

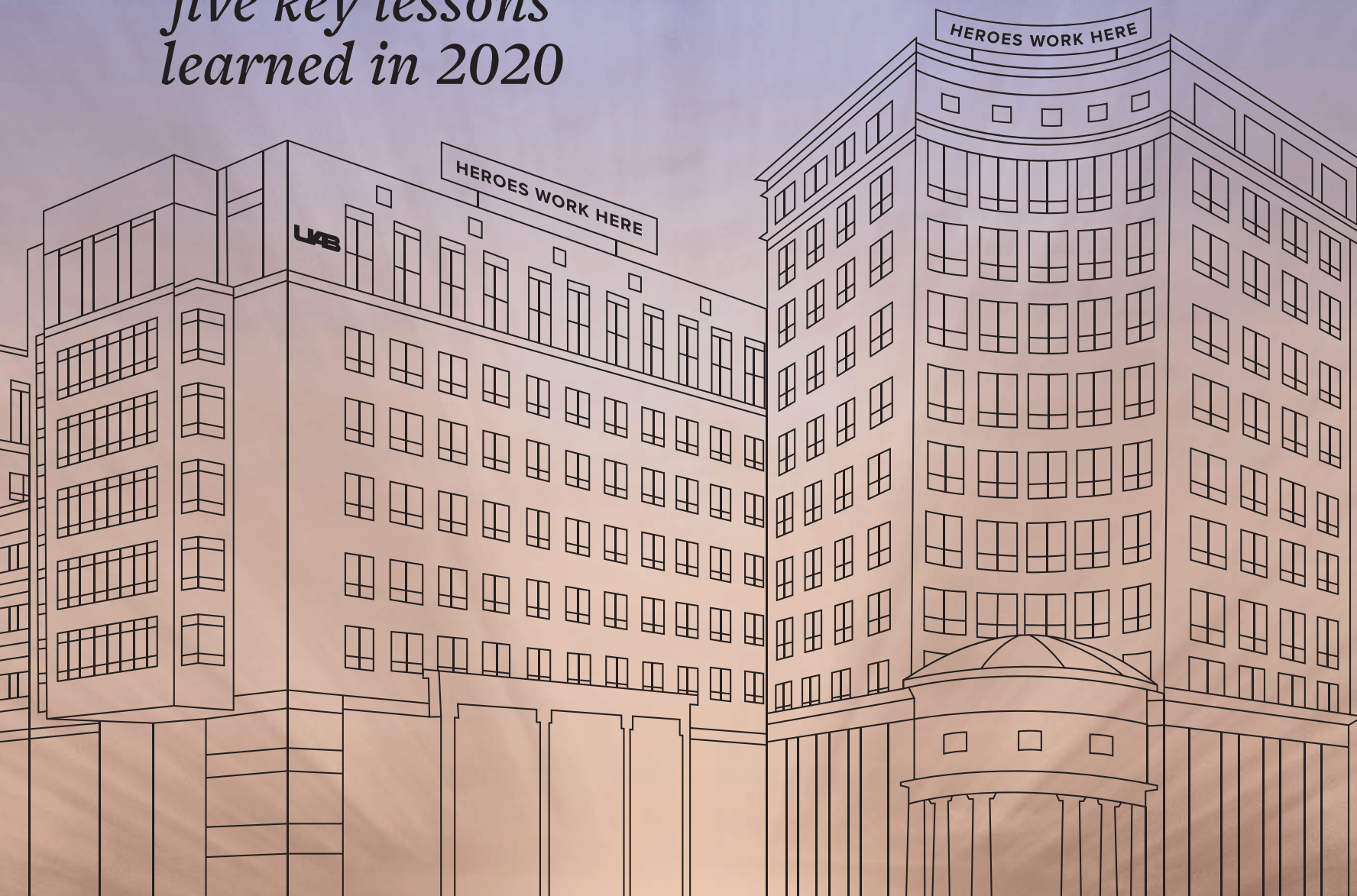
UAB THE UNIVERSITY OF ALABAMA AT BIRMINGHAM

# ANNUAL REPORT

SCHOOL OF MEDICINE

BENCH TO BEDSIDE TO COMMUNITY

*five key lessons  
learned in 2020*







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From the global pandemic that impacted over 94 million lives to a monumental movement against racial injustice and one of the most tense presidential elections in living memory—it's no wonder that “unprecedented” became one of the most overused words of 2020.

It was an extraordinary year—a year of great challenges, but also a year of boundary-breaking opportunities. As I reflect back, I am struck by how much we learned in 2020, not only about the novel coronavirus that upended our lives, but also about our own ingenuity, resilience, and commitment. Therefore, it seems fitting that the theme of this year's Annual Report is “Lessons Learned.” In the pages that follow, you'll be introduced to the five key lessons of the past year:

**Lesson One: We're All in This Together** – In 2020, we learned that we are all interconnected, and how the most vulnerable among us fare in a crisis affects everyone. Especially when it comes to health, looking out for our neighbor reaps benefits for ourselves.

**Lesson Two: Adapt and Be Nimble** – In medicine and health care, the only constant is change. Being light on our feet and able to adapt quickly has been critical to our ability to continue meeting our missions in medical education, clinical care, and research, no matter the obstacle.

**Lesson Three: Never Stop Innovating** – Our School of Medicine is an innovation engine, and that didn't slow down amid the pandemic. In fact, the pace of our discovery efforts hastened in many ways, especially in cases where the novel coronavirus and COVID-19 were the focus.

**Lesson Four: Collaboration Fuels Growth** – Our greatest strength this past year has been our willingness to pull together toward common goals, and in doing so achieve things we never could as individuals. UAB has always been distinguished by our spirit of collaboration, and never has that been more on display than in 2020.

**Lesson Five: Take Care of Each Other** – If the events of the past year have shown us anything, it's that we truly are one family. As such, the only way forward is to take care of each other. Check in with each other. Ask, “How are you, really?” And, above all, listen—listen to people's stories with an open heart and an open mind. Because only by leading with kindness and humility can we tackle the gravest problems we face.

Despite the challenges of 2020, I am grateful for these lessons. They will no doubt leave us stronger, more resilient, and better prepared for the future after the coronavirus pandemic has receded.

Sincerely,



Selwyn M. Vickers, M.D., FACS  
Senior Vice President of Medicine  
Dean, UAB School of Medicine  
James C. Lee Jr. Endowed Chair  
University of Alabama at Birmingham  
Chair, University of Alabama Health Services Foundation Board

WE'RE ALL IN THIS  
*together*





## COVID-19 SPOTLIGHTS HEALTH DISPARITIES IN AMERICA

Not only did the COVID-19 pandemic throw longstanding racial and socioeconomic health disparities in the U.S. into stark relief, it made them more deadly. Early in the crisis, it became clear that disproportionately high rates of chronic diseases like hypertension, asthma, and diabetes among people of color—in large part the result of systemic barriers to health and health care—were dramatically affecting outcomes and mortality from COVID-19.

In Alabama, by the end of April, over 45% of COVID-19 deaths were among African Americans, in a state where the population is just 26% African American. As the Centers for Disease Control and Prevention (CDC) acknowledged, “There is increasing evidence that some racial and ethnic minority groups are being disproportionately affected by COVID-19. Inequities in the social determinants of health, such as poverty and health care access, affecting these groups are interrelated and influence a wide range of health and quality-of-life outcomes and risks.”

Along with a host of other faculty and leaders, School of Medicine Dean Selwyn Vickers, M.D., FACS, co-founder of UAB’s NIH-funded Minority Health and Health Disparities Research Center (MHRC), spoke out in editorials and interviews in a variety of national media, sounding the alarm as evidence of COVID-19’s disproportionately severe outcomes for minori-

ty and underserved communities compounded. Vickers, along with 14 African American medical school deans and health care leaders, contributed an op-ed to USA Today titled, “Black medical leaders: Coronavirus magnifies racial inequities, with deadly consequences.” The op-ed appeared online on April 12 and in the April 13 print edition of the newspaper.

Vickers also contributed an op-ed to the Association of American Medical Colleges (AAMC) website titled, “Medical students need to learn about health disparities to combat future pandemics,” which appeared April 30. Based on that, Harvard Medical School’s Center for Primary Care requested that Vickers contribute to its blog, and his piece, “Coronavirus Pandemic Highlights the Need for Health Disparities Training as a Fundamental Part of Medical Education” was posted June 3.

Beginning in the spring and continuing into the fall, Vickers appeared on a host of local news programs as well as CNN, MSNBC, and in a roundtable with policymakers and hospital and medical school leaders hosted by news website The Hill in August. Throughout these editorials and appearances, Vickers advocated that addressing health disparities will not only improve the health and well-being of traditionally underserved communities—and better prepare them to weather the next pandemic—but it will also improve health and health care for everyone. – Jane Longshore



# ENGAGING UNDERSERVED COMMUNITIES

When the pandemic began, the UAB Minority Health & Health Disparities Research Center (MHRC) quickly pivoted its focus to COVID-19. Because minority race/ethnicity, obesity, and chronic health conditions are risk factors for severe COVID-19 illness, the MHRC was uniquely qualified to address health disparities in the context of the pandemic. Also critical was MHRC's ability to leverage its robust community engagement partnership network and Building Healthy Communities Coalitions across Alabama.

The MHRC identified key concerns via a series of virtual focus groups with five underserved communities across the state, including confusion about who was impacted and at risk for infection; worry over basic needs (food, shelter, paying bills, childcare, job loss); and overeating, lack of exercise, increased alcohol consumption, and other risky behaviors. In addition, the center identified barriers related to social determinants of health common in low-resource communities, including lack of transportation, lack of health insurance, and uncertainty about risk, testing processes, and eligibility requirements.

In essence, the MHRC found that COVID-19 was making marginalized communities even more marginalized. The center developed an intervention model around COVID-19 in vulnerable communities—the Community Mobile Testing Model (CMTM)—with three essential components:

- COVID-19 community engagement and education
- Mobile testing units serving walk- and drive-through services located in vulnerable communities
- Patient navigators to guide individual participants through the testing process and follow-up

The CMTM was piloted in June and July. The MHRC held 33 testing sites in 18 communities and tested 1,434 people. COVID-positive rates in this initial expansion were 5% for whites, 9% for Black/African Americans, and 29% for Hispanics. Following the success of this community initiative, the MHRC applied for and received Jefferson County CARES (Coronavirus Aid, Relief, and Economic Security) Act funding which allowed the center to expand the model in Jefferson County. The expanded program involves preventing COVID-19 through better adherence to prevention guidelines; testing for COVID-19 in underserved communities and hotspots; and preparing for future waves through improved health (better nutrition, more physical activity, and improved wellness).

Based on this work, the MHRC was well-positioned when the NIH sought to launch the Community Engagement Alliance Against COVID-19 Disparities (CEAL) program, which focuses on Blacks/African Americans, Hispanics/Latinos, and American Indians—populations that account for over half of all reported cases in the U.S.

CEAL is funded by a \$12 million award to teams in 11 high-risk states: Alabama, Arizona, California, Florida, Georgia, Louisiana, Michigan, Mississippi, North Carolina, Tennessee, and Texas. The CEAL teams promote and facilitate the inclusion and participation of underrepresented communities in vaccine and therapeutic clinical trials to prevent and treat the disease.

“Building on existing partnerships within UAB, the goal of Alabama CEAL is to establish a research and community engagement infrastructure to identify contributing factors to the disproportionate burden of COVID-19 in vulnerable communities and establish effective, community-engaged strategies to enhance education, address misinformation, improve access, and increase inclusion of underserved populations in COVID-19 research,” says MHRC Director Mona Fouad, M.D., lead principal investigator of UAB's CEAL award.

The UAB CEAL investigators are leveraging the infrastructure and community partnerships of the MHRC, the UAB Center for Clinical and Translational Science, and the UAB Schools of Medicine, Public Health, and Health Professions.

– Jane Longshore and Bob Shepard







**NO BAJE SU  
VENTANILLA**

- PONGA SU AUTO EN  
ESTACIONAR
- MUESTRE SU  
IDENTIFICACIÓN

**UAB** MINORITY HEALTH & HEALTH DISPARITIES  
RESEARCH CENTER  
The University of Alabama at Birmingham

**UAB** MEDICINE



**Cooper Green Mercy**  
HEALTH SERVICES AUTHORITY  
AFFILIATE OF UAB HEALTH SYSTEM

The UAB Minority Health & Health Disparities Research Center has focused on engaging with and expanding testing in communities that typically lack access to health care throughout the pandemic.



# CONFRONTING HEALTH DISPARITIES AND COVID-19 THROUGH RESEARCH

UAB has a wealth of expertise and experience studying the causes and effects of health disparities, so when the COVID-19 pandemic struck, our researchers pivoted to exploring how the pandemic was intersecting with and impacting health disparities. Below are just two examples of this type of innovative research.

In October, researchers from the UAB Center for AIDS Research (CFAR) were awarded a two-year, \$5 million award to be a site of the NIH's Rapid Acceleration of Diagnostics (RADx) initiative, implementing the RADx Underserved Populations, or RADx-UP, program in local communities. RADx-UP will support research to better understand COVID-19 testing patterns among underserved and vulnerable populations; strengthen the data on disparities in infection rates, disease progression, and outcomes; and develop strategies to reduce the disparities in COVID-19 testing.

In collaboration with clinical and community partners, UAB investigators are working to conduct 36,000 COVID tests statewide. Investigators are building upon lessons learned from existing HIV research in the state, and study findings will help guide public health messaging and provision of COVID-19 vaccines to rural communities.

"The RADx program is a bold and ambitious NIH initiative

to dramatically increase COVID-19 testing availability, convenience, and timeliness," says Michael Mugavero, M.D., MHSc, project investigator and professor of medicine in the Division of Infectious Diseases. "It is significant that UAB and the state of Alabama will be a part of this unprecedented national initiative, engaging hard-hit communities to expand the reach of testing to underserved and vulnerable rural populations."

Also in October, a study published in the Mayo Clinic Proceedings: Innovations, Quality & Outcomes by UAB researchers showed that Black individuals have a disproportionately higher COVID-19 mortality burden across all of the U.S., which is driven by a high incidence of COVID-19 infection. They found key geographic differences in the distribution of health determinants and COVID-19 mortality patterns.

Vibhu Parcha, M.D., a clinical research fellow in the Division of Cardiovascular Disease, says systemic racism in health may be driving the high mortality burden seen among Black individuals. Parcha and his team analyzed data from the CDC's Behavioral Risk Factor Surveillance System survey and COVID-19 mortality data from state public health department databases. This investigation is the first attempt to look into race-stratified geographic differences in health determinants and their relationship with COVID-19 mortality using nationwide data.

Researchers found that Black individuals in the U.S. have a higher prevalence of comorbidities and poor socioeconomic conditions. Both Black and white individuals living in the Southern and Midwestern U.S. have a higher prevalence of these health determinants. The researchers found that Black individuals have a three-times-higher likelihood of COVID-19 infection and twofold higher crude mortality. They also noted that the infection fatality was similar between Black and white individuals.

"Crude mortality explains how badly a population is affected by the deaths due to a disease, whereas infection fatality ratio is a measure of how severely the disease affects those who are infected with the virus," Parcha explains. "The persistent racial disparities in health care, as underlined by our study, may predispose Black individuals to bear a hefty share of the COVID-19 pandemic. This is evident in nearly three-fold higher COVID-19 crude mortality rate among Black individuals. We need urgent efforts to mitigate the systemic racial health disparities that have been heightened during the pandemic."

– Savannah Koplon and Adam Pope





# WORKING TOGETHER TOWARD REENTRY

On April 14, 2020, the University of Alabama System announced a COVID-19 Health and Safety Task Force consisting of roughly three dozen members from various fields. Co-chaired by School of Medicine Senior Vice President for Medicine and Dean Selwyn Vickers, M.D., FACS, the multidisciplinary task force was charged with creating a framework for the safest possible return to on-campus instruction for the University of Alabama, the University of Alabama at Birmingham (UAB), and the University of Alabama in Huntsville (UAH). That effort resulted in development of the GuideSafe™ COVID-19 response platform, a set of tools to facilitate campus reentry and COVID-19 symptom monitoring.

The origins of GuideSafe™ began in early spring 2020. UAB experts led by Sue Feldman, R.N., M.Ed., Ph.D., professor in the UAB School of Health Professions and UAB School of Medicine, Mohanraj Thirumalai, MSEE, Ph.D., assistant professor in the UAB School of Health Professions, and Sarah Parcak, Ph.D., professor of Anthropology in the UAB College of Arts and Sciences, created a symptom and exposure reporting tool to identify emerging COVID-19 hot spots across the state. The public website, HelpBeatCOVID19.org, is a multi-channel geographical symptom tracker powered by crowdsourced, consumer-generated data collection that is inclusive and representative, with an emphasis on underserved and underrepresented communities and populations. HelpBeatCOVID19.org's successful development and implementation under exceedingly tight deadlines, while leveraging UAB's impressive depth and breadth of expertise and key partnerships, provided key lessons and a roadmap for the development of GuideSafe™.

As co-chair of the UA System Health and Safety Task Force, Vickers recognized the potential of HelpBeatCOVID19's development to form the basis of a powerful tool to facilitate the return to on-campus instruction. "It became clear early on that HelpBeatCOVID19 could evolve into a screening tool that could be used across our university and system for reentry," said Dr. Vickers. "That's when we began pulling together teams from across the Schools of Medicine, Public Health, and Health Professions to redesign and reposition it, and looking for sources of funding."

The resulting GuideSafe™ platform incorporates a set of symptom reporting, event entry tools, and exposure notification, and as well as risk-mitigating behavioral strategies to limit the spread of the disease. To date, there are over 250,000 daily GuideSafe™ platform users and 45 participating organizations.

GuideSafe™ includes three tools:

- ▶ GuideSafe™ Healthcheck, a COVID-19 assessment tool that allows users to report COVID-19 related symptoms and exposure.

- ▶ GuideSafe™ Event Passport, which facilitates access to meetings, events, or facilities.

