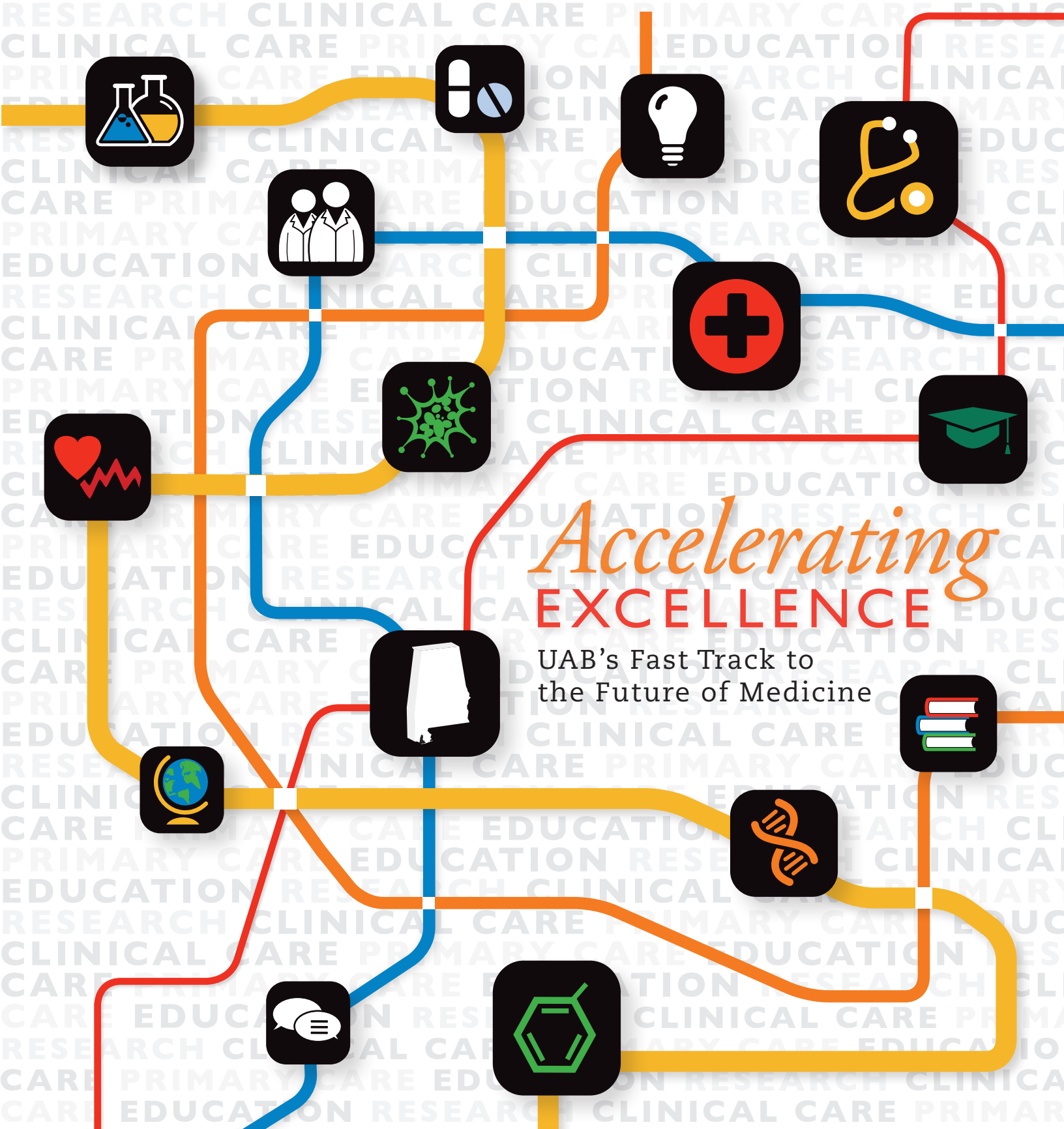


UAB MEDICINE

A Magazine for Alumni and Friends of the School of Medicine

Volume 38 • Number 1 • Winter 2012



Accelerating EXCELLENCE

UAB's Fast Track to
the Future of Medicine

Plans of Action



Senior vice president and dean Ray Watts with Andrew West, Ph.D.

