



As the COVID-19 pandemic stretched into 2021 and the vaccine rollout expanded, it looked as though the end of the deadliest pandemic in American history might be in sight. However, as we now know, there were many more months ahead of heavy workloads, long hours, stress, and uncertainty for America's health care workers, especially in parts of the country like Alabama where vaccination rates have lagged. UAB Medicine's care providers and staff at every level have shown astounding resilience as the third and fourth waves of coronavirus infection swept through our state, which as of October 11 had seen a total of 808,132 reported cases and 14,858 deaths.

Therefore, it was tremendously uplifting for the final quarter of 2021 to begin with a transformational turning point for our school. As you'll read on the following pages, the School of Medicine received a \$95 million lead gift from longtime University of Alabama at Birmingham supporter Marnix E. Heersink, M.D., in recognition of which the school has been renamed the UAB Marnix E. Heersink School of Medicine. UAB has enhanced this philanthropic support with a generous contribution of \$5 million from Triton Health Systems, bringing the total support for the school to \$100 million.

This powerful affirmation of our unlimited potential reinforces what we have always known: that UAB truly is a world-class institution. As exemplified by the people and programs highlighted in this year's Annual Report, our school has never allowed anything to limit our aspirations, and this incredible gift expands the scope of our already boundless vision of the good we can do here at home and around the world.

It has been a year of adaptation and innovation across all our mission areas, in medical education, clinical care, and biomedical research. We have refused to compromise on our standards of excellence despite the ongoing challenges of the COVID-19 pandemic, and excellence was on display across every area of our school.

With the Heersink naming gift and some exciting leadership transitions (see page 6), our school stands at an inflection point. What comes next will rise from the same building blocks that have always formed the foundation of our success: ingenuity, innovation, perseverance, dedication, collaboration, and inclusion.

Sincerely,

Selwyn M. Vickers, M.D., FACS

Senior Vice President for Medicine

Dean, UAB Marnix E. Heersink School of Medicine

James C. Lee Jr. Endowed Chair

University of Alabama at Birmingham

Chair, University of Alabama Health Services Foundation Board



Sanner Gift

On September 28, the University of Alabama at Birmingham (UAB) announced that, in grateful recognition of
a transformational \$95 million lead gift from longtime

additional philanthropic con
high-impact recruitments, p

School of Medicine.

The record gift is the single largest philanthropic commitment in university history. In addition to naming the UAB Heersink School of Medicine, it will establish and name the Marnix E. Heersink Institute of Biomedical Innovation and the Mary Heersink Institute for Global Health. The gift provides support with both endowed and outright funds for key initiatives of the Heersink School of

supporter Marnix E. Heersink, M.D., the UAB School of

Medicine will be named the UAB Marnix E. Heersink

Heersink, a renowned eye surgeon, innovator, and entrepreneur, desires his gift to inspire and catalyze

additional philanthropic contributions that support high-impact recruitments, programs, and research in the Heersink School of Medicine. UAB has enhanced this philanthropic support with a generous contribution of \$5 million from Triton Health Systems, bringing the total support for the school to \$100 million.

Senior Vice President of Medicine and Dean Selwyn Vickers, M.D., FACS, says the gift and others it inspires will set the future course of the Heersink School of Medicine.

"On behalf of the Heersink School of Medicine and all the people we serve across Alabama, the nation, and the world—now and in the years to come—I sincerely thank Dr. Heersink," Vickers says. "This act of tremendous generosity reflects his heart for service and the scale of our shared ambition for the UAB Heersink School of Medicine



to be a global leader in biomedical discovery and innovation, medical training, and patient care. It is a powerful affirmation of the unlimited potential of our school and reinforces what we have always known: that UAB truly is a world-class institution."

In 2018, UAB became part of an elite group of eight academic medical centers that had attained more than \$100 million in net National Institutes of Health (NIH) research funding growth over the previous five years, and was the only school to rise 10 spots in the rankings. In 2020, the Heersink School of Medicine ranked 24th for NIH research funding.

Vickers says the generous pledge was a strategic decision made by Heersink to invest in a medical school with a rapidly rising trajectory and growing opportunities for transformative impact in scientific discovery, training, and clinical care. In addition, the gift will support the school's strategic growth and help recruit and retain the brightest scientists and physicians in priority areas like precision medicine and pharmacogenomics, transplantation, oncology, neurology, health disparities, immunology, and others through endowed chairs and professorships—subject to later approval of the proposed occupants by the University of Alabama System Board of Trustees.

The pledge also intends to establish and name a new, first-of-its-kind biomedical institute and an associated endowed support fund—the Marnix E. Heersink Institute of Biomedical Innovation and the Marnix E. Heersink Institute for Biomedical Innovation Endowed Support Fund—as well as name the Marnix E. Heersink Institute for Biomedical Innovation Conference Center. The institute will focus on

Heersink says UAB's history of notable achievements and aggressive pursuit of excellence motivated him to partner with the school to advance their shared priorities. He attributes his affinity for the school to a set of qualities it embodies that he calls the three E's: excellence, expansive, and encompassing.

"I have seen that, in all it does, the school strives for excellence, works to expand its reach, and values collaboration and encompassing diverse backgrounds, voices, and talents," Heersink says. "This gift will build on the school's tremendous momentum and enhance its ability to innovate and deliver on the three E's in a very strategic way. I look forward to a continued partnership in supporting its life-changing work. Mary and I are so appreciative of the wonderful education UAB has given our family and now also look forward to UAB's increased presence in our hometown of Dothan."

Naming the Heersink School of Medicine has been a priority of Vickers and UAB President Ray Watts, M.D.; they stress that a gift of this significance endorses and builds on the school's worldwide reputation in a very powerful and public way.

"Having the Heersink name on the school is a powerful testament to its competitiveness among the very best academic medical centers in the world, which is indeed the result of our focus on the three E's," Watts says. "Dr. Heersink's transformative support is critical to building on our global prominence and impact, and his humility and commitment to making the world a better place are inspiring. We will work diligently every day to honor his confidence and trust."

Heersink says UAB and the Heersink School of Medicine have been instrumental in the lives of his family. He and his wife, Mary Parks Heersink, have been married 43 years and have six children: ophthalmologists Mila, who is a UAB Heersink School of Medicine graduate, and Sebastian, an MIT and Georgetown Medical School graduate; Bayne, a dentist who graduated from the UAB School of Dentistry, including a two-year UAB prosthodontic fellowship; Damion, a licensed U.S. patent attorney now training to become an internal medicine physician at Ochsner Health System in New Orleans; and twins Christiaan and Marius, who both participated in UAB's Early Medical School Acceptance Program (EMSAP) and obtained combined M.D./MBA degrees from UAB and are in ophthalmology and family medicine residencies, respectively. The Heersinks' daughter-in-law Juanita Titrud Heersink, M.D., was Ms. UAB in 2003, graduated from the UAB Heersink School of Medicine, and completed her internal medicine residency at UAB.

The Heersinks are well-known philanthropists in Alabama and beyond, having made significant donations from their personal funds and through their family foundation. Previous gifts and

"Having the Heersink name on the school is entrepreneurial health care innovation initiatives that foster and facilitate health care and socioeconomic transformation. a powerful testament The primary location of the institute will be at UAB, with a prominent physical presence in Dothan, Alabama, the Heer- to its competitiveness among the very best academic medical centers in the world." Ray Watts, M.D., UAB President

pledges to UAB include those to renovate the atrium in the Heersink School of Medicine's Volker Hall and to establish the Heersink Family Active Learning Resource Center in Volker Hall, the Heersink Family Endowed Glaucoma Fellowship, and the Heersink Family Foundation Scholarship Endowment in Optometry, among others.

The \$95 million pledge also intends to establish and name the Mary Heersink Institute for Global Health and associated Mary Heersink Institute for Global Health Endowed Support Fund, dedicated to developing and implementing educational and mentorship programs as well as experiences for global health trainees and scholars.

The University of Alabama System Board of Trustees formally accepted the \$95 million gift at its September 28 special meeting and unanimously approved the naming of the UAB Marnix E. Heersink Heersink School of Medicine, the Marnix E. Heersink Institute of Biomedical Innovation, the Mary Heersink Institute for Global Health, and other entities outlined in the gift agreement.

"We are proud that UAB has played a significant role in the lives of the Heersink family and that they chose to help advance the Heersink School of Medicine's transformative trajectory," said UA System Chancellor Finis St. John. "On behalf of the Board of Trustees, the University of Alabama System and all those we serve, I thank the Heersinks for their record gift, which will further strengthen our systemwide commitment to excellence in teaching, research, and service, and expand our positive impact in Alabama and beyond."

Dr. Heersink is a cataract and laser refractive surgeon and co-owner and chairman of Eye Center South in Dothan, a practice he and John Fortin, M.D., opened in 1980 which now has 12 offices in Alabama, Florida, and Georgia. Heersink and his family opened Health Center South, a 140,000-square-foot, state-ofthe-art medical complex for doctors of all specialties in Dothan. Heersink is also an owner or agent of many other companies, including real estate holdings and manufacturing entities in the United States and abroad. He is a fellow and member of several professional organizations, including the American Academy of Ophthalmology, the International College of Surgeons, the American College of Surgeons, the American Society of Cataract and Refractive Surgery, and the Royal College of Physicians and Surgeons. He is certified by the American Board of Eye Surgeons. His professional memberships also include the Houston County Medical Society, the Medical Association of the State of Alabama, the American Intraocular Implant Society, and the American Medical Association. He has a special interest and training in the diagnosis and surgical treatment of cataracts as well as laser vision correction. Heersink is also the founder of the Eye Education Foundation, which organizes yearly continuing education seminars in which doctors share their knowledge, experience, and insight. The seminar,

Mary Heersink serves on the UAB Heersink School of Medicine Board of Visitors. She is also a member of the Advisory Board of the Master of Global Health Program, a joint initiative among McMaster University in Canada, Maastricht University in the Netherlands, Manipal University in India, and Thomassat University in Thailand. After her then 11-year-old son

accredited in many states, is in its 33rd year.

This page: Marnix Heersink and family were presented with custom UAB Football jerseys at UAB's homecoming game in October. Facing page: Senior Vice President of Medicine and Dean Selwyn

Damion nearly died from E. coli in the early 1990s, she wrote the book, "E. coli 0157: The True Story of a Mother's Battle with a Killer Microbe," and became a key advocate for federal oversight and regulations. She cofounded and sits on the board of directors of STOP Foodborne Illness, a national food safety organization. She also serves or previously served on boards of directors for numerous nonprofit and civic organizations in the Dothan area, including Girls Clubs of Dothan, the Wiregrass Museum of Art, Houston Academy, and Landmark Park.

"The significance of this record gift to the Heersink School of Medicine, UAB, and the University of Alabama System cannot be overstated," Watts says. "We look forward to celebrating the Heersinks, their generosity, and the

significant advancements in





SELWYN VICKERS

Leadership Changes Continue Building on Excellence

Significant leadership changes that will impact the futures of both the Heersink School of Medicine and the UAB Health System (UABHS) were announced in 2021. In April, we learned that Will Ferniany, Ph.D., would retire at the end of 2021 after nearly 13 years at the helm of the \$5 billion, 11-hospital UAB Health System.

A senior leader in health care since 1975, Ferniany became chief executive officer of the UABHS in 2008, and also served as the CEO of the new UAB/Ascension St. Vincent's Alliance (learn more about the Alliance on page 46).

At that time, it was announced that Selwyn Vickers, M.D., FACS, senior vice president of Medicine and dean of the UAB Heersink School of Medicine, would succeed Ferniany as CEO of the UABHS and the Alliance in 2022 while continuing in the role of dean of the medical school. "I thank Dr. Ferniany for his unwavering support of the mission of academic medicine," Vickers said. "He has understood the value of recruiting top talent and conducting innovative research that translates to improvements in health care. Our school's growth and overall academic prowess would not have occurred without Dr. Ferniany's partnership, as well as the formation under his leadership of the academic enrichment fund to facilitate the clinical departments' support of our research and recruitment efforts."

A NEW ERA

Vickers becoming UAB Health System CEO represents the culmination of years of planning and action toward greater alignment between the three entities that comprise UAB Medicine: the Heersink School of Medicine, the UAB Health System, and the University of Alabama Health Services Foundation (HSF) physician practice plan.

A combined CEO and dean is a common leadership structure among peer institutions such as Johns Hopkins, Vanderbilt, and University of Michigan. At UAB, it will bring all aspects of our mission as an academic medical center—in medical training, research, and clinical care—together at the top.

In Vickers, UAB tapped a leader with deep personal experience across all three mission areas. He earned his medical degree and trained in surgery and surgical oncology at Johns Hopkins, and completed research fellowships with the National Institutes of Health and training at John Radcliffe Hospital of Oxford University, England.

Vickers joined the UAB faculty in 1994 as an assistant professor in the Department of Surgery and later directed the Section of Gastrointestinal Surgery. He received numerous teaching honors at UAB and became the first faculty member chosen by students as commencement speaker. During this time he also became a co-founding director of the UAB Minority Health & Health Disparities Research Center, and remains an active health disparities researcher today. In 2006, Vickers became the Jay Phillips Professor and Chair of the Department of Surgery at the University of Minnesota Medical School. He also served as vice chair of the practice plan, and as a leader in the Fairview Health System. While at Minnesota, Vickers' lab was instrumental in the development of the injectable cancer drug, Minnelide, which entered phase II clinical trials for the treatment of pancreatic and gastrointestinal cancer in September 2013.

Vickers returned to UAB in 2013 to become senior vice president of Medicine and dean, and serves as chair of the HSF board and as vice chair of the Health System board. During the first five years of his tenure as dean, the School of Medicine became one of only eight schools in the country to grow its research portfolio by \$100 million, and the only school to rise 10 spots in NIH research rankings. He remains a board-certified, practicing pancreatic cancer surgeon, and as a researcher has had continuous NIH funding for the past 25 years.

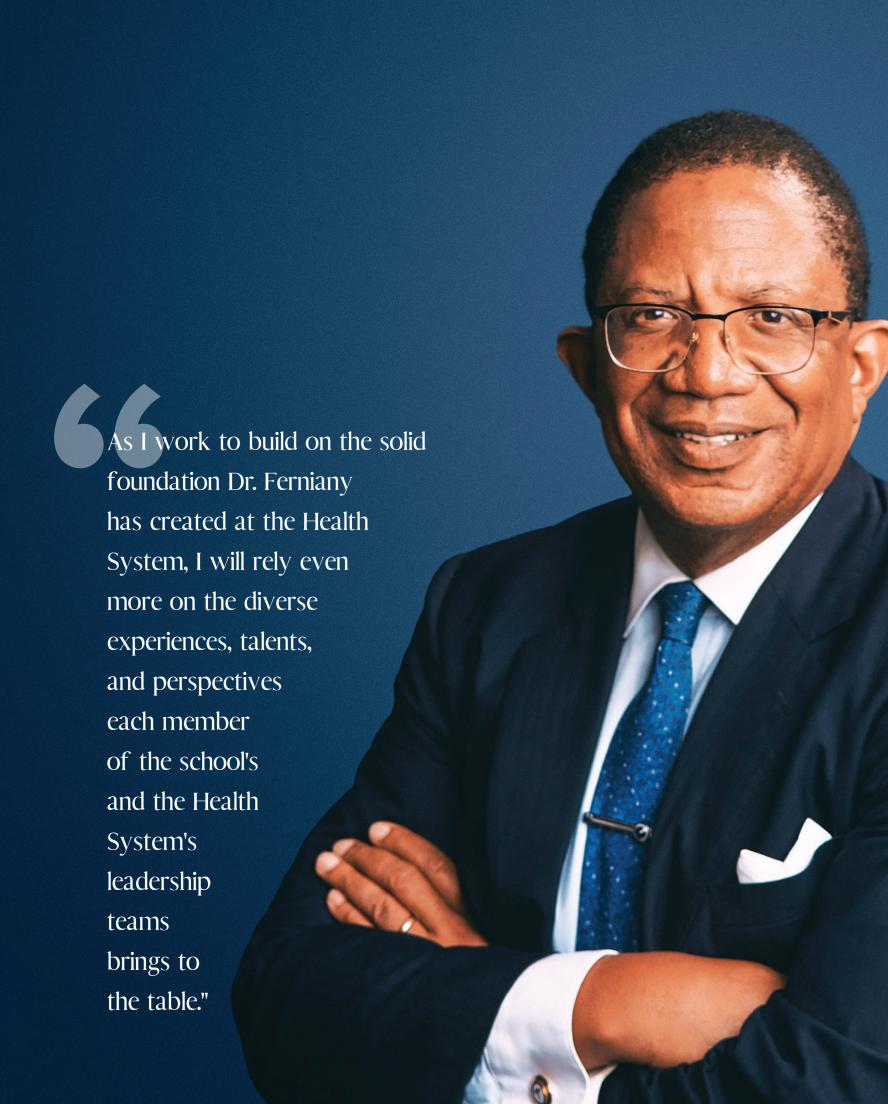
MAKING IT WORK

To help Vickers manage both the CEO and dean roles, changes in the senior leadership reporting structures of both the Heersink School of Medicine and the Health System have been enacted. In his expanded role as executive vice dean, Anupam Agarwal, M.D., will serve as the lead academic officer for the Heersink School of Medicine, while Senior Vice Dean for Research Etty (Tika) Benveniste, Ph.D., will serve as the school's lead scientific officer. Senior associate deans in their respective areas will report to Agarwal and Benveniste, while department chairs continue to report to Vickers.

