LSU Health Shreveport has a number of research centers. Some are designated as a Center of Excellence by the Louisiana Board of Regents, including Cancer (Dr. Rick Mansour, Interim Director), Arthritis/Rheumatology (Dr. Samina Hayat, Director), Cardiovascular Diseases and Sciences (Dr. Wayne Orr, Director), and Emerging Viral Threats (Dr. Andrew Yurochko, Director). Two additional centers, the Center for Brain Health (Dr. Elizabeth Disbrow, Director) and the Louisiana Addiction Research Center (Dr. Nicholas Goeders, Director) are working towards achieving the Center of Excellence designation. LSU Health Shreveport has two centers funded by the National Institutes of Health as Centers of Biomedical Research Excellence, often referred to as “COBRE” centers. These are for Applied Immunology and Pathological Processes (Dr. Andrew Yurochko, Director) and Redox Biology and Cardiovascular Disease (Dr. Chris Kevil, Director). Faculty can leverage the resources in these centers to apply for additional grants that build on their funded research already in place.

Have you identified any “quick research wins” at LSU Health Shreveport that you plan to support?

Yes! We are in the process of doing three things that we are confident will result in early wins. First, we will fund a request for application, or “RFA,” to principal investigators holding federal grants to produce the preliminary data needed to obtain an additional grant. An external “mock study section” will review the applications and recommend those that are likely to be competitive. Second, we will identify principal investigators whose grant applications were not funded but received a good score and provide them with the resources needed to respond to reviewers’ critiques. And third, in October, we will open a specialized research lab in the new medical education building where research can safely be conducted on emerging pathogens. Notably, this field will receive substantial federal funding in the coming years. We have initiated recruitment of scientists with an established track record to launch the research program in this facility.

Where do you see research at LSU Health Shreveport in the next 3- 5 years?

Aiming high, I see total research funding doubling in 5 years, from about \$25 million annually to \$50 million. This growth in research will likely come from three sources: additional grants awarded to currently funded investigators or those on the edge of funding, new funding to researchers in emerging pathogens, and an expansion in clinical research.

What do you mean by clinical research?

Thus far, clinical research at LSU Health Shreveport has been heavily weighted towards vaccine trials. Yet clinical research encompasses a broad range of areas, including epidemiology, biostatistics, cost-effectiveness analysis, population research, artificial intelligence as applied to clinical practice, clinical trials of drugs, devices and other interventions and implementation science. Taking implementation science for example, why are some prevention strategies or medical treatments that have been shown to be effective not widely adopted by individuals in a given community? We will recruit individuals with expertise in these areas in addition to supporting existing faculty with such expertise.

What will it take to achieve your 3-5 year goals?

Belief, collaboration, effort, belief.

Have you uncovered a well-kept secret about research at LSU Health Shreveport that you’d like to see shared?

Our institution is fortunate to have numerous state-of-the-art research core facilities and instrumentation. These core facilities provide a common resource that can be used by researchers all across the campus. For example, over the past several years, new equipment has been installed for advanced next-generation genomic sequencing, high precision mass spectrometry for proteomics and metabolomics, advanced super resolution and transmission electron microscopy, and spectral high speed cell sorting. These resources, along with other new advanced technologies, are unique to our region and state, giving LSU Health Shreveport a wide range of research opportunities for studies by our own faculty and through collaboration with others.

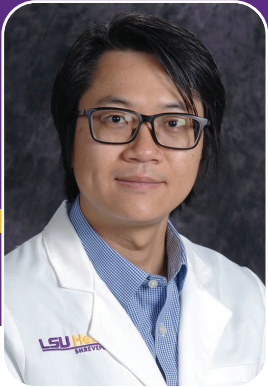
David Guzick, MD, PhD,

served for nine years as University of Florida (UF) Senior Vice President for Health Affairs and President of UF Health. Under his leadership, the UF Health hospital system and six health science colleges were brought together as a functionally integrated academic health center, resulting in transformative improvements in patient care quality, NIH funding and educational innovation, as well as a dramatic expansion in education, research and clinical facilities. From 2002 to 2009, Dr. Guzick was Dean of the School of Medicine and Dentistry at the University of Rochester. In addition to serving as Dean, he was the principal investigator for Rochester’s NIH Clinical and Translational Science Award. From 1995 until 2002, Dr. Guzick was the Henry A. Thiede Professor and Chair of the Department of Obstetrics and Gynecology at the University of Rochester.

Dr. Guzick earned his medical and doctoral degrees from NYU as part of the NIH Medical Scientist Training Program. His PhD is in economics with specialty concentrations in health economics and econometrics. Following a residency in obstetrics and gynecology at The Johns Hopkins Hospital, he completed a fellowship in reproductive endocrinology at the University of Texas Southwestern Medical School. Continuously funded by NIH for over 20 years prior to his appointment at UF and internationally recognized for his research on a variety of topics in reproductive medicine, Dr. Guzick was elected to the Johns Hopkins Society of Scholars in 2004 and to the National Academy of Medicine in 2008. His recent book, *The U.S. Health Care Industry: Balancing Care, Cost and Access*, was published by the Johns Hopkins University Press in 2020.