Our new strategic roadmap is generating excitement across campus and in the community as we begin realizing the full potential of the School of Medicine at UAB. I am especially eager to see how the plans impact young investigators such as Dr. Andrew West, the John A. and Ruth R. Jurenko Scholar in Neurology and Neurobiology. He has already made key discoveries about the LRRK2 enzyme that, when mutated, contributes to Parkinson's disease. Today, his lab is exploring LRRK2 as a therapeutic target, working with partners across UAB and at Southern Research Institute to develop models of the disease and potential inhibitors.

Dr. West says that the research should reveal the elusive molecular machinery of Parkinson's disease, and he hopes to test therapies in the clinic within a few years. This is important work, because currently there is no way to stop the neurodegeneration that accompanies Parkinson's disease.

The strategic plan will support our scientists and clinicians as they translate breakthroughs like these into innovative treatments and cures for patients. We want to speed up the process, enabling them to take advantage of leading-edge knowledge and technology while helping them overcome the challenges of a tight funding environment. We also need to build partnerships to make sure that every person in Alabama has access to lifesaving solutions.

For the first time, UAB has an integrated, comprehensive roadmap for research, education, our clinical programs, and primary care. We have created an unprecedented partnership, working with Dr. Will Ferniany, CEO of the UAB Health System; Dr. Sergio Stagno, president of the University of Alabama Health Services Foundation; and leaders throughout our departments, centers, and campuses to bridge gaps and create common goals. Our plans also connect with UAB's overall strategic plan as well as the Birmingham Business Alliance's Blueprint Birmingham, which lists UAB as a top priority.

Now is the time to invest in UAB biomedical research and in scientists like Dr. West. Leveraged with philanthropy, their ideas will yield great dividends for our school, for our community and state, and for countless patients and families. We have already begun to act on our plans, and I encourage you to join us as we create a brighter, healthier future for Alabama.

Best regards,

Senior Vice President for Medicine
Dean, School of Medicine
James C. Lee Jr. Endowed Chair

Get monthly updates from Dean Watts at www.uab.edu/deanwatts.

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UAB's Fast Track to the Future of Medicine

The School of Medicine unveils a strategic roadmap that will transform health care in Alabama.

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Correction: In the News Digest of the summer 2011 issue, the untitled drawing we credited to resident Alicia C. Ballard, M.D., is actually *Cowardly Lion*, a charcoal drawing by professor Alexander J. Szalai, Ph.D. We regret the error.

PRABHU PLANS NEW CARDIOLOGY PROGRAMS

Sumanth D. Prabhu, M.D., the new director of the Division of Cardiovascular Disease, is ready to build on UAB's tradition of pioneering novel therapeutics and scientific discoveries in cardiology and cardiac surgery. "I want us to be one of the country's best in research and clinical care, and in the development of translational cardiology research," he says. Prabhu, who holds the Mary Gertrude Waters Chair of Cardiovascular Medicine, plans to establish programs focusing on the newest diagnostic and therapeutic efforts in heart failure, interventional cardiology, electrophysiology, cardiac imaging, and preventive cardiology/hypertension.

Previously, Prabhu was a professor and university scholar in cardiovascular medicine and physiology and biophysics at the University of Louisville. There, he also served as the cardiology section chief for the university hospital, director of heart failure and transplant research, and director of the preventive cardiology clinic. Prabhu's research focuses on pathophysiological mechanisms in heart failure, including left ventricular/myocardial function, chamber remodeling, inflammation, and oxidative stress.



Standaert Named Neurology Chair

An internationally renowned expert in Parkinson's disease and other movement disorders is the new chair of the UAB Department of Neurology. David G. Standaert, M.D., Ph.D., directs UAB's Center for Neurodegeneration and Experimental Therapeutics, the Division of Movement Disorders, and the UAB

Comprehensive Neuroscience Center. He also was recently appointed to the John N. Whitaker Endowed Chair in Neurology.

Standaert, who joined UAB from Harvard in 2006, treats patients with Parkinson's and other movement disorders and researches potential cures for degenerative diseases. He serves on the scientific advisory boards of the American Parkinson Disease Association and the Michael J. Fox Foundation for Parkinson's Research.

