

COLLEGE OF NURSING AND HEALTH INNOVATION

# INNOVATIONS IN HEALTH RESEARCH



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IMPRINT ON  
HEALING**

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## PROGRAMS

### Undergraduate Nursing

Bachelor of Science in Nursing	Bachelor of Science in Public Health
RN to BSN	Bachelor of Science 3+2 BA + AT
RN to MSN	Master of Science in Exercise Science
RN to BSN Pathways	Master of Science in Athletic Training

### Graduate Nursing

Master of Science in Nursing	Master of Science in Athletic Training
Adult Gerontology Acute Care Nurse Practitioner	Master of Science in Athletic Training 3+2 BA + AT
Adult Gerontology Primary Care Nurse Practitioner	Master of Public Health
Family Nurse Practitioner	Doctor of Philosophy in Kinesiology
Psychiatric/Mental Health Nurse Practitioner	Graduate Certificate in Public Health Practice

### Community Programs

Pediatric Acute Care Nurse Practitioner	Kourage Health
Pediatric Primary Care Nurse Practitioner	MavFit Exercise and Wellness Counseling
Neonatal Nurse Practitioner	Little Mavs Movement Academy

### Certificate Programs

Dual Pedi Primary/Acute Care	Undergraduate Rural Health Certificate
Dual Gerontology Primary/Acute Care	Graduate Rural Health Certificate
RN to MSN Family Nurse Practitioner	Graduate Gerontology Health Care
Master of Science in Nursing Administration	Undergraduate Telehealth
RN to MSN Nursing Administration	Postbaccalaureate Graduate Health Care Informatics
Master of Science in Nursing Education	Postbaccalaureate Nursing Educator Certificate
RN to MSN Nursing Education	Postbaccalaureate Nurse Administrator Certificate
Master of Science Healthcare Informatics	Post-Master's Nurse Administrator Certificate
Doctor of Nursing Practice	Post-Master's Certificate - Nurse Practitioner
Doctor of Philosophy in Nursing	
BSN to PhD in Nursing	

### Kinesiology

Bachelor of Science in Exercise Science
Bachelor of Arts in Kinesiology

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Dean  
**Elizabeth Merwin**

Professor of Practice and Head of Marketing and Communications  
**Kim Siniscalchi**

Interim Associate Director of Marketing and Communications  
**Samuel Galindo**

Multimedia Producer  
**Daniel Grigg**

Contributors  
Rachel Biggs  
Katherine Egan Bennett  
Samuel Galindo  
Randy Gentry  
Daniel Grigg  
Midori Hrinda  
Neph Rivera  
Margy Rockwood  
Amber Scott  
Kim Siniscalchi

Graphic design by  
**GreenerU**



**Thank you for reading "Innovations,"** The University of Texas at Arlington (UTA) College of Nursing and Health Innovation's (CONHI) newest collection of our recent research endeavors. In this publication, you will have a front row seat into the past two years of trailblazing research being done in our college. I am excited for you to learn about how our esteemed researchers are pushing the bounds of current knowledge and finding new and exciting ways to advance health and the human condition.

Some of the stories you'll read about in this issue include the opening of UTA's new \$6.2 million, 3,500-square-foot Clinical Research Imaging Center, which features a 3-Tesla magnetic resonance imaging machine; how a group of CONHI researchers, who have each received grants from the Trauma Research and Combat Casualty Care Collaborative, are revolutionizing the recovery process for military personnel and others with traumatic injuries; and how CONHI is using research to break through social and structural determinants affecting women's health and health disparities. Additionally, you'll hear from members of UTA's Integrative Immunology Laboratory and Bone-Muscle Research Center, as they share the innovative methods being used in their research. These are just a few of the exciting stories that await you in the following pages.

Every day, our world-renowned faculty—representing nursing, kinesiology, and public health—work tirelessly to address complex health issues facing our world. I hope you enjoy the latest edition of "Innovations," and please know that we are thankful for your interest in CONHI and your continued support as we discover ways to positively impact the ever-evolving field of health care research.

Elizabeth Merwin



## NEW FACULTY



**SHIKHA PRASHAD, PH.D**

**Assistant Professor in Kinesiology**

Dr. Prashad's predominant research interest is understanding the neural and cognitive mechanisms of motor learning in populations with dopamine dysregulation (e.g., substance use, movement disorders) across the lifespan using electroencephalography (EEG) and advanced computational techniques.



**JENNIFER WOO PHD, CNM/WHNP, FACNM**

**Assistant Professor in Graduate Nursing**

Dr. Woo's research focuses on addressing health disparities in maternal child health outcomes such as preterm birth. The basis for her research centers around a biosocial framework examining how understanding the intersections of psychosocial, genomic, and nutrition impact health outcomes in pregnancy.



**DR. ROSE WIMBISH-TOMPKINS**

**Assistant Professor in Undergraduate Nursing**

Dr. Wimbish-Tompkins' primary research focus is the utilization of community-based participatory research and culturally guided evidenced-based health intervention approaches to prevent commercial tobacco and substance use among urban Native American youth populations.



**UMBER DARILEK, PHD, RN, IBCLC**

**Assistant Professor in Undergraduate Nursing**

Dr. Darilek is interested in the impact of early relational health intervention during neonatal intensive care on infant neurodevelopmental and maternal mental health outcomes.



**ELIZABETH KREUZE, PHD, RN, ATC**

**Assistant Professor in Undergraduate Nursing**

Dr. Kreuze's research interests include the study of suicide morbidity and suicide mortality among healthcare workers. She is especially interested in the study of suicide among nurses.




## PAUL FADEL APPOINTED AS THE MORITZ CHAIR IN GERIATRICS

**Dr. Paul J. Fadel**, Professor of Kinesiology, Associate Dean for Research and Director of Clinical Translational Science in the College of Nursing and Health Innovation has been appointed as the Moritz Chair in Geriatrics. Fadel will hold this appointment for three-years which began January 2024.

"I appreciate the support of the Dean, and CONHI Leadership in this appointment as the Moritz Chair in Geriatrics," says Fadel. "I look forward to advancing our research capacity and collaborations focused on investigating neural and vascular mechanisms contributing to cardiovascular disease risk, with an emphasis on aging as a primary risk factor."

Joining UTA CONHI in 2015, Fadel's extensive research background, particularly his expertise in Neural Cardiovascular Control, positioned him to secure this appointment.

"Dr. Fadel has been funded on extramural grants from 2004 to present that have resulted in 180+ publications. His expertise in the area of Neural Cardiovascular Control makes important contributions to human health and disease conditions such as heart failure, diabetes, chronic kidney disease, and cerebrovascular health," says Dean Elizabeth Merwin, PhD, RN, FAAN in an email announcement to CONHI faculty and staff.

The Moritz Chair in Geriatrics is a permanent endowment used for the benefit of the College of Nursing and Health Innovation. Fadel is excited to use this appointment to identify mechanisms related to the heightened cardiovascular disease risk with age. This will facilitate the Moritz endowment moving closer to its goal of informing the field of geriatrics, aging, gerontology, while benefiting the CONHI, UT Arlington, and the greater community. 



## FIVE FACULTY RECEIVE TENURE IN 2024



ANN AMUTA JIMENEZ



DANIEL TROTT



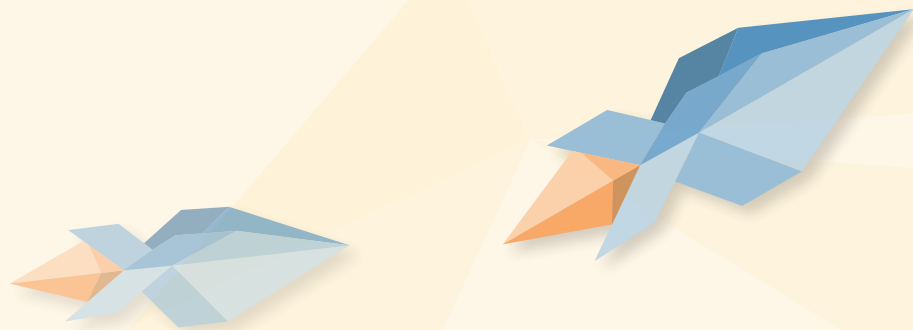
JESSICA SMITH



KYRAH BROWN



TANYA SUDIA





## SELECT RECENTLY FUNDED GRANTS

### PUBLIC HEALTH

Ann Amuta-Jimenez  
*Development of Tailored, Multilevel Cervical Cancer Interventions for Ethnically Diverse Black Women*; National Institutes of Health, \$477,869

Kyrach Brown  
*Maternal and Child Health Federal Consolidated Program*; Health Resources and Services Administration (HRSA), DHHS, \$2,272,351

Ziyad Ben Taleb  
*Understanding the effect of waterpipe size on smoking behavior, toxicant exposures and subjective experiences*; National Institutes of Health, \$154,000

Denise Hernandez  
*Mobilizing communities to strengthen resilience using a Community Asset Inventory Dashboard*; UT Health Science Center at Houston, \$306,716

Yue Liao  
*Personalized feedback of wearable biological sensor data to promote active living in cancer survivors*; American Institute for Cancer Research, \$247,500

### KINESIOLOGY

Chueh-Lung Hwang  
*Reducing blood pressure in mid-life adult binge drinkers: the role of microvascular function and sympathetic activity*; National Institutes of Health, \$761,608

Michael Nelson  
*Retrospective Single Image Multi-endPoint anaLysis (SIMPL) to define pathophysiologic mechanisms of heart failure with preserved ejection fraction*; National Institutes of Health/R21, \$247,800

Kamal Awad  
*Engineered 3D Bioprinted Muscle Grafts loaded with Prostaglandin E2 for Volumetric Muscle Loss*; UT Health Science Center at San Antonio, \$200,000

Daniel Trott  
*Mechanisms of CD8+ mediated cell non-autonomous arterial aging*; National Institutes of Health/R01, \$2,905,037

Jon Weidanz  
*Mouse Vivarium Services and In Vivo Experimental Support*; Boehringer Ingelheim International GmbH; \$2,004,680

Jingsong Zhou  
*Multifaceted role of MG53 in alleviating neuromuscular function decline in ALS*; National Institutes of Health, \$3,162,242

### NURSING

Zhaoli Liu  
*Impact of Rural Hospital Closures on Cancer Outcomes and Cancer Racial Disparity among Medicare Beneficiaries*; National Institutes of Health/R03, \$171,163

Meagan Rogers  
*Innovative Nursing Academic Collaborative*; Texas Higher Education Coordinating Board, \$192,887

Zui Pan  
*Zinc Protection Against Ischemia-Reperfusion Injury in Heart*; National Institutes of Health/R15, \$443,022

Barbara Schneider  
*A pre-hospital hyperbaric oxygen regimen to stimulate skeletal muscle regeneration after blunt trauma*; UT Health Science Center at San Antonio, \$100,000

Venu Varanasi  
*Semiconductor Biomaterials to Speed Bone Healing: A Bioengineering-Driven Approach*; National Institutes of Health/R01, \$927,061





## HEALING SOLDIERS THROUGH INNOVATION

Three University of Texas at Arlington (UTA) scientists hope to revolutionize the recovery process for soldiers and others with traumatic muscle injuries. These researchers have each received grants from the Trauma Research and Combat Casualty Care Collaborative, a University of Texas System initiative focused on the critical need for improved trauma care in the U.S.

Kamal Awad, assistant professor of research in the College of Nursing and Health Innovation (CONHI) and researcher in UTA's Bone-Muscle Research Center received a grant to support his work to utilize 3D bioprinting technology to create personalized engineered muscle grafts that can be implanted into damaged muscle tissue.