RESEARCH SPOTLIGHT





2023 Research Celebration Rising Star DR. REGGIE LEE

Dr. Hui-Chao “Reggie” Lee was born and raised in Taiwan. Through his father, who was a neuroradiologist Reggie often accompanied at work, Dr. Lee was exposed to the world of illnesses, science and medicine throughout his childhood. This foundational childhood experience inspired Dr. Lee to pursue a career in scientific research, with a plan to focus on basic and translational studies that relate to neurological illnesses, stemmed from his revelation that there aren’t many effective treatments for illnesses affecting the brain.

Dr. Reggie Lee obtained his PhD in pharmacology under the mentorship of world-renowned neuropharmacologist, Dr. Tony Jer-Fu Lee. His graduate studies were at Tzu Chi University in Hualien, Taiwan, where he met his wife, Yin Chieh “Celeste” Wu. In 2013, they moved to the United States to pursue post-doctoral studies at the Cerebral Vascular Disease Research Laboratories in the Department of Neurology at the University of Miami. There they met their post-doctoral supervisor, Dr. Kevin Lin, and moved with him to LSU Health Shreveport in 2016.

Since arriving in Shreveport, Dr. Lee was promoted to Assistant Professor on the tenure track after completing a two-year American Heart Association Postdoctoral Fellowship. He has been very productive in his seven years at LSU Health Shreveport with over 20 peer-reviewed publications, many invited lectureships nationally and internationally, journal editorships and mentorship of medical students, graduate students and postdoctoral fellows.

Dr. Reggie Lee is now working to find an answer to the question: “Can the after-effects of cardiac arrest be ameliorated?” Of the 350,000+ cases of out-of-hospital cardiac arrests that happen in the U.S. each year, only 8-10 percent survive, even if the cardiac arrest is treated by Emergency Medical Services. Among people who experience cardiac arrest and live, more than half do not return to their previous level and quality of life due to a variety of impairments such as cognitive deficits, anxiety, depression, post-traumatic stress symptoms and severe fatigue. In addition to a lower quality of life, this adds up to a shortened lifespan. To accomplish his goal of ameliorating the after-effects of cardiac arrest, a

causal biochemical mechanism in the brain would have to be identified, and then molecules that could in some way counter the trouble-making pathway would have to be developed and tested.

Knowing few things, if any, are more complex than the human brain, Dr. Lee has been dedicated to his research. He knew that the after-effects of cardiac arrest are physiologically complex, involving reduced blood flow to the brain’s neuronal cells, inflammation of these cells and some added measure of dysfunction of their intracellular machinery. In trying to identify those factors that ultimately determine whether the brain cells remain alive or die off following cardiac arrest, Dr. Lee discovered a novel enzyme in the brain that occurs much more often in brain neurons that are susceptible to reduced blood flow. In studies of rodents that were successfully resuscitated after experimentally induced cardiopulmonary arrest, he was able to show that when these animals were treated with a drug that specifically inhibited this enzyme, many of the after-effects of CA -- reduced blood flow, neuronal inflammation, neuron cell death, and learning/memory deficits -- were alleviated.

This line of research provided the data that earned Dr. Lee a \$1.83 million R01 award from the NIH entitled “Kinase regulation in cerebral ischemia,” for a five-year study that began on April 1, 2022. Hopefully, if one of the molecules that Dr. Lee is investigating is shown to be successful in ameliorating the after-effects of cardiac arrest in rodents, it can represent the start of a research program in which this discovery can be translated to the management of cardiac arrest in humans. Regarding Dr. Lee and his research, the chair of neurology, L. Dedrick Jordan, MD, PhD, states that “Dr. Lee’s lab is doing critically important research using innovative techniques to better understand why the brain cannot tolerate even short periods of decreased blood flow without permanent damage. This fundamental knowledge will enable him and others to develop targeted therapies that could dramatically reduce brain injury after stroke or cardiac arrest. Furthermore, access to research participants through collaborations with clinicians in our department will enable Dr. Lee to validate and translate these discoveries more rapidly.”

Fifth Annual Research Celebration Honors Excellence in Research

On Thursday, February 23, LSU Health Shreveport held the 5th Annual Research Celebration, where members of the community and LSU Health Shreveport employees and students were invited to hear about the past year's accomplishments of the Office for Research. Updates on extramural grant funding, the clinical trials office, and a highlight of new faculty members and upcoming developments were shared by Dr. Chris Kevil, Vice Chancellor for Research and other faculty members. The Office for Research also recognized the 2023 Research Excellence Award Winners for their research, academic achievements and support for the advancement of research at LSU Health Shreveport.



