THE UNIVERSITY OF ALABAMA AT BIRMINGHAM® | HEERSINK SCHOOL OF MEDICINE | SUMMER 2025

UAB Medicine® Magazine

KEYS TO UNDERSTANDING

A POWERFUL PHILANTHROPIC PARTNERSHIP IS TRANSFORMING RESEARCH AND TREATMENT OF INTELLECTUAL AND DEVELOPMENTAL DISABILITIES

Cover Story

Virendra Mishra, Ph.D., associate professor in the UAB Department of Radiology, is co-director of the Civitan International Neuroimaging Laboratory along with Jane Allendorfer, Ph.D., associate professor in the UAB Department of Neurology.

Features

Briefs

Departments

People have asked why Alabama? I say it's because we have all the right pieces. We have UAB, a renowned research university. We have a supportive state health officer. We have Rotary Clubs. And we have people who care."

ISABEL SCARINCI, PH.D., MPH

Read more on page 10

ALUMNI

Sheldon Kushner, M.D., shares his experience as a young surgeon in Vietnam

Read more on page 36.

MESSAGE FROM THE DEAN

As I'm sure is true for many academic medical centers with significant research enterprises, to say that the first part of 2025 has been eventful is an understatement. In times of uncertainty, I turn to the simple clarity of our mission and vision statements as a guide:

Mission: *To advance health and healing through patient care, education, and discovery.* ***Vision:*** *To be a leader in making a global impact through innovative care, transformative discovery, and collaborative teaching and learning.*

These sentiments are our north star, serving as a reminder of the greater purpose behind our daily endeavors. Our school's history is marked by eras of both challenge and triumph, but we have weathered every storm to come out stronger, more resilient, and more adaptable, a trend I am confident will continue.

Collaboration is a keystone value of our school, and this issue will introduce you to a few of the many critical partnerships that fuel our excellence. Among them, the Civitan International Research Center, established in 1989 with a $20 million pledge from Civitan International, is one of our longest-standing, most dynamic philanthropic partnerships; a unique collaboration between UAB and partners across Alabama called Operation Wipe Out has the lofty goal of eliminating cervical cancer as a public health threat in our state by 2033; and our thriving start-up culture is made possible by collaborations between experts across the school, university, and Birmingham.

These stories remind us that, when we work together, our collective efforts lead to extraordinary outcomes.

ANUPAM AGARWAL, M.D.
Senior Vice President for Medicine and Dean
James C. Lee Jr. Endowed Chair
UAB Marnix E. Heersink School of Medicine

RECRUITMENT

Leading Innovation in Radiation Oncology

Breast cancer management expert to lead department

After a national search, Corey Speers, M.D., Ph.D., was named chair of the UAB Department of Radiation Oncology, effective May 12, 2025. He joins UAB from Case Western Reserve University and the University Hospitals Seidman Cancer Center in Cleveland, Ohio, where he was a professor, the vice chair of Research, and the Hennessy Hyland Master Clinician in Immunotherapy and New Drug Development in the Department of Radiation Oncology.

Speers is an internationally renowned expert in the management of breast cancer, with a focus on the most aggressive forms of the disease. His research interests include nomination and validation of expression-based signatures to predict patients who need treatment intensification and signatures to identify patients who will not need further adjuvant therapy for breast cancer. His translational work has credentialed a number of novel targets for the treatment of triple-negative breast cancer.

As principal investigator or co-investigator, Speers works to identify more effective, targeted therapies for breast cancer, including PARP-inhibitors, CDK4/6 inhibitors, and androgen receptor antagonists as agents for radiosensitization. His laboratory has also utilized kinome screens to identify novel targets for the treatment of aggressive breast cancers like triple-negative breast cancer.

COREY SPEERS, M.D., PH.D.

"I am excited to work alongside the department's talented faculty, staff, and trainees to build upon this strong foundation and further advance our shared mission of innovation and impact."

RESEARCH

Protective Biome

Probing Gut Bacteria's Role in Cancer Immunity

Selene Meza-Perez, Ph.D., instructor in the UAB Division of Immunology and Rheumatology, Department of Medicine, received the Heersink School of Medicine's Featured Discovery award for her study titled "Proteobacteria impair anti-tumor immunity in the omentum by consuming arginine," which was published in Cell Host & Microbe.

The study explores the complex relationship between gut bacteria and immune responses, particularly how certain bacteria can hinder the body's natural ability to fight tumors. The study reveals how specific types of bacteria, such as Proteobacteria, consume a vital nutrient called arginine, a compound necessary for activating immune cells that could otherwise target and eliminate tumors. In mice treated with antibiotics or raised in a germ-free environment (lacking Proteobacteria), immune cells called CD8+ T cells were more effective in fighting tumors.

Without the Proteobacteria to consume arginine, higher levels of this nutrient were available, which in turn reduced the suppressive power of Tregs, allowing the CD8+ T cells to attack and shrink the tumors. The study also demonstrated that adding arginine supplements had a similar effect, enhancing CD8+ T immune cell function and reducing tumor growth.

SELENE MEZA-PEREZ, PH.D.

EDUCATION

BHI-Ph.D.

New Biomedical and Health Informatics Ph.D. Program

The UAB Department of Biomedical Informatics and Data Sciences announced the launch of a new Ph.D. program in Biomedical and Health Informatics (BHI-Ph.D.). "This interdisciplinary field blends elements from computer science, statistics, clinical research, and bioinformatics," said Jin Chen, Ph.D., vice chair of education for the department. "It emphasizes analyzing and interpreting complex data, as well as developing and disseminating solutions, infrastructure, and algorithms to address human health and disease problems."

The BHI-Ph.D. core curriculum includes essential courses in research methodologies, machine learning, and the ethical practice of research. Students can specialize in one of three advanced tracks:

- Translational bioinformatics: This track uses computational methods to analyze biological data, bridging bench research and clinical applications.
- Clinical and health informatics: Students in this track will gain expertise in enhancing patient care and health care delivery systems through informatics.
- Artificial Intelligence in medicine: This cutting-edge track trains students to harness AI for transformative health care applications.

The program is awaiting ACHE approval, followed by final Board of Trustees approval in the summer of 2025. The department aims to open enrollment after that process is complete.

JIN CHEN, PH.D.

PATIENT CARE

Urology Unmatched

UAB Named Kidney Stone Care Center

UAB was named a Care Center by the Oxalosis & Hyperoxaluria Foundation (OHF), making it one of three designated OHF Care Centers in the world, along with the Mayo Clinic and Boston Children's Hospital. The designation marks UAB's recognition as an international research hub and multidisciplinary clinical site focusing on primary hyperoxaluria and other rare kidney stone diseases.

Primary hyperoxaluria is a significant kidney stone disease caused by the overproduction of the molecule oxalate. It can be diagnosed as primary hyperoxaluria type one, two, or three, with type one being the most severe. Because primary hyperoxaluria is relatively rare and underdiagnosed, it can be difficult for patients to find experts in the field, especially without having to travel far.

"That's where the Care Centers come into place," said Kyle Wood, M.D., associate professor in the UAB Department of Urology and co-chair of the OHF. "We can provide care from UAB to the entire Southeast if not a larger area for any individual who's diagnosed with a rare kidney stone disease, including primary hyperoxaluria."

KYLE WOOD, M.D.

One Saturday in June 2024, Jamie Smith began her shift with UAB Hospital's Environmental Health and Safety as usual. What started as a normal day led to her waking up in a hospital bed three days later, having suffered sudden cardiac arrest.

Learn how her colleagues' quick action and a team of UAB providers saved her life at go.uab.edu/smith-sca.

PATIENT CARE

The Kick

Soccer Federation Preferred Providers

Amit Momaya, M.D., associate professor and chief of Sports and Exercise Medicine in the UAB Department of Orthopaedic Surgery, and Steven Brown, M.D., associate professor and chief of Sports and Exercise Medicine in the UAB Department of Family and Community Medicine, have become the first Alabama physicians to be included on the prestigious U.S. Soccer Federation Preferred Provider List.

Momaya is renowned for his specialization in leg and knee injuries, particularly ACL reconstruction. He frequently performs the lateral extra-articular tenodesis (LET) procedure, which provides greater stability to the knee by protecting it from rotational forces and reducing stress on the ACL graft—a critical intervention for soccer players, who are prone to these injuries.

Brown is a notable specialist in non-surgical orthopaedics, with a particular focus on lower extremity orthobiologics. He is recognized for his expertise in Platelet-Rich Plasma (PRP) injection treatments, which have proven effective in promoting healing and reducing pain for various musculoskeletal conditions, especially those commonly found in soccer athletes.

AMIT MOMAYA, M.D., AND STEVEN BROWN, M.D.

RESEARCH

Expanding Hope

Steering Clinical Trials Growth

Dana Rizk, M.D., was appointed associate dean for Clinical Trials and Cynthia Joiner, Ph.D., MPH, R.N., was named assistant dean for Clinical Research Operations in the Heersink School of Medicine, effective March 1, 2025. Both newly created roles will work closely with Senior Associate Dean for Clinical and Translational Research, Orlando Gutiérrez, M.D., to lead the school's efforts to advance clinical trials. The appointments follow the December 2024 announcement of David Kimberlin, M.D., professor of Pediatrics, as the associate vice president for Clinical Trial Operations for UAB.

Both roles will be key operational leaders for the school's clinical trials administration, developing standard operating procedures, streamlining workflow processes, and ensuring adherence to regulations and guidelines from sponsoring agencies and oversight bodies. They will identify key areas of clinical trials growth and optimize clinical trials operations across the school's departments and centers and will serve as leaders in the Center for Clinical and Translational Science (CCTS), with a primary focus to expand the CCTS' clinical trials activities.

Rizk is the Anupam Agarwal Endowed Professor of Medicine and the director of Clinical Trials Research in the Division of Nephrology, Department of Medicine, Medical Director of the UAB Glomerular Kidney Disease Clinic, and Medical Director of the Clinical Trials Administrative Office.

Joiner is an associate professor of Medicine and the vice chair for Research Operations and Development in the Department of Medicine, as well as the executive director of the department's Clinical Research Enterprise unit, which she created.

DANA RIZK, M.D., AND CYNTHIA JOINER, PH.D.


UABMEDICINE

MENTORSHIP

Stefanie Robel, Ph.D., associate professor in the UAB Department of Cell, Developmental and Integrative Biology, **received the Landis Award for Outstanding Mentorship 2024.** This prestigious award is given to only five people annually by the National Institute of Neurological Disorders and Stroke (NINDS) and is named in honor of former NINDS Director Story Landis, Ph.D. Robel, who is the first UAB faculty member to receive this award, also received $100,000 to support efforts toward fostering the career advancement of trainees.

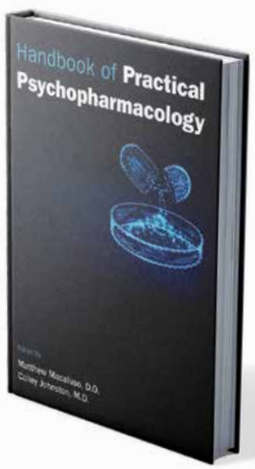
Robel's approach to mentorship focuses on empowering mentees to reach their full potential through a framework focused on "People, Projects, and Productivity." Her strategies include using project management tools to boost productivity, helping mentees identify research gaps, and organizing regular retreats. Robel also created a hands-on undergraduate curriculum and leads a book club on work-life balance, professional development, and more.

NINDS noted that they clearly saw the impact of her work through letters submitted by Robel's trainees, many of which "reflected that they gained a deep appreciation of the value of good mentorship in a way that will no doubt influence many of them to become outstanding mentors themselves."

PRESS

Psychopharmacology Handbook Published

The "Handbook of Practical Psychopharmacology," edited by UAB Department of Psychiatry and Behavioral Neurobiology faculty members Matthew Macaluso, D.O., professor and Bee McWane Reid Endowed Chair in Mood Disorders, and Calley Johnston, M.D., assistant professor, was published by American Psychiatric Association Publishing. The handbook features information on indications, contraindications, dosing, drug interactions, clinical monitoring, and adverse effects for more than 130 medications.



RESEARCH

Problem Plaques

Cellular Changes in Coronary Artery Disease

In the study, "Spatial transcriptomic approach to understanding coronary atherosclerotic plaque stability," published in Arteriosclerosis, Thrombosis, and Vascular Biology, Associate Professor of Medicine Gregory Payne, M.D., Ph.D., and his team used spatial transcriptomics to examine the location and activity of different cells inside artery plaques from deceased patients. By comparing stable plaques with unstable ones, the team found important differences in how cells behave and communicate.

"Atherosclerosis is a notoriously complex disease, involving a wide range of cell types and multiple factors that contribute to its onset, progression, and eventual complications like plaque rupture and heart attacks," Payne said. "When we had the chance to apply this cutting-edge technology to such a challenging problem, we jumped at it."

They discovered that certain cells inside the plaques—like immune cells and muscle cells—change their roles and locations in ways that may make plaques more likely to burst. These changes were linked to inflammation and clotting, two major risk factors for heart attacks.

IN THE NEWS

UAB EMERGENCY DEPARTMENT EARNS NATION'S FIRST LEVEL 1 ACCREDITATION

The UAB Emergency Department has earned the first Level 1 Accreditation from the American College of Emergency Physicians in the U.S. A Level 1 emergency department must meet and exceed the program's 34 common criteria, as well as requirements in staffing, personnel and resource availability, and creating a safe environment for patients and staff. This milestone reinforces UAB's role as a health care innovation leader, demonstrating the institution's ability to translate academic discovery into advancements in emergency care.

PATIENT CARE

Leadership Update

New chair invests in children's care

YUNG LAU, M.D.

Yung Lau, M.D., was named chair of the UAB Department of Pediatrics and physician in chief of Children's of Alabama, effective March 24, 2025. He served as interim chair of Pediatrics since November 1, 2024.