- ▶ GuideSafe™ Exposure Notification App, a partnership between the Alabama Department of Public Health (ADPH), UAB, Google, and Apple that automates COVID-19 exposure notification without sacrificing privacy.





The platform was developed by a team of experts at UAB led by Feldman and Thirumalai. While Healthcheck officially launched in May 2020, the Event Passport and the Exposure Notification App officially launched in August 2020. The entire GuideSafe™ initiative was supported by Alabama federal Coronavirus Aid, Relief and Economic Security Act (CARES Act) funds.

The Exposure Notification app was developed through a collaboration between the Alabama Department of Public Health, UAB, Google, and Apple, with early development from Motion-Mobs, a Birmingham company founded by UAB alumni. Alabama was one of the first states in the U.S. to launch Google and Apple's joint exposure notification technology and currently has over 150,000 downloads with over 350 verified positive COVID-19 tests reported using the app. Traditional case contact tracing conducted through public health department efforts are averaging 1-2 close contact notifications. Each verified positive COVID-19 test through the app can potentially notify 10 times the number of close contacts as traditional case contact tracing thereby mitigating spread.

GuideSafe™ also includes a robust testing program:

- COVID-19 testing was provided free of charge for all students at Alabama colleges and universities prior to the fall 2020 return to campus, making it the largest-scale higher education testing initiative in the nation.

- Ongoing sentinel testing collects information useful for assessing the stability or change in COVID-19 spread across campuses.

Pilots were conducted in Birmingham and Tuscaloosa beginning July 26, 2020 while GuideSafe™ Entry Testing began at 12

additional locations across Alabama on August 4, 2020. GuideSafe™ provided a free, non-invasive nasal swab-based procedure for students to ensure a negative test before returning to campus. In the case where a student tested positive, he or she was requested to quarantine before returning to campus.

Developing each GuideSafe™ component involved its own challenges, not least among them the exceedingly tight deadlines that were necessary in order for the platform to be ready in time for the fall return to campus. UAB was uniquely positioned and equipped to overcome these challenges thanks to its critical mass of informaticians, infectious disease physicians, public health practitioners, pathologists, research computing leaders, data analysts, marketing and communications professionals, anthropologists, and administrative, operations, and other physician leaders. The other fundamental components of success were the strong spirit of innovation and collaboration that characterizes the culture of UAB and a deep commitment to service, both at an institutional level and among the individual team members.

In November, UAB announced a partnership with the PathCheck Foundation—which was founded at the Massachusetts Institute of Technology—to include the anonymous and encrypted COVID-19 test verification technology created for GuideSafe™ by UAB in PathCheck's own exposure notification app. This patent pending technology is the only one of its kind used to verify positive COVID-19 tests that requires no human intervention. The partnership will enable other states and countries to best leverage the Google/Apple Exposure Notification app as the nation and world continues to develop tools to help tackle the COVID-19 pandemic. – Jane Longshore and Jessica Martindale



A School of Medicine student displays the GuideSafe™ app on his phone.





## PATHOLOGY TAKES CENTER STAGE

The COVID-19 pandemic thrust the field of pathology into the limelight in an unprecedented way, highlighting the crucial roles that pathologists' diagnostic and lab expertise play in tackling the myriad challenges that arise with defeating a new disease.

UAB Pathology has been recognized throughout the pandemic primarily for its development and support of COVID-19 testing, led by Sixto Leal Jr., M.D., Ph.D., assistant professor and director of the Fungal Reference Lab (FRL). By March 1, with support from department leadership, the School of Medicine, and the university, Leal had developed an assay to test for SARS CoV-2 (COVID-19), validated the test, and submitted an Emergency Use Authorization application to the FDA. On March 13, the Alabama Department of Public Health (ADPH) reported the first known case of COVID-19 in the state. On March 17, the FRL went live with its SARS CoV-2 test.

In-house testing enabled the start of clinical trials and biospecimen repository collections across campus. The test's 24-hour turnaround time facilitated a return to operations for UAB hospitals and many regional hospitals. The acquisition of equipment to process multiple test systems, funded in part by the state's CARES Act, allowed for the ramping up of test capacity and expansion of tests offered.

In June, the return of students to University of Alabama System campuses for fall semester loomed, with the caveat that each student be tested prior to return (an effort that was later expanded to all Alabama colleges and universities). Dr. Leal's lab, in collaboration with UAB Hospital Labs and the ADPH, adapted its clinically offered lab-developed testing capabilities to a pooled testing approach. This cutting-edge program offered the ability

to test up to 250,000 students prior to their return to campus, nearly 68,000 of which were conducted at UAB. Between July 28 and August 3, for example, the lab processed more than 11,000 tests per day.

By October, the lab incorporated Influenza A and B detection into the UAB FRL SARS-CoV-2 test. Additionally, the team is now working on identifying and implementing prognostic markers into the diagnostic tests to distinguish infected individuals likely to do well during at home quarantine from patients that are more likely to progress to severe illness, enabling optimized use of clinical resources.

In addition to innovating around testing, the department has confronted the pandemic across the clinical and research realms in myriad ways. Department Chair George Netto, M.D., the Robert and Ruth Anderson Endowed Chair, was featured in "The Pathologist" magazine in April, discussing how UAB Pathology rose to the challenges of combatting this virus.

"UAB Pathology was poised to take on the challenge of adapting to the needs of our patients, our colleagues, and our trainees during this unprecedented time, thanks in large part to the stellar team we have curated," Netto said. "Our clinical faculty and staff reacted nimbly, working tirelessly to accommodate testing needs. Our research faculty continue to offer innovative insight into the virus and its long-term effects on the body. Our support staff have all been willing to adjust to the fluid demands of this situation.

"University, local, and state leadership each have provided the support needed to continue our work safely, offering long-range vision to bolster future discoveries in this area. We are extremely proud of our entire UAB Pathology team." – Christina Crowe



# TRAINING PHYSICIANS FOR RURAL AND UNDERSERVED ALABAMA

The UAB Department of Family and Community Medicine was awarded a \$7 million grant to address the need for training additional family medicine physicians to serve in rural and underserved areas of Alabama. The grant, from the Health Resources and Services Administration (HRSA), part of the United States Department of Health and Human Services, will enable the department to develop novel high school and college pipeline programs, medical student programming, and faculty development programs to enhance curriculum and mentoring efforts. Eight medical students were accepted into the program in 2020, who are working in the department's clinics, as well as partner clinics at Cahaba Medical Care and Christ Health Center.

"Currently, our state needs more than 600 additional primary care providers to meet the needs of the patients and the kinds of health conditions that we will be seeing by 2030," says Irfan Asif, M.D., chair of the Department of Family and Community Medicine. "To address this deficit, we must be aggressive in the family medicine and primary care programming that we develop and implement. This grant will go a long way toward helping us achieve that goal."

Asif has begun laying the groundwork for the department's enriched training program—the Comprehensive Urban Un-

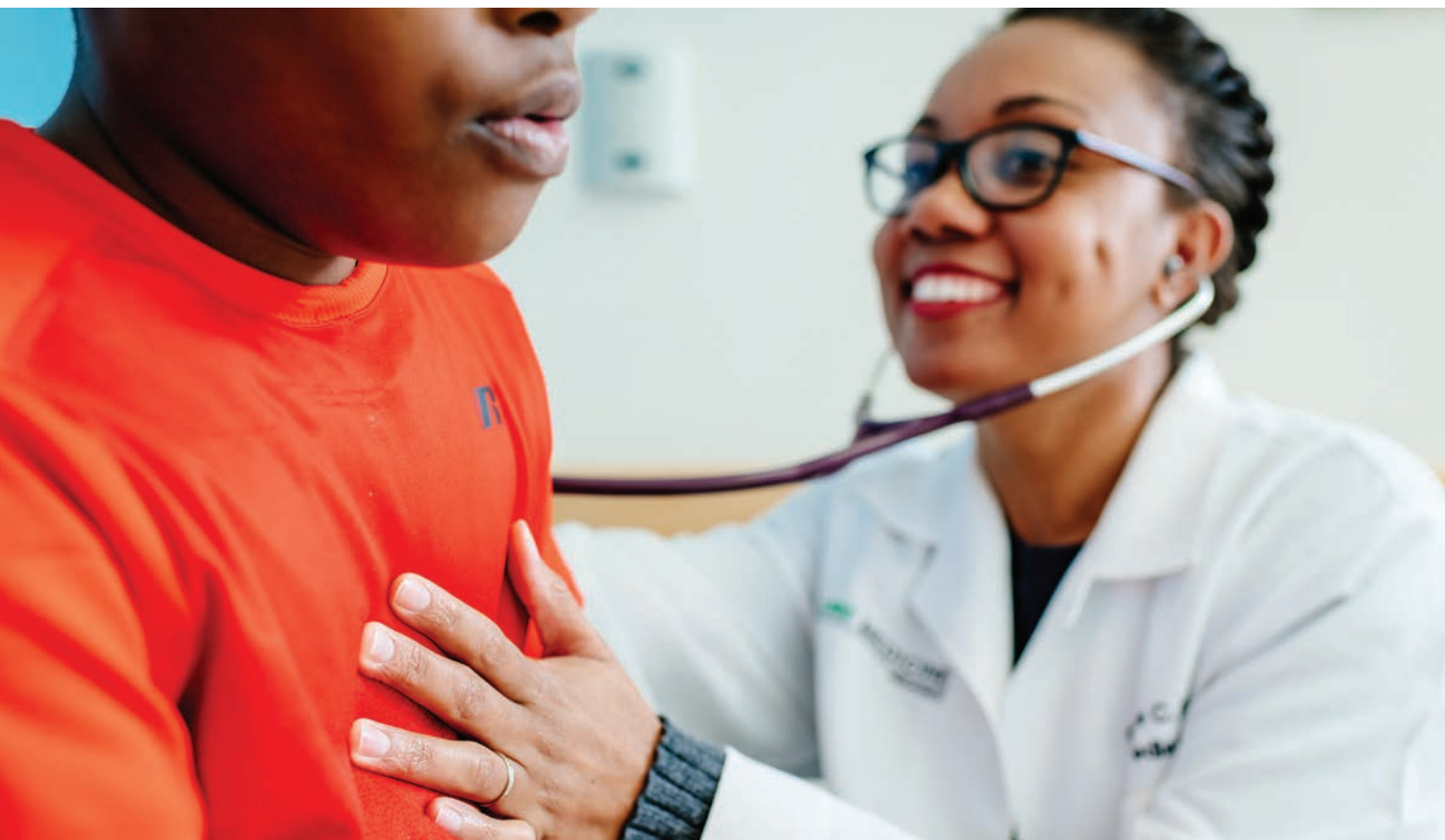


Irfan Asif

derserved and Rural Experience (CU2RE)—which will address six core areas related to interprofessional education, behavioral health, social determinants of health, cultural and linguistic competency, practice transformation, and telehealth. "The CU2RE program will help identify, train and retain students interested in family medicine and primary care, particularly those from urban and rural underserved backgrounds," Asif said. "We will tap into our regional campuses across the state to help

broaden our reach, as well as partner with programs such as the Alabama Area Health Education Center, Minority Health and Health Disparities Research Center, Office for Diversity and Inclusion, and others to identify high school and college students with a passion for service."

Asif says the grant will help offset the challenges that the region has long grappled with, particularly in its most vulnerable populations. "With an insufficient physician workforce, Alabama struggles to adequately prevent disease; this contributes to our state ranking in the bottom five in the country for many chronic illnesses. This HRSA grant is meant to help address the state of Alabama's primary care workforce shortage and sets the stage for making a considerable impact on the health and well-being of the patients we serve." — Bob Shepard





A healthcare professional, likely a nurse or medical assistant, is walking down a hospital hallway. She is wearing a blue patterned surgical cap, a white face mask, and a dark blue zip-up jacket over light blue scrubs. The jacket has "PLUE SCHRUM DEPARTMENT OF ANESTHESIOLOGY AND PERIOPERATIVE MEDICINE" on the left chest and "LPS MEDICINE" on the right chest. She is holding a clear plastic bag and a blue stethoscope. In the background, another person in blue scrubs is walking away. The hallway is bright and modern.

ADAPT AND  
*be nimble*





Kevin Harrod (right), professor in the Department of Anesthesiology and Perioperative Medicine, talks to Ritesh Sevalkar (left), postdoctoral fellow in the Department of Microbiology, in Harrod's laboratory, May 2020.

## PIVOTING OPERATIONS TO MAINTAIN SAFETY AND WELLNESS

Throughout the COVID-19 crisis, the School of Medicine has focused on making an impact through research, testing, guidance, and community care. Leadership and infectious disease experts have worked around the clock to ensure the most effective plans are executed to guide our enterprise, the Birmingham community, and the state of Alabama. UAB has advised key leaders across Alabama on best practices and next steps, including partnerships with Governor Kay Ivey's office, the Alabama Department of Public Health, Jefferson County Public Health, and regional hospitals.

Selwyn Vickers, M.D., FACS, senior vice president for Medicine and dean of the School of Medicine, has played an important advisory role since the onset of the COVID-19 pandemic, serving on the Executive Committee of Governor Kay Ivey's Coronavirus Task Force and as co-chair of The University of Alabama (UA) System Campus Health and Safety Initiative to develop reentry plans for the System's three campuses in Tuscaloosa, Birmingham, and Huntsville.

At a campus level, the School of Medicine has worked closely with the Provost's Office, Health Services Foundation, School of Public Health, and the UA System on operations, coordination, planning, and more.

The School of Medicine has strived to create a safe community in partnership with a host of partners and constituents, but how did it prepare to keep its employees, faculty, students, and trainees safe? On March 16, staff who were deemed nonessential to campus operations were sent home for remote work, a directive that, for

the most part, continues today.

"Our research enterprise followed the same model, and halted operations from mid-March until the end of May 2020, except for COVID-19 and essential research. Beginning in June 2020, research labs were able to resume work, with stringent safety planning that needed to be approved," says Etty (Tika) Benveniste, Ph.D., senior vice dean for Basic Sciences. "Social distancing, wearing of appropriate PPE, use of common equipment rooms, and shift work schedules all dictated the extent of activity in labs. The resumption of research was critical for furthering the goals and progress of all our faculty with external funding and ensuring the continued training of graduate students and postdoctoral fellows."

Many working parents have struggled in the pandemic to balance work with home life, with the added stress of educating their children. UAB leadership recognized this distress, particularly for working parents, and responded to challenges some employees faced as K-12 school districts adopted hybrid teaching plans for the fall term, including adding various childcare options. Among them, the university established a drop-in virtual learning hub, the UAB Youth Drop-In Study Program, at The Hilton at UAB for children of faculty and staff who are required to work on campus periodically.

Through these and other efforts, UAB has worked diligently to adapt to the pandemic and is still working to ensure the safety of all faculty, staff, students, and trainees. – Jessica Martindale



# TAKING EARLY ACTION ON PPE

Before a single case of COVID-19 had been diagnosed in the U.S., UAB Medicine's Supply Chain Services team already were taking steps to assure they could maintain a supply of personal protective equipment (PPE).

"In the health care supply chain, the bulk of your PPE comes out of Asia," says Laura Kowalczyk, vice president of Supply Chain and Support Services for UAB Medicine. "In early January, we realized that what was happening in China (where the virus originated) ultimately was going to affect the manufacturing facilities.

"We pulled all our N95 respiratory inventory out of the system. We sequestered masks, gowns, face shields, and other forms of PPE. Normally these items are available to our departments on a daily order basis. We changed this process so that these items would be available based upon an agreed upon formula for each unit and department. Through this process we were able to conserve these critical items for our clinicians and health care teams."

This sequestration and conservation activity helped UAB Medicine get through the initial shock to the supply chain that hit in March when COVID-19 started spreading through the U.S. At the same time, the Supply Chain team also began an extensive process to manage alternative sourcing for PPE, including through

private donations. A warehouse with a drive-through donation facility, a dedicated website, and a robust vetting process were established as part of this effort.

"The extent of donations was phenomenal," Kowalczyk says. "It spanned from individuals like painters who had some industrial N95s in their garages, all the way to our Schools of Medicine, Nursing, Dentistry, and our labs coming to us and saying, 'Here is all we have and we want the hospital to have it.' At times we had to go to material and supplies that was not as comfortable, but we never offered any PPE that was less than the highest level of protection for our health care workers. We are proud of the low rate of COVID infections among our health care team during this time."

As the year went on and the situation stabilized, Kowalczyk says UAB was able to pass along some of the excess PPE donations to nursing homes and other health care entities.

"It's been a wild ride, but it's been a very organized wild ride," Kowalczyk says. "We've come out of it with some good lessons learned and how we will manage PPE and many other supply categories that have been affected going forward. We still have everything sequestered, but we've developed a structured process to manage the ongoing challenges." – Cary Estes



# LCME RE-ACCREDITATION BEGINS

The UAB School of Medicine is once again undergoing the rigorous self-study process to gain re-accreditation from the Liaison Committee on Medical Education (LCME).

Work began in summer 2020, with faculty and staff gathering data that will be reviewed and submitted to the LCME. An internal task force will begin a self-study in spring 2021, that will include as central elements the completion of an extensive data collection instrument (ongoing) as well as an independent survey of medical students designed and analyzed by student leaders. The effort will culminate in a site visit from an LCME team, planned for April 10-13, 2022.

Catherine Fuller, Ph.D., professor in the Department of Cell, Integrative and Developmental Biology, and Gustavo Heudebert, M.D., MACP, professor in the Department of Medicine and former interim regional dean for the Montgomery Regional Medical Campus, are leading the re-accreditation process as the Faculty Accreditation Co-Leads, together with Elizabeth Rahn, Ph.D., the site visit coordinator.

“Preparing to renew our LCME accreditation is a great opportunity for self-reflection, capturing areas where we’re per-

forming well, and identifying areas where we can grow and improve, making sure we’re providing the highest quality medical education for our students,” says Craig Hoesley, senior associate dean for Medical Education. “Accreditation is foundational to us being an academic medical center, and our leaders, faculty, and staff are working diligently to secure a successful re-accreditation.”