- **Excellence in Extramural Funding Award**
Martin Sapp, PhD, Chair of Microbiology & Immunology
- **Excellence in Translational Research Award**
Nobel Bhuiyan, PhD, Assistant Professor of Internal Medicine
- **Excellence in Innovation Award**
Patrick Massey, MD, MBA, Associate Clinical Professor and Director of Clinical Research for Orthopaedic Surgery
- **Research Rising Star Award**
Hui-Chao "Reggie" Lee, PhD, Assistant Professor of Neurology
- **Community Champion Award**
Kris Clements, SMART Program Student Coordinator, Teacher at Caddo Magnet High School
- **Career Service Awards**
Kenneth McMartin, PhD, Professor of Pharmacology, Toxicology, & Neuroscience, 42+ years of service to LSUHS
Kevin McCarthy, PhD, Chair of Cellular Biology & Anatomy, 25+ years of service to LSUHS

Kevin Lin Investiture

On October 7, 2022, the LSU Health Sciences Foundation held the formal investiture of Hung Wen "Kevin" Lin, PhD, as the Joanna Gunning Magale Endowed Professor of Neurology. An endowed professorship is among the highest honors that can be bestowed on a faculty member. The professorship's purpose is 2-fold: to provide recognition of our best and brightest and to provide crucial funding of the holder's work or to support an academic department's specific needs. Mrs. Magale was a life-long philanthropist, and this professorship was established through a gift from her estate in 1995. The purpose of the Magale Endowed Professorship is to support research within the Department of Neurology.



Dr. Lin earned his Bachelor of Science from the University of Wisconsin-Madison in Biochemistry. He went on to earn his PhD from Southern Illinois University, School of Medicine in Pharmacology in 2007. He completed his Post-Doctoral Fellowship at the University of Miami, Miller School of Medicine in Neurology in 2012.

Dr. Lin's research focus is cerebral vascular innervations and involves the characterization of novel signaling agents. The importance of identifying novel factors that influence cerebral blood flow autoregulation and innovative neuroprotective agents in the context of cardiopulmonary resuscitation and stroke are his long-term research goals. He previously discovered, a new vasotone regulatory agent (Lin HW et al., PNAS, 2008), namely the release of palmitic acid methyl ester (a vasodilator and neuroprotective agent that is more potent than some nitric oxide donors) and stearic acid methyl ester (a neuroprotective agent). His overall research interests include general neurology, stroke, cerebral ischemia, neuroprotection, angiogenesis, and cerebral blood flow.



Dr. Lynn Harrison on Detail as NASA Space Biology Scientist

Lynn Harrison, PhD, Professor of Molecular and Cellular Physiology, was selected as the Deputy Program Scientist on Detail for NASA's Biological and Physical Sciences Division of the Science Mission Directorate. NASA's Space Biology program identifies and develops concepts for transformative research relating to the changes experienced by living organisms in the unique environment of space. As the Deputy Program Scientist, Dr. Harrison will provide expert scientific leadership for the formulation and execution of the program, particularly in the area of rodent biology. She began her two-year term on Monday, February 27 and is in the process of moving to Washington DC to work at NASA Headquarters.

This is not Dr. Harrison's first experience with NASA, however. In 2011, she participated as a panel expert in a programmatic meeting, and from December 2020 to December 2022, Dr. Harrison was the Chair of the BLISS (Space Biology Beyond LEO Instrumentation and & Science Series) Scientist Working Group for Space Biology. She was involved in identifying new members, directing the discussion of the BLISS group, establishing the agenda for the meetings and writing the yearly report. Over the past ten years, Dr. Harrison has received over \$1.4 million in funding from grants as PI or Co-I funded by NASA or the Louisiana Space Grant (LaSPACE), which is a consortium of the Board of Regents and NASA. Her most recent grant award was titled "Investigating Lunar Stress and Parkinson's Disease Using an Alpha Synuclein Yeast Model."

Dr. Harrison is one of the founders and organizers of the Space Biology Interest Group (SBIG) at LSU Health Shreveport, which was established in March 2022. She organized monthly meetings with speakers to discuss new research ideas related to humans thriving in deep space and published research related to space biology, and informed faculty and students of funding opportunities from NASA and LaSPACE.

School of Medicine Students Selected as NIH *All of Us* Research Scholars

Three LSU Health Shreveport second year medical students were chosen to participate in the National Institutes of Health (NIH) *All of Us* Research Scholar Program: Raegan Abadie, Nicholas Jones and Tyler Tran. The NIH *All of Us* Research Scholars program aims to address the critical need to reduce disparities in healthcare and the biomedical workforce by supporting young researchers. During the eight months of the program, as they continued as full-time medical students, our students conducted an individual research project, received skills training and connected with a mentor for professional development.