Present and future Health System leadership transitions were also announced. Beginning January 1, 2022, Dawn Bulgarella assumed the role of senior operational leader and president of the UAB Health System while retaining her role as CFO of UAB Health System and the UAB/Ascension St. Vincent's Alliance. (Jason Alexander continues to serve as executive vice president of the UAB/Ascension St. Vincent's Alliance and CEO of Ascension St. Vincent's.) Bulgarella previously provided critical strategic leadership as an executive administrator of a large clinical department, senior associate dean for School of Medicine Administration and Finance, and CFO.

UAB Medicine CEO Reid Jones has no immediate plans to retire, but at the time of his eventual retirement, Vickers will assume the UAB Medicine CEO title and Bulgarella will assume Jones' operational responsibilities as president of UAB Medicine while retaining her responsibilities as president of UAB Health System. A Birmingham native and UAB graduate, Jones has served UAB Medicine for more than 25 years. He became UAB Medicine CEO in 2020, and prior to that served as chief operating officer of the UAB Health System since the position was created in 2013. (Learn more about UAB Medicine leadership on page 67.)

"UAB Medicine's tremendous growth and success over the past seven years has been possible because of our culture of collaboration and mutual respect," Vickers says. "As I work to build on the solid foundation Dr. Ferniany has created at the Health System, I will rely even more on the diverse experiences, talents, and perspectives each member of the school's and the Health System's leadership teams brings to the table." — Jane Longshore







AMERICA'S BEST **LARGE EMPLOYER**

Forbes 2021

The University of **Alabama at Birmingham** tops the list of competitors including:

Google

Mayo Clinic

MD Anderson Cancer Center

Microsoft

NASA

Netflix

Yale University

Be a part of the best. Be a part of UAB.

UAB's commitment to excellence is nothing new, but our 2021 accolades from Forbes certainly are.

We've been named the best large employer in America—and the best employer for diversity among colleges and universities.

We're also among the top five largest public hospitals in the U.S., in the top one percent of global institutions for NIH funding and the recipient of \$100 million in naming gifts for our UAB Heersink School of Medicine.

go.uab.edu/GrowWithUs

A full-page ad touting UAB's outstanding Forbes rankings ran in the Sunday, November 28 edition of The New York Times.

HEERSINK SCHOOL OF MEDICINE

Education

Our world-class medical education programs train physicians at all levels—from pipeline programs that foster future medical students from Alabama's rural areas, to partnerships with the university on innovative undergraduate programs, to our exceptional M.D. and numerous dual degree programs, to our 98 accredited residency and fellowship programs, to our continuing medical education programs that provide lifelong learning for practicing physicians.

New Biomedical Engineering Electives

The Department of Biomedical Engineering, a joint department of the UAB Schools of Medicine and Engineering, began offering three new coenrolled elective courses for medical students in the 2021-22 academic year. Gene Editing and Engineering introduces concepts of gene editing technologies and potential applications to clinical therapies. The course features guest lectures from faculty experts in specific techniques and student-led case study discussions, including clinical translational strategies and ethical considerations for applications of these technologies.

Biomedical Device Design and Commercialization focuses on the development of medical devices, with consideration of customer validation, design within realistic constraints, brainstorming and evaluation, and design proposals. Development issues such as market, intellectual property, and patent landscapes; regulatory approval; business models; and reimbursement are also addressed. Communication and how to reach target audiences is included in the curriculum.

Entrepreneurship in Medicine will be offered in spring 2022. The course focuses on the process of commercially translating technological advances to improve health care delivery and quality of life for patients. It will provide an overview of the global biotechnology and pharmaceutical industry and address various topics related to the formation of a start-up company, such as entrepreneurship, idea development, IP protection, business planning, financing, management, and marketing. Small groups of students will collaborate to develop a commercialization plan for an NIH Small Business Innovation Research grant submission.

Medical Education Snapshot

806 Medical Students **1,134** Residents and Fellows **1,649** Full-Time Faculty

4 Campuses **27** Academic Departments

98 Accredited GME Programs

Diversity and Inclusion Leadership

Latesha Elopre, M.D., MSPH, an associate professor in the Division of Infectious Diseases, was appointed assistant dean for Medical Education Diversity and Inclusion in the Heersink School of Medicine effective August 1. This new position supports recruiting students from underrepresented in medicine (URiM) populations into residency and fellowship programs and provides critical engagement and support for URIM trainees in

the learning environment. Elopre previously served as the director of Diversity and Inclusion for the Office of Graduate Medical Education.



Grand Rounds

In 2021, the Heersink School of Medicine launched a new, school-wide Grand Rounds, open to all staff, students, faculty, and trainees. The sessions help researchers, physicians, educators, administrators, and other health care professionals stay informed of trending topics, keeping them up-to-date in evolving areas and providing education outside their practice areas.

The inaugural discussion on February 11, titled "Cultural Complications," featured Chelsea Harris, M.D., M.S., general surgery resident at the University of Maryland, and Lesly Dossett, M.D., MPH, assistant professor of Surgical Oncology at the University of Michigan. Their presentation explored how to recognize and combat negative effects of bias in the hospital environment.

On May 12, the second installment featured special guest Lauren Whitt, Ph.D., head of Global Resilience at Google, presenting "Cultivating Resilience." Whitt discussed how to build resilience, avoid burnout, and learn to be intentional timely themes surrounding wellness for Mental Health Month in May.

The third session in October featured Lindsay Sutton, Ph.D., MSPH, a psychologist by training, and a behavioral designer and performance strategist who works with large companies to develop new problem-solving methods. She spoke about the Myth of Work-Life Balance. Visit go.uab.edu/SOMGrandRounds for more information and links to videos of the presentations.





Curriculum Changes Reflect Modern Medical Landscape

The curriculum for training Alabama's future physicians is evolving, shaped by a global pandemic, a deeper understanding of our communities, and important changes in the ways medical students are assessed in the U.S.

At UAB, it all starts with Patient, Doctor, and Society (PDS)—medical students' first course, taken prior to the White Coat Ceremony. Course co-directors Caroline Harada, M.D., assistant dean for Community-Engaged Scholarship in the Heersink School of Medicine and a professor in the Division of Gerontology, Geriatrics, and Palliative Care, and Stephanie Berger, M.D., associate professor in the Department of Pediatrics, are shining a light on the societal issues that affect health and the ways physicians can impact communities.

Naturally, COVID-19 has become part of the conversation, with leaders from the Jefferson County Department of Health sharing pandemic insights and experiences. Berger and Harada also have added sessions examining implicit bias, racism, and strategies to help physicians address health disparities. Other highlights include a panel discussion with African-American physicians and an exploration of the history of racism in medicine.

Students also interview a patient and research the patient's neighborhood "with a goal of understanding not only their medical history but also the social context in which they live, and understanding how that impacts their health," Harada says. "We show the complex web physicians and patients live and work in every day, because if you don't understand how social factors determine health outcomes, you can't help your patients effectively."

Following the PDS course, students proceed through a curriculum that reflects major changes in the United States Medical Licensing Examination (USMLE) testing structure, namely the switch to a pass/fail grade for the Step 1 exam (taking effect in January 2022) and the discontinuation of the Step 2 Clinical Skills (CS) exam.

The USMLE made these decisions to address unintended impacts of the exams on medical students. For example, Step 1 "initially was developed to serve as a benchmark, to show the student has mastered the foundational sciences and can proceed to the clinical curriculum," says Craig Hoesley, M.D., senior associate dean for Medical Education and chair of the Department of Medical Education. Yet the exam had become a "stratification tool for graduate medical education programs," pressuring students to focus on achieving specific scores to compete for specific residencies at the expense of learning, he explains. As for Step 2 CS, Hoesley says the financial burden associated with the test had risen to approximately \$2,000 per student. Many students also struggled to prepare for the exam, while others had concerns that the assessment was subjective.

Hoesley, a member of the USMLE Management Committee, anticipates that the National Board of Medical Examiners eventually will develop a new clinical skills exam. In the meantime, the Heersink School of Medicine has strengthened its clinical skills curriculum by enhancing the Introduction to Clinical Medicine course for MS1 and MS2 students, and by requiring MS3 students to take three OSCEs (objective structure clinical exams) with standardized patients.

Hoesley predicts that residency program directors nationwide are likely to put a greater emphasis on Step 2 Clinical Knowledge exam scores in the wake of the USMLE's decisions. Heersink School of Medicine faculty are encouraging students to take that exam early—as soon as they complete their MS3 year—and are modifying the curriculum calendar so that students have time to prepare for it. Research and service activities, along with letters of recommendation, also will be key for students looking to distinguish themselves as they compete for residency positions, Hoesley says. – Charles Buchanan, Kendra Carter



Program Connects Underrepresented Students to Medical Careers

The rich diversity of America isn't always reflected in its medical schools. To help expand diversity among UAB's medical students—and the future physician workforce—the Heersink School of Medicine has partnered with Alabama historically black colleges and universities (HBCUs) in a new Early Assurance Program. Selected students will be eligible for early acceptance to medical school, and they will participate in activities, including physician shadowing and research opportunities, to prepare them for medical careers.

"Our mission at the UAB Heersink School of Medicine is training the next generation of physicians to care for Alabama's citizens. An important aspect of that mission is ensuring that we're developing a physician workforce that reflects our state's population," says Craig Hoesley, M.D., senior associate dean for Medical Education and chair of the Department of Medical Education.

Building pipelines to attract and retain students who are historically underrepresented in medicine (URiM) helps to meet the health care needs of patients in communities across Alabama, says Christina Grabowski, Ph.D., the Heersink School of Medicine's associate dean for Admissions and Enrollment Management. She points to research showing that students in diverse learning environments feel better equipped to meet the needs of diverse patients—and that diverse teams are better at solving problems. In another study, patients reported a greater sense of trust in care

providers who share similar backgrounds.

The Early Assurance Program is open to current Oakwood, Alabama A&M, and Tuskegee students who have completed their sophomore year. Students apply in the spring of that year, and selected applicants receive an interview. Applicants must have a minimum 3.5 undergraduate grade point average and a minimum 3.5 grade point average in their science courses to be considered. Preference is given to Alabama residents.

"Ideal qualifications for candidates include diverse experiences and perspectives, career potential for leadership, maturity, strong letters of support, and a passion for service," Grabowski says. "We will provide myriad opportunities for students to learn more about medicine and prepare for medical school. Students who complete the program and meet the selection criteria for the Heersink School of Medicine will earn early acceptance."

The first class of Oakwood and Alabama A&M students entered the Early Assurance Program in the fall of 2021 and are eligible to enroll in the Heersink School of Medicine in the 2023-2024 academic year. Tuskegee University is the newest school to enter the program and students will be eligible for the 2022 cohort. Grabowski anticipates that the program will expand with additional partnerships between the Heersink School of Medicine and other Alabama HBCUs. – Charles Buchanan, Kendra Carter



Match Day Reveals Next Steps

On Friday, March 19, students in the Class of 2021 matched into residency programs across the country at Match Day. Match Day, which takes place the third Friday in March, is when the National Resident Matching Program (NRMP) releases results to applicants seeking residency and fellowship training positions in the United States.

For the second year in a row, the school's official Match Day celebration was shifted to an online format due to COVID safety protocols. Emails from the National Resident Matching Program hit students' inboxes at 11 a.m. Celebrating from their homes or from safe public spaces that allowed for social distancing, students were given five minutes to silently learn their match results, and then had the option to share them live with over 600 viewers watching the livestream.

Students matched into 89 residencies in 33 states, including at UAB, Emory University, Stanford University, UCLA, Vanderbilt University, University of Michigan, Cincinnati Children's Hospital, University of Tennessee Memphis, Washington University, and many more. A total of 331 new residents and fellows joined UAB's programs in Birmingham, Huntsville, Montgomery, and Selma. Learn more at go.uab.edu/matchday2021. – Mary Ashley Canevaro

Class of 2021 Match Stats

99% match rate

176 students matched

37% primary care

63% non-primary care

64 students matched in Alabama

38 students matched at UAB

Top Specialties

26 Internal Medicine

20 Pediatrics

16 Family Medicine/Emergency Medicine (each)

11 Diagnostic Radiology

Anesthesiology/Neurology/OBGYN/Surgery (each)















Celebrating Commencement

The Heersink School of Medicine held its Commencement ceremony on Saturday, May 22 at Bartow Arena. Selwyn Vickers, M.D., FACS, senior vice president for Medicine and dean of the Heersink School of Medicine, welcomed the graduates, saying, "These students being hooded today stand out for their resilience, their grit, their innovation, and their commitment to the good of all."

Rep. Terri A. Sewell, U.S. congresswoman for Alabama's 7th district, gave the Commencement address. She encouraged the grads to use their resources to help all people, but particularly those who are underserved. She discussed witnessing firsthand the need for equitable health care growing up in Selma, and noted that health disparities have been exacerbated by the COVID-19 pandemic.

The ceremony concluded with the hooding of the graduates and a group reading of the Hippocratic Oath. A Military Promotion Ceremony was held earlier that day to celebrate graduates who will enter military training programs, and each of the school's four regional campuses—Birmingham, Tuscaloosa, Montgomery, and Huntsville—hosted a virtual award ceremony to celebrate campus-specific honors. Watch the ceremony at go.uab.edu/somcommencement2021.







Regional Campus Roundup

The Heersink School of Medicine has three regional campuses, located in Huntsville, Tuscaloosa, and Montgomery, in addition to the main campus in Birmingham. All our medical students complete their pre-clinical coursework at the Birmingham campus before completing their third- and fourth-year clinical coursework at one of the four campuses. Training at the regional campuses offers the same quality medical education along with opportunities specific to the facilities and cities in which each campus operates.

LKB

LKB



Huntsville Campus

69 MEDICAL STUDENTS

60 UAB INTERNAL MEDICINE AND **FAMILY MEDICINE RESIDENTS**

22 FULL-TIME UAB FACULTY

Home to the Rural Medicine Program, a five-year program that trains physicians to serve in rural and small-town Alabama

Offers integrated Family Medicine and Internal Medicine Residency Programs



Regional Dean Roger Smalligan, M.D., MPH

Tuscaloosa Campus

68 MEDICAL STUDENTS

49 UA FAMILY MEDICINE **RESIDENTS**

85 FULL-TIME UA FACULTY

Home to the Primary Care Track, designed to give students a strong foundation in clinical medicine through longitudinal patient experiences and faculty mentorship

Home to the Rural Medical Scholars Program, a five-year program that trains physicians to serve in rural and small-town Alabama



Regional Dean Richard Friend, M.D.

LIB

Montgomery Campus

35 MEDICAL STUDENTS

27 UAB INTERNAL MEDICINE **RESIDENTS**

4 FULL-TIME UAB FACULTY

Affiliated with the UAB Selma Family Medicine Residency and Fellowship **Programs**



Regional Dean Louis Lambiase, M.D. effective December 1, 2021

Two White Coat Ceremonies Welcome New Students

Each year, the Heersink School of Medicine welcomes the incoming class with a White Coat Ceremony. Due to the coronavirus pandemic in 2020, a White Coat Welcome event for the entering class was held online, with the promise of an in-person ceremony when COVID safety protocols allowed.