The LCME, sponsored by the Association of American Medical Colleges and the American Medical Association, is the nationally recognized accrediting authority for medical education programs leading to the M.D. degree in the U.S. Students and graduates of LCME-accredited medical schools are eligible to take the United States Medical Licensing Examination, enter ACGME-approved residency programs, and graduation from an LCME-accredited medical school is, in most states, a prerequisite for medical licensure.

The UAB School of Medicine holds full accreditation from its last LCME survey visit in 2014. Learn more about the school’s re-accreditation efforts at [go.uab.edu/lcme](http://go.uab.edu/lcme). – *Kendra Carter*

# UAB INCIDENT COMMAND CENTER

In response to the COVID-19 pandemic, the UAB Incident Command Center streamlined existing efficient processes to deliver resources and real-time communication to medical providers. Since then, the Incident Command Center has worked to provide medical professionals with every tool they need to take care of patients during the pandemic. UAB Medicine’s existing Emergency Operations Plan (EOP) describes a comprehensive “all hazards” command structure for coordinating the six critical areas: communications, resources, safety and security, staffing, utilities, clinical, and support activities. The EOP applies to natural, technological or manmade events that significantly disrupt the environment of care and treatment (i.e. tornado, loss of utilities, civil disturbance, etc.); or that results in sudden, significantly changed, or increased demands for the organization’s services (i.e. a mass casualty incident, infectious disease outbreak, etc.). The Emergency Management Committee (EMC) is the multidisciplinary group responsible for oversight of the Emergency Management Program. The committee is comprised of leaders from departments across UAB Medicine.

Established in 2014, the Incident Command Center organizes objectives providers can follow for multiple crises, both

planned and unplanned, with a goal of reducing redundancy and providing clarity. There are two main Command Centers in UAB Hospital, as well as satellite posts at various UAB Medicine facilities, as well as a mobile post that can be deployed off-campus. The Incident Command Center locations have delivered a common point of coordination and communication during the 2020 crisis.

In January and February of 2020, the center’s management teams pre-activated, and then activated, an existing standardized plan—the Serious Infectious Disease Management Plan (SIDMP)—for an all-systems approach and a response to the looming COVID-19 crisis. The plan includes processes and protocols for management of Ebola virus and other hemorrhagic diseases, and highly pathogenic respiratory viral infections, including SARS-CoV2 (COVID-19). Since activating the plan, the Incident Command Center has continued to follow protocol, adjusting efficiencies as the crisis has changed over time.

The center impacts patient care by maintaining continuity of care during a surge crisis. The incident processes and center locations provide a well-organized method that allows multiple disciplines to meld into one system. –*Mary Ashley Canevaro*



# TELEMEDICINE TRANSFORMS COVID-19 RESPONSE

In March 2020, as the entire country grappled with a changing reality, leadership and faculty at UAB were rapidly evolving a classically derived definition of health care, which had traditionally been considered in-person.

“Expansion of telehealth allows for the delivery of quality care in a patient’s home, but it also provides for social distancing in those cases where a patient needs to see their health care provider in person or for those with a loved one in the hospital,” says Bart Kelly, executive director of Telehealth Services at UAB Medicine. “It keeps patients, visitors, and staff safe while not compromising on care.”

To bolster this response, UAB received \$1 million from the Federal Communications Commission to facilitate the massive telehealth transition that occurred during the onset of the COVID-19 public health emergency.

The award funded the purchase of iPads, webcams, and remote patient monitoring devices to facilitate the huge increase in telehealth that UAB experienced. UAB added additional telehealth carts in the emergency department and maternal emergency unit to improve the ability to screen patients and reduce health care provider exposure. This benefits patients by expanding

the current telehealth infrastructure, therefore increasing access to care.

UAB eMedicine already utilizes telehealth carts to expand telehealth services to other hospitals and ensure access to subspecialty care such as infectious diseases, critical care, stroke, and nephrology. The award also helped expand remote patient monitoring of patients with COVID-19, particularly for those at high risk of severe disease due to secondary conditions such as diabetes, heart failure, kidney disease, and hypertension.

UAB supported a significant response to telehealth in the first six months of the pandemic, with over 200,000 telehealth visits. “What lots of people don’t recognize is UAB eMedicine had many other important telehealth programs that also ramped up,” says Eric Wallace, M.D., medical director of Telehealth at UAB. “Some of these include specialized programs like linking moms to their babies in the Regional Neonatal Intensive Care Unit and linking families to their hospitalized loved ones when visitation was restricted, as well as inpatient telehealth programs delivering highly specialized care in rural hospitals. These areas of care were significantly impacted by the pandemic. I’m very proud that UAB adapted as rapidly as possible to provide patients the care and contact that they needed no matter what the circumstances.”

In late April, UAB Medicine’s COVID Respiratory Clinic launched for COVID-positive patients who are experiencing worsening symptoms at home. Since then, as the number of cases has increased, the clinic has tripled the number of patients seen in a day. The COVID Respiratory Clinic is operated by the Department of Medicine’s Division of Infectious Diseases in collaboration with physicians representing Internal Medicine and the Department of Family and Community Medicine.

Additionally, in November, the Post COVID Treatment Program was established to help patients receive proper follow-up care in the weeks and months after their recovery process and is open to all who need further medical evaluation related to COVID-19 symptoms.

This program is unique not only to Birmingham; it is one of only a few programs of its kind across the country. – Jessica Martindale

This summer, Eric Wallace, M.D., medical director of Telehealth at UAB, and Curt Carver Jr., Ph.D., vice president for Information Technology and chief information officer at UAB, were appointed by Governor Kay Ivey to serve on the state’s Broadband Working Group, which provides input and guidance on how to allocate up to \$300 million in funding from the federal Coronavirus Aid, Relief and Economic Security Act. One important use of those funds, Ivey notes, is to extend broadband internet access to close “serious gaps” in coverage around Alabama. These gaps contribute to disparities in health care, commerce, and education, Wallace says.



Davide Botta, assistant professor in the Department of Microbiology, conducts COVID-19 research, May 2020.







# PHILANTHROPY FUELS HOMEGROWN COVID-19 RESEARCH

Soon after a COVID-19 national emergency was declared in the U.S., Jim Gorrie, CEO of Birmingham-based Brasfield & Gorrie, asked UAB President Ray Watts, M.D., to talk to a group of CEOs about COVID-19 needs and opportunities. Watts shared three pages of urgent needs at UAB for clinical research and laboratory research meant to save lives, understand the disease, and find treatments. The next day, Gorrie sent an email to the 21 business leaders who were on the call, saying Brasfield & Gorrie would contribute to the UAB effort, “and I just wanted to encourage anyone else who can help to join in.”

The result? In just 20 days in March, the UAB Advancement Office raised more than \$1.1 million from the Birmingham business community and a donor in Montgomery for urgent laboratory and clinical COVID-19 research at UAB. More than 50 School of Medicine faculty members submitted grant proposals and 14 projects were selected for awards in April.

“Because of the urgency of this pandemic, one of the criteria was how quickly the research team could launch their study, and how quickly they could begin to see results,” says Etty (Tika) Benveniste, Ph.D., senior vice dean for Basic Sciences in the School of Medicine. “We wanted research studies that could be reviewed at the three- and six-month time frames to determine their potential. That is a very accelerated timeline for research.”

Ten additional pilot projects—funded by \$402,000 in donations—began August 1. Competition for funding was open to the entire university, and 76 applications were received. Preliminary data from the pilots will form the basis for new grants and contracts, including pursuit of the \$2 billion COVID-19 grant support being offered by the National Institutes of Health.

“We are also very involved with the National Institutes of Health Vaccine Treatment and Evaluation Units that are participating in worldwide studies on both vaccines and treatment for SARS-CoV-2,” says Jeanne Marrazzo, M.D., director of the UAB Division of Infectious Diseases. “It is to the credit of UAB investigators in both the clinical and basic sciences to have been able to ramp up important research studies so quickly in the face of this pandemic, and a credit to the Alabama business community who responded so quickly and generously with the funding necessary to undertake this work.” –  
*Jeff Hansen and Bob Shepard*

## URGENT COVID-19 RESEARCH FUND PROJECTS ROUND 1

- Early identification and treatment of cytokine storm syndrome in COVID-19
- Defining serologic and neutralizing humoral immunity to COVID-19
- Human lung tissue model of SARS-CoV-2 infection to monitor treatment response
- HelpBeatCOVID19: Crowdsourced COVID-19 Symptom Tracker
- Establishment of a biospecimen repository to enable SARS-CoV-2/COVID-19 research at UAB
- SARS-CoV-2 interventions for mitigating COVID-19
- Baseline use of renin-angiotensin-aldosterone system (RAAS) inhibitors and the risk of severe novel coronavirus infection (COVID-19)
- Development of a rapid and scalable COVID-19 antibody epitope mapping platform by phage display
- Optimization of SARS-CoV-2 diagnostic testing throughput and prognostic significance
- Fluorescent cell-based reporter platform for detecting SARS-CoV2 infection
- Targeting nsp1 of SARS-CoV-2 for antiviral development
- Development of SARS-2 recombinant proteins for diagnostics, vaccine testing and research
- An animal model of COVID-19 pathogenesis and treatment
- Inhalational bitter taste receptors agonists for treatment of SARS-COV-2

## ROUND 2

- Clonal diversity of human antibodies to SARS-CoV-2 S-protein
- Glucocorticoid treatment of COVID-19 cytokine storm syndrome
- Therapeutics targeting COVID-19 entry into pulmonary epithelial cells
- Immunotyping COVID-related acute respiratory distress syndrome
- Circulating microbiota and microbial endotoxin drive uncontrolled immune activation of blood monocytes in COVID-19
- Development of a tri-specific neutralizing antibody for the treatment of SARS-CoV-2 infection
- Individual- and area-level risk factors for COVID-19 disparities in the Deep South
- Exploratory study of the effect of tranexamic acid treatment on the progression of COVID-19 in outpatients
- Molecular mechanisms underlying the pathogenesis of acute respiratory distress syndrome in critically ill SARS-CoV-2-infected patients
- Neutrophils as a driving mechanism of acute respiratory distress syndrome and death in COVID-19 patients



# ADAPTING MEDICAL EDUCATION IN THE COVID-19 ERA

After the COVID-19 pandemic reached Alabama, medical education leaders at the School of Medicine quickly regrouped to enable students to continue their training. “Everybody has been incredibly impressive in their performance,” says Craig J. Hoesley, M.D., senior associate dean for Medical Education. “There’s some fatigue, but our people have adapted and handled it well.”

In mid-March, at the recommendation of the Association of American Medical Colleges, medical students were removed from clinic work, and all classroom instruction was shifted online. Meanwhile, most residents continued to work regular shifts but were limited in their ability to closely interact with patients, a key component to their training.

Still, faculty never stopped teaching, learning, and helping. Because now more than ever, Hoesley says, it is important for UAB to continue training the physicians of tomorrow. “Alabama is a medically underserved state, and for us to slow down the pipeline of physicians coming out of our schools would impact the health care workforce down the road,” Hoesley says. “We had to very rapidly put together an effective curriculum for both the clinical and pre-clinical students, so their progression through medical school wouldn’t be impeded.”

This included the creation of a course in disaster medicine, conducted in partnership with the Federal Emergency Management Agency and the Center for Domestic Preparedness in Anniston. “We wanted to do something that would engage the students to learn from this experience,” Hoesley says. “Our emergency medicine physicians helped develop an online disaster medicine course that many of our students took. They learned about ways to manage a pandemic, as well as the principles around the epidemiology of epidemics and infectious diseases.”

With clinic work on hold, many medical students volunteered for efforts that were not part of their official classwork. This included organizing blood drives and PPE drives, calling patients to schedule and report the results of COVID testing, working as contact tracers, taking meals to senior citizens concerned about venturing out, and even supporting faculty who didn’t have access to childcare.

Though it was three months before the students could return to clinic duty and some in-person classroom instruction in June, Hoesley says they still received a valuable education during that time away.

“Our students understood why they needed to come out of the clinic in March, but they also wanted to help,” Hoesley says. “They had to deal with this disruption in the curriculum and continue to meet their learning objectives, but at the same time they were fully engaged in ways to safely support our efforts to deal with the pandemic in our community.”

“From many of the students I’ve talked to, if anything this has really strengthened our resolve to be part of the medical community,” says fourth-year medical student Graham Kirchner. “It’s really been affirming to see how practitioners individually and the medical community as a team have come together to support patients. It’s been a positive affirmation in my choice of a career, to see the kind of impact we can have.”

Residents also had to quickly adapt to a new way of treating patients. Along with an increased use of masks and other PPE equipment (as well as social distancing as much as possible with co-workers), there has been a reduction in the ability of residents to offer hands-on treatment.

“To minimize exposure, a lot of times we talk with patients through the window instead of going into the room,” says Salmaan Kamal, M.D., an internal medicine resident. “It’s been a challenge to not connect with patients each day. That’s been the biggest change.”

One thing that has not changed, however, is the school’s commitment to educating medical students and treating patients. “I’ve been really proud of how my co-residents and UAB leadership and medical staff have approached this pandemic,” Dr. Kamal says. “Everybody has been willing to help and put in extra hours, sometimes without knowing how long they’d have to do that. Everybody at UAB has really responded and stepped up.” – *Cary Estes*









NEVER STOP  
*innovating*



Drew McDonald (left), a father of two from Trussville, Alabama, agreed to participate in UAB's remdesivir clinical trial while he was being treated for COVID-19 at UAB in March.



## REMDESIVIR'S UAB CONNECTION

By now, most of us have heard of the antiviral medication remdesivir, the first drug that was FDA-approved to treat patients with COVID-19. What many don't know is that the research that led to remdesivir being identified as a treatment for COVID-19 has an important connection to UAB.

Remdesivir was developed by Gilead Sciences more than 10 years ago, primarily to treat Hepatitis C and respiratory syncytial virus. In 2014, Gilead entered into collaboration with the UAB-led Antiviral Drug Development and Discovery Center (AD3C), headed by Richard Whitley, M.D., distinguished professor at UAB, to study remdesivir against coronaviruses, including SARS and MERS. Gilead provided molecules that were tested at laboratories at Vanderbilt University and the University of North Carolina at Chapel Hill under the aegis of the AD3C. Based on those study results, in 2016-2018, the NIH conducted research of remdesivir against MERS infection in an animal model. These earlier studies enabled remdesivir to more quickly be tested and approved for human use as a treatment for COVID-19 when the 2020 pandemic struck.

Thanks to its UAB connection, UAB was chosen as a site for an NIH-sponsored global clinical trial of remdesivir in March. That same month, Drew McDonald of Trussville, Alabama, started noticing backaches and body pains along with a low-grade fever after dinner on a Friday night. The father of two went to bed and woke up the next morning to a fever of more than 102, and aches that he recalls "hitting" his bones.

"I had just had the flu in February and knew that what I was feeling was just so much more intense and onset than the flu,"

McDonald recalls. "I had a gut feeling that it was COVID-19, and after seeking medical attention and self-isolating for several days, it was confirmed that my body was battling this new virus."

Upon admission to UAB, McDonald was approached by Division of Infectious Diseases physicians about potentially enrolling in the remdesivir clinical trial. "Drew stood out because his immediate inclination when approached about the study was that he wanted to participate to help others who would inevitably be in his position in the future," says Nathan Erdmann, M.D., who supported enrollment and oversaw the trial during its duration. "The trial process, by definition, involves a degree of uncertainty, and this can be intimidating to potential participants."

McDonald began an intravenous infusion daily for three or so days before he was healthy enough to be discharged home. Because the trial was randomized, double-blinded, and placebo-controlled, McDonald and his doctors still are unsure if he received remdesivir or placebo as part of his role in the trial. However, McDonald is still glad he could participate in the trial.

"I had confidence in the research being done at UAB. Sometimes we hear conflicting information, whether from social media or different news outlets that we are listening to; but these doctors who are approaching people like me to enroll in a trial live and breathe this every day and truly want to find the answer," McDonald says. "Helping research in any way, if anyone has the capacity, that's how we get answers and how drugs get discovered. I'm grateful for all that UAB is doing to help further research and save lives." – Savannah Koplon, Adam Pope



# COVID-19 VACCINE CANDIDATE BEGINS FIRST CLINICAL STUDY

A COVID-19 vaccine candidate that underwent extensive preclinical testing at UAB in the spring and summer was scheduled to begin clinical testing in December. Biopharmaceutical company Altimmune Inc., submitted an Investigational New Drug, or IND, application to the FDA to commence a Phase 1 clinical study of its single-dose intranasal COVID-19 vaccine candidate, AdCOVID.

The UAB preclinical study for Altimmune showed that AdCOVID stimulated a broad immune response, including both systemic immunity—as shown by neutralizing antibodies in the blood—as well as local immunity, featuring mucosal IgA and resident memory T-cells in the nasal cavity and respiratory tract.

Intranasal vaccination is an attractive strategy for COVID-19, as the nasal mucosa represents the first-line barrier to SARS-CoV-2 entry before viral spread to the lung. “It’s not widely known or appreciated that nasal mucosal immunity may be essential in preventing the spread of the SARS-CoV-2 virus to other individuals by stopping replication and transmission of the virus at the site of infection — the nose and respiratory tract,” says Fran Lund, Ph.D., leader of the UAB preclinical work, and the Charles H. McCauley Professor and Chair for the UAB Department of Microbiology. “Several recent studies have shown that, in the absence of mucosal immunity, the nasal cavity may become a reservoir for the coronavirus, particularly in children,

potentially allowing for disease transmission even after an intramuscular vaccination.”

“A vaccine that prevents transmission by children would allow them to return to school and their parents to return to work,” Lund says. “We are excited to collaborate with Altimmune on the advancement of this important next-generation vaccine and look forward to seeing data from the upcoming clinical study.”

Vipin Garg, Ph.D., president and chief executive officer of Altimmune, says, “We’ve made exceptional progress advancing AdCOVID and are on track to begin a Phase 1 clinical study this year, with a data readout anticipated in the first quarter of 2021. While the progress being reported with current vaccines is very encouraging, many in the scientific and medical communities agree that there is continued need for next-generation vaccines that offer significant enhancements.”