Lau is a nationally recognized expert in pediatric electrophysiology, including arrhythmia management with catheter ablation, pacing, and device, as well as congenital heart disease.

Lau previously served as professor and vice chair for Clinical Affairs in the Department of Pediatrics, where he held the Thomas N. Carruthers Endowed Chair in Cardiology. He also served as division director for Pediatric Cardiology.

"Dr. Lau's deep roots at UAB and Children's of Alabama, his demonstrated leadership, and his passion for clinical excellence, innovative research, and committed mentorship will be key assets in shaping the future of the Department of Pediatrics and Children's of Alabama," said Anupam Agarwal, M.D., senior vice president for Medicine and dean of the Heersink School of Medicine.

Lau earned his medical degree from Loma Linda University in California before completing his internship and residency in Pediatrics at UAB. He completed a Pediatric Cardiology postdoctoral fellowship at the Medical University of South Carolina before joining the UAB faculty in 1994.

RANKINGS

The 2024-2025 Best Global Universities rankings from U.S. News & World Report named UAB No. 164 out of 2,459 schools, making it the highest ranked school in Alabama. Rankings were calculated using bibliometric indicators such as publications, citations, and highly cited papers.

TOP 100 RANKINGS

35: Best Global Universities for Surgery
49: Best Global Universities for Clinical Medicine
58: Best Global Universities for Endocrinology and Metabolism
69: Best Global Universities for Oncology
71: Best Global Universities for Immunology
85: Best Global Universities for Cardiac and Cardiovascular Systems
86: Best Global Universities for Infectious Diseases

Tackling Athletes' Mental Health

UAB Psychiatry and Blazer Football partnership supports players' wellness

Cary Estes

In football, there are phrases that are as familiar to a player's ears as the sound of a coach's whistle: "Suck it up … Fight through it … Shake it off." Tough words for a tough sport. But even as coaches push players to test their physical limits, they understand that injuries require time and resources to heal.

The problem is coaches can't recognize mental health issues nearly as easily as they can a torn ACL or dislocated shoulder. That's why UAB head football coach Trent Dilfer is working with the UAB Department of Psychiatry and Behavioral Neurobiology to provide players with mental health information and advice.

"Mental toughness and physical toughness sometimes get blended together, but they're two separate things," said Dilfer, a former Super Bowl-winning quarterback who spent 14 years in the NFL. "As coaches, we're not experts in mental health or depression, so any time you can partner with experts to help provide resources, you're doing your players a service. And our primary focus is the players and their holistic development."

The partnership grew from a chance meeting at a UAB basketball game between Dilfer and Matthew Macaluso, D.O., the Bee McWane Reid Professor and vice chair for Clinical Affairs in the UAB Department of Psychiatry and Behavioral Neurobiology. Dilfer spent several minutes talking with Macaluso's son and even let him try on Dilfer's Super Bowl ring.

"I wrote Coach a thank-you note for making such a special memory with my son, and said to let me know if there was anything I could do for him or the team," Macaluso said. "That led to a series of meetings where we talked about how there are many players who are not prepared for the struggles they'll have in college, on the field, or in life outside of football. I asked how our department could help promote mental wellness and be a resource for players with mental health needs."

Currently, Macaluso and Karen Marks, a licensed clinical social worker, visit the UAB football complex once a month to lead educational sessions on mental health with the team, and discuss what a person should do if they need assistance. He said the meetings help the players realize that openly dealing with mental health issues is not a sign of weakness.

"I think the best part of the educational sessions is when we open the dialogue for participation," said Marks. "Often one question prompts another question, or more often, another story. Other hands shoot up, or players will nod in agreement. Engaging, participating in the dialogue, and sharing their experiences in a vulnerable way is visibly team-building."

"There is still a stigma in our society in general, and especially among young athletes, where many people don't understand that mental disorders are biological in nature just like any other health problem, such as high blood pressure," Macaluso said. "We've had some very deep conversations with groups of players about barriers that are holding them back from success both on and off the field."

Dilfer has long recognized the need for a strong support system to help players on and off the field, dating to the emotional struggles he endured following the death of his 5-year-old son in 2003 while Dilfer was in the NFL.

"One of the big advantages of doing this at UAB is the resources available within the medical center that supplement the great services offered by traditional student counseling services," Dilfer said. "You have experts in their field who want to partner with you all over campus, and Dr. Macaluso and his team have stretched to help us.

"On many occasions, Coach has reached out to me looking for resources for a player or to pick my brain about the best way to engage with a particular player as an individual," Macaluso said. "He's committed to making these young men into fine, healthy human beings in addition to top athletes. He's someone who truly cares about his players as people."

LEFT TO RIGHT: TRENT DILFER AND MATTHEW MACALUSO, D.O.

“AS COACHES, WE’RE NOT EXPERTS IN MENTAL HEALTH OR DEPRESSION. SO ANY TIME YOU CAN PARTNER WITH EXPERTS IN THEIR SPACE TO HELP PROVIDE RESOURCES, YOU’RE DOING YOUR PLAYERS A SERVICE. AND OUR PRIMARY FOCUS IS THE PLAYERS AND THEIR HOLISTIC DEVELOPMENT.”

TRENT DILFER

PREVENTABLE

ALABAMA IS THE FIRST STATE IN THE NATION WITH A COMPREHENSIVE PLAN TO ELIMINATE CERVICAL CANCER

When it comes to cervical cancer, Alabama has one of the highest rates of new cases and mortality. A dire situation to be sure, but there is a silver lining: Alabama also leads the country in the effort to eliminate cervical cancer as a public health threat.

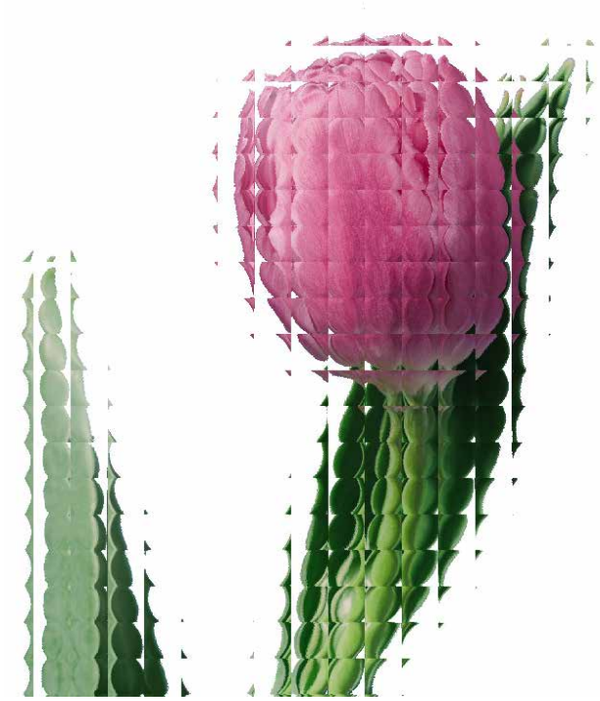
Launched statewide in 2023, Operation Wipe Out is a collaboration between UAB, the Alabama Department of Public Health (ADPH), Rotary Club of Birmingham, and various community partners to eliminate cervical cancer as a public health problem by 2033 through a multipronged approach that includes expanding access to cervical cancer screening and follow-up care as well as education around prevention of human papillomavirus (HPV) infection, the leading cause of cervical cancer. Through Operation Wipe Out, Alabama has become the first state in the nation to devise a comprehensive plan for the elimination of cervical cancer.

STORY BY
LYNNE HALL

PHOTOS BY
ANDREA MABRY

CERVICAL CANCER is different than most cancers because, not only can be detected early and treated, it can be prevented," said Isabel Scarinci, Ph.D., MPH, vice chair for Global and Rural Health in the UAB Department of Obstetrics and Gynecology and senior advisor for Global Cancer at the O'Neal Comprehensive Cancer Center at UAB. "Think about that. There is a cancer that can be eliminated because we have the tools, we just need to get them out to communities. That's why we all came together—UAB, the Alabama Department of Public Health, and Rotary Clubs in Alabama."

Audacious ambition? Perhaps, particularly coming from a state that consistently has some of the highest rates of cervical cancer incidence and mortality. But when you're shooting for the moon, audacity may be just what is needed.



85 PERCENT OF PEOPLE WILL EXPERIENCE A TYPE OF HPV INFECTION AT SOME POINT IN THEIR LIVES.

ACCORDING TO THE CENTERS FOR DISEASE CONTROL

THE SCIENCE OF CERVICAL CANCER

The cervix, a firm, round lump of tissue at the back of the vaginal wall, is actually the tip end of the uterus that serves as a conduit between the uterus and the vagina. According to the Centers for Disease Control and Prevention, 85 percent of people will experience a type of HPV infection at some point in their lives. Since most infections are asymptomatic and clear over time, many people are unaware of the infections. Unfortunately, some types of HPV are persistent and can cause changes that result in cervical pre-cancer and cancer.

The good news, says the CDC, is that cervical cancer is over 90 percent curable if detected early through cervical cancer screening. And, there is a vaccine that prevents HPV infection, thereby preventing the development not only of cervical cancer but also of other cancers associated with HPV infection such as oropharyngeal and anal cancer in men and women, penile cancer in men, and vulvar and vaginal cancer in women.

Why, then, are so many women still suffering and dying from cervical cancer, not just in the U.S. but worldwide? And what can be done to change that?

Those were the questions the principals of Operation Wipe Out set out to answer, beginning in late 2021 in Chambers County, the Alabama county with the highest cervical cancer incidence and mortality rates in the state. Four years later, Alabama is leading the country in the quest to eliminate cervical cancer as a public health problem.

WORKING TOGETHER

While Operation Wipe Out began as a joint effort between UAB, the Alabama Department of Public Health, and Rotary Club of Birmingham, Scarinci and Nancy Wright, director of the ADPH Cancer Prevention and Control Division (CPCD), deserve credit for their roles in recognizing the problem close to home and taking the first steps toward organizing the effort.

Scarinci, a native of Brazil whose training in clinical psychology ultimately led her to the UAB Department of Obstetrics and Gynecology, was working with the Rotary Clubs of Birmingham and Colombo to reduce cervical cancer in Sri Lanka. She quickly recognized that these services were needed just as badly in her

home state. She approached her local Rotary president with her concerns; "Well, come up with a plan," was his answer. Challenge accepted.

Choosing Chambers County because of its high cervical cancer rate, Scarinci, in collaboration with the Rotary Clubs of Fayette and Chambers County and community leaders, began reaching out to women to learn the reasons behind the high cervical cancer rates.

At the same time, Wright was working across the state to increase CPCD's focus on cervical cancer. Having spent 24 years with ADPH, 20 as CPCD director, Wright was instrumental in establishing age and income guidelines for women who are eligible for free cancer screenings at their local health departments.

"It's incredible to say there is a cancer that we can stop—we can *end* it," Wright said, a hint of wonder in her voice. "There is no other cancer we can say that about."

Wright approached Scarinci and UAB Obstetrics and Gynecology Chair Warner Huh, M.D., who also serves as an ADPH consultant on cervical cancer screening procedures, and suggested they host a summit to uncover the reasons for Alabama's high rate. A gynecological oncologist specializing in cervical cancer for more than 30 years who helped pioneer the use of robotic surgery in gynecologic cancer procedures, Huh's status as a respected researcher and clinician makes him a powerful ally in the fight against cervical cancer.

GATHERING DATA

"I trained in Boston, where cervical cancer rates were a fraction of what they are here—maybe one or two cases per year," Huh said. "The needs of the patient population in this state are significant, but to be able to provide meaningful interventions that prevent women from getting cancer and to make sure people don't lose their mother, their grandmother, their wife … that is incredibly powerful."

He suggested that instead of holding a summit where they talked *at* rural doctors, they invite physicians from across the state and ask them what obstacles they face. That summit, held in October 2022, uncovered a number of reasons for Alabama's high cancer rates, the most prominent of which proved to be the lack of screening and clinical and surgical services in rural and impoverished areas. Following the summit, Scarinci, Wright, Huh, and partners met to devise a statewide action plan incorporating all they'd learned.

The group then brought in ADPH State Health Officer Scott Harris, M.D., MPH, who readily saw the need for action and agreed to launch Operation Wipe Out through the ADPH."This situation is made worse because almost all of these cases are completely preventable with regular cervical cancer screening, prompt referral to appropriate care, and prevention education," Harris said. "We have all the necessary tools to eliminate this terrible disease, and it feels like a public health failure whenever a new case is diagnosed." Harris said.

"IT'S INCREDIBLE TO SAY THERE IS A CANCER THAT WE CAN STOP– WE CAN END IT."

NANCY WRIGHT

ALABAMA LEADS THE WAY

Operation Wipe Out, is built on a three-pillar foundation of HPV prevention, screening, and follow-up care for abnormal screenings. The biggest problem Alabama faces is lack of services in rural areas. “Most of these areas don’t even have a gynecologist and area hospitals have closed,” Wright said. “Many people don’t have transportation or are uncomfortable driving to a larger city.”

To overcome these challenges, ADPH not only provides the HPV/Pap test at all county health departments, but also has certified nurse practitioners that travel to underserved areas to perform colposcopies, a follow-up procedure for abnormal HPV/Pap tests. Additionally, Operation Wipe Out hosts meetings encouraging physicians and practitioners to attain certification to perform colposcopies in their offices. Wright says their efforts are paying off. “Last year, we performed nearly 900 colposcopies.” Scarinci says that, as word has spread about how the state of Alabama is leading the country with a program to eliminate cervical cancer, requests for information about Operation Wipe Out have poured in from other states.

“People have asked why Alabama?” Scarinci said. “I say it’s because we have all the right pieces. We have UAB, a renowned research university. We have a supportive state health officer. We have Rotary Clubs. And we have people who care.”