"These grafts are

designed to be conductive, allowing for improved integration with the body's natural electrical signals, and cellularized, meaning they contain living cells that can help regenerate muscle," Awad says. "Through our innovative muscle grafts, we hope to fully regenerate the injured muscles and restore their functionality again."

Awad's grafts aim to combat volumetric muscle loss, a condition often experienced by those who suffer from traumatic injuries with significant muscle loss. Many patients are unable to restore lost muscle function, leading to amputation and permanent disability.

Barbara St. Pierre Schneider, CONHI professor of graduate nursing and endowed chair in gerontological nursing, received a grant

to support her work on the implementation of hyperbaric oxygen therapy to stimulate muscle regeneration in blunt trauma victims.

"With the increasing availability of portable or soft hyperbaric oxygen chambers, a milder form of hyperbaric oxygen therapy may be accessible to crush injury patients near non-specialized clinical facilities," says Schneider. "This novel project aims to test whether a pre-hospital form of hyperbaric oxygen will stimulate the healing of muscle injured by a crush insult. The expected outcomes are findings that will contribute to building a scientific foundation for implementing hyperbaric oxygen for crush injury patients in pre-hospital settings."

Muthu B. J. Wijesundara, professor of research in the

Department of Bioengineering and principal research scientist at the UTA Research Institute, was awarded a grant to pursue his research to address pressure injuries - which often affect immobilized casualties after long range medical evaluation - through the creation of an adaptive spine board overlay designed to lessen interface pressure, immobilize the patient, and reduce vibration transmission.

"A closed-loop control will be used to optimize the air cell pressures to reduce pressure experienced by the patient's body, including any high-pressure points, to lower pressure injury risk," says Wijesundara. "Air cells at the sides of the body will also be used to stabilize

patients, particularly those with spinal cord injury and multiple fractures. Advanced algorithms will be designed to mitigate vibration transfer from the aircraft to the human body by measuring the real-time vibration experienced by the patient."

UTA faculty's use of research and technology to create a better future for soldiers and others with traumatic muscle injuries echoes UTA's commitment to finding innovative ways to address complex problems in the world.

In 2024, the Trauma Research and Combat Casualty Care Collaborative awarded more than \$18 million in grant awards to UT system researchers. ➡



Kamal Awad



Muthu B. J. Wijesundara



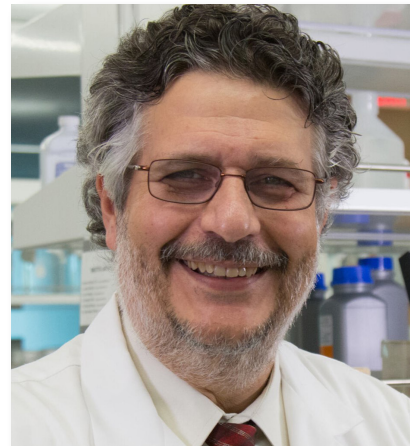
Barbara St. Pierre Schneider



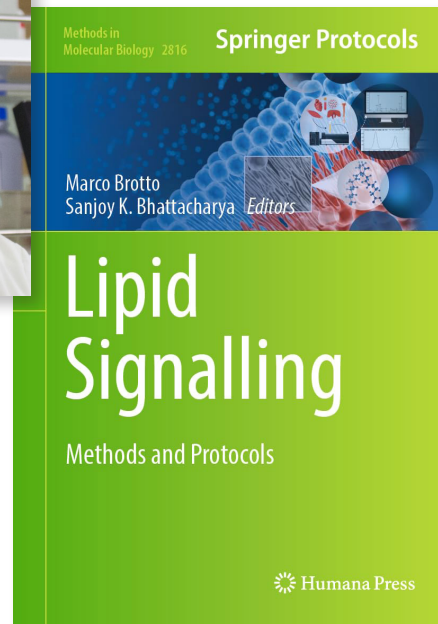


# HOT OFF THE PRESS

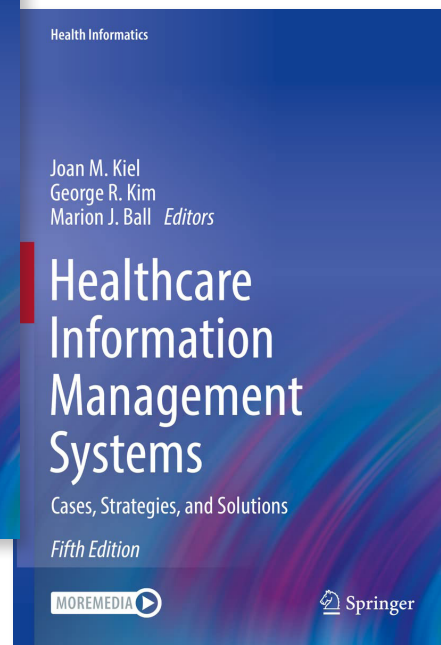
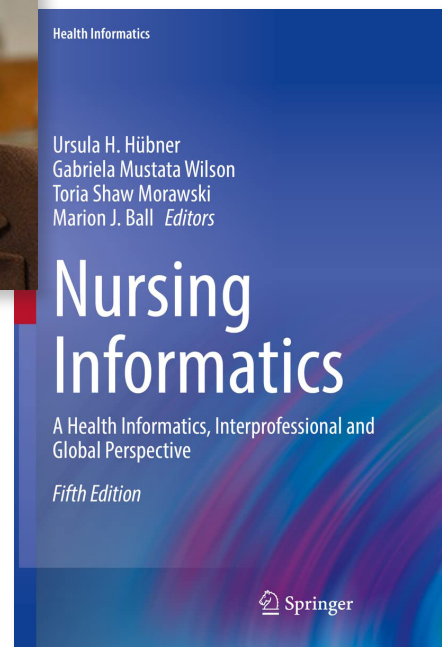
RECENT BOOK PUBLICATIONS BY CONHI FACULTY



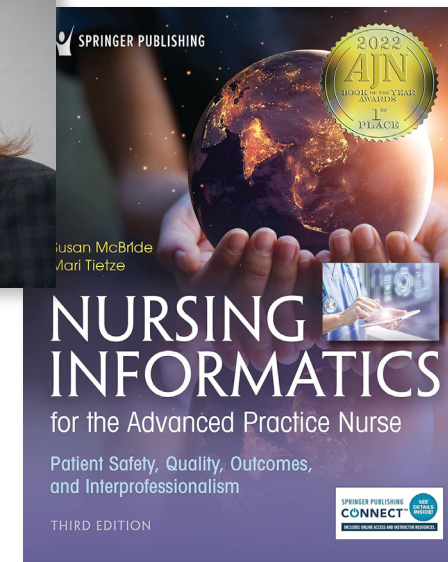
Editor: Dr. Marco Brotto



Editor: Dr. Marion Ball



Author: Dr. Mari Tietze





MAKING AN  
IMPRINT  
ON

HEALING



*An  
innovator takes a  
roundabout path  
toward developing  
groundbreaking  
3D-printing technology  
for muscle and bone  
regeneration*

—Margy Rockwood





**In the realm** of traumatic injury to musculoskeletal and intracranial structures, treatment can be a long, burdensome process that can lead to incomplete healing and loss of function. Venu G. Varanasi, a faculty member in the Bone- Muscle Research Center (BMRC), is on the forefront of developing concepts, materials, and tools that may shorten healing time, make the process more comfortable, and yield more consistent outcomes.

For Dr. Varanasi, the path to a career as a researcher, educator, and innovator at UTA was fueled by a personal and creative spirit of discovery. Initially finding success in football and other athletics early in high school, he simultaneously became intrigued by innovations in science and engineering.

"Even at 14, I realized I wanted to get a PhD because I like delving into, experimenting with, and tackling the more complicated problems that are out there," Varanasi says.

In college, it was his thermodynamics class that most sparked his interest. By developing a strong relationship with his professor, Varanasi was given opportunities to explore advanced topics. It was then that the research bug really bit him, leading him to publish three papers while still an undergraduate.

"Once I got a taste of research, I had a hard time putting it down," he says.

## WIND TUNNELS AND TURBINES

In 1996, Varanasi accepted a summer internship at NASA, working on commercial airfoil to rectify problems related to the unusually high rate of aircraft crashes between 1983 and 1997. There, he developed a polymeric glue that adhered pressure taps and sensors to the inside of the wings of airplanes to assess what was going wrong. The work environment was stimulating: he worked with his mentor to test products on a model Boeing 747 set in a "monstrous" cryogenic wind tunnel.

"The sheer size of the environment in the wind tunnel left me in amazement," Dr. Varanasi says. "It was so illuminating, the sheer size of this

testing facility and the temperatures and airflow considerations taken into account in the design of these aircraft!"

Despite the joy and successes in scientific pursuit, the path of discovery was not without its personal trials. Varanasi was halfway through a chemical engineering research assistantship at the University of Florida when he was diagnosed with Stargardt disease, a rare inherited condition that leads to early macular degeneration.

Many professors declined to provide the accommodations necessary for him to read his research materials more comfortably. Only one faculty member, recognizing Varanasi's potential, was willing to be his advisor despite his impaired vision.

## IN SEARCH OF EYESIGHT ANSWERS

Undeterred, Varanasi accepted a fellowship to go to Oak Ridge National Laboratory to investigate how to make coatings for metal blades in turbine engines. It was there that he gained a broader perspective on how to apply novel research methodology to new fields.

"They're the ones who told me, 'Hey, take your skills in what you learned here with us and see if pursuing a career in biomaterials can help you learn more about regenerative therapies!'" he says.

So, embarking on a new adventure, Varanasi started a regenerative research program at UC San Francisco. He found humor in the fact that he was working among the greatest minds in the microbiology field after spending his entire education and research career in an unrelated field.

"It was a deep dive into something I hadn't



Dr. Venu G. Varanasi with lab assistants Ahmed Yacoub and Bianca Chavez.

touched since 11th grade. So here I am, 12 years later in my postdoc, learning about the genome revolution of the 90's!" he says.

Varansi worked with some of the most prominent researchers in biomaterials used for tissue regeneration. Early on, he submitted a grant to the NIH for a career award, and to his great surprise, it was funded on the first try. His research focused on translating his learnings in engineering, thermodynamics—and even turbine engines—into the development of new devices that would improve biomedical manufacturing processes.

"This journey began because I wanted to learn more and more about my low vision problems," he says. "Over time, my scope of interest widened."

## 3D PRINTING FOR TRAUMA DEFECTS

As part of this effort, he homed in on the study of craniofacial structures, moving his research to Texas, which served as a breeding

ground for his later work on 3D printing. In 2018, he joined the UT Arlington Bone-Muscle Research Center, where he collaborated with Pranesh Aswath and Marco Brotto, who served as provost of UTA and director of the BMRC, respectively. There, by utilizing the UTA Nanotechnology Center resources, Varanasi developed absorbable coatings for bone implants.

At UTA, informed by his accumulated knowledge and experience across disciplines, he went on to explore the development of 3D-printing technology to help heal soft and hard tissue defects.

Traditionally, in cases of tissue or bone damage, an implant is used to help facilitate the healing process where the damage or loss has occurred. The primary problem with this approach lies in the size of the gap between the bone and the implant, where the implant is made separately from the defect and then inserted, but often not in the precisely same shape as the defect itself.

Varanasi created a way to shorten healing time for these injuries. His approach uses 3D printing to "live print" directly on to the defect





## AROUND THE COLLEGE

in a three-dimensional shape that contours and matches the actual dimensions of the tissue. The printed scaffold is designed to vastly reduce the gap between the edge of the implant and the defect, allowing bone or tissue to grow much more easily at a much faster rate.

"The more gap you have, the longer it takes to cross that gap," Varanasi says. "This technology, which reduces the gap to less than .01mm, enables rapid healing."