Last spring and summer, 24 researchers from six labs at UAB—all working under UAB COVID-19 safety protocols—and eight researchers at Altimmune tested the potential COVID-19 vaccine in a collaboration that was announced March 30. “The goal,” Lund said at the time, “is to get the data to Altimmune as rapidly as possible, so they will use the information gained from the preclinical study to design their clinical trial in people.” – *Jeff Hansen*







NIH Director Francis Collins  
visited the School of  
Medicine on March 6.

## NIH LEADERS SPEAK AT UAB

Several high-profile visitors in 2020 highlighted the growing scope and prestige of the School of Medicine's research enterprise. Speaking to a packed audience on March 6, Francis Collins, M.D., Ph.D., director of the National Institutes of Health (NIH), shared his picks of 10 "areas of particular excitement and promise" in biomedical research. In nearly every area, UAB scientists are helping to lead the way, as Collins himself noted in several cases. Collins concluded his talk by sharing his advice for young scientists, including the suggestion that, "Every investigator needs to be pretty comfortable with some of the computational approaches to science. Big data is here—artificial intelligence, machine-learning. We can all get into that space. But it's going to take some training, and it will be really helpful to have those skills."

### Collins' top 10 list includes:

1. Single-cell sequencing
2. New ways to see the brain
3. Induced pluripotent stem cells
4. Microbiome advances
5. Influenza vaccines
6. Addiction prevention and treatment of pain
7. Cancer immunotherapy
8. The All of Us Research Program
9. Rare diseases
10. Diversity in the scientific workforce

In addition to his public talk, Collins had breakfast with UAB medical students, heard research presentations from senior faculty, had lunch with graduate students and postdoctoral fellows, including M.D./Ph.D. students, and discussed strategic directions with UAB research leaders. "I am eager to meet with you," he told a group of junior faculty. "UAB is one institution we are particularly

interested in seeing flourish."

On October 28, Anthony Fauci, M.D., director of the NIH's National Institute of Allergy and Infectious Diseases, and Kathleen Neuzil, M.D., director for the Center for Vaccine Development and professor in the Departments of Medicine and Pediatrics at the University of Maryland School of Medicine, delivered keynote addresses to more than 2,000 trainees, faculty, staff, and invited guests as part of UAB's virtual COVID-19 Research Symposium. The symposium highlighted COVID-19 research and clinical trials on a global, national, and institutional level. Speakers discussed and presented on topics such as the NIH's involvement in research since the onset of COVID-19, global vaccine development, basic science surrounding COVID-19, therapeutics, and population health.

Fauci gave the symposium's kickoff keynote address, speaking for almost 20 minutes on the public health and scientific challenges of the historic COVID-19 pandemic and what's next—which he said he hoped would be a vaccine candidate in the very near future.

Neuzil concluded the symposium with a second keynote address highlighting the work on national COVID-19 vaccines. She noted in her talk that "UAB has been a major player" in vaccine trial design and execution due to the leadership role played by UAB faculty in groups including the Infectious Diseases Clinical Research Consortium and HIV Prevention Trials Network.

"The fact that two prominent national leaders such as Dr. Fauci and Dr. Neuzil were keynote speakers at the UAB COVID-19 Research Symposium speaks not only to the importance and timeliness of the topic but also to the critical role that UAB is playing in the effort to combat this pandemic," says Christopher Brown, Ph.D., vice president for Research at UAB. The full video of the symposium is available on the School of Medicine's YouTube page.

— Tyler Greer, Jeff Hansen, Matt Windsor

# FEATURED DISCOVERY WINNERS 2020

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

**1 Resident macrophages reprogram toward a developmental state after acute kidney injury**

JCI insight, January 2019, Volume 4, Issue 2

Jeremie Lever, Travis Hull, Ravindra Boddu, Mark Pepin, Laurence Black, Oreoluwa Adedoyin, Zhengqin Yang, Amie Traylor, Yanlin Jiang, Zhang Li, Jacelyn Peabody, Hannah Eckenrode, David Crossman, Michael Crowley, Subhashini Bolisetty, Kurt Zimmerman, Adam Wende, Michal Mrug, Bradley Yoder, Anupam Agarwal, James George

**2 Immunoglobulin light chains generate proinflammatory and profibrotic kidney injury**

The Journal of Clinical Investigation, June 2019, Volume 129, Issue 7

Wei-Zhong Ying, Xingsheng Li, Sunil Rangarajan, Wenguang Feng, Lisa Curtis, Paul Sanders

**3 Defining Genetic Variation in Widely Used Congenic and Backcrossed Mouse Models Reveals Varied Regulation of Genes Important for Immune Responses**

Immunity, July 2019, Volume 51, Issue 1

Danielle Chisolm, Wayne Cheng, Shelby Colburn, Aaron Silva-Sanchez, Selene Meza-Perez, Troy Randall, Amy Weinmann

**4 Glomerular immunodeposits of patients with IgA nephropathy are enriched for IgG autoantibodies specific for galactose-deficient IgA1**

Journal of the American Society of Nephrology, October 2019, Volume 30, Issue 10

Dana Rizk, Manish Saha, Stacy Hall, Lea Novak, Rhubell Brown, Zhi-Qiang Huang, Huma Fatima, Bruce Julian, Jan Novak

**5  $\beta$ -amyloid redirects norepinephrine signaling to activate the pathogenic GSK3 $\beta$ /tau cascade**  
**Science Translational Medicine, January 2020, Volume 12, Issue 526**

Fang Zhang, Mary Gannon, Yunjia Chen, Shun Yan, Sixue Zhang, Wendy Feng, Jiahui Tao, Bingdong Sha, Zhenghui Liu, Takashi Saito, Takaomi Saido, C. Dirk Keene, Kai Jiao, Erik Roberson, Huaxi Xu, Qin Wang

**6 Ventral hippocampal projections to the medial prefrontal cortex regulate social memory**

eLife, May 21 2019

Mary Phillips, Holly Anne Robinson, Lucas Pozzo-Miller

**7 TREK-1 and TRAAK Are Principal K<sup>+</sup> Channels at the Nodes of Ranvier for Rapid Action Potential Conduction on Mammalian Myelinated Afferent Nerves**

Neuron, December 2019, Volume 104, Issue 5

Hirosato Kanda, Jennifer Ling, Sotatsu Tonomura, Koichi Noguchi, Sadis Matalon, Jianguo Gu

**8 Mitochondrial Oxidative Phosphorylation Regulates the Fate Decision between Pathogenic Th17 and Regulatory T Cells**

Cell Reports, February 2020, Volume 30, Issue 6

Boyoung Shin, Gloria Benavides, Jianlin Geng, Sergei Korolov, Hui Hu, Victor Darley-Usmar, Laurie Harrington

**9 Structure of the host cell recognition and penetration machinery of a Staphylococcus aureus bacteriophage**

PLoS Pathogens, February 2020, Volume 16, Issue 2

James Kizziah, Keith Manning, Altaira Dearborn, Terje Dokland

**10 PRDM16 suppresses HIF-targeted gene expression in kidney cancer**

Journal of Experimental Medicine, June 2020, Volume 217, Issue 6

Anirban Kundu, Hyeyoung Nam, Sandeep Shelar, Darshan Chandrashekar, Garrett Brinkley, Suman Karki, Tanecia Mitchell, Carolina Livi, Phillip Buckhaults, Richard Kirkman, Yawen Tang, Glenn Rowe, Shi Wei, Sooryanarayana Varambally, Sunil Sudarshan

**11 Identification of an Anti-diabetic, Orally Available Small Molecule that Regulates TXNIP Expression and Glucagon Action**

Cell Metabolism, September 2020, Volume 32, Issue 3

Lance Thielen, Junqin Chen, Gu Jing, Omar Moukha-Chafiq, Guanlan Xu, SeongHo Jo, Truman Grayson, Brian Lu, Peng Li, Corinne Augelli-Szafran, Mark Suto, Matt Kanke, Praveen Sethupathy, Jason Kim, Anath Shalev

**12 Fluid-electrolyte homeostasis requires histone deacetylase function**

JCI insight, July 2020, Volume 5, Issue 16

Kelly Hyndman, Joshua Speed, Luciano Mendoza, John Allan, Jackson Colson, Randee Sedaka, Chunhua Jin, Hyun Jun Jung, Samir El-Dahr, David Pollock, and Jennifer Pollock





## DESIGNING A CLEAR MASK WITH SMART CAPABILITIES

An entirely transparent facemask designed by Rubin Pillay, M.D., Ph.D., chief innovation officer in the School of Medicine, and produced by Birmingham firm Fitz-Thors Engineering Inc. could revolutionize masking and monitoring for COVID-19 symptoms, Pillay says.

Unlike other clear mask models, which still feature white or colored straps, Pillay's masks feature a clear plastic mouth covering and clear nose barriers, chin barriers, and ergonomic looped arms that secure around a wearers' ear. The looped design allows the wearer to easily lift the mask without removing it entirely to eat or drink.

"We started working on this idea around March or April," Pillay says, adding that his initial idea was N95 mask nasal inserts before it grew into the current design. "We followed the whole innovation process—we spoke to physicians, clinicians, and the average layperson. It truly transforms masking. We wanted it to be fully transparent, functional, and ergonomic."

Pillay designed the mask to be modular: The basic version includes just the mask itself. For more protection, the wearer

can attach N95 filter cushions around the mask barrier for use in a health care setting. Another modification allows the wearer to swap the mask arms for ones with sensors that monitor temperature and pulse for early detection of viral infections such as COVID-19. The modifications for the basic mask will be sold separately, Pillay says, so buyers can customize the mask for their own specific needs.

"I had this dream of a 'smart mask,'" says Pillay, who worked with UAB Department of Materials Science and Engineering Chair Brian Pillay, Ph.D., on later versions of the mask design. "I figured there had to be a better way to mask. The smart version of this clear mask is the equivalent of having a Fitbit around your head."

Outside of providing a barrier protection against in-person transmission of viral infections such as COVID-19, Pillay says the data gathered by the masks' sensors could transform the diagnostic process.

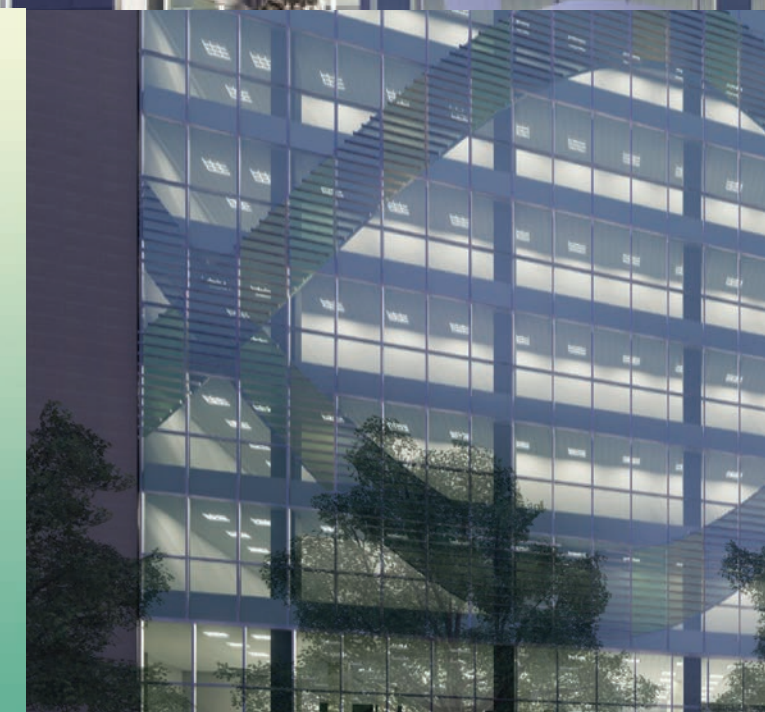
"I think with the data we collect, we can develop digital diagnostic data to diagnose COVID-19, and people wouldn't need to queue for testing," he explains. – *Haley Herfurth*



TEC | STYSLINGER GENOMIC MEDICINE AND DATA SCIEN



LYONS-HARRISON TO





# UAB GENOMIC MEDICINE GARNERS MAJOR INVESTMENT

A planned Genomic Medicine and Data Sciences Building at the University of Alabama at Birmingham (UAB) is expected to have a profound effect on the health care of residents of Alabama and beyond. Governor Kay Ivey announced in November that the project will receive \$50 million in state funding from the Public School and College Authority. Jefferson County leaders previously committed \$5 million.

“The Altec Styslinger Genomic Medicine and Data Sciences Building represents the future of modern health care, and the combined support from our local and state elected officials and private donors is truly an investment in the lives of every Alabama citizen,” says UAB President Ray Watts, M.D. “This facility will accelerate advancements in precision medicine, informatics, and data sciences as we gain greater understanding of the roles our genes and the environment play in major human diseases.

“The University of Alabama System and Board of Trustees made this transformational project a top priority,” Watts continues. “We share a great appreciation for Governor Ivey’s affirmation and visionary leadership, along with that of our Jefferson County legislative delegation, the Jefferson County Commission, and our Birmingham business community. This support will allow UAB and Alabama to be a leader in the future of precision medicine.”

UAB Senior Vice President of Medicine and School of Medicine Dean Selwyn Vickers, M.D., FACS, estimates the building will support more than 50 additional leading researchers and 300 research support staff, and an increase of \$75-\$85 million in research funding. “The facility will be pivotal to recruiting and retaining high-level researchers,” Vickers says. “We are already

on the leading edge, but this facility will increase our competitive advantage in supporting researchers who will bolster our local economy.”

“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. “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.”

Previously, the School of Medicine and the HudsonAlpha Institute for Biotechnology partnered to create the Center for Genomic Medicine in 2014 with the primary mission of conducting research and facilitating translation of research findings into clinical practice. UAB also established the Hugh Kaul Precision Medicine Institute and the UAB Informatics Institute in 2014. In 2017, UAB and HudsonAlpha received state funding to launch the Alabama Genomic Health Initiative, one of the nation’s first statewide efforts to harness the power of genomic analysis to help identify those at high risk for a genetic disease and provide a basis for continuing research into genetic contributors to health and disease. The following year, UAB joined the National Institutes of Health All of Us Research Program as the lead institution of the Southern All of Us network.

The Altec Styslinger Genomic Medicine and Data Sciences Building will house the Hugh Kaul Precision Medicine Institute and the Informatics Institute, along with many of their investi-

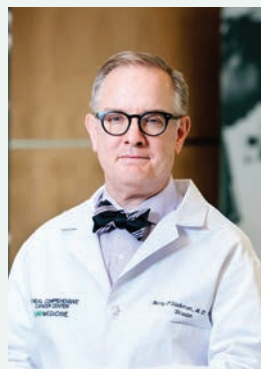
gators. The facility will also be home to faculty in translational science and staff from the Bill L. Harbert Institute for Innovation and Entrepreneurship and Office of Sponsored Programs.

The new facility will involve renovation of the existing Lyons-Harrison Research Building. It will encompass 145,000 square feet of new computational research, research support, office, administrative, and scientific collaboration and meeting spaces designed to meet the specific needs of genomics and precision medicine investigators and their programs. Construction costs are \$52.1 million, and the total cost of the project will be \$75 million. – *Bob Shepard*



# NEW LEADER HELMS CANCER CENTER

Barry Sleckman, M.D., Ph.D., began his new role as director of the O'Neal Comprehensive Cancer Center at UAB in January 2020. Sleckman, formerly associate director of the Meyer Cancer Center at Weill Cornell Medicine, is a world-renowned researcher who focuses on understanding how DNA double-strand breaks are generated and repaired—a topic important for cancer and immune system development and function.



**Barry Sleckman**

“UAB is a phenomenal institution and a rapidly growing research powerhouse, fueled in part by the more than 400 talented physician-scientists and researchers at the O'Neal Comprehensive Cancer Center,” Sleckman says. “Their groundbreaking research and treatments have far-reaching and transformational impact on cancer research and patient care in Alabama, and beyond, every day.”

Sleckman completed his M.D. and Ph.D. in immunology at Harvard Medical School. He completed his residency in internal medicine and fellowship in infectious diseases at Brigham and Women's Hospital. After completing his postdoctoral training in molecular immunology in the laboratory of Dr. Frederick Alt at Boston Children's Hospital, Sleckman started his own laboratory in 1998 as an assistant professor in the Department of Pathology and Immunology at the Washington University School of Medicine.

In addition to his role as associate director of the Meyer Cancer Center, Sleckman held positions as professor of pathology and laboratory medicine and professor of microbiology and immunology at Weill Cornell Medicine. Prior to that, he was associate director of the Siteman Cancer Center at Washington University for 10 years. He moved to Weill Cornell in 2015.

The O'Neal Comprehensive Cancer Center at UAB is one of the original eight National Cancer Institute-designated comprehensive cancer centers in the U.S. It is among the nation's leading cancer research institutions and one of only 51 NCI-designated comprehensive cancer centers. It has been continuously funded for 48 years.

“It's an honor to have an opportunity to lead a cancer center that is recognized as among the nation's best,” Sleckman says. “We will continue the work to achieve the O'Neal Comprehensive Cancer Center vision to eliminate cancer as a major public health problem. To do this, the O'Neal Comprehensive Cancer Center must catalyze important cancer discoveries across diverse centers, departments and schools on the UAB campus and then translate these discoveries into innovative cancer therapies in close partnership with the UAB Health System.” – *Anna Waters*



## CELEBRATING PROTON THERAPY FIRST

The UAB Proton Center treated its first patient with proton therapy on March 11. “We celebrate this first of many patients who will be treated at UAB with this advanced technology,” said Will Ferniany, Ph.D., CEO of UAB Health System. “With this technology, we will improve the quality of life for many cancer patients and their families in Alabama and the Southeast.” As of December 1, 94 people have completed treatment, coming from as far away as Hawaii and Turkey.