As time has passed, more organizations have partnered with Operation Wipe Out, including the American Cancer Society, Huntsville Hospital, Tuskegee University, and many more.

SCOTT HARRIS, M.D., MPH
State Health Officer

NANCY WRIGHT
Director of the ADPH CPCD

BIGGEST BARRIERS TO WOMEN’S HEALTH CARE IN ALABAMA

- REGIONAL LACK OF GYNECOLOGISTS
- CLOSED HOSPITALS
- UNRELIABLE TRANSPORTATION

In November 2024, Wright was invited to share Operation Wipe Out’s progress with the global community at the Conference of the International Papillomavirus Society held in Scotland, an accomplishment she sees as the highlight of her career.

“The feedback was fantastic, and we had people from Brazil, India, Africa, and across the U.S. ask us if we could help them and become partners,” she shared. “It’s like the world is hungry to do something about cervical cancer. And Alabama is leading the way.”

Taking the lead in a vital community health effort is an endeavor that is, serendipitously, familiar to Scarinci. As an infant in Brazil, she contracted polio before receiving the necessary second vaccination. The life-threatening event left her with a limp and, she says, her mother always blamed herself. Not wanting other families to suffer, her mother began going door to door in their small town in Brazil, armed with the polio vaccine and her limping child. “Do you want this to happen to your child?” she queried. Her efforts had a real impact on polio in their town.

"I asked her once if she truly believed that we could eradicate polio in the world. She said, ‘Not really, but I did my part.’ That’s what I’m doing now,” Scarinci said of her work with Operation Wipe Out. “I’m doing my part.”

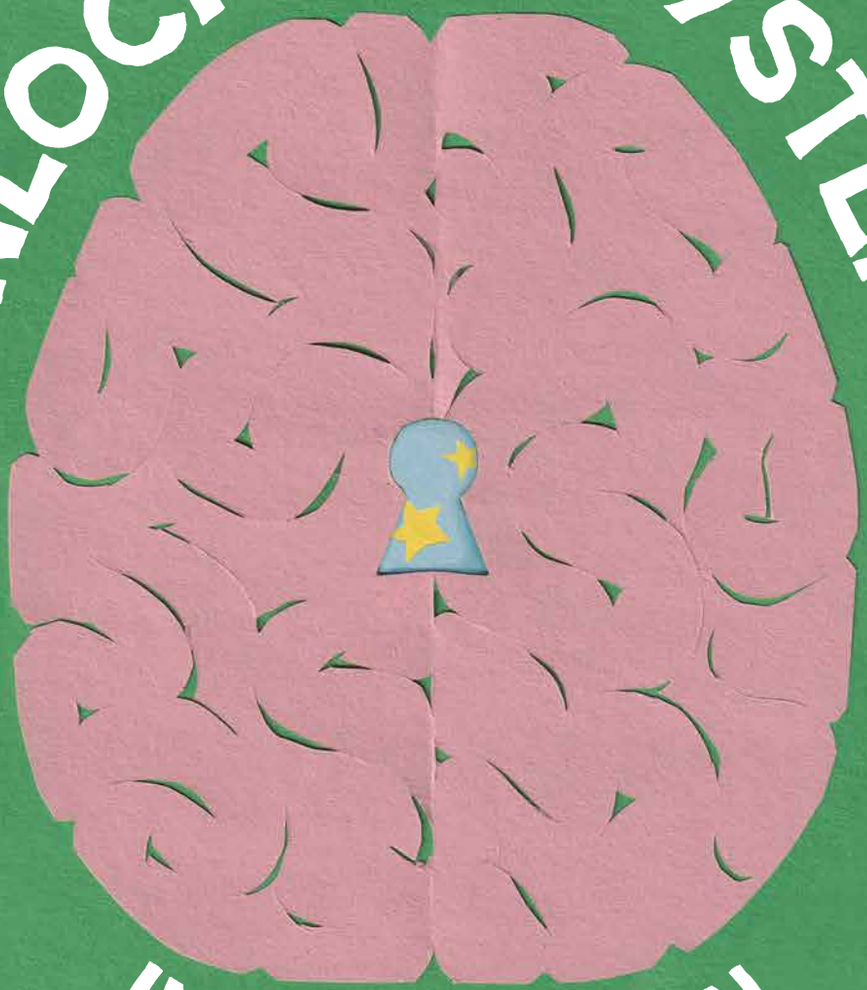
On January 31, 2025, Operation Wipe Out held its second summit in Birmingham, sharing updates on its progress and engaging the larger community across Alabama with over 150 attendees. There’s still a long way to go, but Scarinci and all the individuals and organizations involved in Operation Wipe Out can rest assured, when it comes to achieving the lofty goal of eliminating a deadly cancer, everyone is doing their part.

“IT’S LIKE THE WORLD IS HUNGRY TO DO SOMETHING ABOUT CERVICAL CANCER. AND ALABAMA IS LEADING THE WAY.”

NANCY WRIGHT

LEARN MORE ABOUT OPERATION WIPE OUT AT OPERATIONWIPEOUT.ORG.

UNLOCKING MYSTERIES IN THE BRAIN



A POWERFUL PHILANTHROPIC PARTNERSHIP IS TRANSFORMING RESEARCH AND TREATMENT OF INTELLECTUAL AND DEVELOPMENTAL DISABILITIES

CARY ESTES

BEFORE THERE WERE MRI MACHINES

or CT scans— never mind the possibility of using AI to unlock the mysteries of the human brain—there was Civitan International.

Founded in 1917, this organization of volunteer service clubs throughout the globe spent the first four decades of its existence focused primarily on community needs such as food drives and services for the elderly. Then in the 1950s, Civitan began to focus on helping people with neurological developmental disabilities and became a major supporter of Special Olympics International.

By the late 1980s, Civitan decided to take its support to another level. Instead of just providing services to those affected by neurodevelopmental disabilities, Civitan wanted to fund research aimed at potentially discovering treatments and even cures for such disabilities.

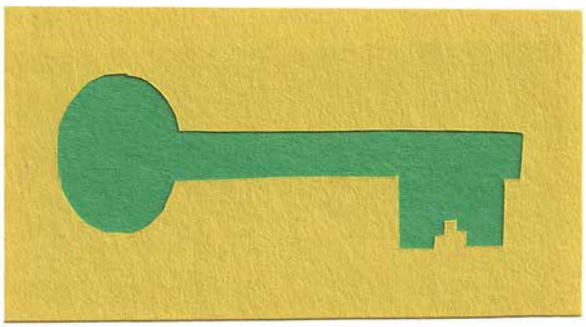
So, in 1989, the Civitan Board of Directors pledged $20 million to create the Civitan International Research Center (CIRC). After reviewing applications from universities and medical organizations throughout the country, Civitan chose to place that center at UAB.

Photos by Andrea Mabry

TODAY, CIRC, which celebrated its 35th anniversary in 2024, is a leader in researching the causes and potential treatments for neurodevelopmental disabilities and disorders. More than 150 Civitan scientists and staff are dedicated to basic and translational research in service of CIRC's mission to improve the well-being and the quality of life of individuals and families affected by intellectual and developmental disabilities. In addition, the Civitan-Sparks Clinics at UAB provide support for families with children who have been impacted by developmental disabilities. To date, Civitan International has exceeded its initial $20 million commitment and has donated over $21 million to the CIRC, including a $1.25 million pledge in 2024.

"We're doing research that starts at the most basic science level in understanding brain function, and we're conducting clinical trials that are on the cutting edge of the next treatments," said Craig Powell, M.D., Ph.D., chair of the UAB Department of Neurobiology, who has been the CIRC director since 2018. "Then we're going all the way to actually caring for patients and their families, so we're involved in all levels of this process."

For researchers and clinicians, the brain remains a perplexingly complex organism. But Powell says progress is being made in understanding some of the brain's mysteries, which in turn is leading to promising treatments of a wide variety of neurodevelopmental disorders.



"There have been dramatic advances in the clinical treatment of genetic causes of all sorts of intellectual and developmental disabilities," Powell said. "We have treatments that can slow the course of Alzheimer's. We're using brain stimulation to treat Parkinson's. We can now virtually cure a genetic form of childhood ALS called spinal muscular atrophy with a one-time dose of gene therapy into the spinal fluid.

"We're just beginning to see the emergence of multiple drug or medical therapies for specific genetic causes of intellectual developmental disability. We're on the cusp of a host of new treatments for what people used to think were immutable disorders. Once you were diagnosed with them, you were stuck and there wasn't much we could do for you other than behavioral treatments. But we're beginning to discover medicines that can make a real difference in the lives of these children and their families. That's a huge change from the past."

ALIGNMENT AND INNOVATION

One of Powell's first moves as CIRC director was to create the Translational Research Core (TRC) within the CIRC and bring in clinical research psychologist Cassandra Newsom, Psy.D., as its director. The TRC includes spaces for evaluating children with intellectual disabilities, along with areas for post-docs and trainees to work.

"What this has done is transform our ability to do translational research that takes what we're learning in the lab directly to the patients in the clinics," Powell said.

For example, Newsom led the Phase 2 clinical trials of a novel drug for a genetic cause of autism and intellectual disabilities known as Pitt-Hopkins syndrome. That study was recently completed and the drug demonstrated significant benefits for patients.

"This was the first drug trial for Pitt-Hopkins, and the first potential treatment for this condition," Newsom said. "The results of that study will be used to work with the FDA to see if we can move forward with a Phase 3 trial. It's exciting to be working on evaluating a drug for a disorder where there have not been treatments before."

Newsom also is one of the lead investigators of the HEALthy Brain and Child Development Study, being conducted in collaboration with the University of Alabama, the National Institutes of Health, and a multi-site national consortium. It is the largest long-term study of early brain and child development in the United States and follows pregnant participants and their children for approximately 10 years. Data collected include structural and functional brain imaging; anthropometrics; medical history; family history; biospecimens; and assessments of social, emotional, and cognitive development. About half the sample includes those who experience adversities during pregnancy including, but not limited to, exposures to substances.

"We're trying to understand how healthy brain development unfolds and what that looks like, and also what kinds of things can alter development trajectories and potentially cause problems," Newsom said. "It can be environmental exposure, substance use, malnutrition, lack of access to prenatal care. We're trying to take a broad look to see what kinds of risks and protective factors there may be that could promote healthier brain development in children."

Newsom says the study is emblematic of the type of research that is possible at UAB through the CIRC and the support of Civitan International.
"The consistency of Civitan's investment has given us a solid foundation to build on and support that vision of translational research for autism and neurodevelopmental disabilities. They have made it possible for us to pull some of the best researchers, scientists, and clinicians from across campus to increase the focus on neurodevelopmental research. That has really made a huge difference in the speed at which we can make innovations."

"WE'RE ON THE CUSP OF A HOST OF NEW TREATMENTS FOR WHAT PEOPLE USED TO THINK WERE IMMUTABLE DISORDERS."

Craig Powell, M.D., Ph.D.

Left to right:
Cassandra Newsom, Psy.D.
and Craig Powell, M.D., Ph.D.

The relationship between UAB and Civitan has been so successful that some elements have expanded out of the Civitan Building on campus. One of those is the Civitan International Neuroimaging Laboratory (CINL), which is housed at UAB Hospital-Highlands. As part of UAB's Research MRI Core Facility, the CINL provides state-of-the-art MRI neuroimaging that examines a variety of neurological disorders, looking carefully at how potential treatments affect the brain.

"THE GOAL IS TO MANAGE THE DISEASE ITSELF BETTER, AND NOT JUST THE SYMPTOMS."

Virendra Mishra, Ph.D.

"We'll do an MRI at baseline before treatment, and we want to see if there are any characteristics that may be able to predict if somebody will respond well to medication or an intervention," said Jane Allendorfer, Ph.D., associate professor in the UAB Department of Neurology and co-director of the CINL along with Virendra Mishra, Ph.D., associate professor in the UAB Department of Radiology. "Then once you start treatment, what happens to the brain? Can we induce improvements by changing connections between brain regions or other characteristics that could help improve function for people with these different diseases and disorders?

"With Parkinson's you think of a movement disorder. With epilepsy you think of a seizure disorder. But there are other things they endure like poor cognitive function, mood disorders, poor sleep. Can this intervention improve some of those, and are there corresponding brain changes with that? Similar questions arise with people with schizophrenia and ADHD. Does this intervention change the pathways of the brain?"

One of Mishra's projects involves analyzing a potential connection between Parkinson's disease and dementia. He notes that, while one of the most commonly recognized symptoms of Parkinson's is tremors, approximately 80 percent of the patients develop dementia as well.

"This is something we're trying to understand better. We'll use the scan and look for any signals in the brain that can predict this," Mishra said. "The goal is to manage the disease itself better, and not just the symptoms. If we can control the tremor, that's great. But we also want to understand how we can stop the disease from progressing."

Because of the complexity of the brain, Allendorfer says such research can take years to yield significant breakthroughs, which is why the sustained support from Civitan International is so important.

"Civitan providing these funds helps investigators try out things that could have a high reward," Allendorfer said. "It gives investigators the freedom to think of new avenues to explore. That funding can go a long way and spearhead larger projects."

Left to right: Virendra Mishra, Ph.D. and Jane Allendorfer, Ph.D.

"WE'RE HERE TO HELP FAMILIES NAVIGATE THE AVAILABLE RESOURCES ONCE THEY RECEIVE A DIAGNOSIS AND THE NEED IS CLARIFIED,"

Laura McGuinn, M.D.

A VISION OF WHAT IS POSSIBLE

While there is obvious significance to research that might lead to eventual treatments and cures for neurodevelopmental disorders, thousands of families in Alabama are dealing with the daily challenges that come with what can be a frightening and unfamiliar diagnosis. This is particularly true for parents who have young children with neurodevelopmental disabilities.