Presidential Pair: UAB physicians hold the top two posts in the American Society of Transplantation. Robert S. Gaston, M.D., medical director of kidney and pancreas transplant and holder of the endowed professorship in transplant nephrology, was inducted as president for 2011-12, and Roslyn Mannon, M.D., director of research for the Alabama Transplant Center at UAB, became president-elect. It is the first time in two decades—and only the second time in the organization's history—that the president and president-elect are colleagues at the same institution.



MICROBIOLOGY CHAIR SEARCH NETS TWO RESEARCH LEADERS

Two leading immunologists who are unlocking the secrets of cells important to host defense and inflammatory disease are joining UAB. Frances Lund, Ph.D., is set to become the new chair of the Department of Microbiology; her husband and research partner, Troy Randall, Ph.D., will be the inaugural J. Claude Bennett Scholar in the Division of Clinical Immunology and Rheumatology. The pair previously worked at the University of Rochester Medical Center in New York and have a wide-ranging record of research on basic B-cell and T-cell biology, and how those cells fight or contribute to conditions ranging from arthritis to asthma to diabetes. Lund has shown that B cells play a larger role in the immune system than once thought; at UAB, her work in host response to infection will boost research into autoimmune diseases such as lupus and rheumatoid arthritis. Randall specializes in immune tolerance, the mechanism by which the immune system allows successful transplants. Here he will extend this research into cancer to learn why the body does not effectively fight off cancerous cells.

Moving Forward

- The 2011-2012 edition of the Best Doctors in America recognizes 291 UAB physicians in 55 specialties who are among the nation's top 5 percent of clinicians, as voted by their peers.
- Stephen G. Aller, Ph.D., assistant professor of pharmacology and toxicology, has received a 2011 NIH Director's New Innovator Award, a prestigious grant designed to stimulate highly innovative research and support promising new investigators. Aller focuses on achieving high-resolution structures of human proteins in cell membranes, which could accelerate drug development.
- Donna Arnett, Ph.D., M.S.P.H., chair of the UAB Department of Epidemiology and a senior scientist in the Diabetes Research and Training Center, is president-elect of the American Heart Association.
- Dawn Bulgarella is the School of Medicine's new senior associate dean for administration and finance. Formerly, she was executive administrator of UAB's anesthesiology and emergency medicine departments.
- Wendy Demark-Wahnefried, Ph.D., associate director for cancer prevention and control in the UAB Comprehensive Cancer Center, is president-elect of the American Society of Preventive Oncology.

- Nancy Dunlap, M.D., Ph.D., Department of Medicine vice chair for clinical affairs, is one of five Robert Wood Johnson Foundation Health Policy Fellows for 2011-12. She will spend a year in Washington, D.C., providing health policy leadership.
- T. Michael Harrington, M.D., chair of the Department of Family and Community Medicine, is president-elect of the Medical Association of the State of Alabama.
- Wick Many Jr., M.D., program director for UAB Health Center Montgomery, is governor of the Alabama Chapter of the American College of Physicians.
- Dan Marson, Ph.D., J.D., director of the Division of Neuropsychology, is the 2012 president-elect for the National Academy of Neuropsychology.
- Kathleen Nelson, M.D., senior associate dean for faculty development, was named to the board of directors of the Association of American Medical Colleges.
- Cynthia Owsley, Ph.D., the Nathan E. Miles Endowed Chair of Ophthalmology, has been elected to the national board of directors for Prevent Blindness America.

Next Phase: UAB is one of 25 inaugural members of NeuroNEXT, an NIH-sponsored research consortium created to rapidly advance new treatments for neurological disorders. By joining forces, members will chart the national course of neuroscience research, making it easier to launch clinical trials of promising medications and quickly gauge their effectiveness.



“The level of complexity in bioethics has risen exponentially. It’s important, but hard, for bioethicists to get their facts straight.”