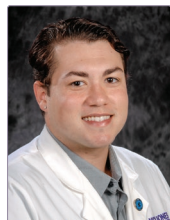
Abadie, Jones and Tran each designed a research project of their choosing utilizing the diverse dataset from the *All of Us* Research Hub, a dataset with over 556,000 participants, 338,000 electronic health records and 410,000 biosamples available to researchers. Tyler Tran was chosen to present at the *All of Us* Research Virtual Convention on March 29.



Raegan Abadie

Correlation between Female Infertility and Obesity in Different United States Regions

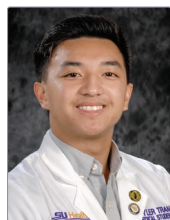
“My research project is focused on the correlation of female infertility and obesity in different United States regions and the comparison to medically underserved areas of the USA. With this research, I hope to draw awareness to the high rates of female infertility in medically underserved areas. I gained experience with research methods and techniques that helped me grow as a researcher with the guidance of an experienced mentor during the program.”



Nicholas Jones

A Cohort Study on the Effects of Genetic Polymorphisms and Environmental Factors on the Development of Asthma

“The long-term goal of this study is to understand genetic inheritance and the economic relationship with the risk for asthma development and to bridge gaps in the literature. As I complete the program, I am thankful for the opportunity to work with the NIH Workbench and the All of Us Research Program and for participants who submitted data. I’m grateful to have been able to design my project, complete a poster and present my research to a national audience.”



Tyler Tran

Race and Gender Differences in High Density Lipoprotein in Myocardial Infarction

“My research is on the association of decreased plasma HDL cholesterol and risk of myocardial infarction in racial and gender populations. The number one factor that distinguishes this program from other research programs is the ability to work at our own pace remotely while still having access to an experienced mentor, a remote research workspace and a variety of remote research resources. Thanks to this program, I’ve been able to develop a research topic emphasizing my interests in medicine without disrupting my academic goals.”

**LSUHS
FACULTY
Named World's
Top 2% Scientists
in 2022**

J. Steven Alexander, PhD

Sami Bahna, MD, DrPH

Pat Bass, MD

Randal Buddington, PhD

Nicholas Goeders, PhD

Shile Huang, PhD

Sushil Jain, PhD

Chris Kevil, PhD

Kenneth McMartin, PhD

Cherie-Ann Nathan, MD, FACS

Yuping Wang, MD, PhD

HONORS and APPOINTMENTS

The **Department of Orthopaedic Surgery** and **Physical Therapy Program** joined a multicenter trial with the University of Pittsburgh, funded by the Department of Defense, entitled “STaR Trial for Multi-Ligament Knee Injuries.”



Richa Aishwarya, PhD, was awarded an American Heart Association Postdoctoral Fellowship.



Nirjhar Aloy, PhD Candidate, received the FWCC Carroll Feist Pre-Doctoral Fellowship for his project “The Role of Alpha-Synuclein in Regulation of Trafficking of Multivesicular Bodies and the Release of Extracellular Vesicles in Melanoma Cells.”



Siyuan Cheng, PhD, Biochemistry and Molecular Biology Fellow, received the FWCC Carroll Feist Post-Doctoral Fellowship for his project “The Binary Function of Notch Signaling in Prostate Cancer Progression.”



Alexandra Finney, PhD, Pathology and Translational Pathobiology Fellow, was awarded an American Heart Association Postdoctoral Fellowship.



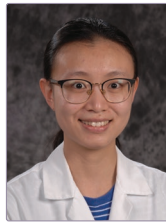
Mychal Grames, PhD Candidate, Pharmacology, Toxicology, & Neuroscience, received the Biotechnology Specialty Section Student Achievement Award from the Society of Toxicology.



Samina Hayat, MD, Division Chief and Professor of Rheumatology and Director of CEAR, was designated a Master of the American College of Rheumatology.



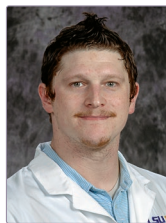
Alan D. Kaye, MD, PhD, DABA, DABPM, DABIPP, FASA, Professor of Anesthesiology and Pharmacology, Toxicology & Neuroscience, received the Lifetime Achievement Award from the American Society of Interventional Pain Physicians.



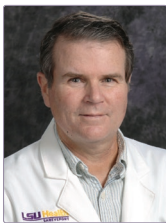
Lin Li, PhD Candidate, received the FWCC Carroll Feist Pre-Doctoral Fellowship for her project “Androgen Deprivation Induces TET2, Priming Transcriptome Reprogramming and Neuroendocrine Trans-Differentiation in Prostate Cancer.”



Krista Queen, PhD, Director of Viral Genomics and Surveillance for CEVT, was invited to present her work, ‘Investing and Sustaining Genome Surveillance is Critical for Stronger Pandemic and Epidemic Preparedness and Response,’ at the Eastern Mediterranean Acute Respiratory Infection Surveillance (EMARIS) Network Conference, organized by the World Health Organization, Muscat, Oman, Mar. 13-15.