That in-person White Coat Ceremony took place August 1, with all attendees required to wear masks. Because the class that entered in 2020 spent the first half of their first year of medical school learning online, this was the first time the whole class had been together in the same space.

Students heard from school leaders and keynote speaker Hussein Abdul-Latif, M.D., the 2020 faculty recipient of the Leonard Tow Humanism in Medicine Award. "You will learn in medical school that there are algorithms and pathways that we have to apply to every disease, but you will also learn in medical school that every decision that we make about every patient that we see is an individual decision. It is guided but not mandated by algorithms and pathways, because we have to take the human factor

of our patient in our decision-making," Abdul-Latif said.

Because of a surge in COVID-19 cases in Alabama, the White Coat Ceremony scheduled for the 2021 incoming class on August 15 was split across two, slightly abbreviated ceremonies. Several awards were presented at the event. MS3 Desalyn Johnson was awarded the 2021 Sara Crews Finley, M.D. Endowed Leadership Scholarship, which honors the late Sara Crews Finley, M.D., co-founder of the first medical genetics program in the Southeast and a beloved faculty member. The Brewer-Heslin Endowed Award for Professionalism in Medicine was awarded to Sharon Spencer, M.D., professor in the Department of Radiation Oncology.

Students at all three ceremonies were cloaked in their new white coats, which were provided by the Medical Alumni Association, by representatives of the school's regional campuses in Huntsville, Montgomery, and Tuscaloosa. Because the school was not able to host its traditional Legacy Luncheon, several legacy students at all three ceremonies were cloaked by their alumni family members. – *Jane Longshore*

2021 Entering Class

5,774 Applicants

512 Interviewed

186 Matriculated

52% Female

48% Male

19% Underrepresented in Medicine

21-39 Age Range

162 Alabama Residents

24 Non-residents

3.78 Average GPA

509 Average MCAT Score

51 Undergraduate Colleges





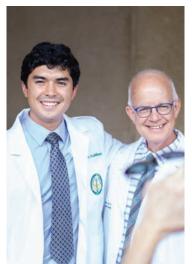












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HEERSINK SCHOOL OF MEDICINE

Clinical Care

At UAB, we offer a complete range of primary and specialty care services and the most up-to-date treatments and innovations in health care. Patients come to us from across Alabama and the country to receive tomorrow's medicine today.

Post-COVID Lunch-and-Learn Series

Most people with COVID-19 fully recover within days or weeks of their infection, but others suffer from post-COVID symptoms long afterward. This summer, UAB Medicine created a video series to help people better understand and manage post-COVID symptoms, which are sometimes called "long COVID" or "post-COVID syndrome."

Post-COVID symptoms are defined as new, returning, or ongoing health problems that people can experience four weeks or more after first being infected with the coronavirus. People who had no symptoms (or mild symptoms) when they were first infected with the virus can have post-COVID symptoms. Also, these symptoms may or may not be the same as the symptoms they experienced when they were first infected with COVID-19.

The series features UAB Medicine experts from a variety of specialties, including cardiology, dermatology, gastroenterology, infectious diseases, neurology, otolaryngology, and others. Topics include Neurologic Complications with Post-COVID Syndrome, Hair Loss and Hives: Post-COVID Symptoms in Dermatology, Treatment Options after Losing Smell with COVID-19, Brain Fog, Insomnia, and Stress: Coping after COVID, and more. The full video series is available at uabmedicine.org/postcovid.

The American College of Emergency Physicians named UAB Hospital-Highlands' Emergency Department a Level 1 Geriatric **Emergency Department,** the first in the Southeast. The accreditation recognizes UAB Medicine's commitment to providing a high-functioning emergency department for older adults.

First Ion™ Robotic Bronchoscopy in Alabama

Hitesh Batra, M.D., MBA, associate professor in the Division of Pulmonary, Allergy and Critical Care Medicine, performed the first robotic-assisted bronchoscopy using the Ion™ system in the state of Alabama on August 25. This new technology enables minimally invasive biopsy procedures to diagnose lung cancer. The system features an ultra-thin, ultramaneuverable catheter that allows more precise navigation inside the lung, as well as offering added stabilization for the physician performing the procedure.

Pediatric Sports Medicine/Cardiology Clinic Opens

UAB Sports Medicine, a partnership between the Department of Orthopaedic Surgery, the Department of Family and Community Medicine, and the Division of Pediatric Cardiology, opened a new multidisciplinary sports medicine and cardiology clinic in May. Sara Gould, M.D., associate professor of Orthopaedic Surgery, and Camden Hebson, M.D., assistant professor of Pediatric Cardiology, lead the clinic.

The highly specialized clinic is for adolescent and young adult athletes who need simultaneous cardiology and sports medicine treatment. It is designed to treat issues such as postural orthostatic tachycardia syndrome—a blood circulation disorder—as well as select post-COVID cardiology conditions.

In order to clear athletes to return to their sport, the clinic orders and reviews an electrocardiogram, or EKG, which records the electrical signal from the heart. Following an EKG, the clinic performs an echocardiogram to confirm whether the patient has cardiomyopathy, a disease of the heart muscle that makes it harder for the heart to pump blood to the rest of the body, which can be induced by COVID-19.

The clinic's specialists also can test patients who are experiencing post-COVID fatigue to determine their current level of fitness, set goals with the patient, and build a treatment plan with exercise prescriptions to reach their goals. Ultimately, the clinic aims to get athletes back to their pre-COVID-19 performance level or higher. As of August 30, the clinic had treated approximately 20 patients, about 30% of whom had experienced COVID-19.







On January 25, 2021, severe weather rolled through Mississippi and Alabama, destroying homes and causing damage in several communities. In Fultondale, the Hernandez family waited in their home for the storms to pass. But when an EF3 tornado touched down in their community, Arnoldo Vasquez Hernandez realized his family could be in danger.

After waking their three sleeping children, the family raced to the basement to take shelter. Hernandez and his youngest daughter were the last, and as Hernandez pushed her to safety, a 100-year-old oak tree crashed through the roof of the house. The tree pinned Hernandez's left leg against his basement stairs.

Local paramedics were first on the scene but were unable to free Hernandez. They called in the UAB SWIFT (Surgical forWard Inter-

> Developed in 2019, SWIFT brings the operating room out into the field and enables doctors to perform life-saving proce-

vention for Trauma) Team to assist.

dures directly at the scene of an incident.

Trauma and acute care surgeon Donald Reiff, M.D., emergency medicine physician Blayke Gibson, M.D.,

> trauma and burn nurse manager Sherichia Hardy, and India Alford, director of Nursing

Services at Gardendale Freestanding Emergency Department, rushed to the scene.

With the house on the verge of collapse, the team determined the only safe

way to free Hernandez was to perform an on-site amputation. In the rain and darkness, in an increasingly unstable building, Reiff removed Hernandez's left leg.

Despite the difficult and dangerous conditions, the above-the-knee amputation itself took only about 10 minutes to complete. The rescue team was finally able to extract Hernandez and carry him to the waiting ambulance, which transported him to UAB.

Two days after the accident, Conley Carr, M.D., residency program director for the UAB Department of Physical Medicine and Rehabilitation, began treating Hernandez for post-trauma rehabilitation care. "He was the first patient I have seen who required surgery in the field after a devastating trauma," says Carr.

Carr specializes in overseeing patients during recovery and has a special focus with individuals who are dealing with limb loss. He also provides counseling and management of pain such as phantom pain.

During his care at UAB Hospital, Hernandez remained in high spirits, bringing smiles to those who surrounded him. "He always looks at the positive," Carr says. "He is definitely a 'glass half-full' type of person, which bodes well for his staying motivated during his healing process."

After several appointments with Carr, Hernandez was cleared to begin seeing Brian Mueller, a certified prosthetist and manager of the UAB Orthotics and Prosthetics Clinic, to be fitted for a prosthetic leq.

On June 1, Hernandez was able to try on a sample prosthetic, allowing him to walk for the first time in five months. Mueller and his team matched the top of the titanium carbon fiber prosthetic to Hernandez's skin tone, creating him a customized prosthetic. One week later, Hernandez, beaming with joy, walked out of his last fitting appointment with a new leg.

"Due to the traumatic nature of the accident, and how much of his leg was damaged, his injury was a little more difficult," Mueller says. "It could be between six to eight months for him to get fully adjusted to this new normal; but he is already doing great, and I am confident that he will do well with his new prosthesis."

As he left UAB's Spain Rehabilitation Center, Hernandez said, "My children keep asking me when we can go to the park again, and thanks to UAB, I can now take them."

Watch a video of the reunion between Hernandez and the physicians and first responders who saved his life at fb.watch/84L-UODGmd. —*Brianna Hoge*

UAB Performs Southeast's First Endovascular Aortic Arch Repair

In April, Greenville, South Carolina, resident Patrick Jones, 74, became the first person in the Southeast and only the fourth person in the United States to receive the NEXUS aortic arch stent graft, a minimally invasive solution for aortic arch repair. Jones underwent surgery for implantation of the graft at UAB, one of the only hospitals in the Southeast that offers this treatment.

Each year, more than 120,000 people develop thoracic aortic arch disease. Unfortunately, the risk associated with open surgical aortic arch repair and the lack of approved devices often lead to limited treatment options for patients with this disease.

Jones came face to face with those limited treatment options when doctors at his local hospital found that his aortic dissection and aneurysm were beginning to progress just six months after he had open-heart surgery. His doctors knew that Jones was a poor candidate for another open surgery, so they sent him to UAB Hospital, where he met UAB Cardiovascular Institute specialists Kyle Eudailey, M.D., a cardiothoracic surgeon, and

Adam Beck, M.D., professor and director of the Division of Vascular Surgery and Endovascular Therapy. Beck and Eudailey determined that Jones was an ideal candidate for this The NEXUS™ aortic arch stent graft system is a minimally invasive repair option that decreases the requirement for open sternotomy and circulatory arrest, which means much less time in surgery, lower risk of complications, and less in-hospital recovery time for patients. These procedures may also provide an option for treatment to patients who are at prohibitively high risk for open surgery.

Jones says he and his wife felt an immense sense of relief when Beck and Eudailey told him he would be a good candidate for the procedure, as they were both afraid that he would not survive another open-heart surgery.

"For me, it was a no-brainer. We felt like we were in the best hands," Jones says. "Dr. Beck and Dr. Eudailey gave us hope, and I knew that, if this procedure worked for me, it could help so many people in the future. It was exciting to be part of an innovative approach that could potentially help others dealing with a similar situation."

Jones underwent surgery to implant the NEXUS aortic arch graft April 1, and five days later he was on his way back home to recover. Within just a few weeks of his procedure, he was able to resume normal activities that he enjoyed before the procedure. – *Anna Jones*



Genetic Counselors Bridge Genomic Medicine and Patients

The increasing ubiquity of genetic testing over the last decade, paired with medical advances showing the benefits of using genetic testing to guide patient care, has led to major development in the field of genetic counseling. The Alabama Genetic Counselor Act passed in 2019 established the Alabama Board of Genetic Counseling (ABGC), which created a licensure program.

"Genetic counseling is growing in size and in medical importance," says Fallon Brewer, CGC, lead genetic counselor of Prenatal Genetic Services at UAB and chair of the ABGC. "The goal of the licensure is to set a minimum standard and protect the patient population. It sets an expectation that service is of a certain caliber."

Just as messenger RNA, or mRNA, is needed to translate a cell's genetic code, genetic counselors are needed to translate medical history, genetic testing options, and test results to patients in order for patients to make informed decisions. Counselors stay up to date with new technology and are able to more accurately identify needed tests, thus limiting unnecessary testing and saving patients time and money. Physicians also lean on a counselor's in-depth knowledge of a patient's medical and testing history when developing personalized care plans.

Genetic counselors work with a variety of patients, including:

- Patients with a family history of a genetic anomaly or disorder
- Families of children born with a genetic disorder
- Patients with a family history of cancer
- · Patients with a genetic disorder
- Patients referred after abnormal testing results

UAB has recognized the value and importance of genetic counseling in the health system and is taking a unique approach to help enhance the field. Instead of having genetic counselors employed by a specific division, all counselors are employed under UAB's Clinical Genetics Services. Counselors then work in at least two of five main areas: cancer, prenatal, adult and pediatric, research, and with non-genetic physicians in areas such as neurology. The structure allows counselors to have more than one specialty and encourages more collaboration and learning among colleagues.

Genetic counselors are vital team members in areas such as UAB's Division of Maternal-Fetal Medicine. They work in every ultrasound clinic, discussing ultrasound findings with expecting parents and assessing the risks of a genetically linked birth defect. The counselors recommend which, if any, genetic tests are needed and also provide family planning guidance to families with known genetic disorders

Genetic counselors have also become an invaluable asset in cancer treatment. Multiple cancers have clear hereditary components that have significant implications on prevention and treatment for patients as well as their family. Through counseling and testing, genetic counselors work to identify patients and family members who might be at future risk for developing cancer. Their role has become a "cornerstone for contemporary cancer care," says Warner Huh, M.D., chair of UAB's Department of Obstetrics and Gynecology and senior scientist at the O'Neal Comprehensive Cancer Center. — Hannah Echols







Welcome Home

Ricky Hamm is no stranger to UAB Hospital. As a medevac helicopter pilot, he has flown ill and injured patients to UAB for 17 years. He was the first medevac pilot to touch down on the landing pad of UAB's new North Pavilion when it opened in 2004.

On January 10, 2021, he found himself at the North Pavilion again, but this time as a patient. A COVID-19 patient. And, it would be 187 days before he would go home.

Hamm said he is not sure how he contracted coronavirus. "We live in a rural area, and I always wore a mask and kept my distance when going to town," Hamm says. "A bunch of us went to get the first dose of the Moderna vaccine, but I must have already had the virus."

Hamm, a veteran who first flew medevac in the army, began to feel sick January 5. Five days later, he was in UAB Hospital with severe breathing issues. He was not a good candidate for a ventilator, so his physicians had to turn to extracorporeal membrane oxygenation, also called ECMO.

ECMO is a device that removes a patient's blood, filtering out the carbon dioxide and adding oxygen. Blood is then pumped back into the body. In effect, the machine takes over the roles of both heart and lungs.

"ECMO is a complicated, complex procedure," says Keith Wille, M.D., professor in the Division of Pulmonary and Critical Care Medicine and medical director of the adult ECMO program. "It's invasive and not much fun for the patient. In this case, it saved his life. But trust me; you do not want to go on ECMO."

Hamm was on ECMO for 147 days, a remarkably long time. He now carries the dubious distinction of being UAB's longest-tenured COVID-19 patient at 187 days. Now that he is home, he still uses supplemental oxygen and an extra-strength CPAP machine at night to help his breathing. He has suffered profound hearing loss, which his wife, Shannon, a speech pathologist, hopes may resolve over time.

His bout with COVID-19 was severe. "He had a lot of support from family and friends," says Shannon Hamm. "We were not sure how it was going to go at first. He was basically out of it for about four months. Once he woke up and joined the fight, things got a lot better. Then we knew he was going to make it."

On July 16, Hamm's family, friends, and co-workers celebrated his discharge from UAB, complete with a blue-light escort from Jefferson County and other area sheriff's departments.

Hamm, speaking to members of the media outside the hospital, offered his support for vaccination. "I believe in the vaccine," he says. "I believe I already had the virus before I got the vaccine, before it could work to protect me. I wouldn't want anyone to go through what I went through."

Hamm's wife, Shannon, says they were halfway through construction of a new house when Hamm got sick. The contractors have now finished, and Hamm got his first look at the house as the caravan bringing him home from the hospital pulled up.

"We built it to live in the rest of our lives," he says. "Built ramps and wide doorways. No stairs. It was for when we grew old. I never expected to need handicap access quite this soon."

Hamm did not celebrate his birthday extravagantly in 2020 due to the pandemic. After more than seven months, he came home from the hospital the day before his 51st birthday—the perfect time for a celebration. – *Bob Shepard*

Retired Firefighter Experiences Complete Response in Clinical Trial

Opelika, Alabama's first female firefighter, Charlotte Patterson, has been
putting out fires for more than 25
years. However, in May 2017, Patterson
learned she would be fighting a new
type of fire—endometrial cancer.
Before coming to the O'Neal Comprehensive Cancer Center at UAB for
treatment, Patterson received a complete hysterectomy and five rounds
of radiation in her hometown. Her
local oncologist presumed the
cancer to be gone.