—Greg Pence, Ph.D., estimates that he has taught medical ethics to about 4,000 students in the 34 years preceding his final School of Medicine lecture last summer. He also has seen his subject grow to become a central focus of medical practice and policy debates. “Ethics is more important because we

are an aging population with more end-of-life issues,” he says. “We also are a pluralistic, diverse society with different viewpoints about ethical issues, and our economy is shrinking, necessitating hard choices about medical care. Almost every ethical issue in medicine is now also one of allocating money, especially among different kinds of senior citizens.” Today the UAB philosophy professor, a renowned ethicist who has testified before Congress on embryonic and reproductive cloning, continues to lead UAB's Early Medical School Acceptance Program, write books, and teach seminars.

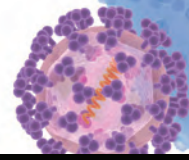


Paving the Way for Advances in Cancer

Status Update: The National Cancer Institute (NCI) awarded the UAB Comprehensive Cancer Center a five-year, \$27.5-million grant to renew support for its research program, extending UAB's elite “comprehensive” status shared with only 39 other cancer centers nationwide. During a rigorous NCI review, UAB received an excellent rating and recognition for its leadership in cancer health disparities and translational therapeutics. UAB is one of the original comprehensive cancer centers, earning the NCI designation when it was created in 1971.

Brain Power: The Cancer Center and the Division of Neurosurgery received a prestigious \$2.3-million Specialized Program of Research Excellence (SPORE) grant in brain cancer from NCI. The program will focus on developing new therapies for anaplastic gliomas, the most deadly and frequent form of malignant brain tumors, including a genetically engineered herpes simplex virus and a monoclonal antibody produced at UAB. The award makes UAB one of the few cancer centers with four SPORE programs—for brain, breast, and pancreatic cancers and a shared grant with Johns Hopkins University for cervical cancer.

Network News: UAB and community hospitals have formed the UAB Cancer Care Network, expanding access to the latest discoveries and treatments throughout the region. “Together we can multiply the power of cancer research while delivering premium cancer care where it is needed most” and enabling patients to stay close to home, says Edward Partridge, M.D., the Evalina B. Spencer Chair in Oncology and UAB Cancer Center director. Affiliates are located in Anniston, Alexander City, and Dothan, Ala.; Macon, Ga.; and Panama City, Fla.



A Lifesaver with a Kind Smile: *Vijay Misra*



Vijay Misra, M.D., was an internationally known cardiologist and director of the UAB Heart and Vascular Center's Cardiac Catheterization Laboratory. For many patients, however, he was a lifesaver with a kind smile and sense of humor. After joining UAB in 1998, he performed the most complex, high-risk percutaneous coronary interventions as well as cardiac structural/valvular, cerebrovascular, and peripheral vascular interventions, especially in patients with no other treatment options. Under his leadership, UAB became the state and region's leading referral center for percutaneous valvular heart disease therapy.

Misra, who died June 4, "was an outstanding physician, educator, and person," says Ray Watts, M.D., senior vice president and dean of the School of Medicine. "Vijay's leadership, both at UAB and internationally, and his contributions to the body of scientific knowledge, to the training of future physicians, and to the care he gave patients have garnered the utmost respect. He will be greatly missed." Two funds have been established to honor Misra's life and work: The Vijay Misra, M.D., Research Acceleration Fund in Cardiovascular Disease supports the discovery and delivery of innovative interventions for patients with complex cardiovascular diseases. The Vijay Misra, M.D., Endowed Support Fund for the Interventional Cardiology Fellowship Program will provide vital support for training interventional specialists. Contributions to both funds are tax-deductible.

More Info: Virginia Gilbert Loftin, vgloftin@uab.edu, 205-975-5602



"THE SOUTH is disproportionately affected by HIV, and UAB is probably the premier research institution in the South," said Jeffrey Crowley, M.P.H., director of the White House Office of National AIDS Policy, during his campus visit in September. UAB was the first location chosen for an implementation dialogue focusing on the National HIV/AIDS Strategy, which includes reducing new infections, increasing access to care and improving health outcomes, and reducing HIV-related health disparities by 2015. The UAB meeting highlighted prevention and care research and was moderated by Michael Saag, M.D., the Jim Straley Endowed Chair and director of the UAB Center for AIDS Research, which has made key discoveries that have helped shape treatment. "Before now, our focus was on developing new drugs and finding ways to get the virus under control," Saag says. "We've done that. During the next five to 10 years, we need to implement care, we need to develop vaccines, and we would love to have a cure."