Matthew Scott, PhD, Pathology and Translational Pathology Fellow, received an award for Best Poster at the 2023 Vascular Biology Gordon Research Conference for his poster “The Role of EphA2 in Vascular Smooth Muscle Cell Proliferation, Migration, and Mitogenic Signaling.”



Stephan Witt, PhD, FCCSI, Professor of Biochemistry and Molecular Biology, served on two NIH study sections: Biophysical, Physiological, Pharmacological, and Bioengineering Neuroscience and Member Conflict: Topics in Neurobiology and Neuropharmacology.

LSU Health Shreveport Named New Site for Nationwide Study on Parkinson's Disease in Black and African American Individuals

LSU Health Shreveport has partnered with The Michael J. Fox Foundation for Parkinson's Research (MJFF) to become one of five sites participating in the Black and African American Connections to Parkinson's Disease (BLAAC-PD) study, a project of the Global Parkinson's Genetics Program (GP2) and the Aligning Science Across Parkinson's (ASAP) initiative. MJFF serves as the implementation partner for GP2 and works with the ASAP initiative to coordinate a global program to conduct scientific research and analysis to identify genetic links to Parkinson's disease.



It is estimated that nearly one million people in the United States are affected by Parkinson's disease (PD), an age-related degenerative brain condition that impacts motor and cognitive function. It is the most common movement-related brain disease and the second-most common neurodegenerative disease.

The Black and African American Connections to Parkinson's Disease (BLAAC-PD) research study seeks to learn more about gene changes that may cause Parkinson's in Black and African American people. To date, 90% of genetics studies performed relating to Parkinson's disease have involved populations of European ancestry, meaning that Black and African American individuals are underrepresented in current research data and the genetic impact on PD susceptibility in these populations is largely unknown.

“While great strides have been made in Parkinson's disease research, there is still more to learn, especially regarding the genetic impact on disease development. Information gathered through studies like BLACC PD could lead to major breakthroughs in prevention, diagnosis, and treatment of Parkinson's disease. Our team at LSU Health Shreveport is looking forward to working with GP2 and the Michael J. Fox Foundation to better understand PD and develop new therapies for all groups of people who are affected by this disease,” said Elizabeth Disbrow, PhD, Director of the Center for Brain Health and Professor of Neurology, who will lead the study at LSU Health Shreveport.

LSU Health Shreveport joins Rush University, University of Chicago, Kaiser Mid-Atlantic and University of Alabama at Birmingham as participating U.S. BLAAC-PD study sites

LSU Health Shreveport joins Rush University, University of Chicago, Kaiser Mid-Atlantic and University of Alabama at Birmingham as participating U.S. BLAAC-PD study sites



Medical Students Cardiovascular Research and Discovery Opportunities

The Center for Cardiovascular Diseases and Sciences (CCDS) has launched the Medical Students Cardiovascular Research and Discovery Opportunities (MS-CARDIO) for medical students to enjoy the opportunity to perform cardiovascular research in the lab of a CCDS faculty member. The summer program will run for 5 weeks, 40 hours per week, with the opportunity for students to extend their research into the following fall semester.

Participating students will have the opportunity to be mentored by one of fifteen CCDS members, participate in enrichments and seminars, mentor an undergraduate student in the CURIOS Program, receive a stipend and present their research at the CCDS Symposium, MSRP poster session and at a national conference.

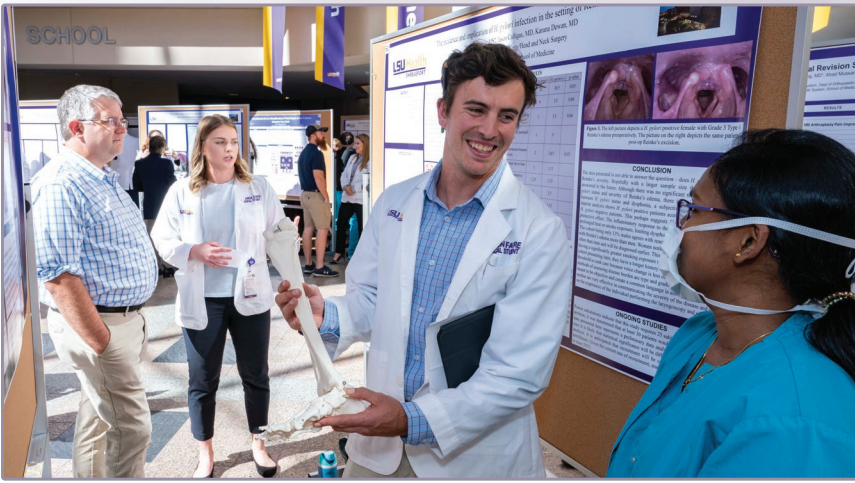
GRANT FUNDING

Arrigo De Benedetti, PhD, Professor of Biochemistry and Molecular Biology, received an LSU Collaborative Cancer Research Initiative (CCRI) Grant for his project “Identification of Gene Targets for Effective Cisplatin-Based Treatment of Prostate Cancer.”