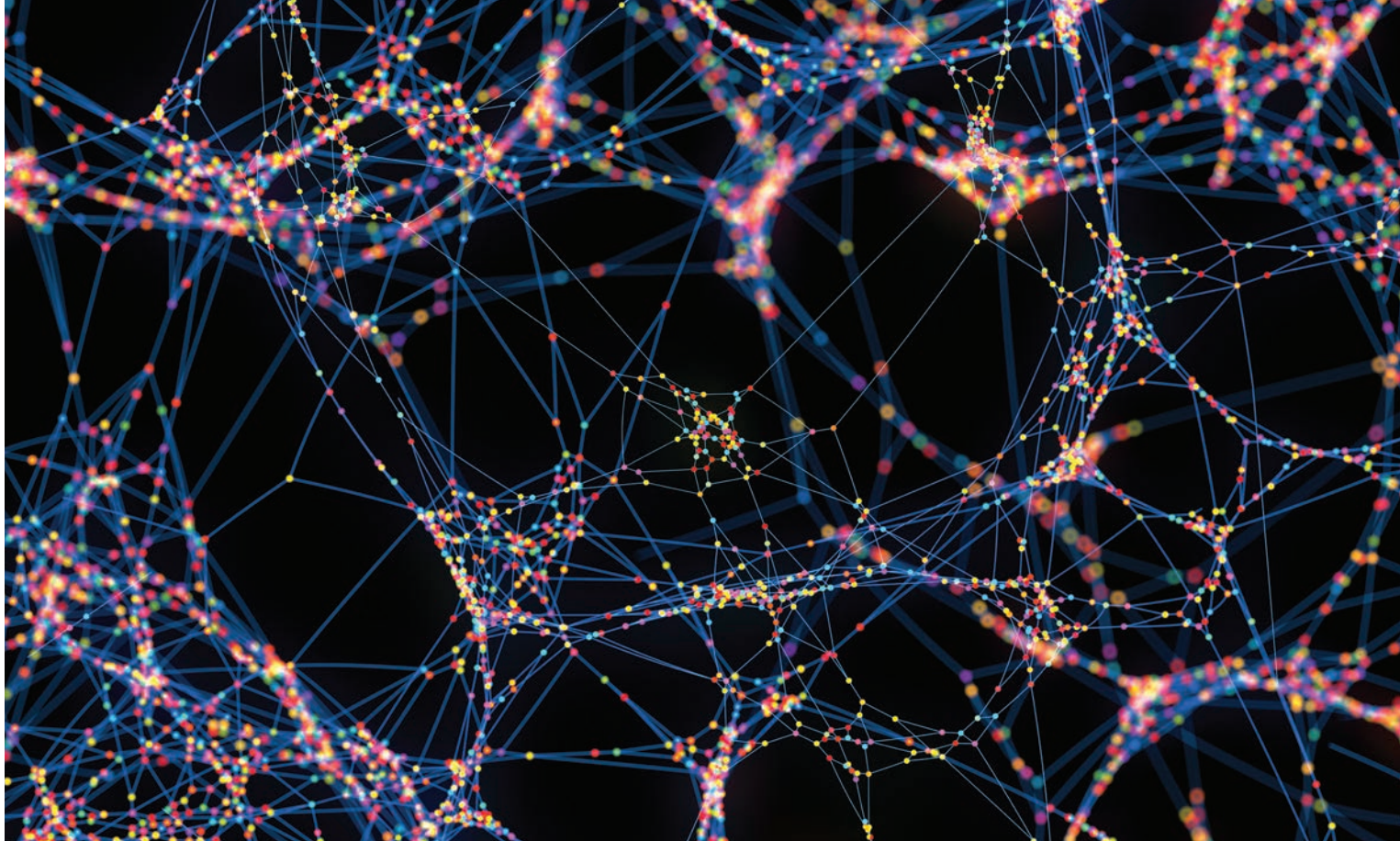
The UAB Proton Center is the first center in Alabama to offer proton therapy and one of only 35 centers in the U.S. to offer this advanced cancer therapy. The location also provides added convenience to patients who may need to access additional services at UAB's medical campus.

“This is an exciting moment in the history of the O'Neal Comprehensive Cancer Center at UAB,” said James Bonner, M.D., professor and chair of the UAB Department of Radiation Oncology. “This new treatment platform allows us to offer patients cancer care with the latest technology.”

Proton therapy uses highly precise proton beams instead of traditional X-rays to treat the tumor, leading to more precise and conformal treatment of the tumor with less dose to normal tissues. Proton therapy is used to treat tumors of the brain and central nervous system, spine, head and neck, lung, prostate, liver, gastrointestinal tract and colon, and some breast tumors. The center's technology platform is Varian Medical Systems new and innovative ProBeam 360 that incorporates new advances for precise treatment.

“Proton International is focused on a singular mission: to bring this important and relevant technology to more people who can benefit from it,” said Chris Chandler, CEO of Proton International. “The fact that we can now make this available to the residents of Alabama and the surrounding areas is a mission fulfilled. The talented physicians and their team will now be able to use this outstanding tool to improve short- and long-term cancer outcomes for patients and their families.” – *Bob Shepard*





## UAB NAMED ALZHEIMER'S DISEASE RESEARCH CENTER

The National Institute on Aging, part of the NIH, named UAB as an exploratory Alzheimer's Disease Research Center (ADRC). The UAB exploratory ADRC joined the network of 31 ADRCs in 21 states, and is the only exploratory ADRC in the four-state region of Alabama, Mississippi, Arkansas, and Louisiana.

ADRCs are located at major medical institutions across the U.S. Researchers at these centers work to translate research advances into improved diagnosis and care for people with Alzheimer's disease and related dementias, as well as to find ways to treat and possibly prevent the diseases. They also contribute to major national neurodegenerative disease research initiatives.

"The establishment of an exploratory ADRC at UAB is an extremely important step in managing this debilitating disease," says Selwyn Vickers, M.D., FACS, senior vice president for Medicine and dean of the UAB School of Medicine. "People born in the Deep South have a higher risk for Alzheimer's disease, and African Americans have a particularly high risk, due in part to the prevalence of diseases that contribute to dementia, such as hypertension, diabetes and cardiovascular disease."

The UAB exploratory center will focus on racial disparities in Alzheimer's disease throughout the Deep South, with stud-

ies that will collect data and follow study participants over time to better understand and then reduce these disparities.

"UAB has a long history of patient care and research into Alzheimer's disease," says Erik Roberson, M.D., Ph.D., Rebecca Gale Professor in the Department of Neurology and the center director. "Our relationships with the UAB Integrative Center for Aging Research, UAB Neurology's Memory Disorders Clinic and Center for Neurodegeneration and Experimental Therapeutics, Southern Research Institute, and HudsonAlpha Institute for Technology provide us with tools and expertise that will be invaluable in conducting the kind of research that can bring about meaningful change in our understanding of this disease, and the way we can treat it."



Erik Roberson

Areas of investigation range from the basic mechanisms of disease to managing the symptoms and helping families cope with the effects. Researchers at the UAB exploratory ADRC will conduct basic, clinical, translational, and behavioral research and train the next generation of scientists.

Among the tools that will be employed in the exploratory ADRC's research projects are genetic sequencing, cognitive screens, medical histories, physical examinations, blood draws for genetic tests, and brain imaging with MRI and PET scans.

– Bob Shepard

# WELCOMING LEADERS



VICTOR DARLEY-USMAR, PH.D., a professor in the Department of Pathology, was named senior associate dean for Research Compliance and Administration. He has been continuously funded by the NIH for 22 years and has published over 300 articles with an H factor of over 100 and over 35,000 citations.



LAKISHA MACK, MBA, was named senior associate dean for Finance and Administration. In this role, she ensures policy compliance, participates in strategic planning, and collaborates with the university and health system on all administrative and financial activities.



VIKAS DUDEJA, M.D., was named director of the Division of Surgical Oncology (Surgery). As a professor at the University of Miami, Dudeja served as co-director of Surgical Grand Rounds, chair of the Institutional K12 Mentorship Committee, chair of the Program Evaluation Committee, and associate program director of the Surgical Oncology Fellowship.



WICK MANY JR., M.D., was named interim regional dean of the Montgomery Regional Medical Campus (MRMC). He previously served as regional dean of the MRMC from its creation in October 2012 until his retirement in December 2017.



ANINDYA DUTTA, PH.D., MBBS, was named chair of the Department of Genetics. Dutta officially joins UAB on March 15, 2021 from the University of Virginia School of Medicine, where he serves as the chair of the Department of Biochemistry and Molecular Genetics.



MARISA MARQUES, M.D., was named interim director of the Division of Laboratory Medicine (Pathology). Marques joined UAB in 1993 from a fellowship at Harvard Medical School. She is a professor of Pathology at UAB, serving as medical director of Transfusion Services.



ANDREW EDWARDS, M.D., was named interim chair for the Department of Emergency Medicine. He joined UAB in 2003 following residency at the University of Louisville School of Medicine, and currently serves as professor and vice chair for education in the department.



DANIELLE POWELL, M.D., MSPH, associate professor in the Department of Physical Medicine and Rehabilitation, was named interim chair of the Department of Physical Medicine and Rehabilitation. Powell also is the associate program director for the Physical Medicine and Rehabilitation residency program.



WARNER HUH, M.D., was named chair of the Department of Obstetrics and Gynecology. He joined UAB in 2002 and has served as vice chair of Gynecology, the Margaret Cameron Spain Endowed Chair in the Department of Obstetrics and Gynecology, professor in the Department of Surgery, professor in the Department of Epidemiology at the UAB School of Public Health, director of the UAB Comprehensive Ovarian Cancer Program, senior scientist for the O'Neal Comprehensive Cancer Center, and medical director of the O'Neal Cancer Service Line.



KENNETH SAAG, M.D., MSC, was named director of the Division of Clinical Immunology and Rheumatology (Medicine). Saag is the Jane Knight Lowe Professor and serves as vice chair of Outcomes and Effectiveness Research in the Department of Medicine.



ERIN SHAUGHNESSY, M.D., was named director of the Division of Pediatric Hospital Medicine (Pediatrics). She joined UAB and Children's of Alabama from Phoenix Children's Hospital and the University of Arizona College of Medicine-Phoenix.



ADRIENNE LAHTI, M.D., was named chair of the Department of Psychiatry and Behavioral Neurobiology. Lahti is the F. Cleveland Kinney Endowed Chair and has served as interim chair for the department since March 1, 2020. She joined UAB in 2006 from the Maryland Psychiatric Research Center, University of Maryland in Baltimore.



BARRY SLECKMAN, M.D., PH.D., was named director of the O'Neal Comprehensive Cancer Center at UAB. He joined UAB from the Meyer Cancer Center at Weill Cornell Medicine, where he was associate director.



# AWARDS & ACCOLADES

ANUPAM AGARWAL, M.D., professor and director of the Division of Nephrology (Medicine), and executive vice dean in the School of Medicine, served as the president of the American Society of Nephrology for 2020.

MONICA BASKIN, PH.D., professor in the Division of Preventive Medicine (Medicine), became president of the Society for Behavioral Medicine.

SMITA BHATIA, M.D., professor in the Division of Pediatric Hematology-Oncology (Pediatrics), was selected by the American Society for Transplantation and Cellular Therapy Survivorship Special Interest Group to receive the inaugural Lifetime Achievement Award.

CHERI CANON, M.D., professor and chair, and Witten-Stanley Endowed Chair of Radiology in the Department of Radiology, was elected the second woman president of the Society of Chairs of Academic Radiology Departments, a role in which she will serve for two years. She also was selected to receive the 2020 Marie Skłodowska-Curie Award, the American Association for Women in Radiology's highest honor.

ROBERT CENTOR, M.D., professor emeritus, received the Jane F. Desforges Distinguished Teacher Award from the American College of Physicians.

TAMERA COYNE-BEASLEY, M.D., professor in the Division of Adolescent Medicine (Pediatrics), was elected to the board of directors of the National Foundation for Infectious Diseases.

SHAWN GALIN, PH.D., professor in the Division of Pulmonary, Allergy and Critical Care Medicine (Medicine) and the director of the Office of Standardized Patient Education, was named president-elect of the global Association of Standardized Patient Educators.

CHRISTOPHER GIRKIN, M.D., MSPH, professor and chair of the Department of Ophthalmology and Visual Sciences, and the Eyesight Foundation of Alabama Chair, was elected to lead the American Glaucoma Society as president beginning in 2022. He will serve as president-elect for the 2021-2022 term.

ANAND IYER, M.D., MSPH, assistant professor in the Division of Pulmonary, Allergy and Critical Care Medicine (Medicine), is the first UAB recipient of the Paul B. Beeson Emerging Leaders Career Development Award in Aging in the award's 25-year history.

LANNING KLINE, M.D., was appointed chair of the American Board of Ophthalmology for 2020.

C. SETH LANDEFELD, M.D., chair of the Department of Medicine and the Spencer Chair in Medical Science Leadership, received a mastership from the American College of Physicians.

BENJAMIN LARIMER, PH.D., assistant professor in the Department of Radiology, received the NIH Director's New Innovator Award, which provides \$1.5 million in research funding over a five-year period.

HOLLY RICHTER, PH.D., M.D., professor in the Division of Urogynecology and Pelvic Reconstructive Surgery (Obstetrics and Gynecology), was named president of the American Urogynecologic Society.

RODNEY TUCKER, M.D., professor in the Division of Gerontology, Geriatrics, and Palliative Care (Medicine), served as president of the American Academy of Hospice and Palliative Medicine.

SELWYN VICKERS, M.D., FACS, senior vice president for Medicine and dean of the School of Medicine, and James C. Lee, Jr., Endowed Chair, served as president of the American Surgical Association for 2020-2021.

RICHARD WHITLEY, M.D., distinguished professor in the Division of Pediatric Infectious Diseases (Pediatrics), received the 2020 National Foundation for Infectious Diseases John P. Utz Leadership Award.

LISA WILLETT, M.D., MACM, professor in the Department of Medicine and the program director for the Tinsley Harrison Internal Medicine Residency Program, served as president of the Association of Program Directors in Internal Medicine.

LAURA DREER, PH.D., associate professor and director of Psychological and Neuropsychology Clinical Research Services in the Department of Ophthalmology and Visual Sciences, was invited to serve as an expert advisory board member for the Prevent Blindness A.S.P.E.C.T. Patient Engagement Program.

KIMBERLY HENDERSHOT, M.D., assistant professor in the Division of Acute Care Surgery, was named an associate member in the new American College of Surgeons Academy of Master Surgeon Educators.

LOUIS JUSTEMENT, PH.D., professor in the Department of Microbiology, was elected to the Graduate Research, Education and Training (GREAT) Group Steering Committee as a Member-at-Large.

CARLOS ORIHUELA, PH.D., professor in the Department of Microbiology and vice chair of Faculty Development, was selected as a Distinguished Lecturer for the American Society of Microbiology for the years 2020-2022.

SUMMER THYME, PH.D., assistant professor in the Department of Neurobiology, was awarded the Klingenstein-Simons Fellowship in Neuroscience.

AMY WEINMANN, PH.D., professor in the Department of Microbiology, was selected as chair of the NIH Cellular and Molecular Immunology - B Study Section.

A woman with short dark hair, wearing glasses, a blue lab coat, and purple gloves, is standing at a laboratory bench. She is looking down at something on the bench. The bench is white with a wooden base. On the bench, there is a white printer and some black equipment. Above the bench, there are several shelves made of wood and metal. The shelves are filled with various laboratory supplies, including boxes, containers, and test tubes. The background shows a large window with a view of a brick building. The ceiling has fluorescent lights and some cables hanging from it.

*collaboration*  
FUELS GROWTH





# ALLIANCE FOR BETTER HEALTH

In July, the UAB Health System and Ascension St. Vincent's entered into a strategic alliance that will increase access to high-quality, innovative medical care through multiple outlets and health programs. The new strategic alliance enables the two entities, which have a long history of collaboration, to further enhance patient care and address Alabama's most challenging health threats. The strength of the collaboration between the two health systems has been on display throughout the COVID-19 pandemic, says Jason Alexander, CEO of Ascension St. Vincent's and senior vice president of Ascension.

"Our ability to coordinate our efforts in response to COVID-19 benefited each organization and the patients and communities we serve," Alexander says. "Ascension St. Vincent's was able to leverage our network to obtain personal protective equipment that was urgently needed by both systems but in short supply, and UAB has accepted the majority of the volume of COVID-positive patients. This alliance will now allow us to be able to collaborate even more."

"We have a great opportunity to improve health care delivery in Alabama for our patients and communities, and doing so will make each organization stronger," UAB Health System CEO Will Ferniany says. "Our physicians, staff, and leadership are now better positioned to deliver on our community service-focused missions."

Ferniany and Alexander serve as the administrative leaders of the alliance—Ferniany as CEO/president and Alexander as executive vice president—with coordinated governance and administrative responsibilities. Both say that efficiencies created by the alliance will also strengthen each organization both clinically and financially.

Though the two entities share resources to better serve the community, they maintain separate, yet aligned, operational structures. For example, the medical staffs remain independent at each system, and medical staff privileges to work within each system would be obtained separately. The historic missions of the organizations will be preserved. Ascension St. Vincent's remains a

UABHS facilities retain the UABHS or UAB Medicine brands, while Ascension St. Vincent's facilities continue to be branded as Ascension St. Vincent's. Entities in the alliance include:

**UABHS**

- UAB Hospital
- University of Alabama Health Services Foundation
- Medical West Hospital
- Callahan Eye Hospital, Clinics and Ophthalmology Services Foundation
- Gardendale Freestanding Emergency Department (FED) and Clinics
- Highway 150 Clinics and Medical West Freestanding Emergency Department
- Acton Road
- Primary and Urgent Care Network

**Ascension St. Vincent's**

- St. Vincent's Birmingham
- St. Vincent's East
- St. Vincent's One Nineteen
- St. Vincent's St. Clair
- St. Vincent's Chilton
- St. Vincent's Blount
- St. Vincent's Trussville
- Ascension Medical Group Practices (including St. Vincent's Primary Care Network)
- St. Vincent's Urgent Care

ministry of the Catholic Church, and UABHS remains an academic medical center with public, charitable, and research functions.