Material elasticity must also vary to accommodate the specific tissue to be regenerated.

"In a bone defect, the material must be hard like a plate," Varanasi says. "In muscle, on the other hand, the material can't be hard: it needs to be able to stretch."

### ABSORPTION ADVANTAGE

Importantly, because there is scaffold material directly attached to the underlying collagenous tissue, allowing it to stay firmly in place, there is no need to use supporting materials such as glue or screws to hold it in place. The natural blood, growth factors, and stem cells become incorporated into the porous scaffold, allowing the vascular tissue to grow inside of it. In time, the biomaterials are absorbed and the person's own new bone or tissue has regenerated the defect.

The 3D-printed scaffold material is made of gelatin or biopolymers that, in themselves, do not induce vasculogenesis. For this reason, biomaterials and nanoparticles are added inside the scaffold material. This increases the scaffold's strength and rigidity and acts as osteoinductive support to induce more bone formation within the defect as it is healing.

These biomaterials are either designed or have the intrinsic chemistry to stimulate antioxidant expression and reducing reactive oxygen species, further promoting healthy healing. They are based on the same chemistry that makes up semiconductor dielectric materials that control electron interactions and thus influence how antioxidant enzymes function.

It is this connection between antioxidants and induction of large tissue healing that Varanasi is leveraging to hasten the healing process.

"Dr. Varanasi is performing truly groundbreaking research that will go a long way in advancing the healing process following traumatic injuries," says Paul Fadel, director of clinical translational science in the College of Nursing and Health Innovation.

### "TRYING" TRIALS

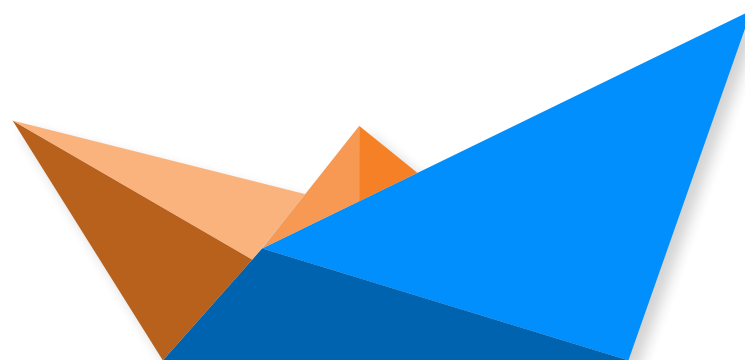
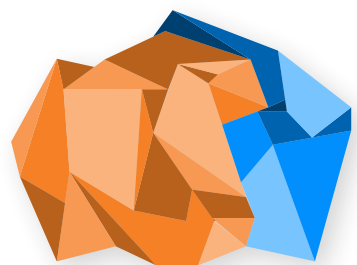
Due to the complexity and magnitude of the task, there are several trials in process to standardize this 3D-printing technology. Varanasi says obtaining approval for this work, including the okay to use rodent cadavers for testing, and then training students to ensure animal survivability and compassion in testing requires significant time and energy.

One of the big hurdles is sterilization of the printed materials in a timely manner. An autoclave would cause the nanoparticles to overhydrate, dry heating would cause them to crumble, and under UV light, the

biopolymers would start to polymerize prematurely.

"The solution is to use ethylene oxide," Varanasi says. "We push the bio inks and materials through a sterile filter. It takes a long time to get through due to the viscosity of the material. Because of this, sterilization must be done well in advance of the application."

**"This could be a sea change in how we think of medical printing." — Dr. Venu G. Varanasi**





A FORWARD PASS

Channeling the best of his football coaches, Varanasi devotes considerable time to teaching and mentoring students. He actively tailors the work microenvironments to their various fields and needs.

He and his students converse about the mechanisms of cells and tissue engineering. Entrepreneurship is also a focus, with discussions

*"Once I got a taste of research, I had a hard time putting it down."*

— Dr. Venu G. Varanasi

about markets, who the customers are and what their opinions will be about the materials, how to know whether a product will be commercially available, and which education models will need to be changed for a significant impact on the clinician's mindset.

Varanasi ensures that the students maintain an open mind; he engages their critical thinking by asking them questions that stimulate independent thought.

"You reach the students by inquiring about their dreams, you ask questions as if they had the naivete and passion of an 8-year-old. You want to know both what they actually wanted to do before they went to school and what they want to do in the next two, five and ten years," Varanasi says.

His hope for the future is to educate surgeons about the new 3D printing technology and find clinicians who are open to adopting these ideas.

"This could be a sea change in how we think of medical printing," he says. "Instead of printing models and permanent implants, we are creating

a temporary surrogate for tissues, one that nurtures its permanent replacement."

The applications for the 3D-printing technology Varanasi has developed extend beyond tissue defects, spanning innumerable applications, such as localizing drug delivery agents to nearby tissues or organs and maybe even direct organ printing someday.

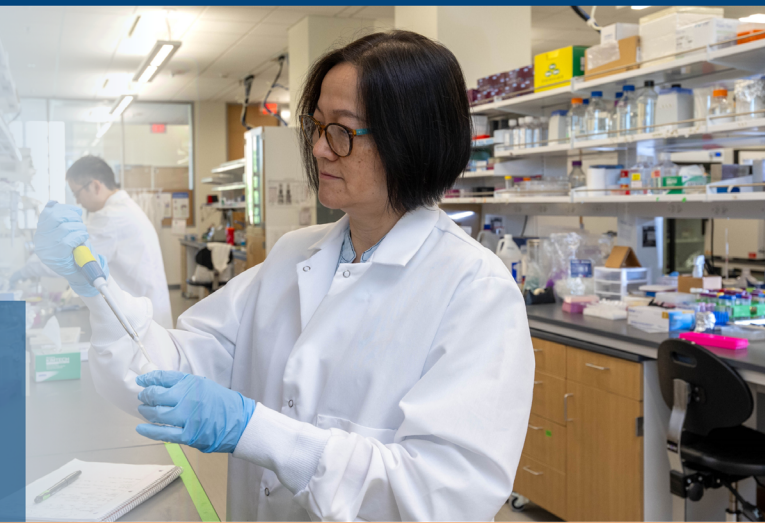
The cure to Stargardt's disease remains somewhere on the frontier, but a polymath like Dr. Varanasi is primed to drive progression toward solutions.

"I stay on top of stem cell research as well as CRISPR and other gene editing technologies through my collaboration with Dr. Brotto," he says. "This is where we think my answer to resolving macular degeneration will likely lie." 📄

Dr. Varanasi extends special thanks to Professor Scott Campbell at the University of South Florida, Diane Hope at Oak Ridge National Laboratory, Timothy Anderson at the University of Florida, Grayson Marshall and Sally Marshall at University of California San Francisco, and Antonio Tomsia and Eduardo Saiz at Lawrence at Berkeley National Laboratory, for their support of his career path.



FACULTY OPPORTUNITIES



The University of Texas at Arlington's College of Nursing and Health Innovation (CONHI) is seeking interested applicants for open faculty positions. CONHI offers an array of exciting and rewarding opportunities for faculty members who value excellence, ingenuity and innovation.

The University of Texas at Arlington

Located in the heart of Dallas-Fort Worth, UTA is a Carnegie Research 1 institution with more than 100 years of academic excellence and tradition. UTA is committed to life-enhancing discovery, innovation instruction and caring community engagement.

Why Work at CONHI?

- Competitive salary and outstanding employee benefits
- UTA holds many distinguished rankings
- We attract the best and brightest scholars from around the world
- Collaborative environment & commitment to health equity
- Extensive and longstanding research partnerships across the country and internationally

Scan Here for all Faculty Opportunities



UTA SEIR Building

The Science & Engineering Innovation & Research (SEIR) building promotes an interdisciplinary approach to research built around engineering, science, nursing, kinesiology, and public health. SEIR is divided into research neighborhoods, which brings together teams from a wide range of disciplines to work in close proximity, allowing for a more free exchange of ideas.



# CONHI TEAM WINS JCEN AWARD

In the summer of 2023, a team of CONHI scholars received word that their article "Faculty Professional Development Strategies Supporting Increased Scholarship" won the 2022 JCEN Innovation Award. JCEN, or The Journal for Continuing Education in Nursing, is a monthly peer-

reviewed publication featuring original articles on ongoing education and professional development opportunities for nurses and other health care professionals.

CONHI Dean Elizabeth Merwin, along with Becky Baird, clinical assistant professor, and Joy Don Baker, clinical professor,

authored the article featured in the journal's March 2023 edition.

The JCEN Innovation Award recognizes excellence in writing and evidence of the expansion and dissemination of knowledge in the field of nursing continuing education and professional development. 🏆

At right: Dean Elizabeth Merwin, Becky Baird, and Dr. Joy Don Baker



Graduate Nursing Professor Dr. Mari Tietze discusses a poster presentation with a Symposium attendee

# SIGMA THETA TAU RESEARCH SYMPOSIUM HIGHLIGHTS THE BEST AND BRIGHTEST IN NURSING RESEARCH

After a five-year hiatus, the Sigma Theta Tau Research Symposium took center stage in January 2024 at the University of Texas at Arlington. The one-day event highlighted researchers and presentations focused on "Innovation through Education, Research and Evidence Based Practice." Featuring speakers from far and wide, the event fostered an inspiring, collaborative learning environment among researchers, faculty members, practitioners, and students.

Presenters covered a broad spectrum of research topics, including simulation, critical care, scholarship, and well-being. Additionally, nursing professionals in academia and representatives from community organizations presented research and evidence-based practice posters. PhD and

DNP students were also on hand to discuss their projects.

"Nursing practice is ever-changing and it is important to have current and relevant information to influence and improve the quality and safety in patient care," says CONHI Clinical Assistant Professor Sharon Blackerby, DNP, RN, NPD-BC, NI-BC, CPHQ, who serves as both a member and Leadership Succession Chair for the College's Sigma Delta Theta chapter.

Blackerby also serves as CONHI's Professional Development Director for contact hours. The event was offered both in-person and virtually, with participants eligible for contact hours.

Additionally, the symposium supports larger research-focused strategic initiatives prioritized at both the College and University levels.

"Research can change our practice and way of thinking. As a Tier 1 university, we want to create an environment where research is valued and disseminating knowledge is part of our culture," says Sigma Theta Tau president-elect and CONHI Clinical Associate Professor Ceil Flores, PhD, RN, CNE. "The symposium allows researchers from diverse backgrounds and varying levels of education to share their passion to improve nursing, both locally and globally."

Sigma Theta Tau is an international nursing honor society designed to encourage students to excel both academically and in the development of professional skills specific to nursing. CONHI's chapter was founded in 1980 and has more than 800 members. 🏆



## RESEARCHER BUILDS ON A CAREER OF EXCELLENCE

Since joining the University of Texas at Arlington (UTA) College of Nursing and Health Innovation (CONHI) in 2021, Jaquetta Reeves, PhD, MS, BSN, RN, NP-C, has brought two decades of expertise in adolescent and young adult health care, health education, and STI/HIV disease prevention to UTA. Her research, which is primarily focused on addressing sexual health inequities and disparities among minority adolescent and young adult populations, continues to open doors to a greater understanding of sexual health and wellness.

"My ability to conduct my own research and concentrate on the topics I am most interested in and enthusiastic about is the most fulfilling aspect of my job at UTA," says Reeves.

Since joining UTA, Reeves has launched the S.A.F.E. Lab, an initiative that prioritizes innovate and effective sexual health programs to help educate and empower young adults; collaborated with the "Power to Decide" group and UTA faculty and students to address the high rates of maternal morbidity among Black women in Texas; joined the Research Education Institute for Diverse Scholars (REIDS) Fellowship at the Yale University School of Public Health, and more.