However, Patterson still
experienced immense pain.
A PET scan confirmed that
her cancer had spread to her
psoas muscle, a muscle that
connects the lower back to the
hip joints and is involved in various
daily activities such as walking and
sitting. This led her to roughly 35
additional rounds of radiation and,
eventually, chemotherapy.

After just two doses of chemotherapy, Patterson began to experience a side effect called thrombocytopenia, meaning her blood platelet levels were abnormally low—too low to move forward with her existing treatment.

"That's when the doctor told me there wasn't anything else she could do for me and that, in her 15 years, she'd never seen cancer spread to a muscle instead of an organ like mine," Patterson says. "My doctor talked to Dr. Leath here at UAB, and Dr. Leath said, 'It's very rare, but I have seen it. Get her to come up here. I think I can buy her a year."

Patterson put her care into the hands of Charles Leath III, M.D., MSPH, director of the Division of Gynecologic Oncology. After meeting Leath, she enrolled in a clinical trial for patients with endometrial or ovarian cancer. To extinguish the fire in her own body, she began traveling to and from Birmingham every other week to receive this experimental therapy.

"There have been a couple of times that I wanted to throw up my hands and say, 'I don't want to do this anymore,' but I think about my family more than myself and what it would do to them if I just gave up," Patterson says.

Just 13 months after enrolling in the clinical trial, Patterson had good news to deliver to her family. In August 2019, Leath called Patterson and told her that the cancer was gone. As of summer 2021, Patterson was two years into remission and remained completely cancer-free.

"Realistically we were hoping that this experimental therapy would keep the tumor from growing and maybe even shrink the size of it," Leath says. "Little did we know that it would vanish entirely. When I reviewed her scans and saw that the cancer was gone, I called her immediately. It's always a really special moment to deliver that news to a patient, especially when there wasn't much hope of the cancer going away."

The O'Neal Cancer Center is one of 17 sites in the U.S. to offer this clinical trial to cancer patients. Patterson is the only patient who has had a complete response to the therapeutic drug delivered in the trial. Rebecca Arend, M.D., MSPH, associate professor in the Division of Gynecologic Oncology, is the principal investigator on the study and presented Patterson's results at the Society of Gynecologic Oncology 2021 annual meeting.

Although in remission, Patterson travels to the O'Neal Cancer Center regularly to receive treatment in hopes of preventing the cancer from coming back. She brings lunches to feed the nurses who administer potentially lifesaving treatments to cancer patients each day. Patterson says this act of service is "nothing compared to what they've done for me."-- Curran Umphrey

Study Uses Electrical Stimulation to Treat Depression

A new study by UAB is using a device originally developed to treat seizure disorder in patients with treatment-resistant depression. Vagus nerve stimulation therapy consists of a small device, about the size of a quarter, implanted just below the collarbone that sends out mild pulses to a nerve in the neck. It was approved in 2005 as a safe and effective treatment option for use in difficult-to-treat depression but has not been widely used, due to a lack of reimbursement from payers.

Matthew Macaluso, D.O., Bee McWane Reid Endowed Chair in Psychiatry and Neurobiology, and study coordinator Katlyn Jackson, from the Department of Psychiatry and Behavioral Neurobiology, are participating in a national study assessing the results of VNS Therapy® in individuals whose depression continues despite trying four or more treatments

"When the VNS device started being used for seizure disorders, doctors noticed that their patients seemed to feel happier," Macaluso says. "This was due to the device's stimulating the vagus nerve, which increases activity in the frontal cortex, helping patients with their mood."

Macaluso says the study may provide evidence that Medicare and other insurance companies need in order to cover it, making the device more accessible to this group of patients with difficult-to-treat depression.

The procedure to implant the device is an outpatient procedure, and most patients can be expected to go home the same day. Macaluso is partnering with Nicole Bentley, M.D., assistant professor in the Department of Neurosurgery, for the implantation of the device.

"Because depression is so hard to treat, and there are not many options for medication, I hope to see real improvement in the severity of the depression," Bentley says. "If at least half [of the study participants] see an improvement, that would be a big win."

Those eligible to participate in the study include Medicare patients with four antidepressant treatment failures in a depressive episode. The most common side effects of the VNS device include voice changes such as hoarseness, prickling or tingling in the skin, sore throat, and breathlessness, and these tend to improve over time. The most reported side effect from the implantation procedure is infection, which occurs less than 1 percent of the time. – *Brianna Hoge*



Launched in January 2021, the UAB Genomics Diagnostics Lab is a collaborative project between UAB Hospital and UAB Pathology's Division of Genomic Diagnostics and Bioinformatics. They created the lab to bridge the gap between clinical genetics, genomics, bioinformatics, pediatric microbiology, pathology, and pharmacogenomics.

The new lab uses the most cutting-edge technology, including the Genexus Integrated Sequencer made by Thermo Fisher Scientific, to conduct rapid next-generation genomic sequencing. Upon the lab's opening, genomic diagnostics and bioinformatics faculty worked to develop and validate two panels with close to 100 genetic markers. Now, they are working to expand to accommodate larger, 500+ gene panels.

The Genexus Integrated Sequencer test results help physicians quickly determine optimal therapies for patients by identifying genetic variants in a patient's tumor, which are often linked to specific therapies. The sooner clinicians receive a tumor's genetic test results, the sooner they can give an accurate diagnosis and make informed treatment decisions—an essential advantage in cases where accurate and timely treatment can be critical.

George Netto, M.D., Robert and Ruth Anderson Endowed Chair in the Department of Pathology, says, "The expertise of the lab's clinicians and staff, combined with the powerful diagnostic capability of its instruments, allows UAB to offer patients increasingly targeted, personalized treatment."

The revolutionary technology in the lab does not end with the Genexus Integrated Sequencer. In collaboration with the Program for Translational Pharmacogenomics, led by Neurology Professor Nita Limdi, Pharm.D., Ph.D., MSPH, the lab is also developing a large pharmacogenomics assay that runs on the recently installed Agena MassArray system. The new PGDX assay, designed by Limdi and Brittney Davis, PharmD, instructor in the Department of Neurology, is based on the latest state-of-the-art evidence on pharmacogenomics and targets 97 variants in 26 genes. "This pharmacogene panel will enable clinicians to personalize treatment for a range of diseases and conditions such as psychiatric disorders, cancer, cardiovascular issues, and chronic pain management, guided by an expert pharmacogenomics consult," Limdi says

UAB's new lab is the first step toward a freestanding genomic diagnostics lab with the capacity to service the state of Alabama and the entire Southeast. The lab's technology and expertise are an important advance toward making precision medicine more accessible to all. – Christina Crowe

U.S. News & World Report

adult specialties ranked among the nation's best

No. 7	Gynecology
No. 10	Rheumatology
No. 22	Rehabilitation
No. 25	Ear, Nose, and Throat
No. 27	Cancer
No. 29	Cardiology/Heart Surgery
No. 30	Geriatrics
No. 31	Pulmonology/Lung Surgery

Neurology/Neurosurgery and Gastroenterology/GI Surgery classified as high-performing

adult procedures/ conditions rated as high performing

THE HIGHEST CLASSIFICATION

Abdominal aortic aneurysm repair

Acute kidney failure

Aortic valve surgery

Chronic obstructive pulmonary disease (COPD)

Colon cancer surgery

Diabetes

Heart attack

Heart bypass surgery

Heart failure

Lung cancer surgery

Pneumonia

Spinal fusion

Stroke

Transcatheter aortic valve replacement (TAVR)

UAB Hospital named Best Hospital in Alabama

BY U.S. NEWS & WORLD REPORT

Healthgrades Awards

BEST SPECIALTY

Among Healthgrades America's

Among Healthgrades America's **100 Best Hospitals for Cardiac Care**[™]

50 Best Hospitals for Cardiac Surgery™ FOR 5 YEARS IN A ROW

FOR 5 YEARS IN A ROW

CARDIAC

Healthgrades Cardiac Care Excellence Award™ for 5 Years in a Row Healthgrades Cardiac Surgery Excellence Award™ for 5 Years in a Row Among Top 5% in the Nation for Cardiac Surgery for 5 Years in a Row Among Top 10% in the Nation for Overall Cardiac Services for 5 Years in a Row Among Top 10% in the Nation for Cardiac Surgery for 5 Years in a Row Five-Star Recipient for Valve Surgery for 5 Years in a Row Five-Star Recipient for Heart Failure Treatment for 4 Years in a Row

GASTROINTESTINAL

Among the Top 10% in the Nation for GI Medical Treatment in 2021 Five-Star Recipient for Treatment of GI Bleed for 3 Years in a Row

NEUROSCIENCES

Recipient of Healthgrades Cranial Neurosurgery Excellence Award™ for 2 Years in a Row Among Top 5% in the Nation for Cranial Neurosurgery for 2 Years in a Row Among Top 10% in the Nation for Cranial Neurosurgery for 2 Years in a Row Five-Star Recipient for Cranial Neurosurgery for 3 Years in a Row

VASCULAR

Five-Star Recipient for Repair of Abdominal Aorta in 2021

Five-Star Recipient for Treatment of Sepsis for 7 Years in a Row Five-Star Recipient for Treatment of Pulmonary Embolism in 2021 HEERSINK SCHOOL OF MEDICINE

Caring for Community

Caring for our community means a lot of things to us. For the better part of two years, it has meant leveraging our deep expertise in infectious diseases and patient care to help our city and state weather the COVID-19 pandemic. But it also means reaching out from the confines of our campus to improve health and health care in underserved areas not only here at home, but also across the globe through innovative and ambitious programs and partnerships.

UAB Takes Simulation Training on the Road

Launched in 2021, the SimUAB® Mobile Simulation Lab is a joint project between the Alabama Rural Health Collaborative (ARHC), which provides assistance for nonprofit rural hospitals across the state, and SimUAB®, a component of UAB Clinical Simulation. It is the only mobile simulation unit in Alabama.

The retrofitted vehicle offers a high-fidelity manikin that mimics a human patient. The manikin breathes, has a pulse and can even blink, and it presents measurable vital signs and responds as a real patient would. The lab has two distinct work spaces inside the vehicle, and the manikin and other equipment are portable, so they can be set up in a parking lot or training area within a health care facility. There is audio and video capability to monitor and record the training sessions.

The training sessions can be personalized to work with individuals, care teams, or entire health care systems. Sessions can be targeted to any number of specific medical issues, including sepsis management, Foley catheter insertion, and central venous line insertion, as well as skills in airway management or ultrasound procedures.

The 2021 Heart & Sole 5K on August 28 raised more than \$25,000 for Equal Access Birmingham, the Heersink School of Medicine's student-run free clinic for uninsured and underserved patients.

Get Stuck with Chuck Vaccine Rally

Alabama and NBA basketball legend Charles Barkley hosted a COVID-19 vaccine rally at Birmingham's Legion Field on August 28. The event was presented by the UAB Minority Health & Health Disparities Research Center and featured an appearance by Barkley, drive-through and walk-up vaccinations, a T-shirt giveaway, DJs, food trucks, and more. More than 120 people received a vaccine dose at the event.

Improving Safety to Improve Health

The Division of Preventive Medicine was awarded a grant from the National Organization of Black Law Enforcement Executives and the Department of Justice (DOJ) to reduce violent crime in Bessemer, Alabama, and improve relationships between community residents and police officers. The project looks at the social factors that contribute to violence such as lack of education and poverty.

Researchers have completed a one-year planning phase, during which the UAB Minority Health & Health Disparities Research Center (MHRC) gathered data to design an intervention which will impact crime reduction in Bessemer. Investigators interviewed community members, law enforcement, civic leaders, community leaders, and victims of crime.

Information gleaned from these interviews shaped a preliminary intervention plan. Community members will provide input on the plan during a series of focus groups. That information, paired with guidance from the Partnership Advisory Board comprised of residents and stakeholders in Bessemer, will guide the development of the final intervention plan. After DOJ approves the plan, the intervention will begin.

MHRC Community Engagement Director Tiffany Osborne explains that things like well-lit walking paths and good relationships with neighborhood police officers make citizens more likely to get outside and exercise. "A healthy neighborhood is a productive neighborhood," she says.



A day after the World Health Organization declared COVID-19 a global pandemic in March 2020, the University of Alabama System made immediate plans to transition to online or alternative instruction and remote work at all three campuses, in Tuscaloosa, Huntsville, and Birmingham. Alabama Governor Kay Ivey declared a state of emergency, and UAB Hospital prepared patient surge plans and implemented visitor restrictions.

At the onset of the pandemic, it was clear that historic levels of planning, preparation, and collaboration would be critical to success, says UA System Chancellor Finis St. John. The UA System Office swiftly created an internal Health and Safety Task Force dedicated to ensuring the safe fulfillment of the System's core mission of teaching, research, and service. The Task Force, led by UAB medical experts and co-chaired by UAB Heersink School of Medicine Senior Vice President for Medicine and Dean Selwyn Vickers, M.D., FACS, ultimately developed an operational return plan that became a national model for colleges, universities, corporations, and nonprofit organizations.

UAB and UAB Medicine were uniquely prepared to

help their students, employees, and patients, as well as the city, state, nation, and beyond, navigate the pandemic safely. "We didn't know what impact the COVID pandemic would have on each of us and the many people we serve, but we rolled up our sleeves and adapted," UAB President Ray Watts, M.D., says. "Throughout a difficult year-and-a-half, the perseverance of our people and their dedication to our vision, mission, and values—with the unwavering leadership and support from UA System Chancellor St. John, the System Office team, and the UA System Board of Trustees—have been extraordinary. And the results—what we have been able to do for the UAB community and our city, state, and beyond-speak for themselves."

MEETING THE MISSION

The pandemic put UAB's commitment to its mission and the communities it serves on full display. "UAB has been an international leader in keeping the public safe and informed throughout the pandemic," says Vickers. "We answered the call when our institution's collective knowledge and expertise was needed more than ever. I can't thank our people enough for working together so selflessly and demonstrating just how outstanding UAB is as an academic medical center and institution of higher learning."

UAB launched the state's first appointment-based mass community COVID testing site in conjunction with the Jefferson County Department of Health, Students and employees from across UAB, including many medical students, have helped the Alabama Department of Public Health (ADPH) with contact tracing, calling thousands of cases a month.

UAB vaccinated its first person on December 18, 2020, and later opened five community-based, mass vaccination sites. By September 2021, UAB had administered approximately 223,000 doses of the vaccine to residents in 63 of Alabama's 67 counties.

UAB's Minority Health & Health Disparities Research Center worked with community leaders to educate underserved populations about the safety and efficacy of vaccination. Those efforts, along with investing roughly \$1.4 million a month to operate five community vaccine

sites, enabled UAB to provide vaccines to racially diverse groups of Alabamians, far exceeding the national average of underserved populations vaccinated-bolstering Alabama's effort.

The Heersink School of Medicine's Fungal Reference Lab in the Department of Pathology has been a focal point for testing for the entire state throughout the pandemic. Because of the lab's efforts, UAB was among the first academic medical centers in the country to offer in-house COVID-19 testing after it launched its own, extremely accurate laboratory-developed test in March

The lab, directed by Sixto M. Leal Jr., M.D., Ph.D., assistant professor in the Department of Pathology, has been analyzing 100 COVID-positive samples a week for the ADPH to help identify which variants are in Alabama. Leal's lab also worked closely with UAB Hospital labs and private-sector biomedical companies to scale up and support the GuideSafe™ Entry Testing program in 2020. Free COVID-19 testing was made available to students at all Alabama colleges and universities in advance of the 2020 fall semester, resulting in the largest-scale higher-education testing initiative in the nation.

UAB research also played a critical role. Remdesivir was approved under EUA as a COVID-19 treatment through research conducted under the auspices of the Antiviral Drug Discovery and Development Center at UAB, and UAB was among the first U.S. sites chosen to conduct preclinical testing of an inhaled monoclonal antibody for COVID-19 that showed therapeutic efficacy.

In just 20 days in March 2020, the UAB Advancement Office raised more than \$1.1 million from the Birmingham business community and a donor in Montgomery for a new Urgent COVID-19 Clinical Research and Laboratory Research Fund at UAB, More than 50 Heersink School of Medicine faculty members submitted grant proposals and 14 projects were selected for awards in April. Ten additional pilot projects—funded by \$402,000 in additional donations-began August 1, 2020.