The alliance will utilize innovative strategies to address health disparities, mental and behavioral health, and diabetes, with an emphasis on expanded access for poor, vulnerable, and rural populations. -Bob Shepard

# EMERGING APPROACHES TO MANAGING DISEASE

This past summer, UAB joined an NIH consortium aimed at better understanding how to employ genomic risk assessments, especially in minority populations, in managing disease. UAB joined the Electronic Medical Records and Genomics (eMERGE) Genomic Risk Assessment and Management Network, under a \$75 million funding provision over five years. The eMERGE Network, which launched in 2007, is supported by the National Human Genome Research Institute.

The funding builds upon the existing eMERGE Network to support both a coordinating center and clinical sites specifically focused on better understanding disease risk and susceptibility by combining genomic and environmental factors and investigating how future findings can be used to help clinicians and patients manage disease risk.

The funding award established four new clinical sites and six enhanced diversity clinical sites across the U.S. UAB is one of the new enhanced diversity sites, which will recruit a higher percentage of medically underserved patients from diverse ancestries.

Overall, the clinical sites will recruit 25,000 patients. Enhanced diversity sites are charged with recruiting 75% or more subjects from diverse ancestries such as racial or ethnic minority populations, underserved populations, or populations who experience poorer medical outcomes. The sites then conduct

and validate genomic risk-assessment and management methods for several common diseases, such as coronary heart disease, stroke, and diabetes.

“There have been more than 4,000 genome-wide association studies conducted that have enabled the development of polygenic risk scores, which can help predict the future risk of many common diseases,” says Nita A. Limdi, Pharm.D., Ph.D. MSPH, professor of Neurology and Epidemiology, director for the program in Translational Pharmacogenomics, associate director at the UAB Hugh Kaul Precision Medicine Institute, and principal investigator for eMERGE at UAB.

However, Limdi says patients of African descent are dramatically underrepresented by those risk scores. “By engaging the diverse patient population we care for, we have the opportunity to validate, adapt and/or develop polygenic risk scores to predict risk of common diseases for underrepresented populations, specifically African Americans.

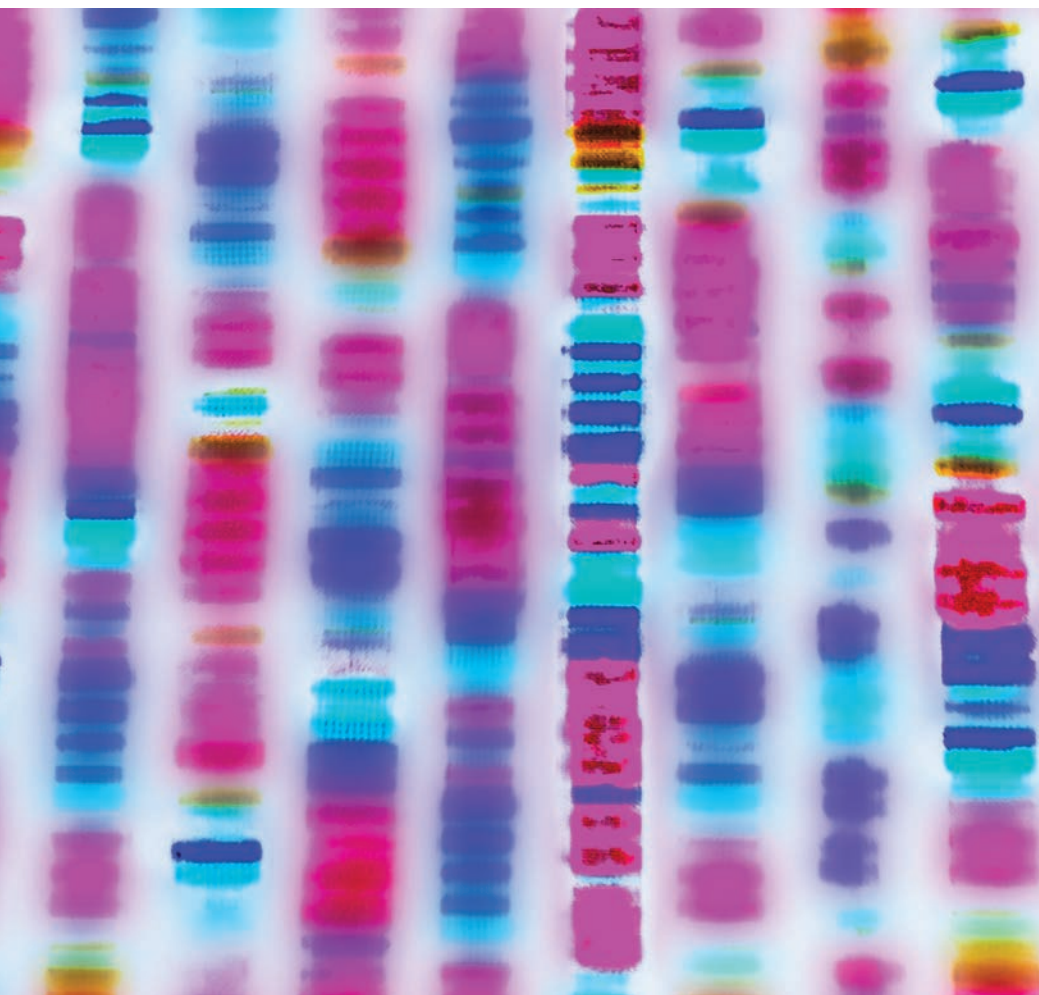
By incorporating known clinical and family history related risk we aim to deploy genome informed risk assessments into the electronic medical record for each patient and tailor disease prevention interventions for patients of all race groups,” Limdi says.

“A key component of this effort will be to determine how to integrate clinical data, genomic risk estimates, and family

history to deliver disease management recommendations into the EMR for clinicians to be able to receive and respond to the information,” says James Cimino, M.D., professor of Medicine, director of the UAB Informatics Institute, and co-PI for eMERGE. “We will be able to leverage UAB’s strengths in precision medicine and informatics to accomplish this goal. The work we do in eMERGE will lead the way for making personalized medicine the standard of care for all patients and conditions.”

“The vital first step to leverage the power of genomics to prevent disease is to use genomic risk assessments to identify and—where appropriate—pre-treat at-risk patients,” Limdi says. “At UAB, we will bring our expertise and experience to collaborate with the eMERGE investigative team to take this vital first step.”

The multidisciplinary eMERGE team is made up of representatives from the School of Medicine, School of Public Health, School of Health Professions, UAB Health System, HudsonAlpha Institute for Biotechnology, and Washington State University. — *Bob Shepard*







# PRECISION MODELING ADVANCES INDIVIDUALIZED TREATMENT

A new Center for Precision Animal Modeling (C-PAM) was created at UAB, supported by a five-year, \$9.3 million grant from the NIH's Office of Research Infrastructure Programs. The UAB C-PAM is one of only three centers in the U.S. funded through a highly competitive NIH program to create national centers for precision disease modeling. UAB submitted a 15-member team proposal led by Brad Yoder, Ph.D., chair of the Department of Cell, Developmental and Integrative Biology, and Matt Might, Ph.D., professor in the Department of Medicine and director of the Hugh Kaul Precision Medicine Institute. Yoder and Might say the new center is a recognition of UAB's national reputation for leadership in both precision medicine and model organism research.

Precision disease modeling involves creation of patient-specific disease models—often using yeast, worms, fruit flies, zebrafish, frogs, mice, or rats—that mimic the molecular character of a condition present in a patient. For example, if a patient has a disease caused by a sequence variant leading to the dysfunction of a gene, then C-PAM will create an animal model with this same genetic variant. Studying the effect that the variant has in the model makes it possible to do science and to screen for potential therapies that is not feasible in the human patient.

Computational capabilities at UAB—including advanced data science and artificial intelligence—will help predict possible treatments that can be tested in the models. Therapies that

help treat the model would then become candidates for treatment of the patient.

By taking advantage of recent advances in genetic engineering at UAB and elsewhere, C-PAM's transformative leap will make animal model research directly available to individual patients and their physicians. The use of such models can confirm tentative or novel diagnoses and aid the search for possible treatments, some of which could be unique to the patient.

Underlying the need for C-PAM is the recognition that every undiagnosed disease program at research universities, including UAB's Undiagnosed Diseases Program, faces a huge problem: While they have identified significant numbers of genomic variants, they still lack sufficient functional evidence for clinical reporting and clinical treatment. The C-PAM approach can reveal whether a genomic variant in a patient is causal of the disease, determine its significance for gene function and disease pathophysiology, and identify and evaluate therapeutic targets.

A distinguishing feature of the UAB C-PAM is the establishment of direct interfaces and services for physicians and patients, in addition to services for other scientists. C-PAM will allow a treating physician to request the creation of a customized model for a patient, and the physician can work with C-PAM to further understand the disease and potential treatment. – *Jeff Hansen*

# REGIONAL CAMPUSES SPOTLIGHT

The School of Medicine is a four-campus medical school: UAB as the main campus and three regional campuses in Huntsville, Montgomery, and Tuscaloosa (The University of Alabama). All students spend their first two years of medical school in Birmingham and are assigned to one of the four campuses for their last two clinical years. The regional campuses are critical to the school's mission to expand access to primary care in Alabama; research has shown that medical students tend to practice where they train (especially for residency), so the school exposes students to different parts of the state in the hopes they may practice there, especially in underserved areas.

**HUNTSVILLE**—One of the earliest regional campuses in the country and home to the UAB Health Center Huntsville, the largest multispecialty practice in the region, the Huntsville Regional Medical Campus (HRMC) is home to the Huntsville Rural Medicine Program for students from rural backgrounds, and offers established residency programs in family medicine and internal medicine.

In December, it was announced that internationally recognized physician-scientist Richard Shelton, M.D., will join the HRMC as its first-ever director of research, a new position to help establish clinical investigation and clinical trials in Huntsville.

Shelton is the Charles Byron Ireland Professor in the Department of Psychiatry and Behavioral Neurobiology and founding director of the UAB Depression and Suicide Research Center. He will join the Huntsville campus on March 1, 2021 as a professor of psychiatry and will continue to serve as director of the research center in Birmingham.

**MONTGOMERY**—Situated at a major medical center, Baptist Health, the Montgomery Regional Medical Campus is home to 20

third- and fourth-year medical students as well as the Montgomery Internal Medical Residency Program and the Selma Family Medicine Residency Program. It has over 130 community-based preceptors.

In October 2020, Gustavo Heudebert, M.D., who had led the Montgomery campus since 2017, retired from UAB. Wick Many, M.D., former regional dean of the Montgomery campus, agreed to fill the interim dean role beginning November 1. He previously led the campus from its creation in October 2012 until December 2017. As of November 2020, a national search was underway for a permanent regional dean.

**TUSCALOOSA**—The Tuscaloosa Regional Medical Campus, housed in The University of Alabama's College of Community Health Sciences, is home to the School of Medicine's Primary Care Track, which prepares students for the primary care fields of family medicine, internal medicine, pediatrics, and community-based specialties and subspecialties. Established in the late 1990s, the Rural Medical Scholars Program provides a pipeline of rural community physician leaders.

Research and scholarly efforts of faculty, staff, residents, medical students, and graduate students were highlighted during the 12th Annual Research and Scholarly Activity Day. Held virtually this year due to the pandemic, the Research and Scholarly Activity Day featured presentations on topics ranging from "The Important Role of Black Physicians in HIV Knowledge and Care in Getting to Zero in HIV Infections, Deaths and Stigma," to "Correlation Between Body Mass Index and Carpal Tunnel Syndrome Treatment Efficacy," to "Cardiac Outcomes After COVID-19 in Collegiate Athletes." — *Jane Longshore*





# UAB CREATES NEW CENTER FOR ADDICTION AND PAIN PREVENTION

Drug overdose deaths soared to their highest-ever level in 2019. Nearly 72,000 Americans died from drug overdoses in 2019—a higher total than the worst-ever years for AIDS, gun violence, or motor-vehicle deaths. Preliminary data for 2020 showed that the problem accelerated in the midst of the COVID-19 crisis. An analysis by The New York Times reported a 13% increase in drug deaths in 2020 compared with the same point in 2019.

“Everyone is focused on COVID-19, understandably, but the opioid problem, alcohol use, and addiction generally are still huge problems,” says Karen Cropsey, Psy.D., professor in the Department of Psychiatry and Behavioral Neurobiology, who specializes in treating substance abuse in vulnerable populations. Cropsey is a member of the Committee on the Review of Specific Programs in the Comprehensive Addiction and Recovery Act for the National Academies of Sciences, Engineering and Medicine, which reviews the outcomes of four programs that seek to address the ongoing opioid crisis.

At UAB, Cropsey is co-director of the new Center for Addiction and Pain Prevention and Intervention (CAPPI) launched in 2020 in the School of Medicine, along with fellow co-director Burel Goodin, Ph.D., associate professor in the Department of Psychology (College of Arts and Sciences), who specializes in pain research, particularly in racial and ethnic disparities in pain experience and pain sensitivity. The center’s mission extends beyond opioids, Cropsey notes. Its goal is to conduct cutting-edge research that can be developed into better treatments for addiction and pain.

“We realized there was a need for a center like this, to give researchers and members of the community something to rally around,” Cropsey says. The center will act as a resource for researchers, including helping junior faculty develop their research programs and providing expertise specific to addiction and pain. “It also allows us to be more competitive for things like center grants, and it is a good recruitment tool because faculty recruits know that, when they come here, they will find a group of colleagues with similar interests.”

UAB has a strong cadre of investigators specializing in addiction and pain research, Goodin says. “We brought together a diverse group from across the university to establish collaborative projects and build synergies.”

CAPPI also aims to focus on outreach to the community and connecting community members with the extensive patient care resources at UAB, including substance use treatment and pain management services and specialized programs, such as the UAB Comprehensive Addiction in Pregnancy Program.

“We want to help the community understand the latest in



Burel Goodin



Karen Cropsey

addiction and pain research and how this work can improve the lives of those impacted by addiction and pain,” Cropsey says.

CAPPI’s educational mission is directed toward an improved understanding of substance use, pain and their intersection throughout the translational science spectrum. The center hosts a monthly CAPPI Journal Club and the Pain and Addiction Special Interest Group, both of which aim to grow a cadre of clinicians and researchers focused on addiction and pain at UAB. CAPPI also will work with fellows from programs across UAB to provide faculty mentorship. – Matt Windsor

*“We realized there was a need for a center like this, to give researchers and members of the community something to rally around.”*

# NEW UNDERGRADUATE BIOMEDICAL PROGRAMS LEADER

In November, Cristin Gavin, Ph.D., was named assistant dean for Undergraduate Biomedical Programs. She also serves as the associate director of the Neuroscience Graduate Program. In her assistant dean role, she oversees curriculum, faculty development, academic advising, recruitment, and undergraduate neuroscience research in the School of Medicine. She is responsible for the oversight and program management of the established undergraduate programs shared with the College of Arts and Sciences, such as neuroscience, genetics and genomic sciences, immunology, bioinformatics, and cancer biology.

As an assistant professor in the departments of Neurobiology and Psychology, Gavin serves as co-director of both the Undergraduate Neuroscience Program and the UAB Postbaccalaureate Research Education Program. In 2016, she was the recipient of a National Academic Advising Association Award and, in 2019, was honored with Dean's Award for Excellence for Teaching.



Cristin Gavin

"I am excited to assume the role of assistant dean of Undergraduate Biomedical Programs in the School of Medicine," Gavin says. "Our innovative, interdisciplinary programs draw exceptional students from all over the country. I look forward to working with the program directors and partners in the College of Arts and Sciences to further grow, strengthen, and diversify our programs."

Gavin received her doctorate in neuroscience from UAB while training remotely at The Scripps Research Institute in Jupiter, Florida. After completing her doctoral training, Gavin returned to UAB for a postdoctoral fellowship. She joined the Department of Neurobiology faculty in 2016.

"Dr. Gavin is an experienced instructor who has the passion to engage the next generation of biomedical students," says Selwyn M. Vickers, M.D., FACS, senior vice president for Medicine and dean of the School of Medicine. "I have confidence that she will provide the guidance needed to increase the visibility of our biomedical programs." – *Bob Shepard*

## COLLEGE OF ARTS AND SCIENCES/SCHOOL OF MEDICINE SHARED UNDERGRADUATE DEGREE PROGRAMS

### BIOINFORMATICS

Bioinformatics involves managing and analyzing large amounts of data about living things—data that will help us treat human diseases and make scientific breakthroughs. Graduates launch careers as data analysts, software engineers, research specialists, computational biologists, and data managers. The program's foundation includes biology, computer science, public health, math, genetics, and chemistry, as well as seminars, electives, and a capstone project. Students put their knowledge to use with research projects, access to resources, internships, study abroad opportunities, and other activities.

### BIOMEDICAL ENGINEERING

Biomedical engineers apply knowledge of modern biological principles to the engineering design process to improve health care—from diagnosis and analysis to treatment and recovery, and from the proliferation of implantable medical devices (such as pacemakers and artificial hips) to cutting-edge technologies (such as stem cell engineering and 3D printing of biological organs).

### CANCER BIOLOGY

Students in this program—the only one of its kind in the U.S.—graduate with a strong educational and research background that maximizes their chances to achieve career goals in cancer biology in particular and life sciences in general. The interdisciplinary curriculum is anchored in cell biology and chemistry, and includes microbiology, immunology, genetics, pathology, pharmacology, and medicine.

### GENETICS & GENOMIC SCIENCES

Genetics and genomics make up the informational blueprint of life. UAB GGS is one of only a small group of undergraduate programs available in the U.S. and offers a rich environment of research, training, and education. The degree is offered in partnership between the Department of Biology (College of Arts and Sciences) and the Department of Genetics (School of Medicine). Courses are taught by experts across campus, offering a remarkable opportunity to access high-level instruction as an undergraduate.

### IMMUNOLOGY

Immunology is the study of the structure and function of the immune system at the molecular, cellular, and physiological level. The program covers biology, microbiology, chemistry, physics, and mathematics. U.S. News & World Report ranked UAB No. 27 in the "Best Global Universities for Immunology" poll for showing "strength in producing research related to immunology."