Taichiro Nonaka, DDS, PhD, Assistant Professor of Cellular Biology and Anatomy, received an LSU CCRI Grant for his project “Targeting saliva as a novel strategy for cancer immunotherapy.”

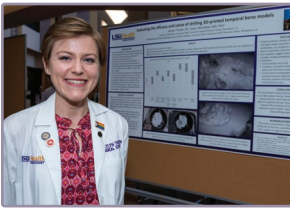
Shile Huang, PhD, Professor of Biochemistry and Molecular Biology, received an LSU CCRI Grant for his project “Repositioning of the fungicide ciclopirox for triple negative breast cancer therapy.”

Xiuping Yu, PhD, Associate Professor of Biochemistry and Molecular Biology, received an LSU CCRI Grant for her project “Targeting INSM1 for the treatment of neuroendocrine prostate cancer.”



Medical Student Research Program

The LSU Health Shreveport School of Medicine's Medical Student Research Program (MSRP) had its largest number of participants in 2022 with over one-third of the first-year class participating. Fifty-three students showcased their research project findings at a competitive poster presentation on October 26. Students worked directly with a faculty mentor on their projects for 10-12 hours a week for five weeks over the summer. In addition to being able to share their work, students competed to receive an award in either basic science or clinical research. Over 30 judges participated in evaluating the projects. Sponsored by the School of Medicine's Dean's Office, the Medical Student Research Program fosters research activity, inspires students to learn more about the research process and generates quality research evidence, while also contributing to building of highly competitive resumes for the students when they apply for a residency program in their fourth year of medical school.



POSTER PRESENTATION WINNERS

CLINICAL SCIENCE CATEGORY

- 1st Place – Kaitlyn Tholen
- 2nd Place – Miranda Duhon
- 3rd Place – Joshua Rosby



BASIC SCIENCE CATEGORY

- 1st Place – Chizoba “Ama” Mosieri
- 2nd Place (tie) – Ivan Alvarez and Morni Modi
- 3rd Place – Kristin Delgado

Biomedical Research and Industry Day Brings Scientists and Students Together

After being held virtually the past two years due to the COVID-19 pandemic, Biomedical Research and Industry Day (BRaID) was held in person on Thursday, October 20 and welcomed more than 170 registrants from academic institutions across North Louisiana. Biomedical Research and Industry Day is focused on bringing together students, trainees, and scientists conducting biomedical research to learn more about the interface between the research laboratory and commercial sector. The theme for this year's conference was “Translational Science: Collaborative Innovation to Improve Health”. Research and industry experts from the Springfield Clinic, Abiomed, Inc., Pfizer, Inc. and the University of South Florida presented keynote presentations and participated in a panel question and answer session. The event also featured talks from students and postdoctoral fellows, a poster session, and networking opportunities. The 2022 BRaID conference was hosted at Louisiana State University Shreveport in collaboration with LSU Health Shreveport, University of Louisiana Monroe, and Louisiana Tech University. Special thank you to event sponsors Louisiana Startup Prize, LSUHS Center for Brain Health, LSUHS Center for Cardiovascular Diseases and Sciences, LSUHS Louisiana Addiction Research Center, and the Center for Biomedical Engineering and Rehabilitation Sciences at Louisiana Tech University.

2022 BRAID AWARD WINNERS

- 1st PLACE High School Student: **Katherine Michael** (LSUHS, SMART Program)
- 1st PLACE Undergraduate Student: **Connor Haskins** (LA Tech)
- 2nd PLACE Undergraduate Student: **Audrey Lashley** (LSUS)
- 1st PLACE Graduate Student: **Utsab Subedi** (LSUHS)
- 2nd PLACE Graduate Student: **Jiyu Li** (LSUHS)
- 3rd PLACE Graduate Student: **Luisa Delgadillo** (LSUHS)
- 1st PLACE Postdoctoral Fellow: **Alex Finney, PhD** (LSUHS)
- 2nd PLACE Postdoctoral Fellow: **Randa Eshaq, PhD** (LSUHS)
- 1st PLACE Medical Student: **Ross Dies** (LSUHS)
- 2nd PLACE Medical Student: **Jay Manuel** (LSUHS)
- 1st PLACE Clinical Fellow: **Matthew Martin, PT, DPT** (LSUHS)



LSUHS Hosts American Society for Microbiology Conference

The 2022 annual meeting of the South Central Branch of the American Society for Microbiology was hosted by LSU Health Shreveport's Department of Microbiology and Immunology at the Shreveport Convention Center October 27-29. The program consisted of keynote talks, oral and poster sessions, and social opportunities.