This is where the Civitan-Sparks Clinics for Developmental and Learning Disorders comes in. As part of the Division of Developmental-Behavioral Pediatrics in the UAB Department of Pediatrics, Civitan-Sparks provides evaluation, consultation, primary care, and even dental services for individuals with a wide range of neurodevelopmental conditions.

"We have a lot of different interdisciplinary clinics all in one building focused on children and youth with developmental disabilities," said Sarah O'Kelley, Ph.D., training director at Civitan-Sparks. "We see children who have known or suspected developmental delays. We also have a broad training program for people going into the field of developmental disabilities."

O'Kelley, who has been with the clinic for 20 years, recently assumed leadership of Alabama's University Center for Excellence in Developmental Disabilities Education, Research, and Service (UCEDD) and the UAB Leadership Education in Neurodevelopmental and Related Disabilities (LEND) training programs.

One of the initiatives O'Kelley has implemented at Civitan-Sparks is the Program for the Education and Enrichment of Relational Skills (PEERS®). The program was developed at UCLA by Elizabeth Laugeson, Psy.D., with whom O'Kelley collaborated before bringing PEERS to UAB.

"It's a social skills program for teens or young adults who want to learn ways to make and keep friends," O'Kelley said. "Often, our patients don't know how to initiate contact or maintain a relationship. The program is caregiver-assisted, so a parent or caregiver is also part of the group and can work with their child in between sessions. We've seen great success with the program—it's a popular clinical offering and training experience."

Left to right: Laura McGuinn, M.D., and Sarah O'Kelley, Ph.D.

"WE HAVE A LOT OF DIFFERENT INTERDISCIPLINARY CLINICS ALL IN ONE BUILDING FOCUSED ON CHILDREN AND YOUTH WITH DEVELOPMENTAL DISABILITIES."

Sarah O'Kelley, Ph.D.

In addition, Civitan-Sparks has started focusing more heavily on family assistance, especially for parents whose child recently received a diagnosis of autism or other developmental disability diagnosis. Civitan-Sparks Clinical Director Laura McGuinn, M.D., who also serves as director of the Division of Developmental-Behavioral Pediatrics, says this ability to branch out into more of a support role is possible because of funding from Civitan International.

"We're here to help families navigate the available resources once they receive a diagnosis and the need is clarified," McGuinn said. "Some people are struggling with basic needs like housing or food, and then you drop this very complicated diagnosis in their lives. So we try to hold their hands and connect them to community resources."

This personal guidance and care are critical, according to Gwendolyn Brown, who has served as a family navigator for the UAB Regional Autism Network. Brown says Civitan-Sparks provides the type of support she wishes she had received when her son was diagnosed with autism more than 20 years ago.

"As a parent, you receive this diagnosis and think, 'How in the world can I do this?,' because it's a huge challenge," Brown said. "But at Civitan-Sparks, they have social workers who immediately begin working with parents about the various resources available. It helps give parents peace of mind."

Brown's son is now 25 years old and works as a self-taught graphic designer. She says she often shares her experience raising an autistic child with patient family members at the clinic. "That's the hope I try to give families, and everyone at Civitan-Sparks tries to give that hope, too," Brown said. "The doctors and social workers really take the time to talk with these families and give them a vision of what is possible."

CIVITAN-SPARKS CLINICS FOR DEVELOPMENTAL AND LEARNING DISORDERS OFFERS SUPPORT WITH A VARIETY OF CLINICS AND CARE OPTIONS

EVALUATION

CONSULTATION

PRIMARY CARE

DENTAL SERVICES

A LONG-HAUL PARTNERSHIP

Mark Eisinger joined Civitan International as a volunteer the same year that UAB was chosen to be the site of the CIRC. He is now the organization's executive vice president, meaning his work with Civitan has paralleled the group's partnership with UAB. And from his view, it has been an extremely fruitful collaboration.

"WE WANT THINGS TO BE INSTANTANEOUS THESE DAYS. BUT WHEN IT COMES TO RESEARCH, IT CAN TAKE 20 OR 30 YEARS BEFORE YOU SEE IT COME TO FRUITION."

Mark Eisinger

"Our members have really embraced the research center. They always look forward to hearing about the work that is being done there," Eisinger said. "We had a Junior Civitan summit where Dr. Powell was the keynote speaker. They'll take these students on tours of the center to see firsthand some of the things they are doing in the lab. The center always takes the time to share their progress with us."

It is an impact that has been more than 35 years in the making, and one that Eisinger hopes will continue for many more years—if not decades—to come. He says while there still is much to be learned in the area of neurodevelopmental disorders, progress is being made thanks in part to the work taking place at the CIRC.

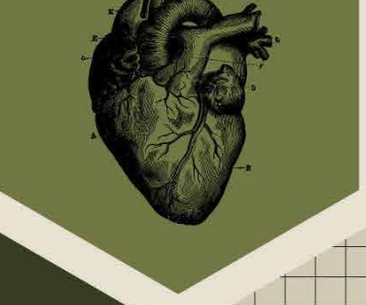
"The genes they have found and the ability to identify what's happening within the brain are some of the biggest discoveries. These are going to be the puzzle pieces that are put together to improve treatment of these disabilities."

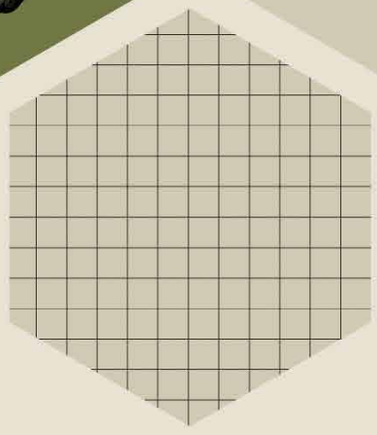
That is the ultimate goal for Civitan International and for all those involved with the CIRC. And it is why the partnership between UAB and Civitan continues to thrive.

"The reason this works is because Civitan International has confidence in UAB's ability to make a difference in the lives of these children," Powell said. "They know that we're caring for patients every day at multiple levels with multidisciplinary approaches. They know we have well over 100 researchers and scientists in their labs working on neurodevelopmental disorders. And we communicate with Civitan as scientists on a regular basis. We tell them the success stories of what the science is doing.

"We're just beginning to scratch the surface on novel treatments. The more we understand about these intellectual developmental disabilities, the more likely we are to advance toward new medical treatments. Once we understand what goes wrong with the brain, we can try to figure out ways to fix it. We've come a long way in 35 years, and with the help of Civitan International, we'll continue working toward those goals."

To learn more about supporting CIRC and Civitan-Sparks Clinics, contact Whitney Williams at 205-934-7406 or whitneywilliams@uabmc.edu.

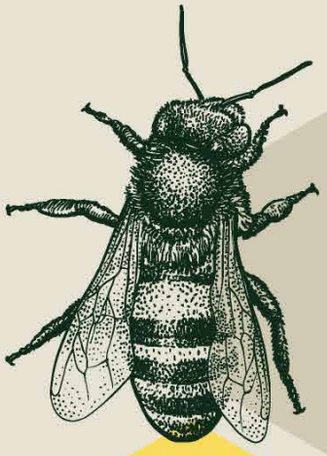


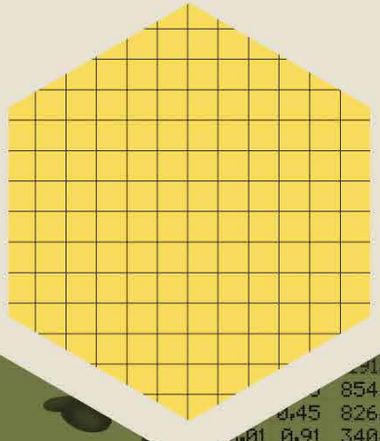


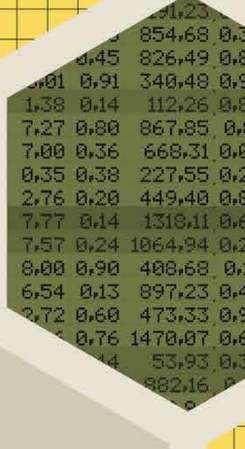
Buzzing WITH Innovation

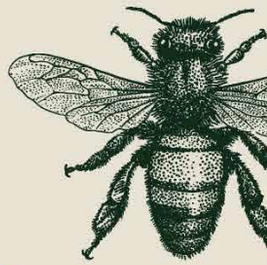
Heersink's thriving start-up culture is producing creative solutions to improve health care outcomes

Jane Longshore





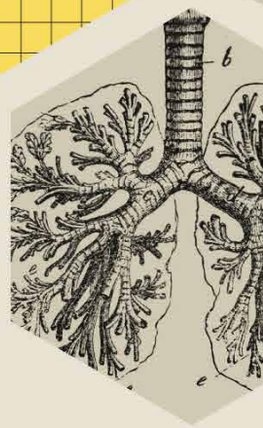




Academic medical centers (AMCs) are among the United States' most active hives of biomedical innovation thanks to their often robust research enterprises. Increasingly, AMCs like the Heersink School of Medicine play a central role in another realm of innovation: the biomedical/biotech start-up space. According to Rubin Pillay, M.D., Ph.D., executive director of the UAB Marnix E. Heersink Institute for Biomedical Innovation, assistant dean for Global Health Innovation in the Heersink School of Medicine, and chief innovation officer for UAB Health System, a start-up is essentially a new business entity created to commercialize intellectual property. The Heersink Institute for Biomedical Innovation is a primary player in getting start-ups based on biomedical intellectual property developed within UAB off the ground.

> **You can be a faculty member, a researcher, a staff member—if you have an idea with commercial potential, our institute provides the support to set up a commercially viable entity to take your idea to the market.**

Rubin Pillay, M.D., Ph.D.

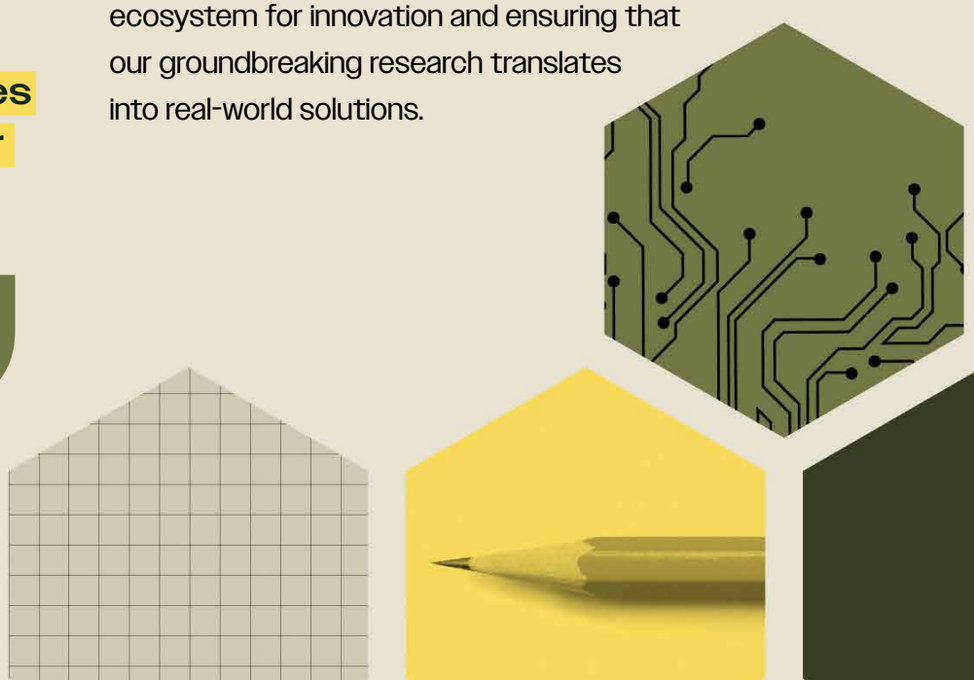


Other partners in the start-up ecosystem include the Bill L. Harbert Institute for Innovation and Entrepreneurship, which houses UAB's technology transfer office, the UAB Research Foundation; the Station 41 biotechnology commercialization hub housed at Southern Research, a translational scientific research organization and UAB affiliate; and state and local incubators and accelerators like Innovate Alabama, Innovation Depot, and the Prosper HealthTech Accelerator. "One of our functions is to act as a catalyst between all the players," Pillay explained. "We provide counsel in terms of the process, we help people work with the tech transfer office, we help them work with funding and financing—we catalyze the whole process out of our institute."

> **UAB owns part of these start-ups, and the hope is that the return on investment from them goes back into investing in other potential start-ups."**
>
> Rubin Pillay, M.D., Ph.D.

UAB's start-up portfolio reflects this dynamism, with five start-ups launched and 10 start-ups approved and poised for launch in 2024 alone. What's more, Pillay says AMCs are ideal environments for launching successful start-ups because they have the right combination of ingredients. "The technology is already there. The infrastructure is already there. The brain power is already there. And, I think, the biggest factor is the problems are there. That's the reason you set up a start-up—you've identified a problem and you have a potential solution. The fact that health care is littered with problems that need to be addressed makes this a uniquely logical and fertile space for start-ups."

On the following pages, we highlight a few of the biomedical and biotech start-ups that have originated in the Heersink School of Medicine, offering a glimpse into the breadth of creative solutions our experts have devised to improve health outcomes. Through collaboration and support, Heersink is cultivating a fertile ecosystem for innovation and ensuring that our groundbreaking research translates into real-world solutions.