### NEUROSCIENCE

Neuroscience, the study of the structure and function of the nervous system with a special focus on the brain, is currently the most rapidly advancing field of research and training. Because this program is a partnership between the Department of Neurobiology (School of Medicine) and the Department of Psychology (College of Arts and Sciences), students have diverse course offerings that include biology, chemistry, math, physics, psychology, and neurobiology.



# RESEARCH CORE PROGRAM GROWS

The Institutional Research Core Program (IRCP) added five new cores to the institution-wide program this year. Each of the five new cores were selected based on merit, out of 24 applicant cores, by the IRCP Oversight Committee. The IRCP growth to 15 supported total cores is a 36% increase over last year.

The IRCP was created to promote the development and operation of outstanding core facilities to serve the needs of UAB investigators. The program is designed to provide assistance to cores in developing sound business plans, preparing and implementing robust standard operating and quality assurance procedures, providing customer-focused service to facilitate the advancement of research and scholarship, and to assist in maintaining the financial stability of the core.

Selection and scoring of the 24 core applications was based on the following review: importance of services to the UAB research mission, engagement in at least two UAB schools, current and potential use of cutting-edge technology, budget justification, UAB community engagement, and leadership and oversight.

Michael Bertram, Ph.D., director of the Institutional Research Core Program at UAB and professor in the Department of Cellular, Developmental and Integrative Biology, says, "The IRCP's expansion to 15 cores emphasizes two primary points. First is the recognition that there are a growing number of strategically important areas of research being conducted by UAB faculty that need specialized infrastructure support through core facilities. Second, there is a substantial, long-term commitment to providing access to specialized equipment and scientific expertise to the faculty of UAB through research cores. The IRCP's impact will be evidenced by the success of UAB's faculty in their research endeavors as they leverage the resources of the cores."

The IRCP Oversight Committee includes representation from all UAB schools, except the School of Education. Thirteen of the IRCP cores are directed by School of Medicine faculty. – *Mary Ashley Canevaro*

## UAB INSTITUTIONAL RESEARCH CORES

Advanced Materials Characterization	Macromolecular Structure
Animal Behavioral Assessment	Mass Spectrometry and Proteomics
Biological Data Sciences	Metabolism
Comprehensive Flow Cytometry	Microbiome Research
Comprehensive Genomics Core	Nuclear Magnetic Resonance
High-Resolution Imaging Facility	Preclinical Imaging
Human Imaging	Research MRI
	Transgenic and Genetically Engineered Models

# NEW RESEARCH AWARD SEEKS TO TRANSFORM HEALTH

To inspire and support bold scientific endeavor at UAB, the School of Medicine announced a new awards program in 2020: the Dr. Levi Watkins Jr. Breakthrough Awards for Research that Transforms Health.

Up to three School of Medicine scientists who propose and secure substantial extramural funding of \$5 million or more are eligible to apply for these awards, which could add up to \$1,000,000 in research support to each investigation. These applications will have an ultimate aim to improve prevention, diagnosis, or management of disease across local, national, and global populations. The awards will be spent on the investigator's proposed team and program.

The spirit of the prize is reflected in its memorial name. Levi Watkins Jr., M.D., (1944 – 2015) was an American heart surgeon whose innovations in cardiovascular science have improved heart health in enduring ways. Watkins was born in Kansas and moved to Alabama as a child. He became the first African American to graduate from Vanderbilt University School of Medicine, and he went on to medical residency at Johns Hopkins Hospital where he became chief resident of cardiac surgery. He subsequently investigated angiotensin blockers at Harvard University, returning to Johns Hopkins as faculty where he implanted the first cardiac defibrillator and developed techniques of open-heart surgery which are still practiced today. His pioneering work exemplifies the far-reaching science this award seeks to promote.

The Watkins Breakthrough Awards committee will consider proposals from principal investigators during the spring of 2021. Watkins Breakthrough Awards will be made based on the ambition of the proposal, its likely impact on health or health care, the size of the proposed project, the proposed funder, and the likelihood of the faculty and research team to secure the award.

– *Carolyn Walsh*

***Watkins' pioneering work exemplifies the far-reaching science this award seeks to promote.***

# RESEARCH HUB RENEWAL

The school completed a much-anticipated renovation to the 8th and 9th floors of the McCallum Basic Health Science building in 2020. McCallum is one of the school's key research facilities and houses scientists from across the School of Medicine. Funding was secured through University Bonds and School of Medicine operating dollars, and the 8th and 9th floors were completed in a two-year time frame, including commissioning in June 2020. The renovation included a transition to an open lab format, which has been well-received among occupants. The building now boasts more natural light, large support spaces, and collaborative office environments. Final renovations to floors 2-7 are expected to be complete between the fall seasons of 2022 and 2023. – *Mary Ashley Canevaro*







McCALLUM BASIC HEALTH  
SCIENCE BUILDING

UAB  
UNIVERSITY OF ALABAMA  
BIRMINGHAM

## CLINICAL PARTNERS

### CHILDREN'S OF ALABAMA

Since 1911, Children's of Alabama has provided specialized medical care for ill and injured children. A private, not-for-profit medical center, Children's serves as the teaching hospital for the UAB pediatric medicine, surgery, psychiatry, research, and residency programs. The medical staff consists of UAB faculty and Children's of Alabama's full-time physicians as well as private practicing community physicians.

Ranked among the best pediatric medical centers in the nation by U.S. News & World Report, Children's provided care for youngsters from every county in Alabama and 42 other states in 2019, representing more than 684,000 outpatient visits and more than 15,000 inpatient admissions.

One of the largest pediatric medical facilities in the U.S., Children's is the only medical center in Alabama dedicated solely to the care and treatment of children.

### BIRMINGHAM VA HEALTH CARE SYSTEM

The Birmingham VA Health Care System (BVAHCS) is a longtime School of Medicine clinical partner and training site. This past year there were 669 residents from the UAB School of Medicine who rotated through the BVAHCS. UAB is an intricate part of VA's health care delivery team and is key to the VA in providing the highest quality care to veterans. The BVAHCS has developed numerous partnerships with UAB in the areas of research, quality scholars, as well as in the training of providers in both the Schools of Nursing and Medicine.

BVAHCS is an acute tertiary medical and surgical care center with nine Community Based Outpatient Clinics serving over 80,000 veterans of Alabama and surrounding states. Care is provided in practically all medical, surgical, and mental health specialties and subspecialties, including renal transplantation.

In November, the BVAHCS was selected as a site for the clinical trial of a single-dose investigational COVID-19 vaccine developed by the Janssen Pharmaceutical Companies of Johnson & Johnson. This is the fourth large-scale COVID-19 vaccine trial in the U.S.

# KEY RESEARCH PARTNER NEWS

In November, Southern Research, the first independent scientific research center in the Southeast, named Michael Catalano and Mark Suto, Ph.D., chief operating officer and vice president for Life Sciences, respectively. Previously, Catalano served as interim COO, and Suto was VP for Drug Discovery and interim VP for Drug Development.

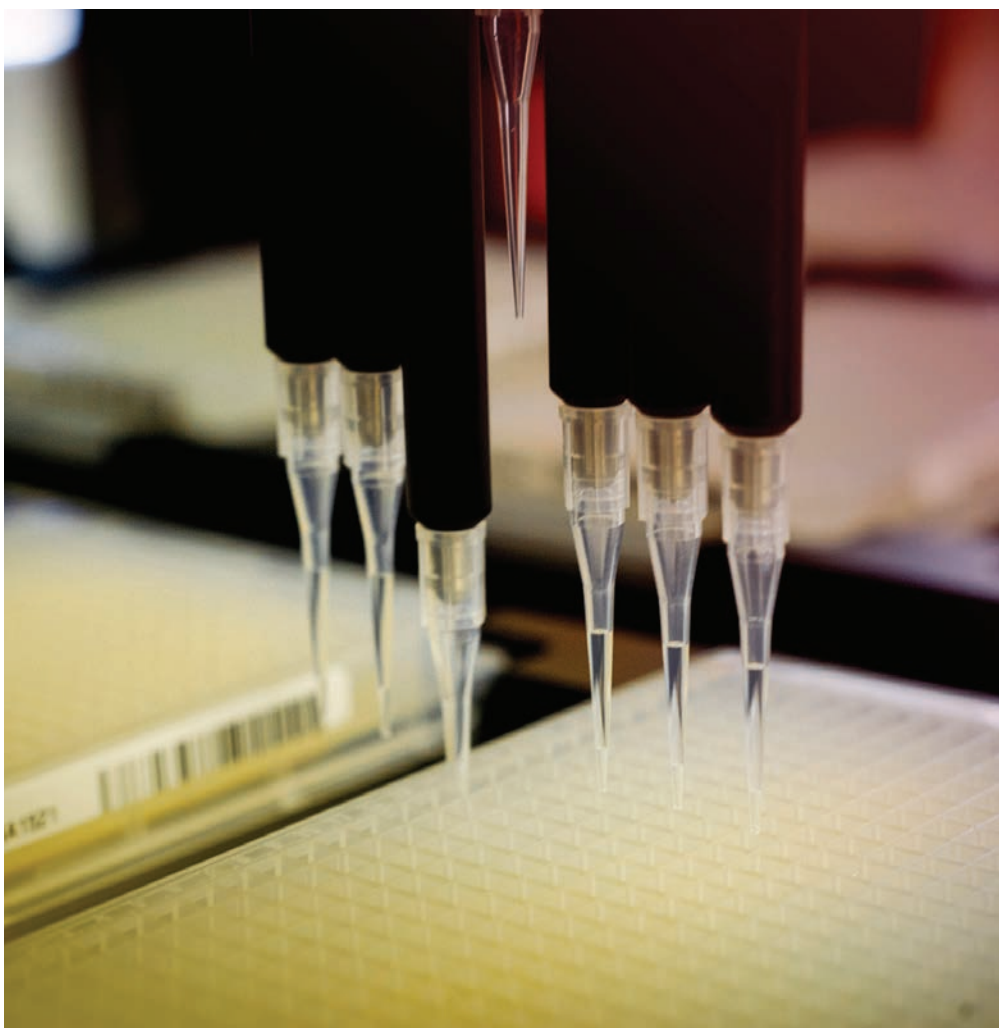
Southern Research is an incorporated affiliate of UAB, and UAB President Ray Watts, M.D., serves as Southern Research interim CEO and chairman. "Michael and Mark have provided forward-thinking and effective leadership during this critical time of notable progress for SR and collaboration with UAB," Watts says. "Solidifying these positions of leadership will enable SR to build on its strong trajectory and positive momentum."

Catalano joined SR in 2017 as general counsel and assumed the interim COO role in 2018. As permanent COO, he will continue to manage the day-to-day operations of SR.

Since joining SR in 2011, Suto has developed multiple research collaborations spanning a diverse array of diseases. In his new role, he will build on ongoing efforts to unite Drug Discovery and Drug Development to optimize growth in SR's Life Sciences portfolio and impact.

Prior to SR, Catalano was general counsel and privacy officer at Influence Health; chief operating officer, corporate secretary, and general counsel for SilverStaff Inc.; vice president of finance for Caesars Entertainment Inc.; and senior development counsel for pharmacy health care provider CVS Caremark.

Suto has more than 35 years of experience working in several large pharmaceutical companies, as well as smaller biotech and venture-backed organizations. He has led multidisciplinary programs that resulted in the identification of clinical candidates in several therapeutic areas. – *Tyler Greer*







*take care*  
OF EACH OTHER





# WHAT CAN WE LEARN FROM THE WELL-BEING INDEX?

The Well-Being Index (WBI), a short survey that determines wellness levels, was launched to all of UAB Medicine in March of this year. The digital tool was rolled out to different groups across UAB Medicine gradually over the past few years, and in March, the remaining groups received access.

The WBI presents immediate individualized feedback, while providing resources that match the user's wellness state. Backed by research from the Mayo Clinic, it empowers individuals to address their own well-being by offering an overview of wellness levels. The assessment identifies individuals' top three areas for growth and points them to local resources within the UAB enterprise, in Birmingham, or nationally. Plus, it tracks personal results over time. The tool also compares user results to peers in similar job roles at UAB Medicine and across the country. Rolling out the tool to all of UAB Medicine was a part of ongoing efforts to benchmark and increase wellness across all cohorts, from physicians and advanced practice providers to trainees and staff.

To understand the specific needs of UAB Medicine employees,

the UAB Medicine Office of Wellness activated process improvement questions at the end of the WBI assessment this summer. These optional and anonymous questions are asked to all employees. The current questions include:

What is your greatest work (or school) related stressor?

What is your greatest stressor outside of work (or school)?

What is one thing UAB Medicine can do to improve your well-being?

The anonymous feedback has provided great insight to leadership across UAB Medicine in identifying barriers and blocks to employee well-being.

The UAB Medicine Office of Wellness is led by David Rogers, M.D., MHPE, chief wellness officer, and Nisha Patel, MBA, MSHA, executive director of Operations, Wellness, and Administration. The office collaborates with UAB Medicine employees and students to support them on their wellness journey. The Well-Being Index tool contributes to the program's vision to align

with UAB Medicine's organizational goal of

being a preferred place to work. By reducing the

unnecessary demands associated with work and by providing support programs, workplace wellness will undoubtedly improve. – Mary Ashley Canevaro





# AND JUSTICE FOR ALL

Summer 2020 was a season of intense emotion and activism, as the killings of George Floyd, Breonna Taylor, Ahmaud Arbery, and others brought millions of people across America into the streets to raise their voices for racial justice. At the School of Medicine, those tragic events and the demonstrations surrounding them sparked a series of conversations around systemic racism. These led to a variety of programs and initiatives aimed at making the school more welcoming and inclusive for students, trainees, faculty, and staff of all backgrounds. The following highlights just a few of those efforts.

On June 10, the school hosted the first of a series of Racial Justice Town Halls, designed to provide space for listening, asking questions, and reaffirming the school's commitment to issues related to race on the academic side of UAB Medicine. (Later town halls addressed matters on the hospital side and in relation to interactions with patients and the community.) This was the first step in a proactive process to listen to the School of Medicine community, gather information, and create and enact a tangible plan of action for addressing issues of racial injustice within the school as well as in the greater community.

Following the town halls, the school contracted with an external consulting firm to conduct focus groups and assist in the development of a comprehensive, long-term plan. The focus groups were conducted in early August and comprised a random sample of employees from each of the school's constituent groups.

Following these listening efforts, more focus on racism and bias in medicine was incorporated into incoming medical students' first course, Patient, Doctor and Society. The change was made specifically in response to feedback received from medical students and was welcomed enthusiastically by the 2020 incoming class. It will become a permanent part of the PDS course.

In June, the School of Medicine added a racial justice statement to its website. It begins, "The UAB School of Medicine condemns racism in all its forms. We acknowledge the existence of stereotyping, bias, discrimination, prejudice, microaggressions, and other forms of racism, and we commit to proactively working to eradicate inequalities."

On June 5, School of Medicine leaders, faculty, and staff participated in White Coats for Black Lives, when health care workers across the nation showed their support for racial justice. Faculty members from the School of Medicine joined health professionals from across campus and UAB Medicine to kneel for a moment of silent reflection and commitment to improve the health and



School of Medicine Dean Selwyn Vickers and other faculty and staff kneel in a park on the UAB campus as part of White Coats for Black Lives on June 5.

safety of people of color.

Also in June, the School of Medicine's Office for Diversity and Inclusion (ODI) announced the creation of new Black/African American and Hispanic/Latinx Faculty Associations, which held their first meetings the week of June 22. In recent years, the ODI has taken a more active role in recruiting people from diverse backgrounds—an important first step in creating an inclusive workplace for all. As more people from underrepresented groups join the School of Medicine, ODI leadership understands that it is equally important to cultivate an institutional climate that supports and nurtures their professional development. Within these new associations, members are encouraged to communicate, network, mentor, and serve as a voice for cultural and educational concerns among the faculty.

On June 19, *Al.com* published an op-ed written by School of Medicine Senior Vice President for Medicine and Dean Selwyn Vickers, M.D., FACS, in collaboration with a host of Birmingham-area faith leaders. Titled "A 2020 response to Dr. King's Letter from a Birmingham Jail," the op-ed recalls Dr. Martin Luther King Jr.'s famous missive, written in 1963 at a pivotal moment in our country's long journey toward racial equality and justice, comparing those events to the ones that took place this spring and summer. In his letter, King admonished white churches and their leaders for acting as bystanders in the civil rights struggle. In the 2020 response, Vickers and his co-authors challenged today's faith leaders to respond more forcefully and directly to the racism still prevalent in our society. —Jane Longshore





# GIFT ILLUMINATES NEW WAYS OF TEACHING AND LEARNING

Marnix Heersink, M.D., and his wife, Mary, of Dothan, Alabama, are shedding light—literally and figuratively—on the evolution of medical education. The Heersink Family Foundation made a dual-purpose gift in 2020 to build a gleaming atrium at Volker Hall’s front entrance and transform part of the second floor into a bright, open center for active learning.

The Heersinks have observed a clear shift in medical education at UAB from the time the first of their six children enrolled at UAB to their youngest son who is in his final year of UAB School of Medicine. Didactic lectures have diminished in favor of student-driven learning, and various disciplines “commingle in the context of a patient walking in the door,” says Mary Heersink, a member of the School of Medicine Board of Visitors. “It’s a kinder, gentler, intelligent way of learning.”

In fact, the Liaison Committee on Medical Education (LCME) now expects medical schools to use lectures for less than half of their preclinical coursework during the first two years. For UAB, anticipating LCME reaccreditation in 2022, the two new spaces will accelerate the move toward interdisciplinary, engaged learning.

The active learning resource center will include a “flipped classroom,” where students collaborate in small groups, using digital teaching tools, while the instructor moves between them. The focus on discussion and interaction helps students dive deep into topics and develop communication and problem-solving skills quickly.

“Active learning also prepares students to work with a wide range of health and research professionals once they graduate,” says Marnix Heersink, a cataract- and laser-refractive surgeon. “The doctors of tomorrow will be used to collaboration. Teams

will decide what’s best for a patient.”

Linked with the active learning resource center, the glass-lined atrium will encourage medical students to cross paths—and strike up conversations—with faculty and scholars from different disciplines from all parts of campus. The bright sunny spot also will relax and recharge busy students, helping to lower their stress and improve overall wellness.