"I now have greater opportunities to publish my research, share my findings at conferences, symposiums, and local and regional events, and—most importantly—mentor other students who share my passion for tackling sexual health inequalities in marginalized communities and underrepresented populations," Reeves says.

The REIDS Fellowship, in particular, has provided Reeves with unique opportunities to collaborate with researchers from across the country to address sexual health and wellness research.


"As a REIDS research fellow at Yale University, I have successfully published articles, applied



Dr. Jaquetta Reeves

for multiple grants, and recently received the prestigious NIH Loan Repayment Program grant worth \$100,000," says Reeves. "Finally, upon joining the REIDS family, I will permanently hold the position of a research fellow at Yale University... I have experienced a profound sense of inclusion and camaraderie, which has proven to be both inspiring and beneficial for my mental well-being."

Reeves believes that tailoring her approach to meet the specific needs of underrepresented communities plays a key role in making a positive impact.

"I have taken a multi-faceted approach that combines evidence-based culturally-tailored, innovative educational teaching techniques, which includes community engagement, collaboration with health professionals, and other "like-minded" STI/HIV researchers," she adds. "By working together, we can improve the significance of sexual health education for minority youth [and] young adults, the way we approach the educational system, and the communities that are hard to reach." 



## THE SCIENCE OF COMFORT

Through advocacy, education, research, and the innovative use of technology, Renee CB Manworren is committed to transforming the health care industry's sensitivity to children's pain.

Dr. Manworren's career and academic journey began in 1985, when her then-infant daughter needed open-heart surgery. At the time, it was uncommon for children to receive anesthesia or analgesics during or after surgery.

"While I was told by really smart nurses and doctors that children don't feel pain, I now think that was an excuse for their discomfort with the lack of knowledge of how to safely give analgesics to children," she says.

At the time, Manworren, a first-generation college student, was working on her Bachelor of Science in Nursing.

"I credit my husband for telling me that there was only so much I could do as a demanding mother, and there was so much more I could do in health care by finishing my degree and leading initiatives to change children's pain management," she says.

Since then, Manworren has taken many steps to address the topic of children's pain and is currently the Elizabeth C. Poster Professor and PhD program director in the College of Nursing and Health Innovation and an associate professor of pediatrics at Northwestern University Feinberg School of Medicine, where she teaches online courses.


She has collaborated with multiple organizations, including the National Science Foundation, National Institute of Health Interagency Federal Pain Research Coordinating Council, and the National Institute for Nursing Research.

Manworren has partnered with bioengineers, health services researchers, nurse scientists, and other health care professionals—including UTA nursing PhD students and nurses from Parkland Health, the University of Texas Southwestern Medical Center, and Children's Health—to utilize machine learning approaches for early detection of postoperative complications remotely in children.

"We have developed an algorithm that has identified surgical complications up to 24 hours before caregivers have contacted their child's surgical provider," she says. "We are also investigating the effect of the availability of Fitbit-based alerts in near real-time on clinical decision-making, time to first contact with the health care system, and health care utilization patterns."

Additionally, she has also applied for funding to advance pain management by testing children from Texas, Chicago, and Florida for genes associated with pain sensitivity and adverse analgesic effects.

While research plays a key role in her overall goals, advocacy is just as important.

"My seminal research involved assessing pediatric health care providers' knowledge and attitudes regarding pain, but my goal has always been to use that knowledge to improve our sensitivity to children's pain and improve pain treatment," she says. "I am now well-positioned to be the voice of reason and compassion in the care of children's pain." 



Dr. Renee CB Manworren



## RESEARCH EXPO HIGHLIGHTS CONHI INNOVATION

In April 2024, the UTA College of Nursing and Health Innovation (CONHI) held its inaugural Research Expo, where faculty, staff, and students members met at UTA's the Central Library to discuss the innovative research being done across the college.

More than 30 presentations and posters were shared across various research topics, including musculoskeletal disease, rural health, AI, and cardiovascular health, to name a few.

research and innovation," Fadel adds. "What was also apparent is the diversity of research in our college from basic science to clinical application focused on advancing the strategic research area of health and the human condition."

Kristin Gigli, a UTA assistant professor in the Department of Graduate Nursing and one of the Expo's presenters, shared her enthusiasm for the event.

"For the UTA research community, expos bring life to new ideas and support and strengthen future research efforts, raising the UTA research profile," says Gigli.

Yue Liao, assistant professor in the UTA Department of Kinesiology and one of the Expo's presenters, echoed this sentiment.

"Research expo help tremendously with bringing researchers together, learning more

*"The number of excellent oral and poster presentations speaks directly to how CONHI is contributing to the Universities' focus on research and innovation."*

— Dr. Paul Fadel

In addition to providing faculty with the opportunity to showcase their latest work, the event was also designed to provide new team members with a chance to socialize with researchers from other CONHI departments.

"We have not met as a college in some time and over the past year we also welcomed a number of new faculty so [I] felt like the timing was right," Paul Fadel, associate dean for research, says. "Also, our college centers are growing and [it's] good for them to provide updates on progress and resources available through the centers."

The recent launch of President Cowley's UTA 2030 strategic plan includes an emphasis on research and innovation, and Fadel believes research expos help contribute to that overall goal.

"The number of excellent oral and poster presentations speaks directly to how CONHI is contributing to the Universities' focus on

about each other's work, and putting a face with the name that we might be seeing a lot virtually but not in-person," Liao says. "Since many of us at CONHI collaborate with researchers across UTA, seeing how our CONHI colleagues are working with others at UTA [is] eye-opening and can lead to dialogue for new research collaboration that we might have not thought of before."

Fadel indicated that the next research expo is slated for the Fall and will provide opportunities for different faculty members to share their research.

Fadel's commitment to showcasing CONHI's research doesn't stop at the College level. CONHI was well represented at UTA's annual Research and Innovation Expo as well. Florence Haseltine, the Jenkins Garrett Professor and Presidential Distinguished Professor, and Matthew Brothers, associate chair of graduate programs in exercise science, attended the event as featured speakers. 🗨️



Kinesiology Assistant Professor Dr. Ang Li and Research Scientist Dr. Jiang Huang discuss a poster presentation



Adjunct Assistant Professor Dr. Ogan Gurel and Graduate Nursing Professor Dr. Zui Pan discuss a poster presentation



STARGAZING  
IN THE  
CELLULAR COSMOS

*A  
research  
warrior takes  
a unique approach to  
probing ALS and finds new  
paths to pursue.*



—Margy Rockwood

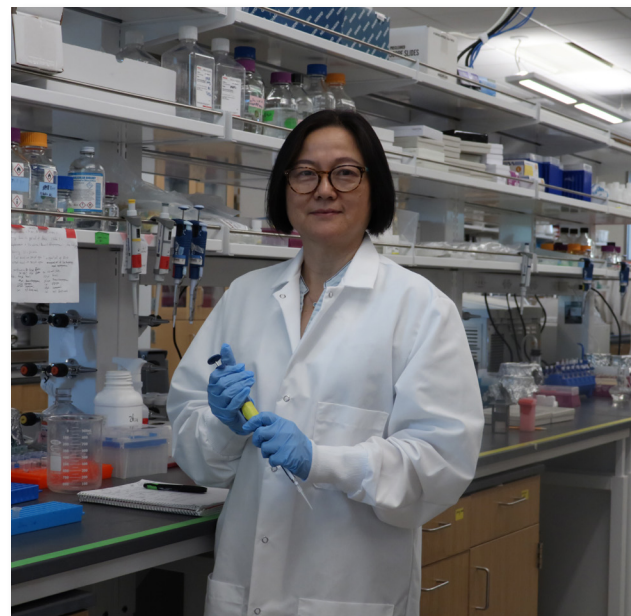


**People like to stargaze**, but even so, we can feel overwhelmed by the unfathomable quantity of celestial bodies and the distances that stretch beyond our visibility. Through history, we have corralled facts and figures to try to solve the mysteries of the universe, but a bit of stargazing can be a sobering reminder that despite our best efforts, there is still so much to uncover. The very best minds have failed in this.

Likewise, in our drive to find the causes of devastating diseases like amyotrophic lateral sclerosis (ALS), the innumerable factors to explore can be daunting. We are reminded that there is a vast kind of inverted cosmos within each living body.

"If you dive inside a small cell, there is infinity, a seemingly endless universe of bodies and movement going on," says Jingsong Zhou, professor of kinesiology and the associate director for the Bone-Muscle Research Center at The University of Texas at Arlington.

This challenge notwithstanding, Dr. Zhou wades through the cellular universe to learn when, how, why, and where the neuromotor transmission we depend on for every movement goes off-course in ALS. Her passion and ongoing



Dr. Jingsong Zhou

work toward this end and her seminal discovery of a mitochondrial defect in ALS skeletal muscle cells, have heightened hopes for shortening the timeline to interventions.

### FROM CLINIC TO BENCH

ALS, also known as Lou Gehrig's Disease, is a fatal disease characterized by progressive motor neuron death and severe muscle wasting. Only 10% of cases are linked to heredity, making the search for relevant culprits even more challenging. For the past six years, Zhou's lab has enriched UTA's program for pursuing this mission, more than doubling the grant resources available to support this work.

"ALS is indeed a devastating disease, and Dr. Zhou's work has made substantial contributions to a better understanding of the disease and potential underlying mechanisms" says Paul J. Fadel, director of clinical translational science in the College of Nursing and Health Innovation. "She is emerging as a prominent leader in this important area of research."

"As a child, I was interested in how the human body works and why diseases occur, which is what led me to Medical School" Zhou says. "But I have always been driven to ask questions and try to find solutions, so I decided to pursue medical research instead of clinic practice."

"Fortunately, I was accepted as a Ph.D. student by Rush University in Chicago to study molecular biophysics and physiology under the guidance of Eduardo Rios, where I have developed my quantitative thinking skills and gained fundamental knowledge in muscle physiology."

After doing her postdoc work at Vanderbilt University in cardiovascular research under the guidance of Katherine Murray, she then returned to Rush as an assistant professor of molecular biophysics and physiology. Zhou gives special thanks to Robert Eisenberg, the department chair, and Eduardo Rios for giving her the opportunity to continue pursuing her original interests in muscle physiology.

### FRUITS OF THE SKELETAL MUSCLE BIAS

Zhou has been studying skeletal muscle for the better part of her 30 years in research. Her ALS studies originated in 2006 when Han-Xiang Deng at Northwestern University offered her an opportunity to use the first rodent model of ALS.

"We isolated individual skeletal muscle cells from ALS mice and examined them under a confocal microscope. The first stunning finding was that the live ALS muscle cells showed defective mitochondria right at the site of the neuromuscular junction," Zhou says. This was the first time, to her knowledge, that the mitochondrial defect had been visualized in live ALS muscle cells under a confocal microscope.

Due to large energy demands, muscle cells are packed with mitochondria, the "powerhouse of the cell." They are the engine that drives movement and also decides each cell's fate. The neuromuscular junction is the site of two-way communication between muscle cells and motor neurons, controlling muscle contraction.

"The new discovery made us ask why this type of mitochondrial defect occurred at the site of neuromuscular junction, what would be the consequences of this defect, and could this be a therapeutic target to alleviate ALS disease progress," she says.

With this evidence, Zhou obtained her first

ALS research grant from the Muscular Dystrophy Association (MDA) in 2007 and published her first paper on ALS in 2010 (Since then, she has been on track to dive deeper into the role of muscle during ALS pathogenesis by looking at mitochondria, calcium signaling, and other cellular processes that are critical to muscle contraction.

Zhou says her finding was possible because she works counter to the tide in ALS research.