Alveolus **Bio**

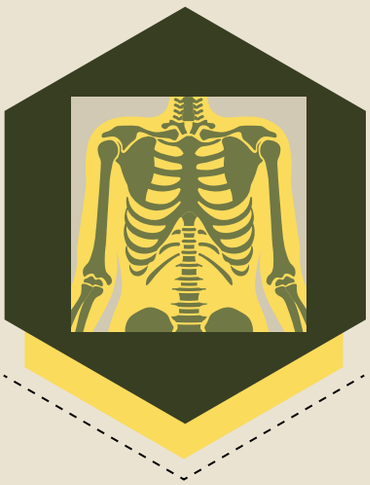
ABOUT: Changes in microbial signatures of the lungs and airways are associated with worsening chronic respiratory disease and persistent inflammation. Alveolus Bio harnesses the therapeutic power of commensal bacteria strains and their byproducts for inhaled delivery of biotherapeutics straight to the lungs.

FOUNDER: C. Vivek Lal, M.D., associate professor in the UAB Division of Neonatology, Department of Pediatrics

YEAR FOUNDED: 2020

LEARN MORE: alveolusbio.com

NOTED: In 2023, Alveolus Bio became one of the few Alabama-based therapeutics companies ever to receive a $2.5 million FastTrack Grant from the National Heart, Lung and Blood Institute for “An inhaled microbiome-targeted biotherapeutic for treatment of COPD.”



Body Check

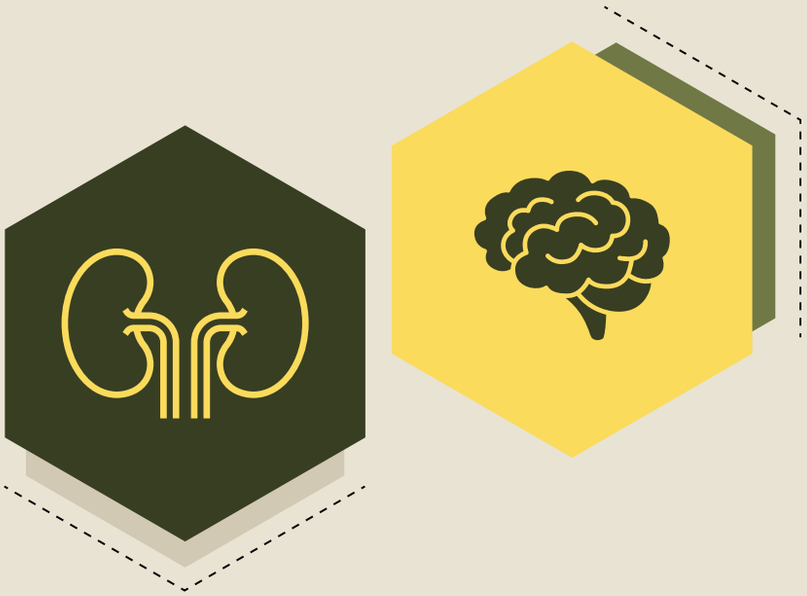
ABOUT: Body Check has developed an FDA cleared, preventative health platform that uses AI to detect unmanaged chronic conditions within imaging exams that are acquired for other purposes. The first commercially available clinical product identifies underlying cardiomegaly, or enlarged heart, prioritizing access to care for high-risk individuals.

FOUNDERS: Steven Rothenberg, M.D., assistant professor, and Andrew Smith, M.D., Ph.D., adjunct professor, in the UAB Department of Radiology

YEAR FOUNDED: 2022

LEARN MORE: bodycheck.ai

NOTED: Rothenberg is the co-inventor of a UAB patent for care coordination software and digital therapeutics related to opportunistic screening; co-founded the first AI marketplace in medical imaging (EnvoyAI, acquired 2018); and is the co-director of AI in Imaging for the Department of Radiology. Smith, an inventor on 30 patents and a co-founder of three start-up companies, was named chair of Diagnostic Imaging at St. Jude Children’s Research Hospital in April 2024 and remains on the UAB Radiology adjunct faculty.



Dialytix

ABOUT: Kidney disease takes a toll on the health care system: 37 million people in the U.S. have kidney disease, $48 billion is spent on treatment of kidney disease in the U.S. per year, and 27 percent of hospital stays in the U.S. have acute kidney injury. Without better data, readmissions and higher acuity and mortality rates will continue. Dialytix provides the first kidney disease care management platform focused on delivering real-time multimodal data integration from electronic health records, dialysis devices, and finance for quality improvement, operational efficiency, and capacity management.

FOUNDERS: Javier Neyra, M.D., associate professor in the UAB Division of Nephrology, Department of Medicine, co-director of UAB Critical Care Nephrology, and co-director of the Clinical and Innovation Cores of the UAB-UCSD O'Brien Center for Acute Kidney Injury Research; Rubin Pillay, M.D., Ph.D., executive director of the UAB Marnix E. Heersink Institute for Biomedical Innovation, assistant dean for Global Health Innovation in the Heersink School of Medicine, and chief innovation officer for UAB Health System; and Ruben Raposo, CEO of Dialytix and three-time UAB graduate (Bachelor of Science in Management Information Systems, Master of Engineering in Information Engineering Management, and Executive Master of Science in Health Administration).

YEAR FOUNDED: 2023 **LEARN MORE:** dialytix.com

NOTED: In April 2024, Dialytix was one of five health-related tech startups to receive $60,000 each as part of the Birmingham-based Prosper Healthtech Accelerator. A team co-led by Neyra also was awarded a $20,000 Priya Nagar, M.D., Innovation Award for Kidney-Related Diseases in February 2025. The team is collaborating with Dialytix to develop an AI-powered clinical decision support tool to help health care professionals optimize treatment decisions for critically ill patients with acute kidney injury undergoing continuous renal replacement therapy.

ReACT FND Health

ABOUT: ReACT (Retraining and Control Therapy), developed by Aaron Fobian, Ph.D., is a novel treatment that uses research-supported approaches designed to help manage and reduce the symptoms of Functional Neurological Disorder (FND), which can include seizure-like episodes, tics, tremors, paralysis, difficulty walking, dizziness, cognitive function difficulties, speech difficulties, and other symptoms. ReACT uses principles of habit reversal and other evidence-based techniques to retrain the involuntary, reflexive functional symptoms, empowering individuals to regain control over their bodies. **The mission of ReACT FND Health** is to expand access to research-supported FND treatment, including offering telehealth ReACT treatment to individuals diagnosed with FND throughout the U.S. and empowering and training clinicians to implement ReACT in their own practices.

FOUNDER: Aaron Fobian, Ph.D., professor in the UAB Department of Psychiatry and Behavioral Neurobiology.

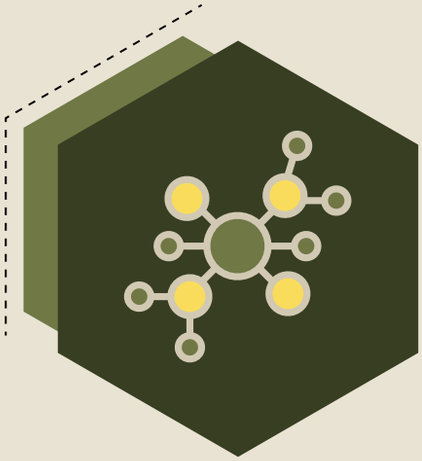
YEAR FOUNDED: 2024

LEARN MORE: reactfnd.health

NOTED: ReACT FND Health began accepting patients into ReACT treatment in January 2025 and has already begun helping individuals with FND throughout the U.S. In April 2025, they trained providers in Iceland to implement ReACT. In 2020, Fobian published the positive results of a 29-participant trial of ReACT that was the first randomized controlled trial of any treatment for pediatric functional seizures. She is currently conducting two funded randomized controlled trials to further establish ReACT's effectiveness.

Endomimetics

ABOUT: Endomimetics is dedicated to transforming patient care through biomimetic nanotechnology, developing advanced coatings and gels that enhance healing and improve the functionality of medical implants. The proprietary Bionanomatrix technology addresses major challenges in cardiovascular health, dialysis access, orthopedic implants, dental regeneration, and brain aneurysm treatment.



FOUNDERS: Ho-Wook Jun, Ph.D., professor in the UAB Department of Biomedical Engineering, and Brigitta Brott, M.D., professor in the UAB Division of Cardiovascular Disease, Department of Medicine.

YEAR FOUNDED: 2009 **LEARN MORE:** endomimetics.com

NOTED: In September 2024, Endomimetics was awarded a $2.8 million Phase II Small Business Innovation Research grant from the National Institute of Neurological Disorders and Stroke to research the potential of Bionanomatrix to improve performance of flow diverters used in the treatment of brain aneurysms.

Curanostics

ABOUT: Curanostics is a HIPAA-compliant platform designed to securely collect, organize, and summarize a patient's medical records using AI. It enables individuals to better understand their health data and seamlessly share it with their health care providers.

FOUNDERS: Christian Lopez Blanco, a UAB Neuroengineering Ph.D. trainee; Yash Vagal, a computer engineering graduate student at Georgia Tech; and Quinlan Mewborne, a technologist at the Mayo Clinic Florida in Jacksonville, who met through the NIH's Bio-Entrepreneurship Capstone.

YEAR FOUNDED: 2023

LEARN MORE: curanostics.health

NOTED: The Curanostics team was chosen as a headlining presenter at the 2024 BIO International Convention in San Diego, one of the biggest events for biotech companies. They also won first place in the poster competition at UAB's Second Annual Disability Health Symposium.

TIXiMED

ABOUT: There are currently no oral medications for Type 1 diabetes, and no specific drug is available to inhibit TXNIP (thioredoxin-interacting protein), a newly identified therapeutic target that is increased in diabetes and causes beta cell death and islet cell dysfucntion. TIX100 is a novel, TXNIP-inhibiting, oral diabetes drug that protects against models of Types 1 and 2 diabetes as well as MASLD (metabolic dysfunction-associated steatotic liver disease), which is often associated with diabetes. TIXiMED was established to develop and commercialize TIX100 as a first-of-its-kind oral therapeutic for Types 1 and 2 diabetes.

FOUNDER: Anath Shalev, M.D., professor in the UAB Division of Endocrinology, Diabetes, and Metabolism, Department of Medicine, and director of the UAB Comprehensive Diabetes Center

YEAR FOUNDED: 2021

LEARN MORE: tiximed.com

NOTED: In July 2024, TIXiMED obtained clearance from the United States Food and Drug Administration to proceed to clinical trials under an Investigational New Drug for TIX100, giving TIXiMED the green light to start human studies with TIX100. On February 28, 2025, TIXiMED announced the successful dosing of the first cohort of subjects of this Phase 1 clinical trial.

Enter: Experts

Meet some of Heersink's outstanding new faculty members

Jane Longshore

Each issue, we introduce you to several of the exceptional new faculty that have joined the Heersink School of Medicine. These outstanding recruits—just a few of the many new faces we welcome to our faculty each year—bring with them a wealth of expertise, impressive research portfolios, and a commitment to excellence in shaping the future of medicine and health care.

Jerri Edwards, Ph.D.

The UAB Department of Psychiatry and Behavioral Neurobiology welcomed Jerri Edwards, Ph.D., as a professor in January 2024. She also holds the Heersink Endowed Chair in Mental Health Research. Edwards earned a bachelor's degree in Psychology from Anderson University and later pursued a master's in Experimental Psychology at Western Kentucky University. She earned her Ph.D. in Developmental Psychology at UAB and completed a postdoctoral fellowship at the UAB Center for Research on Applied Gerontology.

"My primary area of expertise is cognitive training with broader interests in behavioral interventions that help reduce the risk of cognitive impairment and dementia, such as Alzheimer's disease. My research focuses on maintaining quality of life and everyday function for individuals as they age," Edwards shared.

Edwards returned to UAB after 24 years working as a professor at other institutions. She currently serves as the principal investigator for a five-year, randomized controlled clinical trial, "ACTIVE MIND: An adaptive clinical trial of cognitive training to improve function and delay dementia."

The Active Mind study examines whether computerized brain training can reduce risk of dementia such as Alzheimer's disease. Dementia prevention research takes on increased urgency as no proven treatments exist to cure Alzheimer's disease, the most common form of dementia, which affects more than 5 million Americans.

John Engelhardt, Ph.D.

John Engelhardt, Ph.D., joined the Heersink School of Medicine in May 2025 as a UAB Presidential Faculty Scholar, a designation for faculty whose research programs align with UAB's Research Strategic Initiative. He joined the UAB Division of Pulmonary, Allergy and Critical Care Medicine, Department of Medicine as a professor.

Engelhardt received his Bachelor of Science in Biochemistry from Iowa State University and Ph.D. in Human Genetics from Johns Hopkins University. He completed postdoctoral work at the University of Michigan before joining the faculty at the University of Pennsylvania. He has been a faculty member of the University of Iowa Department of Anatomy and Cell Biology since 1997 and served as chair from 2004-2024. He also served as director of the University of Iowa Center for Gene Therapy for the past 25 years.

Ranked among the world's leading cystic fibrosis researchers, Engelhardt's research focuses on the molecular basis of CF disease pathologies and the development of gene therapies for the disorder. His work spans four major research areas: lung molecular and cellular biology as it relates to the pathogenesis and treatment of CF; the development of viral vector for gene therapy and gene editing; pathogenesis of CF-related diabetes; and the study of airway stem cell niches, the regulatory mechanisms that control stem cell proliferation and repair in the airway, and using stem cells to develop cell-based therapies for CF. Engelhardt has published 304 manuscripts in peer reviewed journals.

JERRI EDWARDS, PH.D. | JOHN ENGELHARDT, PH.D. | JENNY YANG, PH.D. | ZHI-REN LIU, PH.D.

Jenny Yang, Ph.D., and Zhi-Ren Liu, Ph.D.

The UAB Division of Hematology and Oncology, Department of Medicine, welcomes husband-and-wife researchers Zhi-Ren Liu, Ph.D., who joined UAB January 1, 2025, and Jenny Yang, Ph.D., as professors.

Liu is an acclaimed cancer biologist whose work is focused on understanding the role of the tumor microenvironment on cancer progression and immunity. He formerly served as a Distinguished University Professor and Georgia Cancer Coalition Distinguished Cancer Scholar in the Department of Biology at Georgia State University.