Among the awardees was Kevin Harrod, Ph.D., Benjamin Monroe Carraway Endowed Chair and professor in the Department of Anesthesiology and Perioperative Medicine. As a result of the funding he received,

UAB COVID-19 by the Numbers

266,000+

VACCINE DOSES ADMINISTERED

BY UAB AS OF OCT. 27, 2021

5,400+

COVID PATIENTS

CARED FOR BY UAB AS OF OCT. 27, 2021



Harrod's team has found 18 drugs that have antiviral activity against SARS-CoV-2. "Many of these will be lead compounds in our drug discovery endeavors for the next year," he says.

On the clinical front, UAB has offered testing, patient care, and administrative expertise and support to hospitals and health systems across the state, improving outcomes for many Alabamians struck by COVID-19.

UAB experts also collaborated with and provided critical public health and infectious disease insights to local and state officials, and also took a lead role in an aggressive public information campaign to increase knowledge and safety. UAB experts have kept a high public profile throughout the pandemic, as have been featured regularly in local media coverage and in thousands of appearances in national and international outlets.

The patient care demands of UAB Medicine have been significant. UAB Hospital admitted its first COVID-positive patient in March 2020, the first of multiple waves of

patient surges that, as of September 1, 2021, continue to stress the system and its clinical care

and support teams. On September 8, UAB Medicine had 166 COVID-19 hospitalizations, with 66 patients in the ICU and 51 patients on ventilators. As of September 9, 2021, UAB had cared for 5,019 unique COVID patients.

"Our employees have overcome great challenges and pushed through personal and professional anxiety and exhaustion to provide world-class care to thousands of patients throughout the pandemic," says UAB Medicine CEO Reid Jones.

"We continue to innovate to best serve patients and really demonstrated why UAB is so vital to all Alabamians."

A new multidisciplinary Post COVID
Treatment Program was developed to
help evaluate patients still experiencing
COVID-19 symptoms more than three
weeks after a positive test to help them
find appropriate specialized care.

A team led by Sue Feldman, Ph.D., professor in UAB's Schools of Health Professions and Medicine, developed the daily Healthcheck tool and worked with Google and Apple to develop the GuideSafe exposure notification app made available to all Alabamians. The anonymous app was designed to alert users if they had been exposed to someone diagnosed with COVID-19.

"With the great challenges we were facing as a university and health system, it would have been easy to turn inward and just try to solve our own problems," Watts says. "But that's not who UAB is. Improving outcomes for all Alabamians is our mission and responsibility, and the pandemic showed just how much that's in our DNA with the high-impact programs we undertook." – Tyler Greer



New Global and Women's Health Leader Seeks to Expand UAB's Reach

As the world continues to grapple with the coronavirus pandemic, Alan Tita, M.D., Ph.D., says there is no better time to highlight the importance of global health partnerships and collaboration. That will be an area of emphasis for Tita in his new role as the Heersink School of Medicine's associate dean for Global and Women's Health. He will also become the founding director of the Mary Heersink Institute for Global Health, which was established as part of the \$95 million naming gift to the Heersink School of Medicine (see page 2).

"The COVID-19 pandemic has shown once again how interconnected the world is, and how health conditions in one place can affect everyone worldwide," says Tita, who took over as associate dean following the retirement of Michael Saag, M.D. "In this framework, it's crucial to engage in global health in order maximize the impact on health outcomes here at home and across the world.

"Furthermore, women's health is a central component of global health, because in most settings the status of women defines the health outcomes of the family and entire community. That's why this is an opportune time to do this, and I am eager to promote efforts at UAB Heersink School of Medicine to address these important areas."

Tita received his medical degree from the Faculty of Medicine and Biomedical Sciences in Cameroon, a Master of Public Health in International Health from the University of Leeds in England, and his Ph.D. from the University of Texas Health Science Center School of Public Health in Houston. He went on to complete his residency in obstetrics and gynecology at Baylor College of Medicine, serving as administrative chief, and his maternal-fetal medicine fellowship at UAB. He has a rich track record of relevant funding and leadership of multicenter and multinational research initiatives.

Tita says he wants to build upon Saag's inaugural work

on the Heersink School of Medicine's Global Health program by expanding research, education, and service/capacity-building activities and consolidating them within the new Mary Heersink Institute for Global Health. Among his key goals are to identify a core network of collaborative partners in selected international settings in order to conduct multinational biomedical research addressing priority global health concerns. He also plans to forge collaborations to launch a master's degree in Global Health at UAB, as well as a future Ph.D. program to enrich global health scholarship at the Heersink School of Medicine and UAB.

"These will happen only with multidisciplinary partnerships across UAB and the world, and our Global and Women's Health program will be a true partner in these initiatives," Tita says. "We want to boost our reach and success by galvanizing philanthropic support around these global health efforts."

Tita is assembling a team to help accomplish these goals. Lynn Matthews, M.D., MPH, was named associate director for Global Health Research and Partnerships. Matthews is an associate professor and global health program director in the Division of Infectious Diseases and has experience leading NIH-funded research programs and collaborations in South Africa and Uganda. "Dr. Matthews will help us cultivate research collaborations in the context of local culture and shared priorities, which is foundational to advancing global health," Tita says. Michelle Feese, MPH, has also joined as the administrative director, and brings extensive experience coordinating multicenter and multinational research projects. The team has developed an action plan for the next year, at the core of which are plans to listen to the UAB Heersink School of Medicine global health community and their collaborators in order to refine a long-term strategic plan. Learn more at go.uab. edu/SOMGlobalHealth. - Cary Estes







On June 16, Live HealthSmart Alabama, a UAB initiative, celebrated the completion of its first phase of improvements in the Kingston community with a ribbon-cutting event at Stockham Park. The culmination of a yearlong implementation project to revitalize the community's infrastructure, the projects included new and improved sidewalks, Americans with Disabilities Act-compliant street ramps, trees and flowers in Stockham Park, painted murals, improved street lighting, and more.

"Live HealthSmart Alabama aims to advance healthy eating, physical activity, and prevention and wellness in underserved neighborhoods throughout Birmingham and the state," says Mona Fouad, M.D., the chief executive officer of Live HealthSmart Alabama and director of the UAB Minority Health & Health Disparities Research Center (MHRC). "To help achieve these aims, we started by making community improvements. This was especially evident in the built environment."

Live HealthSmart Alabama, the winning project of UAB's inaugural Grand Challenge competition, was developed by the UAB MHRC to improve the health of Alabamians by addressing policies, systems, and built environments that can contribute to better health outcomes. Part of the university's strategic plan, "Forging the Future," the UAB Grand Challenge is intended to unite university activities across silos and throughout different schools, forge new partnerships, and impact the community. Live HealthSmart Alabama, proposed by Fouad and multiple partners, was the winning proposal among 77 submitted for the inaugural Grand Challenge grant in 2019. To reenergize the community and encourage walkability, Live HealthSmart Alabama—in partnership with construction firm Brasfield & Gorrie and subcontracted through AG Gaston Construction—set about repaving or building new sidewalks in Kingston. Walkers now enjoy a safe, smooth path connecting homes with Stockham Park, new bus shelters, and "micromobility stations," where residents can rent bicycles and electric scooters.

Kirkpatrick Con-

crete donated

all of the concrete used to make these improvements. Other partners that contributed to the improvements in Kingston include O'Neal Steel, Coca-Cola United, the City of Birmingham, Alabama Power, Steward Machine, Birmingham Jefferson County Transit Authority MAX, Goodwyn Mills Cawood, Blank Space, NAFCO, Birmingham Parks and Recreation, and Watkins Trucking Company.

Another exciting development is the Titusville Neighborway, made possible with the support of Dunn Construction, Vulcan Materials Company, National Concrete Company, Alabama Power, and the City of Birmingham. The first project of its kind in Birmingham, the Neighborway is a street redesigned to encourage biking and walking, reduce traffic, and slow the speed of cars. Connecting a full mile of the Titusville community, the Neighborway runs from Memorial Park to the Villas at Titusville, with micromobility stations at both ends. A gift from the Birmingham Sunrise Rotary Club supported the planting of 48 trees along First Street South in Titusville. As the trees mature, they will provide welcome shade for walkers and a sound barrier for the nearby train tracks, while adding beauty to the neighborhood.

While each community's needs are unique, a consistent issue Live HealthSmart Alabama has found in underserved areas is that these neighborhoods fall within areas that either have limited access to fresh fruits and vegetables or are food deserts.

To bring healthy and affordable food to Birmingham residents, Live HealthSmart Alabama introduced its new Mobile Market at the Kingston ribbon-cutting. Each week, the Mobile Market visits communities across Birmingham. Shoppers can purchase fresh, affordable foods, including proteins, fruits, vegetables, grains, dairy, pantry staples, and a variety of other healthy food options using cash, card, or EBT.

"Currently, Alabama has some of the worst health outcomes in the nation," says Fouad. "The goal of Live HealthSmart Alabama is to move our state out of the bottom 10 in national health rankings. To do this, community members have to have access to healthy food options and the tools to be successful. The Live HealthSmart Alabama Mobile Market helps to provide that."

In addition to its weekly route, the Mobile Market also hosted monthly evening events over the summer, where community members could shop and watch Chef Chris Hastings of Birmingham's Hot & Hot Fish Club restaurant conduct a demonstration using food pulled directly from the market. Learn more at uab.edu/livehealthsmartal. —Charles Buchanan and Jessica Snyder



Pandemic Highlights Importance of UAB/Ascension St. Vincent's Alliance

Even before the emergence of COVID-19, UAB Health System and Ascension St. Vincent's were embracing the concept of "we're all in this together" by forming an alliance between the two organizations.

Announced in January 2020, the alliance offers benefits that quickly became evident during the pandemic, as St. Vincent's helped UAB with PPE shortages, and then UAB in turn assisted St. Vincent's with vaccine acquisition.

"Right away, we demonstrated that both organizations can do much better working together than we can apart," says Will Ferniany, Ph.D., CEO of UAB Heath System and of the UAB/Ascension St. Vincent's Alliance.

This partnership is enabling the organizations to address a number of pressing needs within health care, including hospital capacity and staffing issues. For example, UAB Medicine CEO Reid Jones says some of the patients who are treated at University Hospital could receive similar care at one of St. Vincent's facilities, freeing up space at UAB for more specialized cases.

"One of the primary objectives of the alliance is to spread both patient populations in such a way that they're getting the right care in the right place." Jones says.

The two organizations also have developed an aligned strategy to deal with the current nursing shortage that is being experienced nationwide.

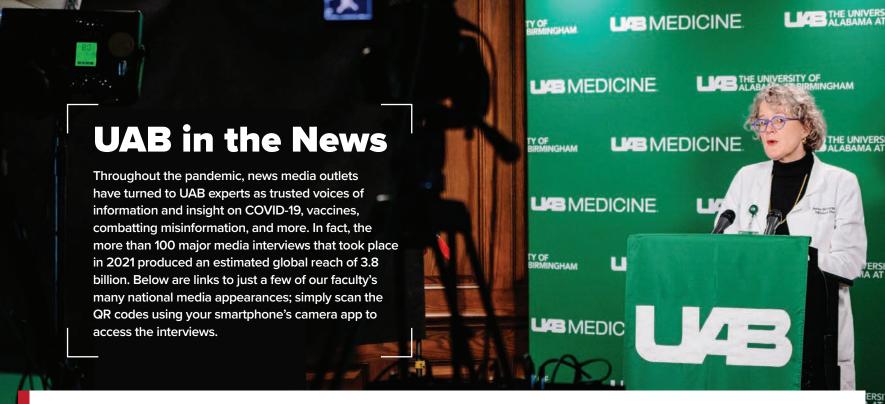
"Staffing is the No. 1 problem we're currently facing," Ferniany says.
"We've been able to approach this together and learn from each other.
They have some programs that are very effective that we're adopting, and we have certain programs that they've adopted."

In addition, there are plans to use the alliance to produce a cardiovascular service line that operates seamlessly across the various facilities. "Together, we could have one of the largest cardiovascular programs in the country," Ferniany says.

Plans also are underway to utilize St. Vincent's patient population to create more clinical opportunities for UAB researchers. "They're very interested in working with us on different research projects," Ferniany says. "It just gives us more places to help with our trials and studies."

Jones says much of the work during the first year of the alliance involved establishing an organizational structure between the two entities, a process he says has gone well.

"It's been gratifying to see how the two leadership teams have supported one another," Jones says. "We refer to this initiative as synergy. There are synergies that will develop that will make the two organizations better together than either could have been independently."—*Cary Estes*





In fighting vaccine denial, facts won't change minds

CNN







ICU beds in Alabama have been filled with adults and children

NPR's Noel King talked to David Kimberlin, M.D., co-director of the Division of Pediatric Infectious Diseases, about lack of ICU space in Alabama.



The Washington Post

Delta is worse. This time around, Alabama is facing a two-front war.

In this opinion article, Michael Saag, M.D., discussed fighting a two-front war—against COVID-19 and misinformation—amid the summertime surge in infections in Alabama.



HEERSINK SCHOOL OF MEDICINE

Research

From basic science exploration to clinical trial excellence, the Heersink School of Medicine provides an extraordinary environment for innovative biomedical research to flourish and succeed. As the home of one of the country's foremost NIH-funded Centers for Clinical and Translational Science, UAB is swiftly moving research from the bench to the bedside to change lives and improve health.

Consuming Branch Chain Amino Acids at Night Could Harm Heart Health

A study published in the Journal of Molecular and Cellular Cardiology shows that an increase in the consumption of branched chain amino acids later in the day could result in a negative effect on cardiovascular health. Using animal models, findings suggest that consuming BCAAs at dinner time caused a dramatic growth of the heart, resulting in a 75 percent increase in cardiomyocyte size in four hours. High consumption of BCAAs, which are found in red meat, poultry, fish, eggs, and nuts, also worsened heart disease progression.

"Our study is the first to show such a dramatic growth of mammalian heart cells following a single meal," says Martin Young, D.Phil., professor in the Division of Cardiovascular Disease. "This study highlights an interaction between heart health and behaviors, and in this case, the behavior being what time of the day we should be eating certain nutrients."

For people with chronic health conditions such as obesity, diabetes, and heart disease, this could serve as a warning. "[The research] blew us away," Young says. "What we found was heart cells grew 75 percent within four hours of the BCAA meal, but then they returned back to normal size again throughout the rest of the day." Young added the enlargement of heart cells worsened heart disease.

In the August 25 episode of STAT's "First Opinion Podcast," Matthew Might, Ph.D., director of UAB's Hugh Kaul Precision Medicine Institute, talked about his son Bertrand, who died of a rare disease at age 12, and why a proposed DARPA-like research agency should focus on rare diseases. Listen at bit.ly/3mMfr0h.

Thyme Named Pew Biomedical Scholar

zebrafish, which share more than 70 percent of their genes with humans.

In June, Summer Thyme, Ph.D., an assistant professor in the Department of Neurobiology, was named one of 22 early-career researchers selected to join the Pew Scholars Program in the Biomedical Sciences. These scientists receive funding from the Pew Charitable Trusts over the next four years as they investigate timely questions surrounding human health and disease. Thyme is developing new methods for dissecting the genetic underpinnings of neurodevelopmental disease by studying

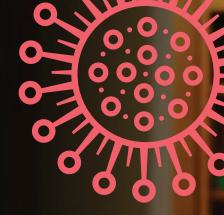
Existing Drug May Change Macrophages Back to Cancer Fighters

A form of cell communication called hedgehog signaling is vital for embryonic development in mammals. But aberrantly activated hedgehog signaling in multiple cancer types—including breast cancer promotes tumor invasion, its spread to other organs, and multi-drug resistance.

Two years ago, Lalita Shevde-Samant, Ph.D., and colleagues showed that hedgehog signaling plays a significant role in altering the immune components of the tumor microenvironment. In August, they reported in a study in Cancer Research how aberrant hedgehog signaling for tumor-associated macrophages—the immune cells that should be proinflammatory guardians against tumor growth—instead transforms them to nonaggressive, immunosuppressive macrophages, called M2 macrophages.