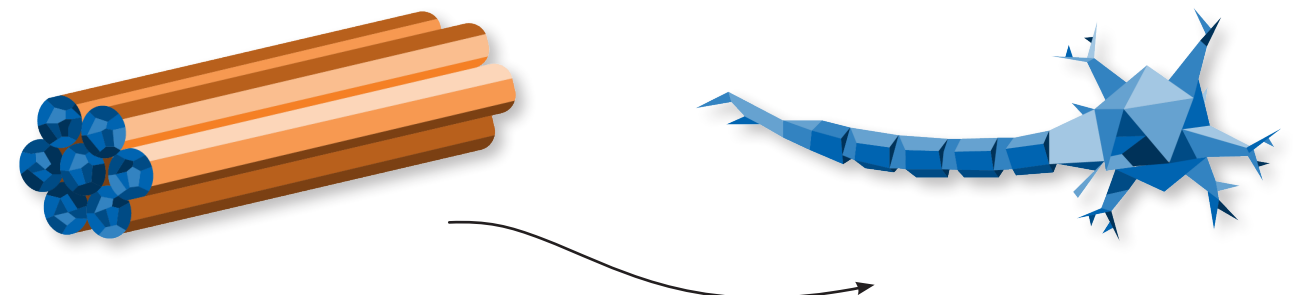
"The mainstream approach is to start with the neuron and work toward the muscle cell," she says. "But we decided, since the muscle is where the problem manifests, we should go backward from the muscle back to neurons."

### REPAIR MECHANISMS PROBED

The studies of Zhou's research team on mitochondrial defects in ALS skeletal muscle uncovered a pathological event that was not identified before. They found that the surface membrane of muscle cells is fragile in ALS, even at the early stage of the disease. The cell membrane integrity can't be maintained, especially at the site of neuromuscular junction.

"Muscle membranes experience constant physical damage due to contraction and relaxation movements," Zhou says. "But our muscle cells have mechanisms for repair. What we have found is that one specific muscle protein (named MG53) lost its membrane repair function

**"Since the muscle is where the problem manifests, we should go backward from the muscle back to neurons." — Dr. Jingsong Zhou**



Skeletal muscle cell

Neuron



## AROUND THE COLLEGE

in ALS muscle."

Through a collaborative study with Jianjie Ma at the University of Virginia and Lyle Ostrow at Temple University, the team found that the synthesized MG53 protein could delay ALS disease progression when applied through intravenous infusion in the tested ALS mouse model (<https://doi.org/10.3390/antiox10101522>). This line of study has been supported by the Department of Defense (DOD) and the National Institutes of Health (NIH).

### TREATMENT HOPES

The path to a full understanding of ALS is confounded by the sheer magnitude of molecular life and activities that take place in that inverted cosmos within. For this reason, a one-factor "Eureka" discovery is unlikely to be in store.

Zhou may have found the mitochondrial defect in ALS skeletal muscle, but the etiology of that defect is multifactorial. Most likely, the pathophysiology involves epigenetics, meaning it is related to many molecular signals that turn certain gene expressions on and off.

Currently, there are three FDA-approved ALS drugs on the market, which focus on quelling toxic neural excitability and reducing oxidative stress. However, the field still demands for more effective treatments to extend patients' life span and improve life quality.

"We hope a cocktail designed can improve mitochondrial function, while also working as a bandage to repair the damaged surface membrane of the muscle cells, thus delaying disease progression," Zhou says.

### ABUNDANT RESEARCH SUPPORT

Zhou has been serving as the principal investor or co-principal investigator on projects supported by multiple major federal grants. Four of these directly focus on ALS from NIH and DOD. The others focus on cardiovascular function and skeletal muscle aging. The most recent one is a 5-year, \$3.16 million grant from the NIH to support a collaboration between The University of Texas at Arlington, the University of Virginia, and Temple University to explore

molecular mechanisms underlying neuromuscular degeneration in ALS and toward developing potential therapeutic interventions.

"In a patient with ALS, muscles fail systemically, except for eye muscles. People with advanced ALS can still move their eyes," Zhou says. "So, we have been checking the gene expression pattern on stem cells, and have found differences between eye muscles and somatic muscles. This raises the hope of whether we can find a way to recreate the targeted molecules found in eye muscle cells to make ALS patients' somatic muscle cells work better."

Her work over the years has been supported by partners at the NIH, the Muscular Dystrophy Association, the DOD, the ALS Association "Ice Bucket Challenge," and the Bank of America Victor E. Speas Foundation. Generous support has also come from other organizations in Texas communities.

*"We share a sense that this quest is bigger than us."*

*— Dr. Jingsong Zhou*

### BIGGER THAN US

Zhou says that as potential targets and treatments come to light, there is a five-level process that follows.

"In the lab, we try to understand the disease first at the gene, cellular, organ, and the animal model level – which is where my lab works, and then at the level of human studies," she says. "We hope we can find potential molecular targets that can be tested at all five levels through collaboration among labs."

When she left Rush, and later Kansas City University, she says she had the collegial support and blessing of the leadership there.

"They knew I was going somewhere where I had greater resources, and the moves were with

their blessing and support," Zhou says. "We share a sense that this quest is bigger than us."

Sharing the same research interests and passion of Dr. Marco Brotto, the director of the Bone-Muscle Research Center, Zhou happily joined the center and the Department of Kinesiology in 2018.

"Together with faculty members in the Center, we made an effort to build up a multi-omics research platform that not only supports the researchers in our center, but also colleagues outside the center," she says.

"Dr. Zhou's research has been instrumental in the development and growth of the Bone-Muscle Research Center, for which she serves as co-director," says Dr. Fadel. "Her research efforts and tremendous contributions are putting the College of Nursing and Health Innovation and UT Arlington in the spotlight for advancing ALS related research."


Zhou credits her research team for success in meeting the challenges each project presents.

She says, "I really use my heart to build the team and find people who share the same passion. Most importantly, I respect them—we respect each other as scientists. A research project will not succeed from a single person's effort. We work together as a unit and help each

other out. The same is true with my colleagues at other institutions."

"Of course, nothing happens without the support of the leadership and the administrative staff from the department, college, and University, although their names never appeared on our publications. In the past six years, my research team received numerous supports. To name a few, the department purchasing/accounting support, animal facility, biosafety, grant management support, and more. Without their support, it would not be possible to rebuild a fully functional research lab at UTA."

Discovery, whether of human cellular architecture or the stars, takes extraordinary curiosity, patience, and a willingness to be a building block in a structure that may not yet be fully conceivable. In a world where researchers must scramble toward grant deadlines and publish or perish, Zhou's words are a heartening reminder of a medical professional's original inspiration.

"I would not do something that didn't match up with my passions," she says. "I have medical training, and I see patients suffering. I wish that I can do something to help patients, by understanding the diseases and finding treatments." 



Dr. Jianxun Yi, Dr. Ang Li, Dr. Jingsong Zhou, Dr. Xuejun Li, and Dr. Li Dong



## STATE-OF-THE-ART CLINICAL IMAGING RESEARCH CENTER OPENS AT UTA

The University of Texas at Arlington has finished construction on a \$6.2 million Clinical Imaging Research Center (CIRC) which features a state-of-the-art 3-Tesla magnetic resonance imaging (MRI) machine, and over 1,000 square feet of clinical research space.

The new center is led by Dr. Michael Nelson, associate professor of kinesiology, who brings more than 15 years of experience using MRI to investigate cardiovascular and cardiometabolic health and disease.

Located in UTA's Science and Engineering Innovation and Research (SEIR) building, the CIRC is supported by manager Aida Nasirian, MSc, MRI technologist Chase Johnson, research nurse Carrie Arena-Marshall, and Medical Director Dr. Vlad Zaha.

"The addition of the Clinical Imaging Research Center is a key part of UTA's vision to expand our clinical research infrastructure," says Kate C. Miller, vice president of research and innovation. "This facility will serve as a beacon for researchers to come together to innovate, discover and perform interdisciplinary research on our vibrant campus."

In addition to advancing medical research on campus, the new facility will support ongoing studies in engineering, physics, mathematics, computer science, social work, and business.

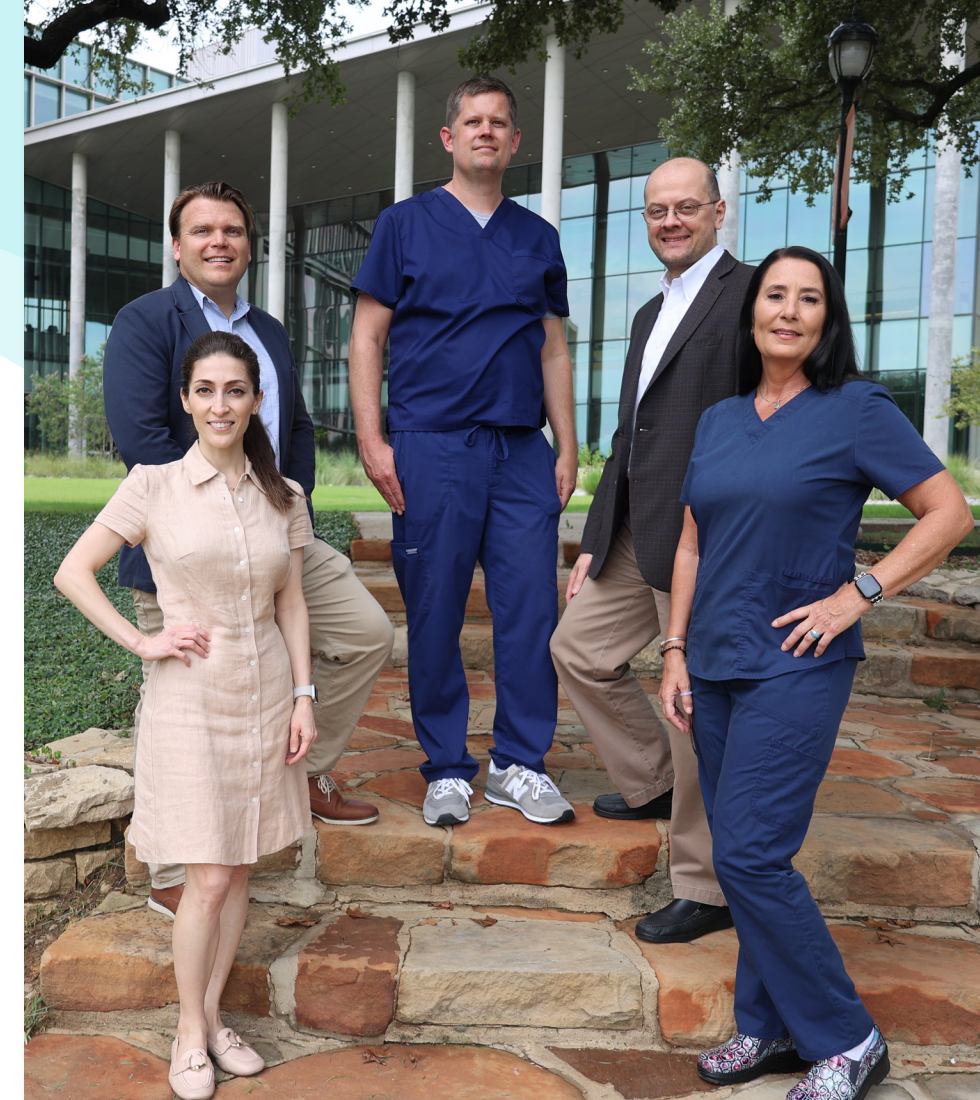
"The interdisciplinary nature of the Clinical Imaging Research Center will bring together the best and brightest of the UTA community and beyond," says College of Nursing and Health Innovation Dean Elizabeth Merwin. "We are

At right: Manager Aida Nasirian, Director Dr. Michael D. Nelson, MRI Technologist Chase Johnson R.T., Medical Director Dr. Vlad Zaha, Research Nurse Carrie Arena-Marshall.

optimistic a facility of this size and scope will continue to attract top-tier researchers and scholars with specific interests and expertise to our campus."