Liu's research lab is focused on the development of a rationally designed protein drug—meaning it is designed to bind to a specific protein to treat a disease—called ProAgio as a treatment for pancreatic, breast, lung, and colon cancer. His team is extensively involved in collaborations in both basic and clinical studies of ProAgio in cancer treatment and in understanding the mechanism of drug action in patient tumors. Due to the unique mechanism of drug action of ProAgio, Liu is also interested in extending the cancer treatment application of the drug to be used in combination with radiotherapies at UAB.

The novel drug mechanism of ProAgio also provides excellent opportunity as a drug in treatment of chronic liver diseases, such as non-alcoholic steatohepatitis, autoimmune hepatitis, and primary biliary cholangitis. Liu said he looks forward to strong collaboration efforts with UAB gastroenterologists and hepatologists in both pre-clinical and clinical studies of ProAgio.

Yang is a trailblazing protein chemist whose work holds tremendous potential to advance medical imaging, improving early disease detection, diagnostic evaluation, and image-guided intervention. A Permanent Regents' Professor and Distinguished University Scholar in the Department of Chemistry at Georgia State University, Yang is a fellow of the National Academy of Inventors, director of the Advanced Translational Imaging Facility and associate director of the Center for Diagnostics and Therapeutics at Georgia State University, and a founder and president of InLighta Biosciences.

Yang's current work involves expanding the development of targeted contrast agents, calcium sensors, and therapeutics for clinical applications of human diseases. With UAB and other centers, she plans to lead large grant applications directed at clinical trials for early detection of liver cancer, pancreatic cancer, lung cancer, colorectal cancer, prostate cancer, breast and liver metastasis, and liver, lung, cardiac, and kidney fibrosis. She will also develop PET imaging agents and theranostic agents for chronic diseases and image guided intervention.

Pathways to Discovery

How research enriches the medical school experience

FEDERICO PROKOPCZUK

is in his fourth year as an M.D./Ph.D. trainee. A native of Rancho Cucamonga, California, he graduated from California State University, Northridge with a Bachelor of Science degree in microbiology before joining the Heersink School of Medicine in June 2021.

Describe the research projects in which you have participated at Heersink.

I work in the lab of Carlos Orihuela, Ph.D., a professor in the UAB Department of Microbiology. My project investigates Pseudomonas aeruginosa, a bacterium that can cause infections in the blood, lungs, or other parts of the body after surgery, and a filamentous bacteriophage known as Pf, and how they affect each other during chronic infection of Pseudomonas aeruginosa. I am looking at the ways that this bacteriophage, which is a bacterial virus, can be making Pseudomonas better at infecting people long-term. Any infection with Pseudomonas aeruginosa can be incredibly damaging, but once the infection becomes chronic, it is incredibly hard to treat. Once this microbe gets in it does not want to leave and over time, this causes more and more complications, especially in people who are immunocompromised. Ultimately, this shortens the lives of people with the infection. If we were to better understand what Pseudomonas aeruginosa may be using to become chronic, like Pf, it could open up new ways of dealing with some of these infections.

What have you learned about your area of research and conducting research in general as a result of your research activities?

I had a background in microbiology going in, but one of the areas that has really become interesting to me is how microbes interact with each other while they are causing disease. It's fascinating to think that while we are trying to clear these infections, we may have some microbial friends that may be able to help us out.
In terms of conducting research, one of the things that has become clearer to me is that research training is more about the mindset than the techniques.

"It's more important to think clearly about a question and approach it with the proper controls than it is to do the most wild and new methods."

How have mentors enriched your research experiences?

Dr. Orihuela has been incredible. He pushes me to be a better version of myself, and that can sometimes come with some hard conversations. There are times where I have had to come to him with bad results and that can be tough, but it's about continual growth. I also credit post-docs and other students in his lab for my mentorship.

I believe we should always be humble and teachable, and being in a good lab means being able to learn from everyone around you.

Have you published or presented your research?

I had a paper published in the journal mBio in 2023 ("Engineered Superinfective Pf Phage Prevents Dissemination of Pseudomonas aeruginosa in a Mouse Burn Model"). I have presented at multiple national conferences, most recently at ASM (American Society for Microbiology) Microbe 2024 in Atlanta, Georgia, and Southeastern Medical Scientist Symposium 2024 in Nashville, Tennessee.

How would you like for research to be part of your career moving forward?

Absolutely, I envision myself being a physician-scientist studying complex infections with a clinical practice in critical care and infectious disease. I want my research to inform my practice and my practice to inform my research. I couldn't choose just one, so I've decided to commit my career to both.

■ Photos by Jennifer Alsabrook-Turner

Pathways to Discovery

How research enriches the medical school experience

COURTNEY SWAIN

is a sixth-year M.D./Ph.D. trainee. Raised in Anniston, Alabama, she graduated from the University of West Florida with a B.S. in Biomedical Sciences in 2018. After completing UAB's PREP Scholars Program in 2019, she joined the M.D./Ph.D. program In 2021, she joined the Graduate Biomedical Sciences program and the Cancer Biology theme for her Ph.D. training.

Describe the research projects you have participated in at Heersink.

I am in the lab of Lalita Shevde-Samant, Ph.D., a professor in the Department of Pathology and the associate director of Cancer Research Training and Education Coordination at the O'Neal Comprehensive Cancer at UAB. Our lab conducts breast cancer biology and immunology research.

My research involves studying a molecular pathway called Hedgehog signaling, which has been shown to drive the growth and metastasis of breast tumors. We also study how diabetes impacts breast cancer progression.

Specifically, the focus of my project is to better understand how Hedgehog signaling and diabetes impact a type of immune cell called T lymphocytes in breast tumors.

What have you learned about your area of research and conducting research in general as a result of your research activities?

My work has led me to learn skills and technologies, such as flow cytometry and bioinformatics, that will be valuable for my future career in medicine. I've also learned how to think critically and independently as a scientist. Altogether, I've received a strong foundation in research skills that will be very essential in my future clinical and research training.

How have mentors enriched your research experiences?

Dr. Samant's mentorship has helped me thrive as a trainee as she continually challenges me to grow as a competent and independent cancer researcher. She also helps me strategically plan every step of my project and training, providing me with a more focused and hands-on research experience.

What inspired you to pursue research as a medical student?

I sought out medical training opportunities that would also allow me to have a dedicated research curriculum, as I knew this experience will be essential for me to achieve my career goals. I started my medical school journey as part of the M.D./Ph.D. program, which allows me to integrate Ph.D. training into my medical education with the goal of developing into a physician-scientist.

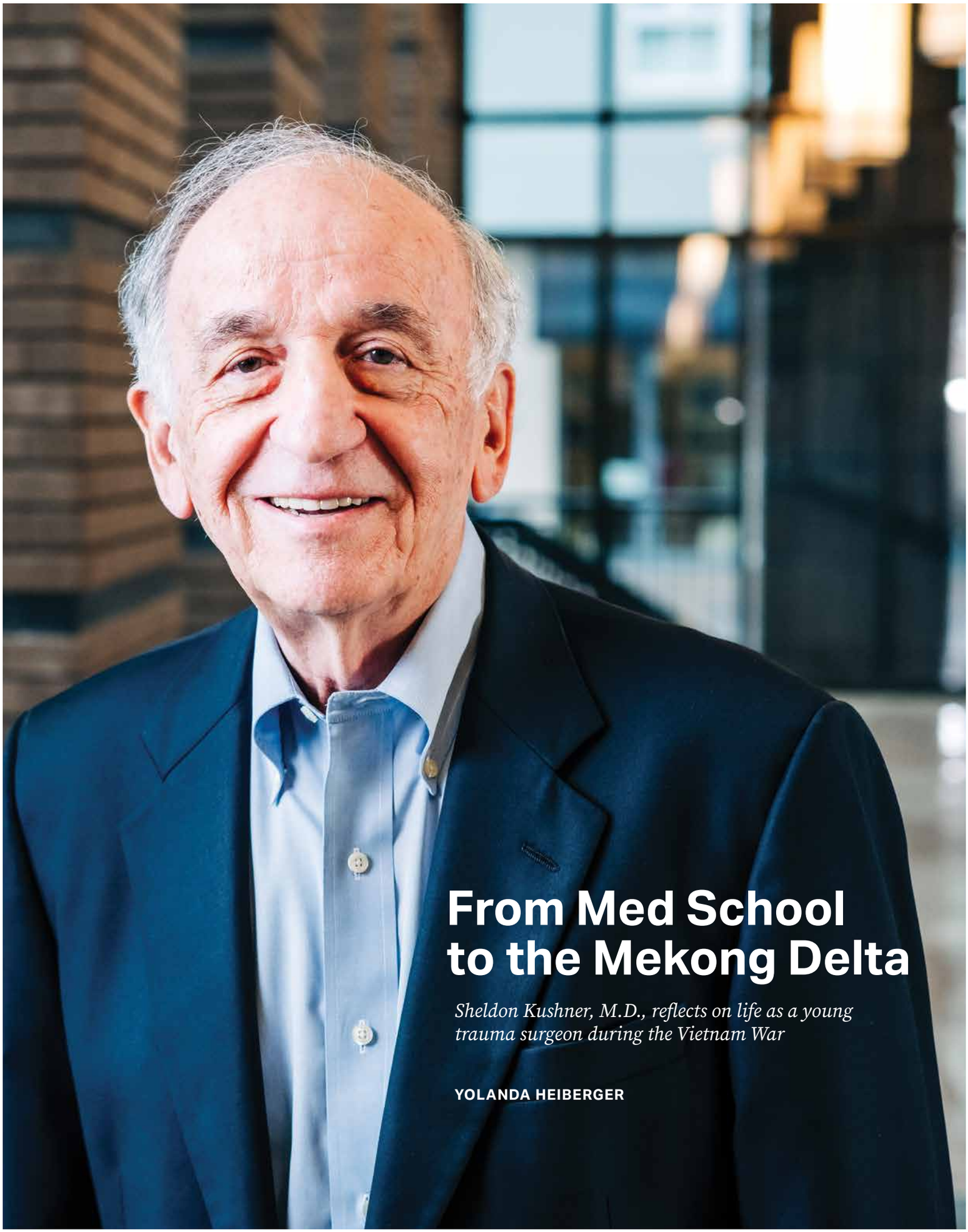
I have both family and close friends that have been significantly impacted by cancer. I've always felt a personal tie to the work I do as I feel empowered by the legacies of those I've lost, while also being inspired by those who continue to fight their battle with cancer.

I've also had the opportunity to present my work at both local and national meetings such as the annual O'Neal Comprehensive Cancer Center Retreat, the Southeastern Medical Scientist Symposium, American Association for Cancer Research Annual Meeting, and the APSA/AAI/ASCI Joint Annual Meeting. As I reach the end of my Ph.D. training, I am currently in the process of publishing and presenting the rest of my work in the coming months.

How would you like for research to be part of your career moving forward?

I will most definitely be continuing to pursue research opportunities in my medical career moving forward. It is my career goal to become an oncologist-scientist, a physician specialized in both cancer care and in conducting cancer research. Specifically, I would like to contribute to initiatives that will manifest into the development of new tools, technology, and resources that physicians and scientists can leverage in improving cancer care and research.

Interviews have been edited for space. The full Q&As are available at www.uab.edu/medicine/magazine.



From Med School to the Mekong Delta

Sheldon Kushner, M.D., reflects on life as a young trauma surgeon during the Vietnam War

YOLANDA HEIBERGER

"Wheels are up," declared the captain of the aircraft carrying Sheldon Kushner, M.D., and other military personnel departing from Tan Son Nhut Air Base in Saigon, Vietnam—ending Kushner's arduous tour of duty as a trauma surgeon during the height of the Vietnam conflict in 1969. Kushner, a native of Montgomery, Alabama, recalls the captain's words unleashing a flood of emotions. "The sense of relief and joy was overwhelming. I was homebound for Travis Air Force Base in California and on to Birmingham to see my family."

A 1966 graduate of the University of Alabama School of Medicine (now the Heersink School of Medicine), Kushner arrived in Vinh Long in the Mekong Delta, southwest of the former city of Saigon, as an Air Force Captain in early 1968, soon after the Tet Offensive in which the Vietcong and North Vietnamese forces launched intense, coordinated attacks that put civilians in the crossfire. Kushner assisted a team of doctors at a Vietnamese civilian hospital as part of the U.S. Military Provincial Health Assistance Program that provided medical aid for civilian war casualties. "I was assigned to perform trauma surgeries, although I didn't have the training to do it and wasn't prepared," said Kushner, who at 26, had completed medical school and a one-year internship. "It was on-the-job training."

The work was exhausting and grueling, with Kushner and another young physician performing up to six major operations a day in two separate operating rooms, including limb amputations from land mine explosions and open abdominal surgeries to remove shrapnel and repair major blood vessels. All were civilian injuries that could have been caused by any side in the conflict. "There was such a high volume of cases, we worked 13- and 14-hour days and could never catch up," Kushner recalled.