This signaling by the tumor microenvironment suggests that use of existing, clinically approved hedgehogsignaling inhibitors may diminish the tumor-promoting properties of tumorassociated M2 macrophages within the tumor microenvironment. Elevated infiltration of immunosuppressive, alternatively polarized M2 macrophages is associated with poor prognosis in cancer patients.

"The allure of targeting hedgehog signaling stems from the availability of several U.S. Food and Drug Administration-approved inhibitors already in use in the clinic, making it applicable to different tumor types," says Shevde, a professor in the Department of Pathology. "Our work supports the possibility that hedgehog blockade is multi-dimensional in its effect on recalibrating the metabolism and, consequently, the functions of immunosuppressive macrophages. Thus, inhibition of hedgehog signaling could present with the dual benefit of directly targeting tumor cells and re-configuring the tumor immune microenvironment to an immune-activated state."



New Immunology Institute Opens Avenues for Discovery

In May, the Heersink School of Medicine announced the establishment of the UAB Immunology Institute (II), a cutting-edge and interdisciplinary hub for faculty, researchers, clinicians, health policy experts, and educators who seek to advance the study of immunology and improve human health through immune-based therapies, including vaccines.

The II serves as a central coordinating hub for immunologic research, which incorporates multiple disciplines, including microbiology, cell biology, transplantation, pediatric and adult medicine, oncology, pathology, and many others. Frances Lund, Ph.D., Charles H. McCauley Chair of the Department of Microbiology, serves as the II's founding director. Troy Randall, Ph.D., The Meyer Foundation William J. Koopman Endowed Chair in Immunology in the Division of Clinical Immunology and Rheumatology, and Paul Goepfert, M.D., The Edward W. Hook III Endowed Professor in Infectious Diseases in the Division of Infectious Diseases, are the institute's associate directors.

"Immunology is an underappreciated research strength of UAB spread across many departments and divisions," Lund says. "The institute will help departments recruit top-talent faculty and provide new research infrastructure for discoveries."

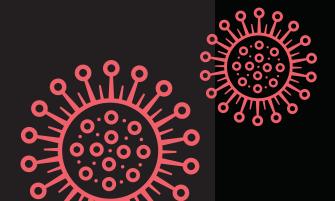
"The Heersink School of Medicine is strongly committed to the success of the institute, which will have a tremendous impact on nucleating and expanding our excellence in immunology in basic science and clinical areas," says Tika Benveniste, Ph.D., senior vice dean for Research and Charlene A. Jones Endowed Chair in Neuroimmunology. "We are most fortunate to have outstanding leadership for the institute in Drs. Lund, Randall and Goepfert, who bring expertise in murine and human immunology, and in fundamental basic sciences to clinical trials."

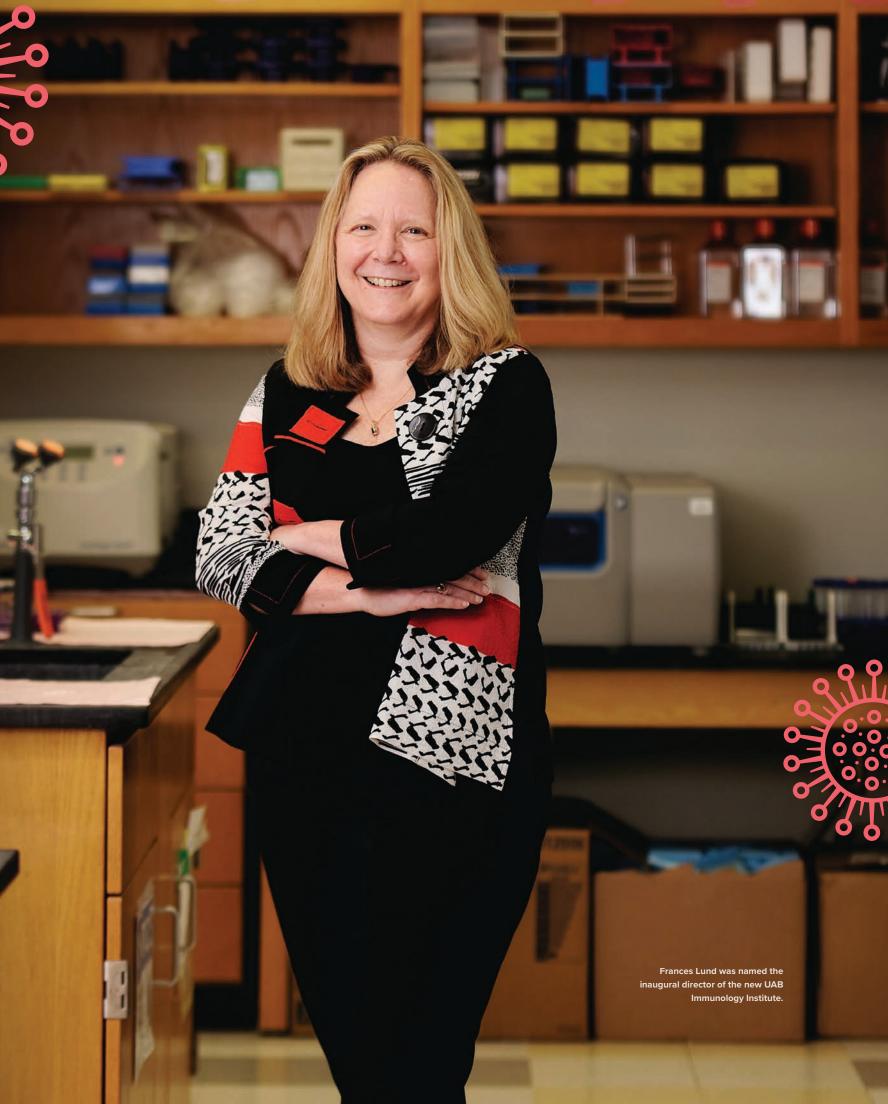
Lund explains the II will bring clinical and basic science researchers together to identify immunologic pathways that may be targeted in individuals with particular diseases. "II-associated cores will be a key component of clinical trials across a spectrum of diseases," Lund says. "The II also will provide access to bioinformatics expertise in molecular and cellular immune profiling."

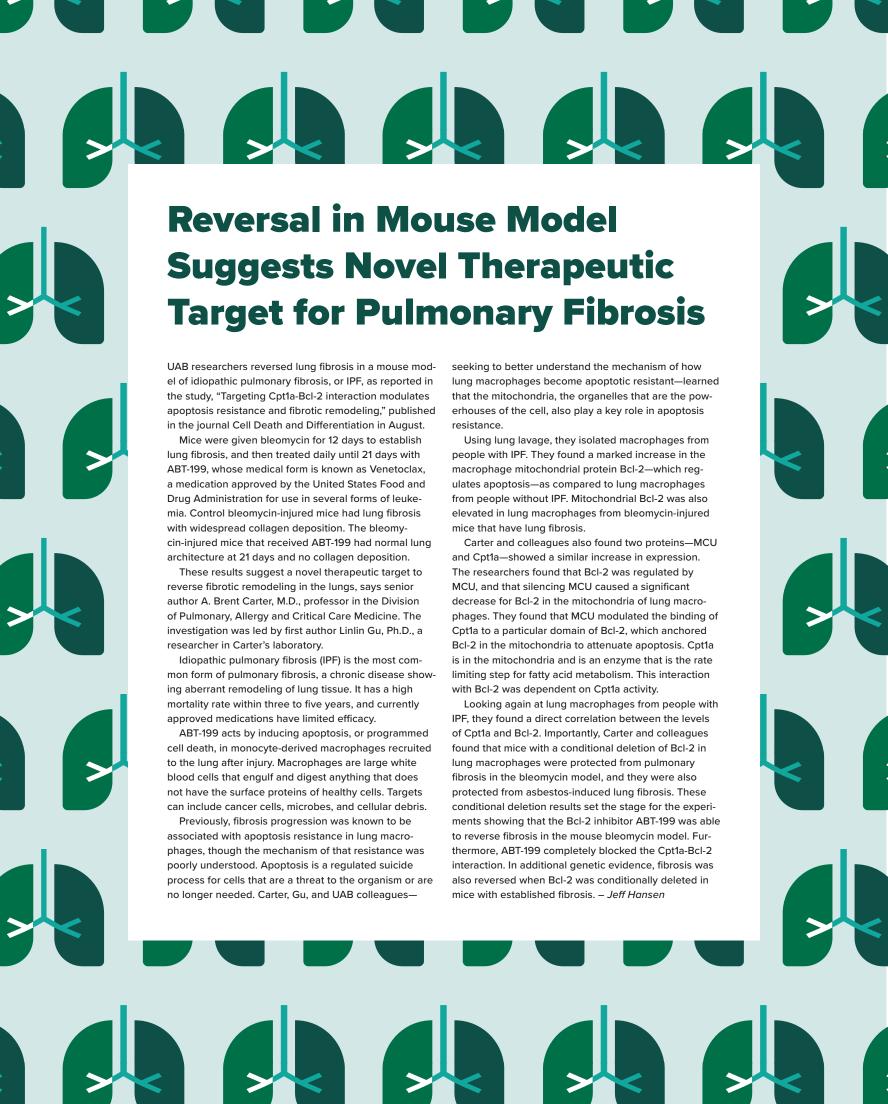
One key goal of the II is to establish and support a repository of healthy donor immune cell samples and eventually open this sample bank to all researchers at UAB. Lund says studying healthy human blood and tissue samples—in conjunction with disease samples or animal models—will further propel UAB into the national spotlight for immunology. While patients with disease have provided donor samples for decades at UAB, healthy donor samples will serve as controls for samples from pathologic conditions, like cancer or infectious diseases, and will expand opportunities to create personalized therapeutics, increase UAB's competitiveness in faculty recruitment, and open new avenues for grant funding.

Another key initial priority for the II includes teaming up with the O'Neal Comprehensive Cancer Center at UAB to develop protocols to measure tumor immune response in cancer patients undergoing various immune-modulating treatments

"Where we can shine as an institution is that we have a strong basic science footprint, but also incredible opportunities in terms of patient cohorts and clinical research," Lund says. "The institute will make it significantly easier for scientists to utilize and test hypotheses in healthy samples. Likewise, it will connect clinicians with basic scientists who can use their knowledge to interrogate patient samples, steadily bridging the gap from bench to bedside." – Mary Ashley Canevaro







Featured Discovery Recipients 2021

Each month, the Heersink School of Medicine selects a Featured Discovery to share our colleagues' research within our school and with those we serve. Recipients must be current faculty and their research must be considered a high-impact discovery that aligns with our missions and demonstrates collaborative/team science. This list includes recipients through October 2021.

FLUID-ELECTROLYTE HOMEOSTASIS REQUIRES HISTONE DEACETYLASE FUNCTION

JCI Insight, Volume 5, Issue 16, July 2020 Kelly Hyndman, Ph.D.

IDENTIFICATION OF AN ANTI-DIABETIC, ORALLY AVAILABLE SMALL MOLECULE THAT REGULATES TXNIP EXPRESSION AND GLUCAGON ACTION

Cell Metabolism, Volume 32, Issue 3, September 2020 Anath Shalev, M.D.

PAGER-COV: A COMPREHENSIVE COLLECTION OF PATHWAYS, ANNOTATED GENE-LISTS, AND GENE SIGNATURES FOR CORONAVIRUS DISEASE STUDIES

Nucleic Acids Research, Volume 49, Issue D1, January 2021 Jake Chen, Ph.D.

STRAP REGULATES ALTERNATIVE SPLICING FIDELITY DURING LINEAGE COMMITMENT OF MOUSE EMBRYONIC STEM CELLS

Nature Communications, 11, Article number: 5941 (2020) Pran Datta, Ph.D.

LIPID MEDIATORS AND BIOMARKERS ASSOCIATED WITH TYPE 1 DIABETES DEVELOPMENT

JCI Insight, Volume 5, Issue 16, August 2020 Sasanka Ramanadham, Ph.D.

E-CADHERIN IS REGULATED BY GATA-2 AND MARKS THE EARLY COMMITMENT OF MOUSE HEMATOPOIETIC PROGENITORS TO THE BASOPHIL AND MAST CELL FATES

Science Immunology, Volume 6, Issue 56, February 2021 Robert Welner, Ph.D.

PORE-FORMING ESX PROTEINS MEDIATE TOXIN SECRETION BY MYCOBACTERIUM TUBERCULOSIS

Nature Communications, Volume 12, Article number: 394 (2021)

Michael Niederweis, Ph.D.

ICOS LIGAND AND IL-10 SYNERGIZE TO PROMOTE HOST-MICROBIOTA MUTUALISM

PNAS, March 30, 2021 118 (13) e2018278118 Craig Maynard, Ph.D.

ONCOLYTIC HSV-1 G207 IMMUNOVIROTHERAPY FOR PEDIATRIC HIGH-GRADE GLIOMAS

New England Journal of Medicine, 2021 Apr 29;384(17) Gregory Friedman, M.D.

A SMALL MOLECULE THAT INDUCES TRANSLATIONAL READTHROUGH OF CFTR NONSENSE MUTATIONS BY ERF1 DEPLETION

Nature Communications, Volume 12, Article number: 4358, July 16, 2021

David Bedwell, Ph.D., and Steven Rowe, M.D., MSPH

DEVELOPMENT OF AN ARTERIOLAR NICHE AND SELF-RENEWAL OF BREAST CANCER STEM CELLS BY LYSOPHOSPHATIDIC ACID/PROTEIN KINASE D SIGNALING

Communications Biology, 4, Article number: 780, June 24, 2021

Bin Ren, M.D., Ph.D.

FEATURED DISCOVERY

Footprint for New Genomic Medicine Building Takes Shape



and Francis Crick, Ph.D., who won the Nobel Prize for their discovery of the double helix structure of DNA.

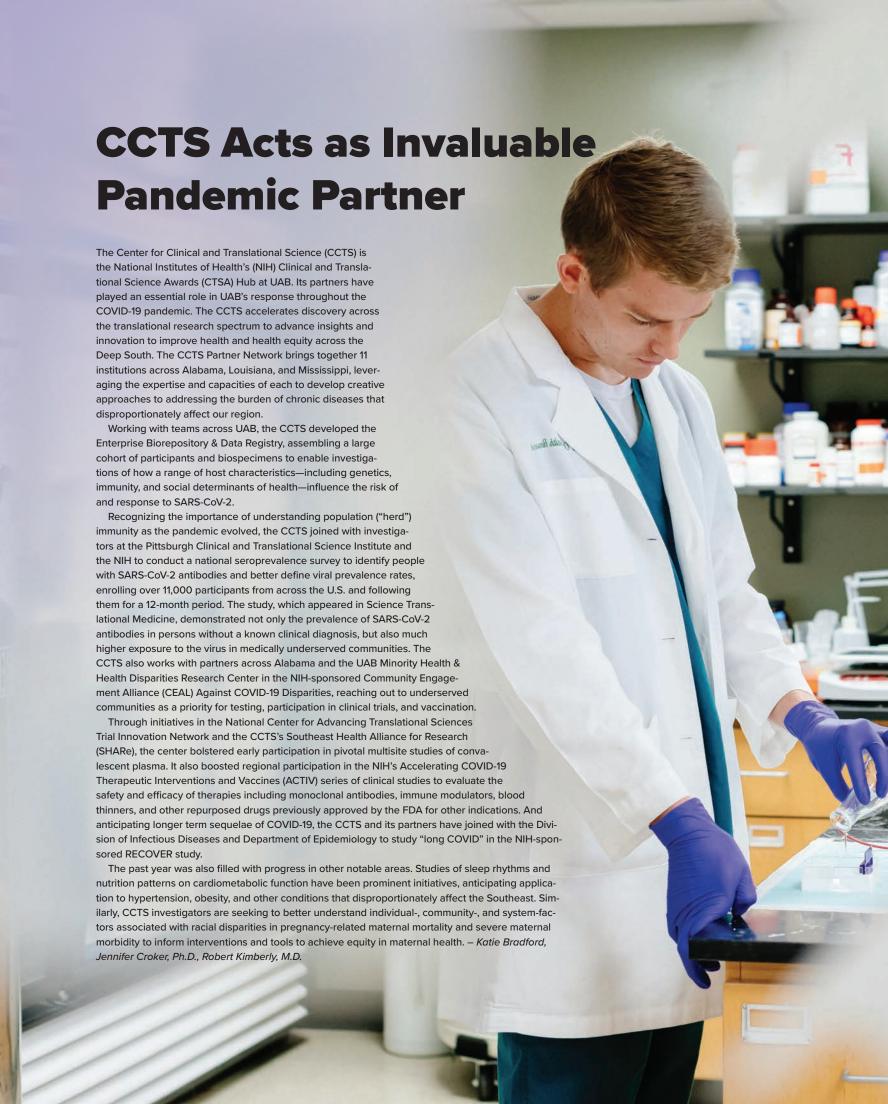
The Roy R. Kracke Clinical Services Building was built in 1929 as a dormitory for nurses of Hillman Hospital and nursing school students, a purpose it served for over 30 years. In 1965, the building was dedicated to Roy R. Kracke, M.D., first dean of the four-year Medical College of Alabama (1944-1950). Along with the dedication came a number of renovations to the building, including modernized work areas, new equipment for clinical laboratories and surgical pathology, and the first Cores laboratory. A faculty dining room and lounge provided the first on-campus haven and rest area for physicians.