The American Society for Microbiology (ASM) is the oldest and largest single life science membership organization in the world. The ASM South Central Branch was founded in 1947 and has a long history of providing opportunities for microbiologists, immunologists, and virologists from Louisiana, Mississippi, and Arkansas to share their work, network, and collaborate.

Bailey Mosher, PhD, Microbiology and Immunology Postdoctoral Fellow, received the inaugural Richard and Dennis O'Callaghan Award at the American Society of Microbiology South Central Branch Annual Meeting for best oral presentation in the Postdoctoral Fellow category.

Danielle Schaal, PhD Candidate, Microbiology and Immunology, received the Charles S. McCleskey Award at the ASM South Central Branch Annual Meeting for outstanding research presented by a doctoral student during an oral or poster presentation.

Second Annual Heart Health Day



Heart Health Day returned for its second annual health fair on Saturday, October 1 at Ochsner LSU Health Shreveport - St. Mary Medical Center. This event was led by the LSU Health Shreveport Center of Excellence for Cardiovascular Diseases and Sciences (CCDS) and hosted by Ochsner LSU Health Shreveport. Each year, Heart Health Day serves the Shreveport-Bossier community by encouraging individuals to improve their overall cardiovascular health. The family-friendly event helps participants understand healthier lifestyle habits through educational videos and activities about heart health, and engagement with Ochsner LSU Health Shreveport healthcare professionals. This year, Heart Health Day welcomed more than 150 attendees and provided free health screenings to more than 120 people. Screening included EKG, cholesterol, glucose, BMI, ABI and blood pressure. Other event highlights included information on clinical trials and how heart health relates to brain health from the LSUHS Center for Brain Health, group exercise classes, one-on-one physician consultations, nutrition guidance, children's activities, American Heart Association Hands-Only CPR training, free lunches and door prizes.

NEW FACULTY

Mabruka Alfaidi, PhD, Instructor in Pathology & Translational Pathobiology

Rohit K. Jangra, PhD, Assistant Professor of Microbiology & Immunology

Baojin Ding, MD, PhD, Assistant Professor of Biochemistry & Molecular Biology

Vinita Batra, PhD, Instructor of Psychiatry & Behavioral Medicine

Hongyan Guo, PhD, Assistant Professor of Microbiology & Immunology

Tarek Magdy, PhD, Assistant Professor of Pathobiology & Translational Pathobiology

Joseph Dedrick Jordan, MD, PhD, Chair of Neurology

Omar Franco, MD, PhD, Associate Professor of Biochemistry & Molecular Biology

Sharee N. Light, PhD, Associate Professor of Neurology and Psychiatry & Behavioral Medicine

Shawn E. McNeil, MD, Assistant Professor of Psychiatry & Behavioral Medicine, Director of Neuroinformatics Research

Nirav Dhanesha, PhD, Assistant Professor of Pathology & Translational Pathobiology



LSU Health Shreveport Hosts Louisiana Junior Science and Humanities Symposium

LSU Health Shreveport hosted the Louisiana Junior Science Humanities and Symposium (JSHS) on Saturday, January 14 and Sunday, January 15. The event was one of 48 regional JSHS competitions that features presentations of original research conducted by high school students from around the state of Louisiana. At each of the regional competitions, three finalists are eligible to receive scholarship awards totaling \$4,500 (awarded at \$2,000, \$1,500 and \$1,000). Five regional finalists are awarded an all-expenses-paid trip to the National Symposium held in Bethesda, Maryland.

JSHS is designed to challenge and engage students in grades 9-12 in science, technology, engineering or mathematics (STEM). Forty-one students from across Louisiana competed for scholarships and recognition by presenting the results of their original research efforts before a panel of judges and an audience of their peers. Symposium participants also heard presentations of current research by the host universities, visited research and development laboratories, and met and exchanged ideas with practicing researchers and fellow students.

The Junior Science and Humanities Symposia Program is jointly sponsored by the United States Departments of the Army, Navy, and Air Force, in cooperation with leading research universities throughout the nation. The National Association of Secondary School Principals has placed JSHS on the NASSP Advisory List of Contests and Activities.

- 1st place, \$2000 scholarship, **Sophie Chen, Caddo Parish Magnet High School**
- 2nd place, \$1500 scholarship, **Andrew Minagar, Caddo Parish Magnet High School**
- 3rd place, \$1000 scholarship, **Raj Letchuman, Caddo Parish Magnet High School**
- 4th place, **Keanna Luo, Baton Rouge Magnet High School**
- 5th place, **Ella Barker, St. Joseph's Academy**

All five students will attend the National JSHS to be held in April in Virginia Beach, VA. Sophie Chen and Andrew Minagar will present orally and vie for further scholarship. Raj Letchuman, Keanna Luo, and Ella Barker will present posters.