The advanced technology housed in the CIRC will play a key role in helping UTA researchers advanced knowledge now and in the future.

The advanced MRI technology at the CIRC will provide high-resolution imaging to enhance our understanding of complex biological processes," Nasirian adds. "This capability will be contributing to advancements in preventative and treatment solutions." ➔



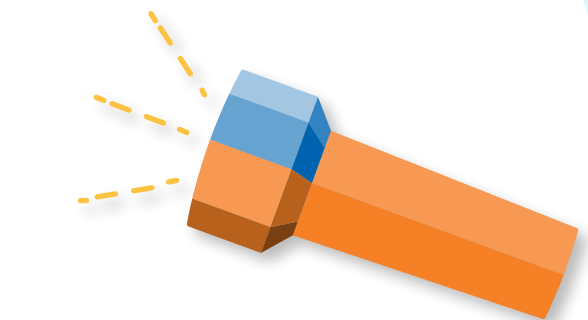
Clinical Imaging Research Center Director Michael Nelson, Provost Tamara Brown, President Jennifer Cowley, and Vice President for Research and Innovation Kate Miller cut ribbon at grand opening for Clinical Imaging Research Center.

## SHINING A LIGHT

In 2019, Priscila Tamplain, associate professor of kinesiology, founded a group for kinesiology and public health tenure-stream women faculty to meet after work. The goal was to provide attendees with opportunities to socialize, support, and mentor each other in an informal setting.

"I thought we needed to create a group for women only," says Dr. Tamplain. "The demands of academia can be pretty high, and women generally have more on their plate than men. So, my goal was to connect everyone and make sure we had a space just for us."

Today, the group has grown to include 15 tenure-stream women faculty in kinesiology, representatives from UTA's College of Liberal Arts



and College of Science, and two nursing faculty. It also has an official name: SHINE, which stands for Support, Harmony, Inspiration, Networking, and Excellence for Women Faculty.

SHINE is also now co-chaired by Yue Liao, assistant professor of public health. Dr. Liao was invited to join the group when she began working at UTA in 2020 and enjoyed the gatherings so much that she proposed the SHINE group name.



Her ideas have led to new opportunities for the group to grow.

"We expanded to department-level and sometimes college-level activities to share resources and talk to each other outside a work setting," Liao says. "For some events, we will also invite our male coworkers because it is important to also get their perspectives."

While socializing remains one of the group's core pillars, Liao is committed to incorporating ways for group members to learn about UTA's resources, engage with one another's research, and collaborate with other departments around UTA.

"I try to sprinkle in academic-focused activities like workshops and seminars so that faculty can learn more about the resources within

UTA that can help them be more successful in their research," says Liao. "For example, we hosted a library workshop where we invited library staff to talk about resources available to faculty that some may not have known about."

Going forward, the future seems bright for SHINE as the group continues to become more integrated into the College of Nursing and Health Innovation's culture. Tamplain credits Liao for the positive trajectory.

"It is amazing to see the work Yue has done—all credit goes to her. She was able to take the group to another level," Tamplain says. "The group is now solid and a source of mentoring, fellowship, and fulfillment in our department and college, and it is wonderful to see the recognition from peers as well." 🏹

## BREAKING THROUGH HEALTH BARRIERS

**Using research to break through** social and structural determinants affecting women's health is what drives Kyrah Brown, associate professor of public health in the Department of Kinesiology, to success. Committed to providing safe and healthy outcomes, Dr. Brown examines the lives and health care experiences of women prior to pregnancy to aid in combating the maternal health crisis, especially for Black women.

In 2018, Brown founded the Black women-led Maternal and Reproductive Health Equity (MRHE) Research Lab, which focuses on conducting high-quality community-based research. The lab investigates and addresses the structural inequities that shape Black women's reproductive and cardiovascular health across the life course. Its foundation is structured around two key components: research and community praxis.

"I work with research scientists across disciplines to shift paradigms toward constructing, measuring, analyzing, and translating conceptual models that represent the nature of how racial disparities emerge in our society," says Brown. "Through community praxis, I train students as community engagement specialists to apply critical theories and principles and collaborate with community partners on educational or intervention initiatives."

The MRHE Research Lab works to address the challenge of educating the community about the specific determinants that affect women's

health. This starts with understanding what matters to the community. Many determinants of health that impact women's reproductive health across the life course also affect other segments of our population in other ways.

"My approach to educating the community is to highlight the factors that most of us care about," says Brown. "I also use storytelling, supported by data, to help people understand the reality of these issues."

Brown acknowledges that the collaborative workspace UTA provides is one of the most rewarding parts of working as a professor and research scientist at the University.

"I appreciate the support I've received from my leadership for my community-engaged research program," says Brown. "I find working closely with partner organizations and being able to see work translated in real time is quite rewarding."

Brown's research demonstrates the powerful commitment and dedication of UTA researchers. The innovative work of researchers like Brown continues to drive innovation and pave the way for healthy futures.

"Kyrah is doing some amazing work that will have a tremendous impact on improving maternal health, particularly for Black women," says Paul Fadel, associate dean for research in the College of Nursing and Health Innovation. "Research and community outreach is desperately needed." 🏹



SHINE program crossover event with Center for Research and Scholarship, titled "Battle with Your Associate Dean of Research!" Kinesiology Professor Dr. Rhonda Prisby, Kinesiology Professor Dr. Judy Wilson, Communication Professor Dr. Grace Brannon, Kinesiology Professor Dr. Yue Liao, Associate Dean for Research Dr. Paul Fadel, Kinesiology Professor Dr. Cindy Trowbridge, Kinesiology Professor Dr. Laura Hwang, and Kinesiology Professor Dr. Feinuo Sun



**At left:** Dr. Kyrah Brown pictured with Research Assistance and Community Engagement Specialist team members Jeremiah Joseph, Yarizel Marquez, Mercy Obasanya, Precious Eluyefa, Akeirria Garvin, Aaliyah Devore, and MK Mongare.



## ENVISIONING A HEALTHIER FUTURE

In 2014, while working as a postdoctoral fellow at the University of Utah, Daniel Trott began to envision innovative ways to gain a better understanding of the vascular biology of aging. In 2018, he brought that vision to the College of Nursing and Health Innovation (CONHI), launching the Integrative Immunology Laboratory.

"It was sort of a sub-project going on in the lab at Utah," says Dr. Trott, who is now an associate professor in UTA's Department of Kinesiology. "When I got here, I made it my own project and the major focus of the lab."


Trott's Integrative Immunology Laboratory, located in the Science & Engineering Innovation

me," says Trott. "Being able to share in their successes and provide guidance along the way is really rewarding."

Trott's team utilizes multiple research methods, including vessel aging and flowcytometry, and often studies the cardiovascular systems of mice. His lab is committed to innovative techniques while also understanding that a basic approach can be helpful at times.

"We're all getting older every day, and the aging population is expanding," he adds. "So, understanding the basic mechanisms and reasons why people are developing cardiovascular disease with age is really important."

In early 2024, Trott lost his father to a stroke. This tragedy motivated him even more to find solutions to a complex issue.

"It's now become more personal to me," says Trott. "I really want to push health innovation forward and bring new ideas. I want to find a universal treatment; that would be the dream." 

*"I want to find a universal treatment; that would be the dream."*

— Dr. Daniel Trott

& Research (SEIR) building, currently consists of three members who are researching aging, cardiovascular disease, and the immune system.

"My lab is very team-oriented; everyone has a role to play. We're all sort of looking at the same question, but from different angles," Trott adds. "My job is to facilitate everybody else's success."

Trott credits his team's success and development as one of the most rewarding aspects of his work.

"Helping folks in my lab develop as scientists is personally gratifying to



## UNDERGRADUATE RESEARCH PROGRAM GAINS MOMENTUM

Since its inception in 2021, the Summer Undergraduate Research Program in Integrative Physiology (SURPINT) program has offered unparalleled access to research opportunities at UTA.

SURPINT is an intensive, application-based program designed for enterprising undergraduate students seeking research and professional development opportunities. Over the course of the 10-week, grant-funded program, students have the opportunity to partner with a veteran faculty member to develop research skills and techniques in a working laboratory setting.

Fellows are assigned to a laboratory and research project according to their previous training and research interests. Research initiatives are rooted in integrative physiology, and biomedical science.

Lauren Gomez, a SURPINT participant and 2023 UTA graduate made the most of her time in the program. Gomez was paired with Marco Brotto, Ph. D and Venu Varanasi, Ph.D., at UTA's Bone-Muscle Research Center. The lab's primary research focus at the time was on the use of biomaterials to regenerate skeletal muscle cells and treat traumatic injuries. Her project homed in on the musculoskeletal cytotoxicity of silicon oxynitro-phosphide based nanoparticles.

"During my time spent working on this project, I was able to develop valuable skills inside and outside of the lab such as cell culture, cell staining, fluorescence microscopy, data analysis, reviewing literature, and presenting data to others," says Gomez. "My mentors pushed me to get as much hands on experience as I could during my time in their labs while encouraging me to stay curious, engaged, and collaborative with others. I was even granted the opportunity to continue working in the lab after SURPINT concluded, all the way until I graduated."


Michael D. Nelson, Ph.D., associate professor of kinesiology, and R. Matthew Brothers, Ph.D., professor, and associate chair of Graduate Programs in Exercise Science, spearhead the

SURPINT program at UTA.

"It is always rewarding to witness the growth of the SURPINT fellows over the 10-week program, and even more encouraging to see so many to remain engaged in research in the following years," says Brothers.

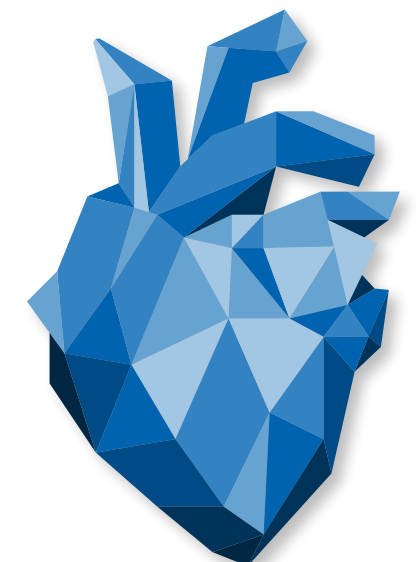
Program participants come from a variety of Departments and Colleges across the UTA campus, including Kinesiology, Biology, Biochemistry, and Bioengineering. At the conclusion of the program, faculty members hosted a mini symposium where each of the students will be present a research poster.

According to Brothers, the program receives rough 180 applications per year and only 21 students were chosen to participate in 2024. In total, 140 UTA undergraduates have participated in the SURPINT program to date.

In December 2024, SURPINT received funding for an additional three years from the American Heart Association to continue their work in preparing the next generation of researchers. 



TO LEARN MORE, VISIT [SURPINT.UTA.EDU](https://SURPINT.UTA.EDU).





## UTA RESEARCH ASSISTANT BUILDS AN IMPRESSIVE RESUME

**Jeremiah Joseph originally arrived at UTA** as a Coordinated Admission Program student intent on transferring to the University of Texas at Austin. But that changed once the Carrollton native arrived in Arlington and got a feel for the campus and the numerous research opportunities and degree program options at UTA. Since then, he has joined the Honors College and has racked up an impressive list of research awards and recognitions.