“Medicine is a team sport,” says Craig Hoesley, M.D., senior associate dean for Medical Education and chair of the Department of Medical Education. “Students must actively learn to solve and discuss complex scenarios together. We deeply appreciate the Heersink family’s generous gift, which will enable us to transform and modernize our learning space and develop welcoming space for students to interact with and engage each other.”

Marnix Heersink eagerly awaits the reaction from the first students entering the bright new spaces. “Our family is very thankful to help play a small role in enhancing their education,” he says. “UAB has strongly impacted our family and many others across the world. We want to nurture that and help it grow.”

With the example set by the Heersink family in mind, the School of Medicine has identified additional naming opportunities to help complete the transformation of Volker Hall’s sixth floor to include space for active, dynamic medical education. These include two breakout rooms to foster collaboration and study, three small group rooms, which will serve as home bases for the school’s Learning Communities, and a conference room for use by faculty, staff, and students. For more information on these and other naming opportunities, contact Erica Hollins at 205-996-6839 or [ehollins@uab.edu](mailto:ehollins@uab.edu). – Charles Buchanan



# PROMOTING EXCELLENCE THROUGH DIVERSITY

This past spring, the Medical Alumni Association (MAA) made a \$100,000 gift to support scholarships for qualified medical students from groups considered underrepresented in medicine (URiM). According to the Association of American Medical Colleges, these include “those racial and ethnic populations that are underrepresented in the medical profession relative to their numbers in the general population.” The MAA’s gift was matched by the School of Medicine Dean’s Office, a sign of the important role diversity plays in fulfilling the school’s missions.

As part of their URiM efforts, the MAA also formed a URiM task force in partnership with the School of Medicine. The task force’s goal is to develop a culturally competent, inclusive, and diverse health care workforce to help eliminate health disparities in Alabama. This multipronged effort includes improving recruitment for outstanding URiM medical students, strengthening mentorship for those students, and increasing scholarships to recruit the most talented URiM students.

The task force’s URiM Scholarship Committee is co-chaired by Pink Folmar Jr., M.D. ’72, and Richard deShazo, M.D. ’71. Folmar is a longtime supporter of the School of Medicine; in 2016 he and his wife established the Pink L. and Miriam R. Folmar Endowed Medical Scholarship, which supports third and fourth-year students who wish to pursue careers in primary care.

deShazo has a long commitment to reducing health care disparities, even editing a 2018 book on the subject, “The Racial Divide in American Medicine: Black Physicians and the Struggle for Justice in Healthcare.” In 2020, he and his wife Gloria went a step further by making a gift to establish a scholarship for URiM students at UAB, inspired by Folmar’s example. The goal, deShazo says, is to increase the number of URiM students who attend UAB for medical training, with the hope that many of them will remain in Alabama when they start their practice.

“UAB has been losing talented, URiM students from Alabama to Ivy League medical schools because those schools offered more full scholarships, and many of those students never come back to Alabama,” deShazo says. “We need to keep more of our medical students in Alabama and help address health disparities, particularly in rural areas.”

This is an important time for such an effort, deShazo says, because of the current transition to more of a team approach in health care. “Doctors are working with nurse practitioners and physician assistants and other health professionals in teams, which is going to provide a pathway to address rural health problems,” deShazo says. “But right now we don’t have enough doctors to lead those teams, because our state has among the lowest ratio of doctors to patients. We have an opportunity that we’re going to miss if we don’t put more doctors into rural areas.”

The deShazos’ scholarship gift includes an estate gift. deShazo says he wanted to structure the gift that way because increasing the number of URiM students at UAB will not happen overnight. “We’re currently donating our RMD (required minimum distribution) re-



Medical Alumni Association URiM task force representatives Michael Bivins, Brittany Anderson, and Tina Simpson talked with Birmingham students about being a doctor on National STEM Day on November 8.

siduals, and then we’re adding a gift at the time of death to make sure that the scholarship is completed. That is the easiest way for people who don’t have a huge pile of money sitting around somewhere to do these types of gifts.”

To learn more about supporting URiM scholarships, and the 1:1 gift match by the Dean’s Office through September 30, 2021, contact Erica Hollins at 205-996-6839 or ehollins@uab.edu. – Cary Estes



# THE GIFT OF LIFE

For many people, an organ donation is the greatest gift they can receive. Over the past year, UAB expanded both the types and quantity of organ donations that result in life-changing transplants.

“We’re a big transplant family here,” says Jayme Locke, M.D., director of the UAB Comprehensive Transplant Institute. “We’re working together and with our patients and community partners to help people achieve the gift of life. That teamwork is really what we’re all about.”

UAB achieved a kidney transplant milestone despite unprecedented challenges brought on by the pandemic. There were 316 kidney transplants performed at UAB Hospital during the 2019-2020 fiscal year, the most in program history.

Locke says the kidney transplant team has worked to expand the program, partly by using organs from hepatitis C (HCV) and HIV-positive donors, efforts that have been led by Surgical Director Michael Hanaway, M.D., Medical Director Clifton Kew II, M.D., and Shikha Mehta, M.D., director of the HCV and HIV programs.

“We’ve tried to get as many people as we can on our kidney transplant list,” Locke says. “Simultaneously, we’ve worked on being as aggressive as possible to make use of kidneys from as

many types of donors as possible, that we know offer a significant survival benefit to our patients over dialysis. In particular, Dr. Hanaway’s leadership in expanding access and organs available for transplant has allowed us to help more people get transplanted, which has decreased waiting times significantly. Our team is being as creative as possible in making sure that every kidney donated to UAB can be offered to our patients.”

In addition, UAB launched a new uterus transplant program in 2020, the first in the Southeast and only the fourth in the country. The program provides women dealing with uterine factor infertility an innovative option for child-bearing through the use of deceased donor organs. UAB is the first program in the U.S. to offer uterus transplantation outside of a clinical research trial, and is one of the few centers in the world accepting new patients.

“We are tremendously excited that UAB is expanding access to uterus transplantation, and offering hope to couples unable to get pregnant,” says Paige Porrett, M.D., Ph.D., associate professor of Surgery in the Comprehensive Transplant Institute, who leads the program. “Our doors are open to both providers and patients anywhere who want to learn more about this exciting new therapy.” – Cary Estes



Michael Hanaway performed UAB's 10,000th kidney transplant in 2017.



# INVESTING IN THE QUEST FOR KNOWLEDGE

In 2008, Mary and Bill Battle's youngest daughter, Kayla, had reached a crisis point. The 24-year-old was in pain and could not walk, and the family needed a diagnosis and a solution. They found both at UAB, under the care of Robert Kimberly, M.D., professor of Medicine and holder of the Howard L. Holley Research Chair in Rheumatology. Kayla learned she had rheumatoid arthritis and received a novel treatment that yielded "amazing results," Mary Battle says. "It was her best chance to get better quickly."

The family faced another pivotal moment six years later when UAB specialists diagnosed Bill with multiple myeloma, a blood-cell cancer. But that time, UAB did not have all the answers. UAB had no comprehensive multiple myeloma program in 2014, which meant that Bill's specialists, who provided initial treatment, had to refer him outside Alabama, to medical centers conducting clinical trials of promising therapies.

To help others benefit from the pioneering knowledge that brought Kayla relief, and to expand expertise so that patients like Bill can receive care close to home, Mary and Bill Battle are investing in resources critical to immunology and cancer research.

Recently, the Battles established the Kayla Smeraglia Single Cell and Cytometry Core Equipment Fund in the Division of Clinical Immunology and Rheumatology. Named for their daughter, now a busy working mother of two, the fund provides scientists with innovative technology to investigate functions of individual cells by quantifying the expression of tens of thousands of genes. Discoveries will help define pathways regulating immune-cell function, which could lead to revolutionary treatments for rheumatoid arthritis, cancer, and diseases including COVID. Future advances could make cytometry a key to precision medicine, with cell analysis identifying effective drugs for individual patients, Mary Battle says.

"Single-cell technologies are evolving at an incredible pace," says Troy Randall, Ph.D., the William J. Koopman Endowed Professor in Immunology and Rheumatology. The Battles' gift will help "sustain a world-class facility, allowing us to acquire the latest instruments to provide cutting-edge services for investigators across UAB," he explains.

A second gift accelerates the growth of the multiple myeloma program at the O'Neal Comprehensive Cancer Center at UAB, home to Alabama's only multidisciplinary myeloma



Mary and Bill Battle

clinic, where Bill now receives care. The Mary and Bill Battle Endowed Professorship for Multiple Myeloma "will support a distinguished physician-researcher in developing a program of national prominence," says Barry Sleckman, M.D., Ph.D., director of the O'Neal Comprehensive Cancer Center at UAB and the Evalina B. Spencer Chair in Oncology. "Our multiple myeloma clinic works collaboratively to find new therapies that will one day lead to a cure, and our goal is to establish our program as the best in the country. The generous support from the Battles is critical in helping us translate important laboratory discoveries to patient care."

The endowed professor also will recruit additional scientists and physicians to UAB, energizing the expansion of research and clinical trials. "We want to move the needle," Bill Battle says. "Every year we've seen new treatments become available, which is encouraging."

The Battle family is grateful for UAB's life-changing care. "When you have a serious health issue, UAB is here to provide world-class healthcare," Mary Battle says. "Alabamians are incredibly fortunate to have access to this level of care so close to home." – Charles Buchanan

*To help others benefit from the pioneering knowledge that brought Kayla relief, and to expand expertise so that patients like Bill can receive care close to home, Mary and Bill Battle are investing in resources critical to immunology and cancer research.*

# 799

medical students

# 1,076

residents and fellows

# 1,695

full-time faculty

## ACROSS FOUR CAMPUSES:

Birmingham  
Huntsville  
Tuscaloosa  
Montgomery

## 2020 ENTERING CLASS

**186** matriculated  
**508** average MCAT score  
**3.8** average GPA  
**49%** female  
**50%** male  
**1%** nonbinary/no response  
**21-42** age range  
**50** undergraduate institutions represented  
**13** states represented  
**158** Alabama residents  
**28** out-of-state residents  
**25** early decision students

## PROGRAMS

M.D.  
Bachelor/M.D.  
M.D./Ph.D.  
M.D./MBA  
M.D./MPH  
M.D./MSPH  
Primary Care  
Rural Medical  
Blaze to M.D.

## MATCH DAY

**99%** match rate  
Students matched at  
**82** institutions in **29** states  
**209** new residents, representing  
64 U.S. and 24 international  
universities, matched into UAB  
residency programs

## Top 5 Specialties

Internal Medicine (27)  
Family Medicine (19)  
Pediatrics (19)  
Surgery (16)  
Tie: Anesthesiology and  
Emergency Medicine (12 each)

## UAB HOSPITAL ACCOLADES

Ranked **No. 1 hospital in Alabama** by U.S. News & World Report, with eight specialties ranked in the top 50: rheumatology (No. 10), gynecology (No. 15), otolaryngology (No. 22), cardiology/heart surgery (No. 24), pulmonology/lung surgery (No. 25), cancer (No. 25), nephrology (No. 29), and geriatrics (No. 49).

Named **one of America's Best Hospitals™** by HealthGrades, based on analysis of more than 45 million patient records across nearly 4,500 hospitals over three years. The list honors the top 5 percent of hospitals in the U.S. for overall clinical excellence; UAB Hospital is the only Alabama health care facility on the list.

Included in Becker's Hospital Review's 2020 list of **100 Great Hospitals in America** for the eighth consecutive year.

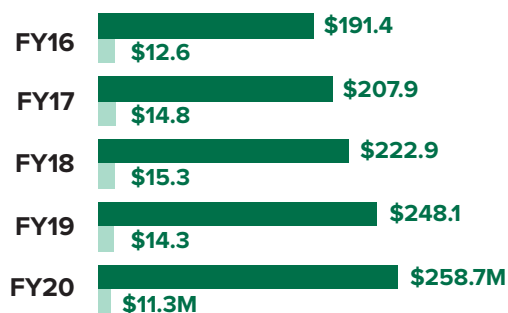
Named one of **"HealthCare's Most Wired"** by the College of Healthcare Information Management Executives. UAB is one of 71 hospitals recognized for achieving Level 9 status from CHIME's 2020 HealthCare's Most Wired program.

UAB and UAB Medicine were among just 100 other programs nationwide to be named an **Antimicrobial Stewardship Center of Excellence** by the Infectious Diseases Society of America. The award is given to stewardship programs led by physicians and pharmacists trained in infectious diseases who advance science in antimicrobial resistance and have achieved standards aligned with evidence-based national guidelines, such as the IDSA-SHEA guidelines and the CDC's Core Elements.

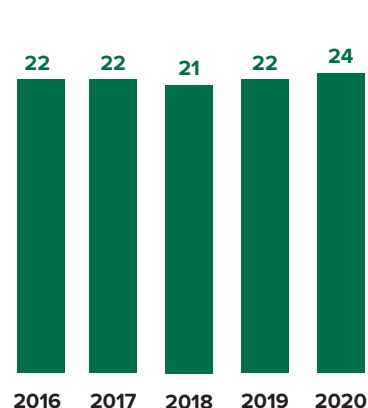
The UAB Health System/Ascension St. Vincent's Alliance were both named to the third-annual **NRC Health Top 100 Consumer Loyalty list**, the first and only loyalty-based hospital rankings that recognize the top U.S. health care organizations for earning exceptional loyalty ratings from their patient populations.



## ENDOWMENT ASSETS



■ Corpus Fund Balance ■ Interest Earned



NIH RANKING<sup>1</sup>  
**24**

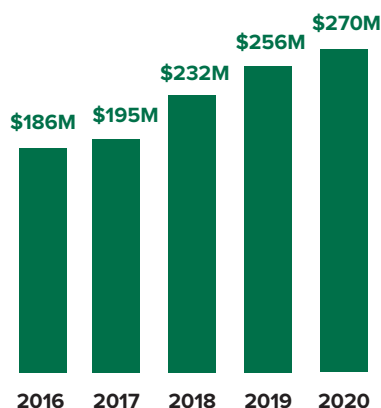
## INNOVATION AT UAB

**86** Patent applications filed

**40** License agreements executed

**5** Startups

**\$4.52M** Licensing revenue

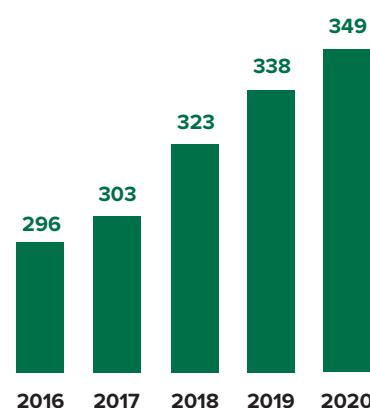


NIH FUNDING<sup>1</sup>  
**\$269,660,929**

## TOTAL FUNDING

**\$638M**

UAB surpassed \$638 million in annual research funding in FY2020—a \$36-million surge above 2019 totals, which set the previous record.



NIH FUNDED PIs<sup>1</sup>  
**349**

## TOTAL REVENUES

**\$829.5 Million**

**\$220.8M** Federal Grants Direct

**\$179.4M** Clinical Enterprise (UH, HSF, HS)

**\$143.7M** Other

**\$90.2M** State Appropriations Including Earmarks

**\$61M** Other Grants Direct

**\$61.4M** Philanthropy

**\$49.4M** Indirect Expense Recovery

**\$23.6M** Tuition

## TOTAL EXPENSES

**\$760.4 Million**

**\$403.6M** Departments, Centers, Regional Campuses

**\$285.3M** Grants

**\$33.3M** Space

**\$38.2M** SOM Infrastructure

## LARGEST NEW NIH AWARDS

**\$2.23M** Site-Specific Immune Cell Activation Detection for Improving Individualized Cancer Immunotherapy

**\$2.02M** Regulation of SORLA by beta-arrestin2

**\$1.99M** Acquisition of cryo-electron microscope

**\$1.95M** Proteasome dysfunction as a driver of age-associated risk for Alzheimer's disease onset and progression

**\$1.86M** Implementation of a Provider-Focused Intervention for Maximizing HPV Vaccine Uptake in Young Cancer Survivors receiving Follow-Up Care in Pediatric Oncology Practices: A Cluster-Randomized Trial

**\$1.86M** UAB Pilot Center for Precision Animal Modeling (C-PAM)

<sup>1</sup> Source: Blue Ridge Institute as of Oct. 5, 2020

# SCHOOL OF MEDICINE LEADERSHIP



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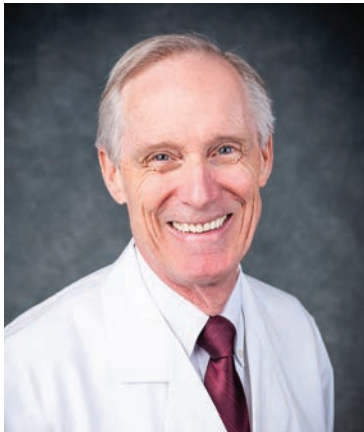
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Chief Physician Executive,  
UAB Medicine



**Reid Jones**  
Chief Executive Officer, UAB  
Medicine and UAB Hospital



**Dawn Bulgarella, MSHA, CPA**  
Chief Financial Officer, UAB  
Health System

## UAB HEALTH SYSTEM

**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, occupational medicine, and the region's first coordinated care unit for geriatric patients.

**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 psychological health.

**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, Montgomery, 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, and Bessemer.

**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 1,100-member multispecialty physician practice serving UAB Medicine through more than 30 centers of excellence.

## JOINT OPERATING LEADERSHIP COMMITTEE

This committee includes Selwyn Vickers, M.D., FACS, senior vice president for Medicine and dean of the School of Medicine; Reid Jones, CEO, UAB Medicine; Tony Jones, M.D., chief physician executive of UAB Medicine and president of the UAHSF; Ray Watts, M.D., UAB president; 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. The group serves as the most senior leadership team in the Health System to advise and support the highest level of strategic and operational activities/initiatives.





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### UAB SCHOOL OF MEDICINE Annual Report 2020

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