RESEARCH BY THE NUMBERS

- 6 Research Centers
- 4 Centers of Research Excellence
- 3 NIH Centers of Biomedical Research Excellence (COBRE)

Numbers reported reflect FY23 To Date funding as of February 2023.

EXTRAMURAL GRANT FUNDING

\$26,111,984



TOTAL # OF
GRANTS
SUBMITTED

141



TOTAL # OF
DISCLOSURES
SUBMITTED

22

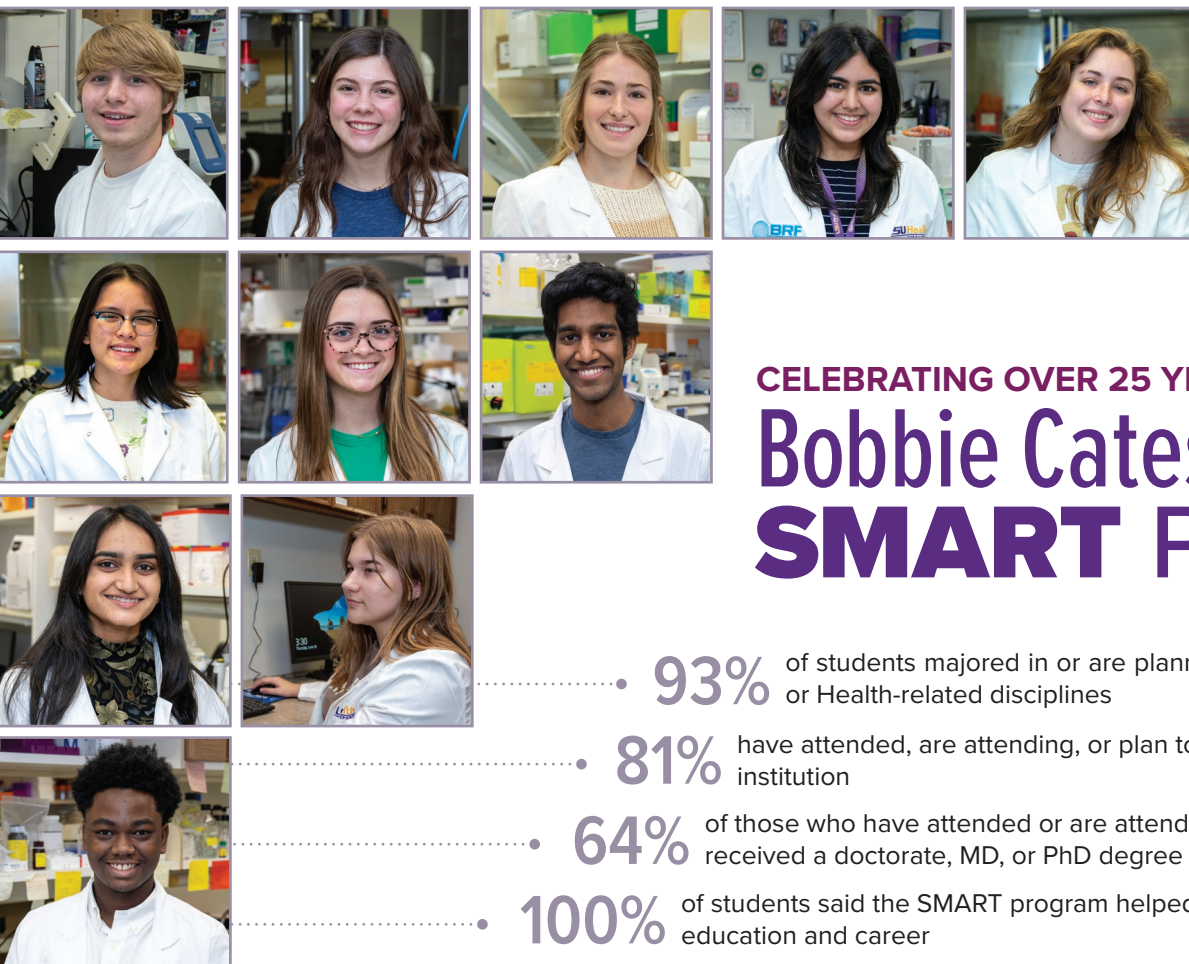


TOTAL # OF
PATENTS FILED

13

TOTAL # OF
PATENTS ISSUED

2



CELEBRATING OVER 25 YEARS of the
Bobbie Cates Hicks
SMART Program

• **93%** of students majored in or are planning to major in the Science or Health-related disciplines

• **81%** have attended, are attending, or plan to attend a postgraduate institution

• **64%** of those who have attended or are attending graduate school received a doctorate, MD, or PhD degree

• **100%** of students said the SMART program helped them in their education and career

*Data from survey of 72 SMART students and alumni