Among his most recent accomplishments is his acceptance into the Archer Fellowship Program in 2024.

Founded in 2001, The Archer Center is the Washington, D.C., campus of the University of Texas System. Students accepted to its Archer Fellowship Program move to the Capitol Hill area of Washington to live with other Archer Fellows and take courses taught by UT faculty and policy experts. The scholars also participate in a full-time internship that aligns with their academic and professional goals.

"The Archer Fellowship Program is an amazing opportunity for any student in any major, as federal policy impacts all of us," says Bobbie Brown, director of advanced placement in UTA's Honors College. "It is designed to educate the next generation of leaders in public service and federal policymaking in a very experiential way. Archer Fellowship alumni will tell you that it is a truly transformative experience."

Joseph's internship was with the Partnership for Public Service, where he managed projects for the Public Service Leadership Institute.

"My experiences with the Archer program and the Partnership have broadened my understanding of my career prospects and have illuminated diverse pathways in policy and healthcare that I can pursue," says Joseph.

His remarkable research chops also earned him a segment on UTA's episode of "The College

Tour," an Amazon Prime TV series covering campus life at universities and colleges across the country.

"Filming the college tour episode was an incredibly fun experience. It was my engagement in research that ultimately persuaded me to remain at UTA, where I was fortunate enough to connect with mentors who have significantly altered the course of my life," says Joseph. "I'm now passionate about sharing this experience and enthusiastically encourage others to seek similar opportunities."



SURPINT students and faculty gathered in Science & Engineering Innovation & Research (SEIR) for a final poster presentation



SURPINT students conducting research with MRI-compatible lower body negative pressure pants, designed to be used during exercise cardiac magnetic resonance imaging



## RESEARCH PROJECT IGNITES A PASSION FOR RURAL CARE

Answering the call for a career in care came naturally to Caroline King, an undergraduate student pursuing an Honors Bachelor of Science in Nursing degree.

King's grandmother was a nurse, and her mother was a social worker who completed her master's degree at UTA. Despite coming from a relatively small town, King says rural care wasn't originally on her radar. But after she joined the College of Nursing and Health Innovation's (CONHI) Center for Rural Health and Nursing (CRHN) as a student associate, her focus shifted.

"Truly, it was joining the center that nurtured my interest in rural health. The center introduced me to databases and resources that quantified the health care deficits of rural communities in the United States," says King. "I've been running with that interest of quantifying and explaining the data ever since."

The CRHN was established in October

2021 to improve access to health care in rural communities. CONHI Dean and CRHN Executive Director Elizabeth Merwin and the college's leadership team recognized a gap in care for more than 4 million rural Texans.

"We need to better understand the most critical health care needs of Texas' rural areas in order to prioritize our efforts. We know there are disparities in maternal care, so I asked Caroline to help us assess the severity of the issue," says Aspen Drude, manager of the CRHN. "She delivered a comprehensive literature review that really brought the issue and its complexities into focus."

King's degree plan also includes minors in political science and gender, women, and sexuality studies.

"I am hoping that research into maternity care in rural communities can translate into a career of policy advocacy," says King. "I want to address increasing private/public insurance reimbursement for midwifery services, expanding protections for nurses against unsafe work environments, and implementing programs that will bring health prevention/screening resources to rural communities."

Drude understands the long-term impact of inspiring students.

"We are grateful for Caroline's passion for improving rural health care and hope our work will inspire more students to take a similar path," says Drude. "The only way we'll address the rural health challenges of today and tomorrow are through the focused efforts of dedication of students and professionals like Caroline."

At left: Caroline King



## FELLOWSHIP AWARD SENDS PUBLIC HEALTH GRADUATE TO THE CDC

Steven Barrientos had plans to be a nurse practitioner.

While completing his Bachelor of Science in Nursing at UTA's College of Nursing and Health Innovation (CONHI), Barrientos found himself enrolling in elective public health courses. In his clinical rotations, he identified a common theme that brought these disciplines together.

"I found many patients grappling with similar, if not identical issues. Many of these issues were chronic diseases that could have been prevented with earlier intervention," says Barrientos. "This realization fueled my determination to make a difference in public health, knowing that timely preventive action could alleviate much suffering and mitigate severity."

After completing his BSN in 2021, Barrientos enrolled in UTA's Master of Public Health program to focus on his interest in epidemiology.

Today, he finds himself working in a research lab at the Centers for Disease Control (CDC) in Atlanta, Georgia.

In 2024, Barrientos was selected for the Dr. James A. Ferguson Emerging Infectious Disease Research Initiatives for Student Enhancement Fellowship, commonly referred to as the Ferguson Rise Fellowship. During this one-year fellowship, Barrientos will work with Jin-Mann Lin and her research team on chronic fatigue syndrome.

"This highly competitive fellowship, funded by the CDC, stands as a testament to Steven's unwavering dedication, research skills, and commitment to public health," says CONHI Assistant Professor Ziyad Ben Taleb, who Barrientos considers his primary mentor.

Under Dr. Taleb's guidance, Barrientos served as a research assistant in UTA's Nicotine & Tobacco Research Laboratory. The experience was his first exposure to academic research, and he soon learned he had a genuine passion for it. His role as a research assistant allowed him to integrate his nursing skills (e.g., IV placement, blood draws, specimen collection, etc.) with the



Steven Barrientos

technical expertise (e.g., epidemiology, statistics, research methods) gained in public health.

At the CDC, Barrientos expects to take his research experience to the next level.

"I'm eager to collaborate within a larger research team comprised of experts," says Barrientos. "I also aim to integrate some of my nursing skills into our research."

He also looks forward to learning more about the inner workings of a government agency and further developing his skills in epidemiological software programs.

Barrientos is grateful to his CONHI professors who have guided him on his path. In addition to Taleb, he also recognizes Tiffany Kindratt, assistant professor of kinesiology, and Mari Tietze, professor of nursing, among his supporters.

To learn more about CONHI's Public Health programs, visit [uta.edu/conhi](http://uta.edu/conhi).



## SCHOLARLY PROJECTS

### DOCTOR OF PHILOSOPHY IN NURSING (PHD)

Shannon Whitehead, The Influence of African American Women's Values and Beliefs on Moderate Intensity Physical Activity: A Qualitative Study

Fatoumata Jallow, Medication Safety in Community-Dwelling Older Adults

Leslie Jennings, Factors Affecting the Success and Persistence of Pre-nursing Students

Marlene Porter, Work Engagement, Burnout, Well-being in Nursing Professional Development Practitioners

Elisa Stehling, Resilience in Heart Failure Patients - A Qualitative Study

Adrianna Vinar, Multidisciplinary Teamwork Perceptions when mobilizing ventilated neurosurgery patients

Tashiana Roberts-Jackson, Relationship Between Nurse Professional Development Practitioners' Perception of Empowerment in the Workplace & Intent to Stay Post the Covid-19 Pandemic

Jean Montgomery, Self-Care Narratives: Life Stories of Rural Adults Managing Chronic Illness without Insurance

### DOCTOR OF NURSING PRACTICE (DNP)

Abimbola Popoola, Guidelines for Suicide Risk Assessment and Referral in Correctional Facilities

Adejumobi Abiodun, A CLABSI Guideline for Healthcare Personnel During a Pandemic

Alejandra Fierro, Obesity Management in Primary Care

Amanda Lynn Paradeaux, Overweight/Obesity Awareness

Amber Hernandez, Emergency Department Overcrowding

Andrea Quintanilla, Screening Adolescents for Depression Using the PHQ9 Questionnaire

Andrew Kosko, Development of a Clinical Practice Guideline to Prevent Post-Cesarean Surgical Site Infections

Angelica Estrada, Improving Teen Contraceptive Care through Shared Decision Making

Anju Banjade Kharel, Hypertension Management in Nepali Immigrants through Evidence-Based Intervention

Anna Augustin, Implementation of a Medicare Annual Wellness Visit Education Program in Primary Care

Annabelle Whalen, Management of Polypharmacy in Older Adults

Annie Toms, Improving Power Drill Utilization for Performing Bone Marrow Procedures for Better Patient Outcome

April Renee Meras, Family-Based Intervention for Childhood Obesity

Ashley Pineda, Improving Incident Reporting in Primary Care

Ashley Snook, Improving Hydration in the Nursing Facility

Ashley White, Quality Improvement of Site Selection for Clinical Trials.

Belen Priest, Re-education for the Fragility Fracture Pathway for Process Improvement

Bonita Neumon-Owens, Evaluation of a Wellness Bundle: Acute Care Nurses

Brandi Holcomb, Evidence-Based Quality Improvement Initiative for a Nurse-Driven Early-Extubation

Bridgette Estes, Increasing Influenza and Pneumococcal Vaccinations Rates in Older Adults

Camella Sitz, A Habit-Based Intervention for Sustainable Weight Loss in Hypogonadal Men with Obesity

Cariessa McFadden, Effectiveness of a Mediterranean-Style Diet for Prevention of Gestational Diabetes Mellitus in Asian Indian Women

Carrleigh Abernathy, Implementation of Scoring Questionnaire for Sore Throat

Catherine Nenta Ebune, CARES Act and the Social Determinants of Health Influence on Telehealth

Cavel Elliot, Decreasing Caregiver Stress and Burden in a Group of Community-Dwelling Caregivers to Persons with Dementia

Cherie Hall, Nurse Manager Leadership Development Program

Chizomam Abanobi, Medication Guideline for Managing Low Back Pain in Adults Over 18 years in an Outpatient Spine Center

Christine Marie Wade, Nurse Burnout Reduction Project

Christine Victorian, Home Blood Pressure Monitoring Bundle for Hypertension Outcomes in Adult Patients Receiving Care in Public Health Clinics

Clara Nkem Omolola, Improvement of obesity management in primary care

Collin Naugher , Guide to Breastfeeding Difficulty

Cynthia Amachree, Antibiotic Stewardship in the Urgent Care Clinic

Cynthia Jean Drew, Improving Completion Rates of Advanced Directives in Assisted Living Facilities

Cynthia Whittington, A Clinical Practice Guideline to Care for Black Women at Risk for Preeclampsia

Danielle Fernandez, Provider Visit Attendance Improvement in Behavioral Health Population Post Hospitalization

Danielle Marie Fournier, Provider Education to Improve Postoperative Biomarker Testing for Patients with Non-Small Cell Lung Cancer

Danielle Stockhorst, Obesity Management in Primary Care

D'Ann DaShya Glasco MSN, Increasing Cervical Cancer Screening in Hispanic Women

Davina Ashleigh Whitehurst, Reducing Medicated Related Falls in the Older Population

Deanna Motakef, Improving Throughput with Early Identification of Needs

Debbie Snodgrass, Improving Outcomes in Rheumatoid Arthritis: Implementing a Bundle Intervention into Practice

Delmy Vesho, Addressing Nurses' confidence and Participation on Advance Care Planning Discussions (ACP)

Dematria Pleshette Holbrook, A Nutritional Intervention in Wound Care

Dena Villanueva, Healthcare Providers Implementation of a Care Bundle for Routine Human Immunodeficiency Virus (HIV) Screening in the Correctional Setting

Dharusal Patel, Best Practice when Caring for Patients on Oral Oncolytic Agents

Doretta Spates, A Mobile Health (mHealth) Intervention to Promote Physical Activity in African American Women

Drexel Forbes, Triageing Patients during an all-hazard disaster. A Clinical Practice Guideline for Nurses

Elizabeth Azie, Creation of a Structured Rapid Response Team with Early RRT Activation

Elizabeth Lopez, Guidelines for Increasing Medication Compliance in the Treatment of Human Immunodeficiency Virus Medication by Decreasing Pill Burden