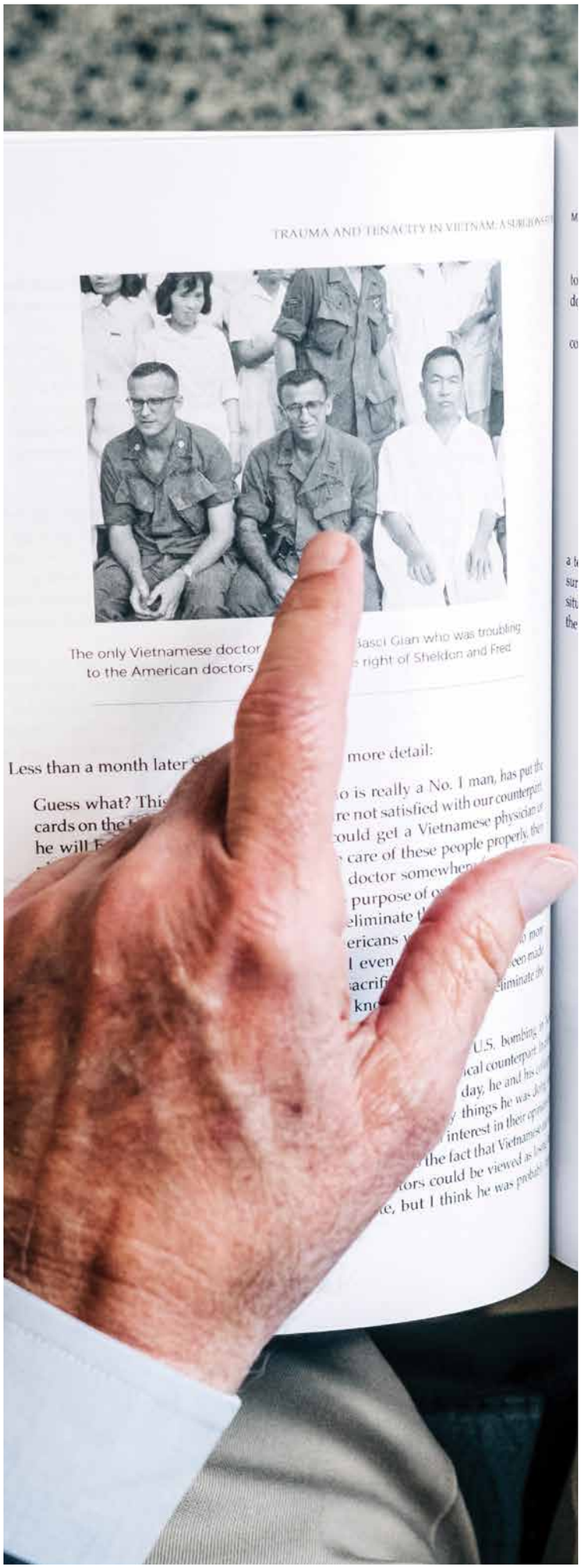
Kushner and his colleagues stayed in an old French hotel, acquired by the U.S. Army, with a group of Army Rangers, Navy SEALs, Navy Seabees, and civilian nurses, totaling 120 people. "It wasn't safe to be at the hospital at night because that's when the Vietcong launched most of their attacks," said Kushner, a retired obstetrician and gynecologist (OB/GYN) who now lives in Point Clear, Alabama. He vividly remembers the terrifying, nighttime sound of North Vietnamese rockets exploding in surrounding villages—a sign that high numbers of civilian casualties would be flooding the hospital at daybreak.

"Up to 25 severely injured civilians were waiting to be treated each morning," he said. "I'll never forget the day a huge truckload of children arrived from a school that was hit by a rocket." Kushner also has heartrending memories of a six-year-old boy named Loc whose injuries from stepping on a land mine required Kushner to perform a life-saving amputation of the boy's legs below the knee. "The Seabees made him a wheelchair, and we found some artificial legs," said Kushner, who recalled teaching Loc some English and reading him stories when his grandmother brought him to visit at the hospital. "I felt horrible having to leave him when my tour was over," Kushner said. "I've tried to find him a few times but was unsuccessful."

Kushner said that while the profound fatigue was something he has never since experienced, the challenge of performing major surgeries without proper training was unimaginably stressful. "I'd sometimes perform surgeries with the medic holding Grant's Atlas of Anatomy turned to a page I needed to see," he said. Kushner recalls that his excellent medical school training was crucial, adding,

> *"I had the good fortune to be taught and trained in Birmingham by some of the best physicians and surgeons in the country."*

A hospital-based program to train and deliver sophisticated care was called Military Provincial Health Assistance Program (MILPHAP). Kushner was part of the MILPHAP team in Vihn Long, Vietnam. Photo above shows the entrance to the MILPHAP compound.



Above: Six-year-old Loc, whose injuries from stepping on a land mine required amputation. Kushner found artificial legs for Loc.
Left: Kushner and fellow surgeons at the Vinh Long Hospital.

Kushner corresponded regularly with surgery faculty member Holt McDowell, M.D., and occasionally with surgery resident Robert Yoder, M.D., requesting guidance for specific operations. "They faithfully responded with detailed instructions in letters and audiotapes," he said, adding that his experience in Vietnam positively impacted how he later practiced medicine. "I learned not to panic when I saw something bad—to stay calm and stay with it. I developed confidence in myself from that experience."

Kushner left the service in 1969 and completed residency training in Obstetrics and Gynecology at the University of Cincinnati, choosing a specialty that he described as "different and a bit happier." After a few years of private practice, he taught in an OB/GYN residency in Pensacola, Florida. In 1991, he went back into private practice in Vero Beach, Florida, where he spent the greater part of his practice career. A 2017 book by author Mary Jane Ingui, Ph.D., Trauma and Tenacity in Vietnam: A Surgeon's Story, details Kushner's experience based on more than 300 letters he wrote to his wife from Vietnam.

"People think the war is over when you come home, but it never leaves you," Kushner reflected. He said while Vietnam is a war most people never understood, he knows that he and his colleagues had a noble purpose and made a difference in the lives of the civilians they treated. "A part of war that is often not considered is the devastating toll on civilian lives," he said. "I left Vietnam with a deep sense of pride for our work at that hospital in Vinh Long and tremendous respect for our brave, patriotic young men fighting in that terrible war." ■

MAA Welcomes New Leaders

The Medical Alumni Association is proud to announce **Rebecca Byrd, M.D.**, as the new Medical Alumni Association president. A dedicated physician at Grandview Internal Medicine in Birmingham, Byrd previously served as vice president of Medical Affairs and president of the Grandview Medical Staff. She earned her medical degree from UAB in 1995 and completed her residency at Carraway Methodist Medical Center.

We are pleased to welcome **Leon Hamrick, Jr., M.D.**, Class of 1981, as our new ex officio board member. Inspired by his father, a longtime Birmingham surgeon, Hamrick discovered his passion for urology during his medical training at UAB. He has been in practice for 27 years, specializing in stone disease and general urology, with the past 17 years at St. Vincent's Hospital.

We are pleased to welcome **George Joe, M.D.,** Class of 1976, as our new at-large board member. One of Alabama's first board-certified emergency physicians, Joe served as medical director for multiple emergency departments, including Carraway Hospital's Level 1 trauma center, and mentored countless medical trainees. Now retired, he enjoys traveling, cooking, community service, and writing a digital book on his family's landmark business, Joy Young Restaurant.

Expanding Learning Horizons

Virtual CME Series on Medical Education

Continuing Medical Education (CME) is evolving, and virtual platforms make it more accessible than ever. Last fall, a series of virtual CME sessions explored key aspects of medical education, offering valuable insights for educators, students, and alumni.

The series kicked off with an *Overview of Medical Education.* Senior Associate Dean for Medical Education Craig Hoesley, M.D., discussed the student body, the latest medical school accreditation requirements, and how the Heersink School of Medicine is pursuing its goal of training physicians to provide care for Alabama.

Assistant Dean for Preclinical Education Will Brooks, Ph.D., covered *The Evolution of Medical Student Learning*, including how technology has changed the way students learn and the impact of team-based learning.

The focus on learning and curriculum continued with Brook Hubner, Ph.D., assistant professor and director of Academic Success in the Department of Medical Education, discussing *Step 1 and Changes in the Learning Landscape,* highlighting recent shifts in medical training and assessment.

Associate Dean for Students Nick Van Wagoner, M.D., Ph.D., and Jason Noah, director of Student Success Programs, delved into *Medical Student Services*, covering student wellness and assisting students with academic struggles.

Christina Grabowski, Ph.D., associate dean for Admissions and Enrollment Management, provided a detailed look at *The Current Admissions Process,* mapping out the journey from applicant to accepted student.

Winter Williams, M.D., associate professor of Medicine, and Monica Agarwal, M.D., professor of Medicine, discussed *The Evolution of Clinical Education*, emphasizing new approaches in hands-on training.

Caroline Harada, M.D., associate dean for Strategic Initiatives, Medical Education, concluded the series with *The Impact of Service Learning on Medical Education,* exploring how real-world experiences enhance medical training and patient care.

Recordings of this CME series can be accessed by scanning the QR code.

The Medical Alumni Association welcomes suggestions for future virtual learning topics; e-mail Beth Eddings at betheddings@uab.edu.

52nd Annual Medical Alumni Weekend

A Mardi Gras Celebration of Tradition

The 2025 Medical Alumni Weekend, held February 28-March 1, brought together over 250 alumni and guests for a celebration infused with the spirit of Mardi Gras. This festive gathering provided a unique opportunity for alumni to reconnect, reminisce, and engage with the evolving landscape of the Heersink School of Medicine.

The weekend included class reunions, a campus bus tour, networking receptions, and more. Attendees had the opportunity to talk with Senior Vice President for Medicine and Dean Anupam Agarwal, M.D., gaining insights into the latest advancements and initiatives at the school.

A highlight was the annual Alumni Awards Luncheon, where distinguished graduates were recognized for their outstanding contributions to medicine and community service. The event also featured the passing of the gavel, symbolizing the transition of leadership within the Medical Alumni Association (MAA).

THE WEEKEND INCLUDED TWO ESTEEMED LECTURES:

- The 46th Annual Reynolds-Finley Historical Lecture explored the rich history of medical advancements in AI, presented by Rubin Pillay, M.D., Ph.D., assistant dean for Global Health Innovation, executive director of the Marnix E. Heersink Institute for Biomedical Innovation, and chief innovation officer for UAB Health System.
- The 33rd Annual Constance S. and James A. Pittman Lecture, presented by Alan Tita, M.D., Ph.D., senior associate dean for Global and Women's Health, provided a look into the work of the Mary Heersink Institute for Global Health (MHIGH), where he serves as the director. Founded in 2021, the MHIGH has an overarching goal to improve overall health and well-being and promote equity in health outcomes among people around the world.

The annual Equal Access Birmingham Silent Auction raised funds for the medical student-run health clinic, ensuring that it has the necessary resources to provide much-needed care to the underserved in our community.

Alumni Weekend Award Winners

Lisa Willett, M.D., was honored with the **Distinguished Alumnus Award** in recognition of her outstanding contributions in the field of medicine. She has trained over 1,000 residents as well as countless UAB medical students through the UAB Department of Medicine, where she serves as executive vice chair and vice chair for Education and Faculty Development. She formerly served as the program director of UAB's Tinsley Harrison Internal Medicine Residency Program.

Leah Leisch, M.D., a provider at the Birmingham VA Medical Center's Comprehensive Pain Clinic and UAB's Beacon Integrated Healthcare with a focus on substance use disorder care and primary care for under- and uninsured individuals, received the **Young Alumni Award** in recognition of her demonstration of the high principles of the medical profession.

Hernando Carter, M.D., an Internal Medicine physician at Archwell Health in Birmingham, received the **Hettie Butler Terry Community Service Award** for his outstanding contributions to healthcare, mentoring, and community service. He founded Prescription for Better Living, which promotes health literacy and education, and actively mentors youth through various initiatives.

Iris Fancher, M.D., who devoted her career to public health with the Jefferson County Department of Health and provided primary care to underserved populations in Jefferson County before retiring, received the **Garber Galbraith Medical-Political Award** for her service to the medical profession and in the medical-political arena.

John Wheat, M.D., MPH, was honored with the **Distinguished Service Award** in recognition of his lifelong dedication to rural health care. His innovative work in developing the Rural Medical Scholars Program has significantly impacted medical education, ensuring a steady flow of skilled physicians to underserved rural communities and addressing critical health care shortages.

Dine with the Docs

Since 2015, Dine with the Docs has connected Heersink medical students with alumni in welcoming, home settings. Fourteen alumni hosted 12 dinners throughout October and November 2024, inviting nearly 90 students into their homes for meaningful conversations over a shared meal. Previous iterations have included experiences like progressive dinners and sunset boat rides, enhancing the opportunity for students to engage with practicing and retired physicians.

Thank you to our alumni hosts for making this special tradition possible. To participate in future dinners, contact Beth Eddings at betheddings@uab.edu.

Match Week Casino Night

The Medical Alumni Association hosted its annual Casino Night on March 18, 2025, bringing together fourth-year medical students for an evening of fun and celebration during Match Week. This tradition continues to be a favorite among medical students, offering them a chance to relax and enjoy an exciting atmosphere filled with classic casino games, fellowship, and entertainment. A variety of door prizes from local businesses made the event even more memorable. The MAA is proud to host this entertaining event and looks forward to continuing the tradition for future graduating classes.

Atlanta Alumni and Donor Reception

Heersink Senior Vice President for Medicine and Dean Anupam Agarwal, M.D., hosted a special reception for alumni, donors, and friends in Atlanta on March 4, 2025. Guests reconnected with fellow graduates, heard updates on the school's latest advancements, and learned about the impact of philanthropic support on medical education and research. The event highlighted the continued excellence of the Heersink School of Medicine, fostering a strong sense of community among those dedicated to advancing health care.

See more alumni events photos at maa.uab.edu

Your Medical Alumni Association gifts and dues in action

COMMUNITY

Gathering on the Green

during orientation week to welcome incoming medical students

4th-year students hosted at Match Week Casino Night - celebrating their hard work leading up to Match results. **150**

Medical students enjoyed the MAA hot chocolate station during December finals week. **200**

GIFTS

White coats gifted to incoming medical students. **190**

Gifted 8 x 10 portraits to graduating seniors, dressed in their tam and gown **107**

Resident Wish List program provides graduating students with much-needed assistance as they prepare to begin their residencies.