The Altec/Styslinger Genomic Medicine and Data
Sciences Building will provide modernized space for
enhanced collaboration and cutting-edge research. It
was made possible by a generous gift from
the Altec/Styslinger Foundation and
funding commitments from
Jefferson County
and the

state of Alabama. The completion of the building—projected for fall 2023—will allow for the recruitment of approximately 50 new principal investigators specializing in genomic and precision medicine, as well as approximately 350 new research and health care jobs. Additionally, the new space will generate more funding from the National Institutes of Health and other private and public sources.

The building's most important benefit, however, is its potential for improving the health of the people of Alabama and beyond. "Genomic approaches have provided powerful tools to diagnose—and recently even to treat rare disorders due to changes in individual genes," says Associate Dean for Genomic Medicine Bruce Korf, M.D., Ph.D., the Wayne H. and Sara Crews Finley Endowed Chair of Medical Genetics and chief genomics officer for UAB Medicine. "We are now able to extend this analysis to understand the genomic underpinnings of common disorders such as diabetes and heart disease. The promise of this building, and of the work that will take place within it, is to employ genomics to bring new knowledge of disease risk, and new strategies for prevention and treatment of both rare and common diseases." - Mary Ashley Canevaro, Bob Shepard

ALTEC I STYSLINGER GENOMIC MEDICINE AND DATA SCIENCES BUILDING





Deep South Center to Reduce Disparities in Chronic Diseases

As announced October 18, UAB, in partnership with other leading academic centers in Alabama, Mississippi, and Louisiana, has established the Deep South Center to Reduce Disparities in Chronic Diseases. The National Institute on Minority Health and Health Disparities awarded funds to UAB and 10 research institutions to establish and support regional comprehensive research centers on the prevention, treatment, and management of comorbid chronic diseases that disproportionately affect populations with health disparities.

These Multiple Chronic Disease Centers received grants totaling almost \$205 million to facilitate research on diseases like obesity, diabetes, hypertension, coronary heart disease, congestive heart failure, chronic kidney disease, chronic liver disease, stroke, and certain cancers.

The Deep South has the highest rates of obesity, diabetes, and hypertension in the nation. As a result, life expectancy in the region is substantially lower than in other regions, and this discrepancy is even greater for Black Americans.

"Promoting health equity and eliminating disparities will require a precision public health approach," says Andrea Cherrington, M.D., professor in the Division of Preventive Medicine and the contact principal investigator for the Deep South Center to

Reduce Disparities in Chronic Diseases. "This requires providing the right intervention to the right population at the right time to reduce the burden of cardiometabolic diseases on minority populations across the Deep South."

UAB will partner with Tuskegee University, the University of Mississippi Medical Center, and Pennington Biomedical Research Center, a campus of Louisiana State University, along with regional non-academic partners, to extend cardiometabolic research into real-world community and clinical settings. The center's UAB leadership team includes Monica Baskin, Ph.D., Orlando Gutierrez, M.D., and Gareth Dutton, Ph.D., from the Department of Medicine.

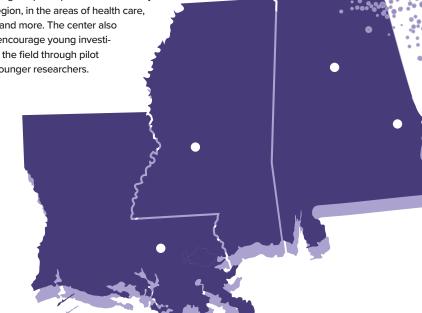
The center will launch three interventions across the region. The first will investigate community-based strategies to reduce cardiometabolic disease by working with Alabama and Mississippi Cooperative Extension Services to combine lay health coaches and community gardens to encourage improving lifestyle and health behaviors.

Another project will look at the effect of weight loss on improving cardiometabolic risk for patients with obesity and diabetes. This project will remotely deliver weight-loss programs using patient portals, augmented with health coaches embedded in primary care.

A third project, focused on diabetes, will address food insecurity and transportation barriers This project will include health coaching, remote patient monitoring and grocery delivery systems.

The center is enlisting the participation of community partners across the region, in the areas of health care, housing, food banks, and more. The center also plans to identify and encourage young investigators with interest in the field through pilot grants designed for younger researchers.

- Bob Shepard



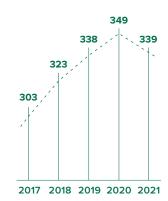
Gene-Based Drug Prescribing Could Benefit Virtually All Alabamians Based on analysis of 3,386 participants in the Al-The researchers also noted that "the prevaabama Genomic Health Initiative (AGHI), a paper lence of actionable genotypes by gene differed published in Clinical and Translational Science in significantly by race." These racial differences June by researchers at UAB and the HudsonAlwere particularly notable in participants prepha Institute of Biotechnology in Huntsville says scribed the beta blockers atenolol, carvedilol, that "almost all Alabamians harbor at least one and metoprolol, commonly used to manage heart failure. Overall, about 50% of participants studied actionable genotype that can impact current or future medications, and a significant proportion had an actionable variant in the ADRB1 gene, are currently prescribed affected medications." which is associated with decreased therapeutic The researchers found that 98.6% of those response to beta blockers. For Black participants, studied had actionable gene variants as desigthat rate was 62.5%, while it was 47.4% for white nated by the Clinical Pharmacogenetics Implementation Consortium. "Pharmacogenomics Unlike many studies, the AGHI cohort includes really has the potential to benefit everyone," says a racially diverse population, with 18% of partici-Brittney Davis, PharmD, instructor in the Departpants self-reporting as Black. "Here we show that ment of Neurology and first author on the article pharmacogenetics is actionable for all Alabami-"Evaluation of population-level pharmacogenetic ans, independent of their race," says Nita Limdi, actionability in Alabama" and an instructor in the PharmD, Ph.D., director of UAB's Program for Department of Neurology's Program for Transla-Translational Pharmacogenomics and co-principal tional Pharmacogenomics. Pharmacogenomics is investigator for AGHI. the study of how gene variation affects people's Korf says the AGHI is now entering a new response to medications. phase, which he calls AGHI (2.0), that "will focus The UAB-developed AGHI is one of the nation's on enrollment in primary care clinics in an effort first statewide efforts to harness the power of geto integrate genomics in routine medical care," nomic analysis in helping identify those who are he says. In addition to reports on genetic disease at risk for diseases caused by genomic abnormalrisk, participants and their health care providers ities. It has enrolled more than 7.000 participants now are receiving pharmacogenomic information, from all 67 Alabama counties since launching in which will be included in the participants' elec-2017. Participants receive genomic testing, intertronic medical records (EMR). pretation, and counseling free of charge. "AGHI "This is where the action is in precision mediis designed to advance scientific understanding cine," says Limdi. "We are laying the foundation of the role that genes play in health and disease," on how to integrate genomic medicine in clinical says Bruce Korf, M.D., Ph.D., associate dean for care. Pharmacogenomics is poised to affect both Genomic Medicine, UAB Chief Genomics Officer individuals and the population at large." – Matt and AGHI's principal investigator. Windsor

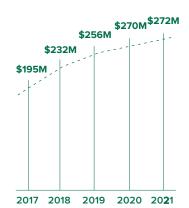
NIH Ranking

NIH Funded PIs









UAB ranked globally in the

Top 10%

of higher-education institutions

Based on global and regional reputation and academic research performance, U.S. News & World Report ranked UAB in the top 10 percent of higher-education institutions globally. UAB ranked as the top institution in Alabama and No. 147 out of 1,750 institutions from more than 90 countries. UAB placed No. 56 for U.S. schools.

Largest New NIH Awards

\$21.7M

Deep South Center to Reduce Disparities in Chronic Diseases

\$13.7M

UAB/Tuskegee Faculty Institutional Recruitment for Sustainable **Transformation Partnership**

\$9.9M

Video Telehealth Pulmonary Rehabilitation to Reduce Hospital Readmission in Chronic **Obstructive Pulmonary Disease**

\$7.1M

HEALthy Brain and Child Development Study at UAB and UA

\$5.7M

Zambia Alabama HIV Alcohol Comorbidities Program (ZAMBAMA)

Total UAB Funding

for FY2021, a one-year increase of almost \$211M (33%)

Innovation at UAB

19 U.S. patents issued

44 licenses executed

127 IP disclosures

UAB startup TriAltus Bioscience secured a \$256K NIH Small **Business Technology Transfer grant**



Physicians of Tomorrow Scholarship

The challenge of paying for medical school can be especially daunting for students who are underrepresented in medicine (URiM)—which, according to the Association of Academic Medical Colleges (AAMC) includes "those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population." The Heersink School of Medicine also considers those from rural backgrounds to be underrepresented in medicine. "Cost is a real obstacle to pursuing a career in medicine," says Christina Grabowski, Ph.D., the Heersink School of Medicine's associate dean for Admissions and Enrollment Management.

The Physicians of Tomorrow Endowed Medical Scholarship offers multiple solutions to that problem. While the new endowed medical scholarship will provide students with tuition support in years to come, the fund that created it—a will bequest legacy gift of more than \$2.1 million from an anonymous donor—also is making an immediate impact on current students. Just over 60 percent of the gift was invested to establish the new scholarship endowment, while the remaining portion of the gift

was directed for current-use or sponsored scholarship support to immediately benefit students in the present. What's more, for the 2020/2021 academic year, the fund matched up to \$200,000 in gifts from other donors that benefit in-state Heersink School of Medicine students who are underrepresented in medicine, magnifying the impact of those donors' gifts as well. The support is helping current and future scholarship recipients "focus on their medical education rather than worrying about how they will pay off hefty student loans" as they begin their careers, Grabowski says.

The unrestricted nature of the gift gave school leadership the flexibility to structure the fund to help more students. Craig Hoesley, M.D., senior associate dean for Medical Education calls the Physicians of Tomorrow Endowed Medical Scholarship fund "an investment in our future. Following a difficult, uncertain year, it gives our current and prospective medical students—from every background—hope, encouragement, and confidence that they can achieve their goals to provide the best care to the people of Alabama." — Charles Buchanan



Medical Properties Trust \$5M Gift to Diabetes Center

Diabetes is a public health problem of epidemic proportions. Alabama is particularly hard-hit with over 15% of adults having diabetes, and experts predict the number will reach over 18% by 2030. The statistics are even higher for Native Americans and Black/African Americans.

The UAB Comprehensive Diabetes Center (UCDC) is at the forefront of science aimed at discovering a curative therapy for this chronic, life-threatening disease. Every day, UCDC investigators are exploring the underlying mechanisms of diabetes to identify novel treatment targets. Led by Center Director Anath Shalev, M.D., the UCDC's track record of discovery is impressive.

One of these discoveries was by Shalev herself. She discovered that the protein TXNIP, short for thioredoxin-interacting protein, is elevated in diabetes. This elevation causes the pancreatic beta cells to die, leaving the body unable to produce enough insulin to maintain normal blood glucose levels. As with all good investigations, one discovery leads to another, and in 2018, Shalev completed an exciting human trial in collaboration with Fernando Ovalle, M.D., director of the Division of Endocrinology, Diabetes and Metabolism, aimed at suppressing TXNIP with a repurposed, common blood-pressure drug. The results of this trial have immediate impact and show tremendous potential for the management of diabetes, and these findings are expected to lead to even greater discoveries that further enhance patient care.

In 2017, Medical Properties Trust gifted the UCDC with \$2.5 million and made another \$5 million gift in 2021 to support just these types of groundbreaking discoveries. "More than 30 million Americans have diabetes and another almost 90 million Americans have prediabetes," says Edward Aldag Jr., chair, president, and CEO of Medical Properties Trust, Inc. "When we first learned of the research that was being done at UAB to possibly cure diabetes, we were astounded. The positive results UAB has with their research couldn't be ignored. To be based here in Alabama and have the ability to assist UAB in a potential cure was an easy decision for us. We are proud to fund the UAB Comprehensive Diabetes Center and help translate that research into a cure for diabetes. This could be a game-changer for so many people."

Shalev says this philanthropic donation will enable more translational discoveries and scientific and clinically relevant advances in the field of diabetes. "These kinds of gifts are transformational because they allow us to build upon our discoveries, aim high, and ultimately change the landscape of diabetes research and treatment," says Shalev. "For decades we have worked on better understanding the mechanisms of diabetes and identifying novel therapeutic targets. Now we can double down on these efforts, focus on finding new treatment approaches, and work on moving them into the clinic. Ultimately we want all people affected by diabetes being able to benefit from these developments." Jessica Martindale

Planned Endowed Chair Gifts to Advance Alzheimer's and ALS Programs

Three generations of the Killion family have been impacted by neurodegenerative diseases. Preventing such diseases from affecting future generations of their own and other families is the goal of two planned gifts to the Department of Neurology made by Christine Killion in honor of her late husband Wayne Killion.

One planned gift will create the WW Killion Family Endowed Chair in Alzheimer's disease, and the other planned gift will create the WW Killion Endowed Chair for ALS. (ALS stands for Amyotrophic Lateral Sclerosis, and it is commonly known as Lou Gehrig's disease. It causes muscle weakness and progressive paralysis.) "I have five grandchildren and if there is something that can be discovered through research that will help our family as well as other families in the future, we want to do that," says Sandy Killion, Christine and Wayne Killion's daughter-in-law of and a UAB alumna and CEO of Birmingham-based Vulcan Industrial Contractors. "It's important for UAB to have the resources needed to recruit the top researchers here."

That is exactly what these gifts will help accomplish, according to David Standaert, M.D., Ph.D., John N. Whitaker Professor and Chair of Neurology at the UAB Heersink School of Medicine. "We're very grateful for the Killion gifts," Standaert says. "These are two important diseases that we need better treatments for. We use these kinds of endowed chairs to recruit and retain the best people to come to UAB and work on these problems."

Standaert says expanded research is urgently needed for both Alzheimer's disease and ALS, since there are no established treatments for either disease. Alzheimer's disease, in particular, is becoming a major issue nationwide, currently affecting more than 5 million people, a number that is projected to double by the end of this decade.

The National Institutes of Health
named UAB an Exploratory Alzheimer's
Disease Research Center last year, and
Standaert says the Killion gifts will help
strengthen the center's efforts. "We have a
number of things we're working on in Alzheimer's
disease research based on studying proteins in the
brain," Standaert says. "There is a lot of evidence that
the protein Tau is critically involved. We have several
researchers who are studying this, trying to determine
whether removing this protein from the Alzheimer's brain

can change the course of the disease."

ALS is not as widespread as Alzheimer's disease, with approximately 5,000 new cases diagnosed each year in the U.S., but it is just as devastating for the families who are affected by the disease. Standaert says the limited understanding of ALS' causes hinders development of potential therapies.

"We have a few therapies that have some effect, but they're not nearly as powerful as we need," Standaert says. "UAB runs the only ALS center in Alabama. We provide comprehensive services to those patients, but what I'd like to provide is a cure. That's where we're headed with this research, and what we hope the Killion Chair may one day help us do.

"The discoveries we need will be made by people.

And one of the ways to get the best and brightest people to come to UAB and find answers to these problems is to offer the kind of support you get from chairs like these."

— Cary Estes



The Year in Philanthropy

In 2021, the Heersink School of Medicine enjoyed its largest fundraising year ever. As demonstrated by the impressive numbers below, our supporters continue to invest in the excellence of our faculty and programs at ever greater rates, and we are deeply grateful for their backing.