Erica Francis, Addressing Diabetes Management Among Uninsured T2DM Patient Using Telephone Follow-up Visit in A Community Clinic

Esther Kumar, Reduction of Cardiovascular Disease Risk Using a CV Bundle in a Community of Senior South Asians in Texas

Esther Wachira, Guideline for Assessment and Prevention of Burnout in Primary Care Nurses

Florence Chinwuba, Implementing Cardiovascular Bundle in Black Adults 18 yrs and Older with Hypertension

Gina Arrey, Reducing Workplace Violence in an Acute Psychiatric Setting

Gina Edgeworth, Using the 4Ms Framework to Decrease Falls

Grace Ngozi Ukonu, Preventing Inpatient Falls by Adding Fall Video Education to the Existing Fall Prevention Program

Hanh Phu, Developing HIV Care Reintegration Guideline in the Correctional Facility

Hanna Zamani, Using Self-Blood Pressure Monitoring for Management of Hypertension: A Guideline Project

Henry John Mineros, Diabetes Foot Exams in Primary Care/Improving Outcomes

Icelind Gallardo, Guideline for Opt-Out Sexually Transmitted Infection Screening in Correctional Facilities

Isabel Beckett, Improving Mammography Communication Through Provider Education

Jasmine Serrano, Guideline for SBHC Provider Education to Start the HPV Vaccine at Nine Years Old

Jeanette Jackson, Improving the Intraoperative Anesthesia Handoff

Jeanine Price, Trauma-Informed Care in the Fertility Clinic Setting

Jennifer Muniz, Access to Care in States with Full Practice Authority

Jenny Khan, Diabetes Foot Ulcer Risk Assessment: Utilizing a Screening Tool

Jessica Sennett, Enhancing Competency and Coping with Anxiety in New Nurse Graduated through Simulation Pre-Briefing

Jessica Wright, LGBTQ+ Inclusive Care

Jose Anselmo Lara, Provider-led Education in the Urgent Care Setting to Improve Sexually Transmitted Disease Testing and Outcomes

Joyce Acquah, Increasing Colorectal Cancer (CRC) Screening in Hispanic Adults Using an Evidence-base Social Determinants of Health-Oriented Guide for Patient Navigation

Kahura Olive, Hepatitis C Guidelines in Jail Settings

Karen Marie Robbins, Promoting Patient-Centered Pediatric Fasting through Email Reminders

Katherine Sandlin, Improving Maternal Breastfeeding Knowledge: The Implementation of a Breastfeeding Bundle

Katie Ginder, Standardized Advanced Practice Provider Orientation Guideline





Kelly Garrett, Using a Balanced Scorecard to Navigate Social Determinants of Health and Hospital Readmissions in Older Adults with Intellectual and Developmental Disabilities  
 Kenneth Kaiser, Clinical Practice Guideline to Improve Emergency Department Triage  
 Kiana Lacy, Diabetes Risk Bundle for African American Adults Living in a Rural East Texas Community  
 Kimberly Burran, Potentially Preventable Readmissions  
 Kizzie Edie, Effectiveness of a Hypertension Bundle on Blood Pressure, Self-Efficacy Knowledge, and Adherence  
 Lauren Michelle Schafer, Using Telehealth to Triage Pharyngitis in Pediatrics  
 Lilia Rasul, Enhancing the Approach in Colorectal Cancer Screening in Primary Care through Education  
 Lisa Florida, Impacting Patient Centeredness in Purposeful Rounding Utilizing an Interactive Participation Based Simulation Approach  
 Loretta Bennan, Improving Hearth Health in African American Adults Using a Cardiovascular Disease Bundle  
 Luchia Foster, Improving Colon Cancer Screening in Primary Care  
 Luisa Collins, Glutamate Optimization as a Treatment for Depression: A Clinical Guideline  
 M. Graves, Guideline for Medication-Assisted Treatment  
 Mari Micci Bramuchi, Conservative Treatment of Peripheral Arterial Disease with Structured Walking Programs  
 Marija Nielsen, Improving Adherence to AAP Guidelines Regarding a Watchful Waiting Approach for Acute Otitis Media (AOM) in a Pediatric Urgent Care Setting  
 Mario Rodriguez, Implementing a Nursing Retention Bundle to Improve Nursing Retention and Nursing Satisfaction in the Cardia Catheterization Lab  
 Martha Johnson, Telehealth Weight Loss Program for Diabetic Patients in a Primary Care Setting in Texas  
 Mary Elizabeth Grimaldi, Per-operative Checklist Compliance  
 Mary Ezebuoro, The Significance of Diet, Exercise, and Weight Loss on Blood Pressure Management  
 Mayte Patterson, Guideline for Opioid Misuse Assessment, Screening, and Management for Adults 65 years and Older  
 Megan Margaret Sanford, Observation versus

Inpatient: Studying the Effect of Diagnosis-Specific Education on Pediatric Admission Classification  
 Mfon Okon Ofong, Depression Screening in Rheumatoid Arthritis Patients  
 Michael Cricchio, Comprehensive Telemedicine Guideline for Rural Family Practice Clinics  
 Michael McAllister, Heart Failure Readmission Reduction Project  
 Michael Richards, Improving Depression Screening in a Men's Health Clinic: A QI Project  
 Micky McDaniel, Guideline for Suicide Screening and Assessment for Acute Care Hospital Settings  
 Monica Herrera, Impact of a Discharge Bundle on Boarding Hours in Acute Care Hospitals  
 Nadya Panjwani, Step Squad Bundle in Older Adults with Multiple Myeloma Hospitalized for an Autologous Stem Cell Transplant  
 Nafisat Olamide Elias-Salawu, Access to Maternal Care: The Improving Access to Maternal Care Act  
 Nancy Wipf, Increasing Mental Health Screening Among Treated Rectal Cancer Patients  
 Natasha Danielle Gultery, An intervention addressing and improving food insecurity screening in older adult patients diagnosed with major depressive disorder  
 Nickeya Laycock, Implementing a Transitional Care Discharge Bundle to Prevent Early Hospital Readmissions in Kidney Transplant Recipients  
 Nkechi Obiageli Akpati, Effect of Walking on Anxiety among Patients diagnosed with generalized Anxiety Disorder (GAD) using GAD-7 Screening Tool  
 Nkeiruka Abanobi, Guideline for Prevention of Surgical Site Infection in Knee Arthroplasty  
 Oyetokunbo Lemoru, Utilizing Daily Mindfulness Training to Manage Stress in Adults Diagnosed with Chronic Conditions  
 Patrick Escamilla, IV Skills Confidence and Ultrasound Dependence in COVID-Era Graduate ER Nurses: A Quality Improvement Project  
 Portia Stephens, Mobile Text Messaging Use in Hypertension Management  
 Rachel Mark, A "Walk in My Shoes" Behavioral Health Stigma Reduction Bundle  
 Raji Anup, Human Papillomavirus Vaccine for Nine-Year-Olds and Up: An Evidence-Based Project  
 Relindis Nange Nsofon Mutia, Improving Post Hospitalization Nephrology Follow-up for Acute Kidney Injury  
 Renelle Ruth Woods, Heart Failure Follow-up  
 Robert Simon, Suicide Assessment in Outpatient

Behavioral Health  
 Ronald Meza, Reducing Readmissions in Heart Failure Patients  
 Rosa V. Rances, Improving Opioid Risk Assessment in Pain Management Practice  
 Roseline Onwuchuruba, Guideline for Diabetes Self-Management in Primary Care  
 Salitporn McKeel, Improving Medical Assistant Performance Through Competency-Based Education: Developing a System Guideline  
 Sally Park, Guideline for Obstructive Sleep Apnea Screening in Outpatient Mental Health Clinic  
 Samantha Kay Garcia, Evaluation of a Palliative Care Screening Intervention to Increase Early Palliative Care Consultation in the Intensive Care Unit  
 Sandra Onwuka, Improving the Detection of Depression in a Primary Care Setting  
 Sara Renee Martindale, Utilization of Text Message Reminders to Increase Outpatient Adult Psychiatric  
 Sarah Baguiwet Souffrant, Use of procalcitonin as a guide for empiric antibiotics in adult patients admitted with COVID-19: A quality improvement project for antimicrobial stewardship  
 Sasha Morales-Otero, Urinary Tract Infections and Antimicrobial Resistance  
 Shana Steege, Work-Related Injury Reduction in Surgical Area Nurses During Their First Year  
 Shannon Diaz, Implications of Improved Communication Using Bedside Handoff  
 Shannon Lynn Havens, Quality Improvement Initiative to Reduce Abscess Packing  
 Shannon Scolly, Preventing Opioid-Induced Pruritis Following Cesarean  
 Shannon Warren, Care for the Caregiver: A Guideline Project  
 Sheleta Lewis, Cardiovascular Wellness Assessment (Hypertension and Peripheral Artery Disease) in an Underserved African American Community  
 Sigga Jobe, Improvement of Hypertension Self-Care Management in African American Older Adults with Uncontrolled Hypertension Through Shared Decision-Making  
 Sindhu Cherian, Hepatitis Delta Infection: An Evidence-Based Approach for Screening and Treatment  
 Sonya Barnett, Chronic Obstructive Pulmonary Disease Guideline Development  
 Stella Ebelechukwu Azie, Use of Aerobic Walking Exercise in Reducing Depressive Symptoms  
 Stella Kebaso, Client-Centered Appointment Reminders to Prevent Cancellations and No-Show Appointments in Telepsychiatry Clinic

Sueanne Baddour, Increasing Depression Screening Rates for Older Adult Primary Care Patients with PHQ Protocol Implementation  
 Sunghae Sandra Jung, Mammography Adherence in women 40 to 75  
 Susan Bowlin, FAST-Tracking Access to Obesity Treatment  
 Suzanne Elizabeth Kraiss, Code Shock Alert Implementation  
 Tabitha Dawn South, Addressing Nurse Leader Compassion Fatigue  
 Tammy Franqueiro, Resilience, Burnout, and Well-Being Among New Graduate Nurses  
 Torey Sippio-James, Impact of Legislative Policy on Maternal Mortality  
 Traceen Eileen Driskill, Asymptomatic Chlamydia  
 Trel Jackson, Implementation of a Lung Cancer Screening Program  
 Trini Bui, Developing HCV Linkage to Care Guideline in the Correctional Facility  
 Valarie Melisa Chambless, Comparing HPV Vaccine Rates in Texas to Southern States and Districts with Minor Consent Laws  
 Vanessa McDaniel, Reducing Polypharmacy in Geriatric Primary Care  
 Vivian Powtackien, Clinical Guidelines for Antibiotic Stewardship in the Urgent Care  
 William Clinton, Improving Nursing Knowledge and Compliance for Pressure Injury Prevention

#### DOCTOR OF PHILOSOPHY IN KINESIOLOGY (PHD)

Brandi Stephens, Sympathetic Vascular Transduction and Sympathetic Reactivity to Muscle Metaboreflex Activation in Young, Non-Hispanic Black Women  
 Andrew Oneglia, Partitioning the Role of Myocardial Steatosis on Left Ventricular Function  
 Logan Moore, The Role of Muscle Damage on Joint Tissue  
 Neelam Ahuja, Amorphous Silicon Oxynitride (SiONx) Coatings for Craniofacial Implants Stimulates Osteogenesis via NRF2 Antioxidant Activity  
 David Buckley, Vascular and Metabolic Consequences of T Cell Aging  
 Ashley Darling, Sympathetic-cardiovascular Stress Reactivity in Adults with Major Depressive Disorder  
 Sauyeh Zamani, Pathophysiological Consequences of Pericardial Adipose Tissue Assessed by Magnetic Resonance Imaging





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