Azithromycin + COPD: The antibiotic can reduce acute exacerbations—sudden onsets of worsened cough, wheezing, and labored breathing—for some COPD patients, says UAB Lung Health Center director Mark T. Dransfield, M.D. His research team showed that azithromycin, added to the usual COPD treatment plan, is effective against exacerbations caused by bacteria, viruses, or a combi-

CURRENT DRUGS, UNCOMMON USES

nation of both. "These promising results may help us reduce the COPD health burden and improve the lives of patients at risk of acute attacks," Dransfield says. The UAB Lung Health Center is one of 10 sites in the COPD Clinical Research Network.

Sulfasalazine + Gliomas: It's used to treat Crohn's disease and some forms of arthritis, but sulfasalazine can also slow the growth of primary brain tumors and inhibit epileptic seizures associated with them. That breakthrough comes from a UAB study revealing the link between brain tumors and seizures, often the first symptom of gliomas. "These tumor cells produce the neurotransmitter glutamate in amounts a hundredfold beyond

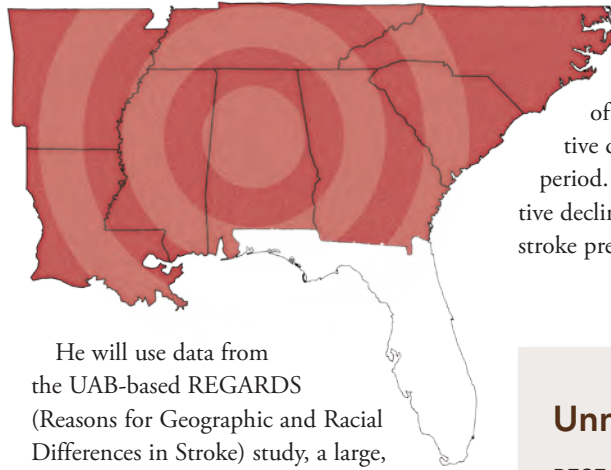
normal," explains Harald Sontheimer, Ph.D., lead investigator and director of the Center for Glial Biology in Medicine. "This results in hyperexcitability that overwhelms healthy neurons and leads to their death," clearing space for the malignant cell to expand. The excess glutamate also can cause abnormal electrical activity in the brain, the basis for epileptic seizures. Sulfasalazine seems to inhibit gliomas from releasing large amounts of glutamate, Sontheimer says. He adds that while the drug must be further researched and redesigned to make it more effective against the cancer, sulfasalazine could help current patients, especially in the glioma's early stages, when it might slow disease progression and provide for a better quality of life.

REGION AT RISK

SEPSIS, STROKE, AND COGNITIVE DECLINE

The Stroke Belt stretches across the Southeast, covering states where the risk of death from stroke is much higher than in other regions of the country. But it's not the only danger they face, according to UAB researchers. Two studies show that the Stroke Belt states also have the nation's highest death rate for sepsis and an 18 percent higher risk of developing incident cognitive impairment, which includes failing memory and slower thought processing.

Henry Wang, M.D., vice chair for research in the UAB Department of Emergency Medicine, says the concentration of sepsis may have many possible causes, including pre-existing medical conditions, health behaviors, diet, genetics, and the environment. He has received a five-year, \$2.7-million National Institutes of Health grant to examine the potential reasons and risk factors. "Sepsis treatment is complex, with disruption of blood flow, organs shutting down, and shock," he says. "We hope our research will lead to novel ways to prevent this disease and its effects."



He will use data from the UAB-based REGARDS (Reasons for Geographic and Racial Differences in Stroke) study, a large, long-term, federally funded investigation of the Stroke Belt. Other REGARDS data led to the discovery about cognitive decline. Virginia Wadley, Ph.D., UAB associate professor of medicine, says the results don't indicate that the region is bad for the brain. "Most likely, there are unmeasured factors that are detrimental, including health disparities, socioeconomic factors, and educational quality," she says. Researchers assessed

brain function using a test that included word recall and time perception. Overall, 8.1 percent of participants experienced cognitive decline during an average four-year period. Researchers hope that linking cognitive decline to stroke-risk factors could lead to stroke prevention.