1K followers on new Instagram @uamedalum

LEGACY

Attendees at Medical Alumni Weekend celebrating nine class reunions. **200+**

Students at three of the four Heersink campuses attended **Dine with the Docs** dinners hosted by 14 alumni. **90**

Legacy Alumni Honored during our Commencement/Alumni Path of Honor Ceremony. **13**

Awards presented to our outstanding alumni during Medical Alumni Weekend. **5**

New dues structure introduced in FY24 including **a $100 'retired' level** resulted in a **9.3% increase** in alumni dues giving.

EDUCATION

Launched popular **Virtual Lunch Series** that hosted 250 attendees from across 20 states over 10 sessions.

Heersink students celebrated an extraordinarily successful **Match Day with a 99.4% match rate.**

Scan the QR code to easily pay your membership dues and make a meaningful impact. Your support helps keep our programs thriving – thank you for being a part of our active community.

A Legacy *of* Learning

Artist with a passion for travel commits bequest to establish scholarship

EMMA LANG

Gerda Carmichael believed the world was meant to be explored. Born in 1930 to French and German immigrant parents in the heart of New York City, Carmichael knew the importance of hard work. Her family didn't always have much, but with dreams of traveling the world, Carmichael's parents taught her the importance of education—and that through her studies, the world was hers to see.

After living overseas, Carmichael found her way to Birmingham, where she met and married Josiah Carmichael, a prominent OBGYN at UAB. His career led Josiah and Gerda across the ocean—to the Amazon rainforest and the beaches of St. Lucia—where he partnered with other physicians to provide medical care to those in need.

To honor Josiah's dedication to medicine, Gerda committed a bequest in her will to the Heersink School of Medicine to establish the Dr. Josiah and Gerda Carmichael Endowed Scholarship in Medicine.

"Towards the end of my mom's life, she had the means and wanted to make sure that those with financial need were given opportunities," Gerda's daughter Maria Calhoun said.

Art was Carmichael's abiding passion. She grew to become an art teacher and artist, specializing in stained glass mosaics and crafting jewelry in silver. Her continued thirst for knowledge and culture led her to the corners of the globe, where she raised Calhoun in the museums of France, in the mangroves of India, and in the shadows of the pyramids of Egypt.

But Gerda was more than an adventurer and artist. Because she knew what it was like to come from nothing, she believed in giving back and helping pave the way for others to achieve their dreams. Gerda became a passionate philanthropist, donating to the symphony; knitting blankets, socks, and hats for children in need; and creating the endowed scholarship, ensuring Heersink medical students can pursue education without added financial strain.

Once the Dr. Josiah and Gerda Carmichael Endowed Scholarship in Medicine is awarded, this endowed scholarship will serve as a lasting resource to help students as they pursue careers in medicine, a tribute to both Josiah's career and Gerda's unwavering belief in the power of education.

Through her legacy gift, Gerda ensured that students with a hunger for knowledge and drive to serve have the opportunity to pursue their dreams. Although Gerda passed away in December 2024 at the age of 94, her journey continues in the lives of the students she will help for generations to come.

Gerda Carmichael

To learn more about giving to medical scholarships, contact Erica Hollins at 205-996-6839 or elhollins@uabmc.edu.

Keep *on* Giving

The Beard family extends their legacy of compassion and care

CAROLYN WALSH

How do you celebrate a family that has given thousands of Alabamians access to home health, hospice, and palliative care? For the family of the late Charles Beard Jr., the answer is simple: Keep on giving.

After a distinguished military career as an Army pilot with foreign service during both World War II and Korea, Charles retired and returned to daily life in the States with his wife Mary Sue and five children.

Though he wasn't looking to start a new business, Medicare's announcement of a new home health benefit caught his attention. "It had always bothered him that his own mom had to be moved to a nursing home before she died, and the idea of having someone who could help people in a home setting intrigued him," his daughter Susan Beard Brouillette recalled.

In 1970, with zero experience in health care but an entrepreneurial spirit and "a big, big heart for people," Charles founded a home health company in Birmingham. Charles was the charming face of the business while Mary Sue was the anchor at home, making it possible for the new venture to thrive. "My parents were a team, and Mom deserves a lot of credit," Susan emphasized. "Women of her generation didn't get enough recognition for supporting their husbands."

Eventually, the company—Alacare Home Health and Hospice—grew into 19 branches across central Alabama, with two of the Beard children as part of the leadership team. Their son, John joined the company in the 1970s and Susan in the 1980s.

As the business prospered, the family began looking for ways to share the gift of health care beyond the bounds of their business. They didn't have to search long to realize that UAB was a perfect investment.

From their first gift to the UAB Center for Palliative and Supportive Care, the relationship between the Beard family and UAB has grown. Now, the family has made a gift that will extend their legacy even further—an endowed chair that will focus on the development of palliative communication as a vital clinical skill.

"Learning and practicing conversational approaches that demonstrate care for the whole person is an integral part of becoming a true palliative specialist," explained Center Director Rodney Tucker, M.D. "When the care team gains experience in talking about all that surrounds serious illness, it equips them with the confidence to handle the emotions that accompany diagnosis, treatment, and beyond."

To that end, the Charles D. Beard Jr. Family Endowed Chair in Healthcare Communication will provide funds to enable the appointed faculty holder to devote sufficient time to the activities of training and scholarship that would otherwise be unsupported in a clinical role, expanding the understanding and practice of communication in the context of serious illness.

"Communication is so key to life. The biggest thing that we struggle with is communicating effectively with one another," Susan shared. "I think my parents would be extremely proud of this endowment."

"We are deeply grateful for the continued investment that two generations of the Beard family have made," Tucker said. "Their generosity will shape the future of how we talk with our patients and their loved ones about serious illness. We are honored that they have chosen to keep on giving—communication, care, and comfort."

To learn more about giving to support the UAB Center for Palliative and Supportive Care, contact Senior Director of Development Christian Smith at 205-934-1974 or christiannsmith@uabmc.edu.

A painting of Charles and Mary Sue Beard hangs in the Family Room of the Palliative and Comfort Care Unit.

Foundations *of* the Future

Gift from UAB Urology leaders establishes endowed professorship

TERESA HICKS

In 2012, urology care, research, and training at UAB entered a new era when the Division of Urology became a department. Dean Assimos, M.D., a globally recognized researcher and clinician with a focus on the role of oxalate handling and synthesis in kidney stone formation, was tapped to lead this transformation as the inaugural chair of the UAB Department of Urology.

Under Assimos' leadership, the department approximately tripled its number of clinical faculty and expanded its educational offerings to include graduate students, postgraduate students, and postdoctoral fellows. Throughout his tenure at UAB, Assimos was actively involved in the establishment of practice guidelines in urology and served in numerous leadership positions in international, national, and regional organizations.

After a decade of service, Assimos retired in 2022 and is a professor emeritus in the Department of Urology. Now, he has joined forces with another eminent UAB Urology leader to ensure the department's future success with a generous gift to establish The John R. Burns, M.D., and Dean G. Assimos, M.D., Endowed Professorship.

The endowment created by this gift will be used to recruit and/or retain an expert faculty member at UAB whose primary research is in the area of kidney stone disease. It will foster cutting-edge research, improve patient care, and further solidify UAB's leadership in urological health.

Burns, a professor emeritus in the Department of Urology, joined the UAB faculty in 1980 after completing a research fellowship in kidney stone disease. He spent his 32-year career concentrating on both the clinical and research aspects of urolithiasis, or kidney stones.

"This incredibly generous gift has inspired our UAB Urology family," said Thomas Chi, M.D., MBA, professor and chair of the UAB Department of Urology and holder of the Anton J. Bueschen, M.D., Endowed Chair of Urologic Surgery and Research. "Drs. Assimos and Burns have demonstrated an extraordinary commitment to the success of our department through their endowment. They dedicated their whole careers to advancing our ability to treat patients with kidney stones and helped redefine our understanding of how stones form. Their work was a testament to the idea that life-changing discovery starts at the benchtop. Furthermore, this endowment will help us ensure we continue the Assimos and Burns legacy of a sustainable future in research that helps us cure stone disease. Retaining and recruiting the best talent is how we magnify our success, and gifts like theirs help us chart our future to dream big."

Dean Assimos, M.D., John Burns, M.D.

"I remain indebted and committed to UAB for the many great opportunities and resources that were provided to me," Assimos said. "The UAB experiences were truly the high points of my career. This gift is one of love for the department and institution. I know that it will be used for the continued propagation of research excellence."

"After spending my entire career at UAB, I have watched us grow from a small division of three faculty members to a large department of more than 25 members," Burns expressed. "I hope that this gift will enable continued growth and excellence for the department."

To learn more about giving to support UAB Urology, contact Associate Director of Development Mary Jane Gibson at 205-934-5772 or maryjgibson@uabmc.edu.

> *"The UAB experiences were truly the high points of my career. This gift is one of love for the department and institution. I know that it will be used for the continued propagation of research excellence."*
>
> DEAN ASSIMOS, M.D.

Advancing Hope

Honoring the O'Neal family for investing in cancer care and research

RICHARD NIEVES

The UAB O'Neal Comprehensive Cancer Center recognized the O'Neal family this past February as the ArtBLINK Gala honorees for their transformative gift to name the O'Neal Comprehensive Cancer Center in 2018. Since then, this profound gift has exponentially expanded the O'Neal Cancer Center's impact, including increasing its research efforts, allowing investments in its senior scientists, and recruiting clinician-scientists to care for cancer patients.

The center's O'Neal Invests Program, created in 2020, accepts funding proposals twice a year from O'Neal scientists with promising ideas for preliminary research that will be competitive for future extramural funding. Since the program began, it has funded approximately 80 proposals for a total of $10,040,000, with early returns of extramural funding of $44,524,564.

"The O'Neal family has had a profound impact on the Cancer Center's mission, both through their generous financial contributions and their commitment to advancing cancer care," said Barry Sleckman, M.D., Ph.D., director of the O'Neal Cancer Center. "The endowment funds directly support our core missions, but the naming itself is equally significant. Being recognized as the O'Neal Comprehensive Cancer Center helps unify our efforts under a single, trusted brand—one that the community can associate with leading-edge cancer treatment and research."

With the O'Neal family's support, the O'Neal Cancer Center created two professorships recognizing exceptional senior scientists and their innovative cancer research. Erwin Van Mier, Ph.D., is the initial holder of the David Hart White Endowed Professorship for Brain Cancer Research, and Suzanne Lapi, Ph.D., is the initial holder of the Emmet O'Neal II Endowed Professorship for Lung Cancer Research.

Despite the challenges of the COVID pandemic, the past five years have seen significant growth in clinical faculty across the disciplines needed for multidisciplinary cancer care. This is most evident in the recruitment of UAB/O'Neal medical oncologists, which has nearly doubled from 26 in 2020 to 50 in 2025. This recruitment also decreased wait times for patients to see a medical oncologist to less than two weeks across most cancers. More importantly, after they see the medical oncologist, new cancer patients are contacted by a member of their cancer management team within 24 hours to schedule testing needed for timely and effective initiation of their treatment. The treatment may include one of over 300 clinical trials currently under way at the O'Neal Cancer Center, with many patients having positive outcomes on these trials.

"It was a true honor recognizing the O'Neal family through ArtBLINK this year," said Tommy Brigham, O'Neal Advisory Board president. "O'Neal Steel was founded in 1921 and has grown into the nation's largest family-owned network of metal service centers. They are a family that believes in giving back and have had a tremendous impact elevating the capabilities of our cancer center at UAB as well as in our community and state. We are grateful for the care and generosity of the O'Neal family."

The UAB O'Neal Comprehensive Cancer Center raised $1.2 million honoring the O'Neal family at ARTBlink to improve cancer care for those in Alabama and beyond.

UAB O'Neal Comprehensive Cancer Center, contact Senior Director of Development Lisa Roth at 205-934-0930 or leroth@uabmc.edu.

Members of the O'Neal family at ArtBlink 2025

A Hands-On-Hobby

Kelly Hyndman shares her love of pottery-making

JAY DIAL

Kelly Hyndman, Ph.D., associate professor in the Division of Nephrology, Department of Medicine, discovered her passion for pottery in 2015. Having just moved to Birmingham, she had two goals in mind: becoming an active member of the community and finding a hobby that would allow her a creative outlet. After realizing that she already had an extensive pottery collection, she decided to try her hand at making some of her own. Ten years later, she has become an accomplished potter.

Hyndman is a regular at Red Dot Gallery in Homewood, attending three-hour pottery-making sessions twice a week. At first, she was primarily focused on creating practical items such as bowls, plates, and mugs. In recent years, however, she has branched out into creating sculptures of marine life. The piece she's most proud of is an octopus, which she says she'll never part with.

While she will occasionally sell her work, she's not in it to make money. "This is not my job, this is my hobby," Hyndman explained. "I do it because it's my creative outlet, and it's one of the only places I don't think about my scientific life."

According to Hyndman, being a scientist is more of a lifestyle than a career choice. As a result, it's important to find ways to be creative and break up the monotony of everyday life. "It's a nice balance to having to be so rigorous and so structured," she explained. "It gives me the opportunity to just do whatever I want."

For those just starting out, Hyndman recommends patience, as well as understanding that every project is different. "You never know what's going to come out of the kiln until it's out. You have to let go of your perfectionism."

Hyndman believes in the importance of having a hobby, even for those uninterested in pottery.

"I just hope everyone has a creative outlet, whatever that is for them," she said. "It's a nice little break from everyday life. Everyone should try to take a moment for themselves."

KELLY HYNDMAN

UAB MEDICINE is the Magazine of the Heersink School of Medicine

Volume 52, Issue 1
Summer 2025

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Editor's Note: The information published in this issue is accurate at the time of publication.

Published twice a year by UAB Heersink School of Medicine Communications. UAB is an EEO/AA/Disability/Veteran Employer.

uab.edu/medicine

UAB MEDICINE

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