\$164,375,038

TOTAL GIFTS

\$41,863,334

TOTAL PLANNED GIFTS

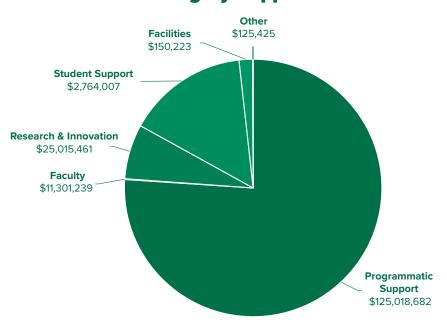
NEW ENDOWED CHAIRS AND **PROFESSORSHIPS**

CUMULATIVE ENDOWED SCHOLARSHIPS

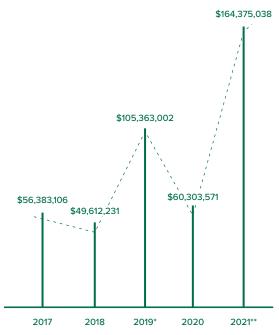
CUMULATIVE **ENDOWED CHAIRS** AND PROFESSORSHIPS

ENDOWED SCHOLARSHIPS

Giving By Support Area



Five-Year Review



*Includes \$30 million gift to name the O'Neal Comprehensive Cancer Center at UAB *Includes \$100 million in gifts to name the UAB Heersink School of Medicine

All totals are fiscal year 2021 unless otherwise noted

Appointments & Honors

IRFAN M. ASIF, M.D., was named the associate dean for Primary Care and Rural Health at the Heersink Heersink School of Medicine. Asif also serves as chair of the Department of Family and Community Medicine.

STEFFANE BATTLE, M.D., was named the chair of the Department of Pediatrics at the UAB Heersink School of Medicine's Huntsville Regional Medical Campus. She served as the interim chair since October 2020 and is the campus' first African American regional chair.

MEGANN BATES CAIN, MPPM, was named chief development officer for the Heersink School of Medicine effective January 1, 2021, after having provided interim leadership of the school's Advancement Office for the previous year.

DOUG BENTLEY, MPH, is the director of Research Administration, Shared Services, in the Heersink School of Medicine. The role provides administrative and pre-award services to investigative research teams across the school.

ETTY (TIKA) BENVENISTE, PH.D., senior vice dean for Research, was named chair-elect of the Association of American Medical Colleges' Group on Research Advancement and Development (GRAND)—an AAMC Affinity Group that provides leadership development, networking, and collaboration opportunities.

JENNIE CRAFT, MPPM, C-TAGME, director of Graduate Medical Education for the Heersink School of Medicine and UAB Hospital, received the 2021 GME Institutional Coordinator Excellence Award from the Accreditation Council for Graduate Medical Education, recognizing her leadership and dedication to residency and fellowship training.

MARIE-CARMELLE ELIE, M.D., was named chair of the Department of Emergency Medicine. She joined UAB from the Division of Critical Care and the Division of Palliative Care, Department of Medicine at the University of Florida's College of Medicine.

LATESHA ELOPRE, M.D., MSPH, was named assistant dean for Medical Education Diversity & Inclusion, a new position established to support recruiting underrepresented medical students into UAB residency and fellowship programs and provide critical engagement and support for URIM trainees in the learning environment.

WILLIAM GEISLER, M.D., MPH, professor in the Division of Infectious Diseases and co-director of the Medical Scientist Training Program, was named the assistant dean for Physician Scientist Development in the Heersink School of Medicine.

CHRISTINA GRABOWSKI, PH.D., associate dean for Admissions and Enrollment Management, was named chair of the Association of American Medical Colleges Southern Group on Student Affairs.

SHAILA HANDATTU, PH.D., was named executive director in the Heersink School of Medicine Office of Research, a newly-created position that became effective June 15. The role facilitates and assists researchers with external grant applications, manages internal funding opportunities, and serves on the school's Space Committee.

LOUIS LAMBIASE, M.D., was named regional dean of the Heersink School of Medicine's Montgomery Regional Medical Campus. He joined UAB from the University of Tennessee College of Medicine Chattanooga, where he was a professor and chair of the Department of Medicine and a professor in the Department of Surgery.

BRENESSA LINDEMAN, M.D., FACS, was named assistant dean for Graduate Medical Education, a new position created to support initiatives improving residents' and fellows' ability to practice medicine in a safe learning environment.

TIFFANI MAYCOCK, D.O., M.S, FAAFP, assistant professor in the Department of Family Medicine and director of the Selma Family Medicine Residency Program, was named to the board of directors for the American Board of Family Medicine.

LAUREN NASSETTA, M.D., an associate professor in both the Department of Pediatrics and the Department of Medical Education, was named director of the Professional Development Office (PDO) in the Heersink School of Medicine. The PDO serves faculty, advanced practice providers, biomedical post-doctoral and graduate trainees, and medical students.

VU NGUYEN, M.D., MBA, was named chair of the Department of Physical Medicine and Rehabilitation (effective January 1. 2022). He joined UAB from Atrium Health's Carolinas Medical Center and Carolinas Rehabilitation, where he held key system leadership roles including chief of PM&R at Carolinas Medical Center and vice president of the Medical Staff at Carolinas Rehabilitation.

BRIAN SAMUELS, M.D., PH.D., was named interim chair of the Department of Ophthalmology and Visual Sciences.

ALAN TITA, M.D., PH.D., was named associate dean for Global and Women's Health in the Heersink School of Medicine (see page 42).

SELWYN VICKERS, M.D., FACS, senior vice president for Medicine and dean of the Heersink School of Medicine, was named president of the American Surgical Association for 2021.

BRADFORD WOODWORTH, M.D., was named interim chair of the Department of Otolaryngology.

Eighteen faculty members were named winners of the 2021 DEAN'S EXCELLENCE AWARDS in the areas of teaching, research, service, mentorship, and diversity. See the full list at go.uab.edu/somdeansexcellence2021.

Ten faculty members were named the 2021 JAMES A. PITTMAN JR., M.D., SCHOLARS. The Pittman Scholars program recognizes the achievements of junior faculty and supports the recruitment and retention of highly competitive scientists and physician-scientists. See the full list at go.uab.edu/pittmanscholars2021.

Heersink School of Medicine Senior Leadership



Selwyn Vickers, M.D., FACS Senior Vice President for Medicine and Dean James C. Lee Jr. Endowed Chair



Anupam Agarwal, M.D. Executive Vice Dean Hilda B. Anderson Endowed Chair in Nephrology



Etty (Tika) Benveniste, Ph.D. Senior Vice Dean for Research Charlene A. Jones Endowed Chair in Neuroimmunology



Megann Bates Cain, MPPM Chief Development Officer



Victor Darley-Usmar, Ph.D.
Senior Associate Dean for Research
Compliance and Administration



Paige Dorman, MA
Executive Director of
Communications



Mona Fouad, M.D., MPH
Senior Associate Dean for Diversit
and Inclusion



Craig Hoesley, M.D.
Senior Associate Dean for Medical
Education
Chair, Department of Medical
Education



Keith (Tony) Jones, M.D.
Senior Associate Dean for
Clinical Affairs
UAHSF President
Chief Physician Executive,
UAB Medicine



Robert Kimberly, M.D.
Senior Associate Dean for Clinical
and Translational Research
Howard L. Holley Research Chair in
Rheumatology



Jean Ann Larson, Ph.D.
Senior Associate Dean for
Leadership Development
Chief Leadership Development
Officer



Toni Leeth, MPH Associate Dean for Strategic Planning and Administration



LaKisha Mack, MBA Senior Associate Dean for Administration and Finance



David Rogers, M.D., MHPE
Chief Wellness Officer, UAB Medicine
ProAssurance Endowed Chair for
Physician Wellness

Associate & Assistant Deans

Irfan Asif, M.D.

Associate Dean, Primary Care and Rural Health

Richard Friend, M.D.

Regional Dean, Tuscaloosa Regional Campus

Alice Goepfert, M.D.

Associate Dean, Graduate Medical Education

Christina Grabowski, Ph.D.

Associate Dean, Admissions and Enrollment Management

Bruce Korf, M.D., Ph.D.

Associate Dean, Genomic Medicine and Chief Genomics Officer

Louis Lambiase, M.D.

Regional Dean, Montgomery Regional Medical Campus

Toni Leeth, MPH

Associate Dean, Strategic Planning and Administration

Kevin Leon, M.D.

Associate Dean, Undergraduate Medical Education

Roger Smalligan, M.D.

Regional Dean, Huntsville Regional Medical Campus

Alan Tita, M.D., Ph.D.

Associate Dean, Global and Women's Health

Nicholas Van Wagoner, M.D., Ph.D. Associate Dean, Students

Alex Boles

Assistant Dean, Finance and Administration

Latesha Elopre, M.D., MSPH

Assistant Dean, Medical Education Diversity and Inclusion

Cristin Gavin, Ph.D.

Assistant Dean, Undergraduate Biomedical Education

William Geisler, M.D., MPH

Assistant Dean, Physician Scientist Development

Alecia Gross, Ph.D.

Assistant Dean, Faculty Onboarding

Caroline Harada, M.D.

Assistant Dean, Community Engaged Scholarship

Brenessa Lindeman, M.D., FACS,

Assistant Dean, Graduate Medical Education

Todd Peterson, M.D.

Assistant Dean, Students

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

Assistant Dean, Global Health

Marjorie Lee White, M.D.

Assistant Dean, Clinical Simulation

James Willig, M.D., MSPH

Assistant Dean, Clinical Education

Carlton Young, M.D.

Assistant Dean, Medical Student Diversity and Inclusion

Majd Zayzafoon, M.D., Ph.D., MBA

Assistant Dean, International Medical Education

Department Chairs

Department of Anesthesiology and Perioperative Medicine Dan Berkowitz, M.D.

Department of Biochemistry and Molecular Genetics David Bedwell, Ph.D.

Department of Biomedical Engineering Jianyi (Jay) Zhang, M.D., Ph.D.

Department of Cell, Developmental, and Integrative Biology Bradley Yoder, Ph.D.

Department of Dermatology Boni Elewski, M.D.

Department of Emergency Medicine Marie-Carmelle Elie, M.D.

Department of Family and Community Medicine Irfan Asif. M.D.

Department of Genetics Anindya Dutta, Ph.D.

Department of Medical Education

Department of Medicine C. Seth Landefeld, M.D.

Department of Microbiology Frances Lund, Ph.D.

Department of Neurobiology Craig Powell, M.D., Ph.D.

Department of Neurology David Standaert, M.D., Ph.D.

Department of Neurosurgery James Markert, M.D., MPH

Department of Obstetrics and Gynecology

Department of Ophthalmology and Visual Sciences Brian Samuels, M.D., Ph.D. (interim)

Department of Orthopaedic Surgery Steven Theiss, M.D.

Department of Otolaryngology Bradford Woodworth, M.D. (interim)

Department of Pathology George Netto, M.D.

Department of Pediatrics Mitchell Cohen, M.D.

Department of Pharmacology and Toxicology Mary-Ann Bjornsti, Ph.D.

Department of Physical Medicine and Rehabilitation Vu Nguyen, M.D., MBA

Department of Psychiatry and Behavioral Neurobiology Adrienne Lahti, M.D.

Department of Radiation Oncology James Bonner, M.D.

Department of Radiology Cheri Canon, M.D.

Department of Surgery

Department of Urology Dean Assimos, M.D.

UAB Medicine Leadership



William Ferniany, Ph.D. Chief Executive Officer UAB Health System/Ascension St. Vincent's Alliance



Selwyn Vickers, M.D., FACS Chair, UAHSF Board



Chief Executive Officer **UAB** Medicine



Dawn Bulgarella, MSHA, CPA Chief Financial Officer. UAB Health System Chief Financial Officer, UAB Health System/Ascension St. Vin-



Keith (Tony) Jones, M.D. **UAHSF** President Chief Physician Executive, **UAB** Medicine

UAB Hospital - Established in 1945 as the teaching hospital for what now is the UAB School of Medicine. Licensed for 1,157 beds and among the 20 largest and best equipped hospitals in the nation. Facilities include:

> UAB Hospital-Highlands - A general acute care facility providing emergency care, orthopaedics, pain management, and occupational medicine. The Emergency Department was named a Level 1 Geriatric Emergency Department, making UAB home to the only accredited geriatric ED in Alabama, the first one in the Southeast and the 17th Level 1 geriatric ED in the world.

The Kirklin Clinic of UAB Hospital - A specially designed "superclinic" for outpatient medical care, housing hundreds of physicians in nearly three dozen specialties, and one of the busiest outpatient centers in America providing the most advanced health care services.

The Whitaker Clinic of UAB Hospital - Located one block east of The Kirklin Clinic, opened in summer 2017 to accommodate growing demand for outpatient health care services. The two clinics serve more than 2,000 patients per day.

Spain Rehabilitation Center - One of the Southeast's foremost providers of comprehensive rehabilitation care with nationally recognized programs designed to address all aspects of patients' rehabilitation, including physical, social, and psycholog-

Women and Infants Center - Designed with patient comfort and family-centered care in mind and providing advanced medical technology dedicated to healthy and high-risk pregnant women and newborns, as well as women receiving care for various gynecological problems, including cancer.

Center for Psychiatric Medicine - Provides inpatient clinical services including addiction recovery, child and adolescent treatment, and geriatric psychiatry in a dedicated facility.

The Kirklin Clinic at Acton Road - Offers a multidisciplinary approach to cancer, heart and vascular care, and an array of other services south of the city. The O'Neal Comprehensive Cancer Center at Acton Road offers innovative, advanced cancer treatment and specialty care services.

UAB Prime Care Clinics - In addition to Primary Care at The Whitaker Clinic, these metro area neighborhood clinics offer primary care in Hoover, Inverness, Leeds, and Gardendale. For convenience, UAB physicians also are available at primary care locations in Huntsville, Montgomerv. Selma, and Tuscaloosa.

UAB Callahan Eye Hospital & Clinics - The only specialty hospital in Alabama focusing on eye care with one of only two Level 1 Ocular Trauma Centers in the U.S. Also offers eye care clinics in Birmingham, Vestavia, Pell City, Sylacauga, Gardendale, Hoover, Bessemer, Trussville, and Oneonta.

UAB Urgent Care - A convenient office in Midtown Birmingham offering medical care seven days a week without an appointment.

UAB eMedicine - Connects patients to UAB's world-class care using telehealth technology on a mobile device or computer and offers two types of online urgent care and scheduled clinic video visits.

University of Alabama Health Services Foundation (UAHSF)

An approximately 1,400-member multispecialty physician practice affiliated with the University of Alabama at Birmingham offering services in 33 specialties.

Alliance Joint Leadership Committee

The Alliance Joint Leadership Council (AJLC) brings together the academic and clinical enterprise of the UAB Health System/Ascension St. Vincent's Alliance at the most senior and strategic level. The committee serves as the senior physician advisory committee to the UAB Health System.

For 2021, the AJLC membership included William Ferniany, Ph.D., CEO of UAB Health System; Selwyn Vickers, M.D., FACS, senior vice president for Medicine and dean of the Heersink School of Medicine (upon Ferniany's retirement at the end of 2021, Vickers also assumed the role of CEO of UAB Health System); Dawn Bulgarella, MSHA, CPA, CFO of UAB Health System; Reid Jones, CEO of UAB Medicine; Loring Rue, M.D., chief medical officer of UAB Health System; Keith (Tony) Jones, M.D., president of the UAHSF: Jason Alexander, CEO of Ascension-St. Vincent's: Tim Bode, M.D., chief medical officer of Ascension-St. Vincent's; Cheri Canon, M.D., chair of the Department of Radiology; Herb Chen, M.D., chair of the Department of Surgery; Seth Landefeld, M.D., chair of the Department of Medicine; and David Standaert, M.D., Ph.D., chair of the Department of Neurology.





UAB HEERSINK SCHOOL OF MEDICINE ANNUAL REPORT 2021

Produced by the UAB Heersink School of Medicine Communications Office

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Report is accurate at the time of publication. Refer to uab.edu/uabunited for UAB's current guidelines and recommendations relating to COVID-19. Some photos in this publication were taken prior to the COVID-19 pandemic and therefore do not depict current safety protocols.

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