Unmasking Schizophrenia

RESEARCHERS TARGET A NEUROTRANSMITTER


Scientists don't know exactly what goes wrong with the handling of the neurotransmitter glutamate in the brains of people with schizophrenia, but two UAB researchers are working to find an answer. The National Institutes of Health has awarded \$3.9 million to UAB psychiatrists Robert McCullumsmith, M.D., and James Meador-Woodruff, M.D., chair of the Department of Psychiatry and Behavioral Neurobiology, to better understand schizophrenia and to look for new therapeutic targets. Meador-Woodruff will investigate glutamate receptors on cells, while McCullumsmith will look at the mechanism that removes excess glutamate from the brain. The research will involve laser capture micro dissection—a device that can isolate specific cells for detailed analysis—and advanced proteomics techniques to study the function and structure of proteins.

"Schizophrenia is a disease that likely has many causes," says Meador-Woodruff, the Heman E. Drummond Endowed Chair of Psychiatry. "There is strong evidence that glutamate plays an important role in its development. Hopefully these studies will help define that role and lead us to a better understanding of how to treat schizophrenia."



HeRO IDENTIFIES INFECTION RISK FOR PREMIES

A new tool beats blood tests at identifying premature infants at risk for life-threatening illness and reduces mortality by 20 percent, say UAB researchers. Wally Carlo, M.D., neonatology director and the Edwin M. Dixon Endowed Chair in Neonatology, co-authored the report on the Heart Rate Observation System (HeRO), a technology to assess preemies, who face a greater danger of health complications, particularly infection, than full-term babies. "Using HeRO, we could analyze multiple variables of the heart rate and calculate an index that estimates the risk of developing infection—before the infants show clinical manifestations," he says. "This is the first noninvasive technique for early detection of infection in such a high-risk population. It is a novel technology that gives real-time results instead of waiting on blood tests at a critical time." UAB's neonatal intensive care unit is one of 16 hospitals worldwide using the HeRO system.

 **Could a Lower Income Lead to Heart Failure?** The risk of heart failure appears to be higher among low-income seniors—even those with a college education—says a new UAB study. Ali Ahmed, M.D., senior investigator and director of the UAB Geriatric Heart Failure Clinic, says that researchers were surprised by the influence of income among a population in which everyone has health insurance. Medicare often is an equalizer, benefiting the poor and non-poor alike, but low-income patients still may be unable to pay out-of-pocket costs for the health care it provides, he explains. "They may have to choose between their drugs and their groceries, or the expenses might adversely affect how often they see their doctor," he notes, adding that income can also affect access to healthy foods and physical activity. More research is needed to identify specific factors that increase the heart-failure risk for low-income people so that effective strategies can be developed, Ahmed says.

Accelerating EXCELLENCE



UAB's Fast Track to the Future of Medicine By Charles Buchanan



On average, it takes at least 10 years for a scientific discovery to become an approved therapy, says Ray L. Watts, M.D., senior vice president and dean of the School of Medicine. It's a timeframe that frustrates physicians, researchers, and patients alike.



Today UAB is pressing the fast-forward button with AMC21: Reaching for Excellence, a strategic roadmap designed to generate biomedical breakthroughs and translate them into new solutions for patients. Reflecting the school's mission for research, clinical care, education, and primary care, the initiative aims to build UAB into the preferred academic medical center for the 21st century (AMC21) and transform health care in Alabama.



Take a closer look at the key elements of the four strategic plans—and discover their potential to change lives and communities for the better across the state and around the world.



Research: Investing in Discovery



What if transferring diagnostic images between hospitals were as simple as e-mail? Two years ago, UAB neurosurgeon Barton Guthrie, M.D., and a team of specialists developed that idea into a secure Web portal called the Central Alabama Health Image

Exchange (CAHIE), which links UAB Hospital with medical centers in Birmingham, Bessemer, Cullman, and Montgomery. Now a patient receiving a scan at one hospital doesn't need a duplicate scan after being referred to another network facility; in an instant, a physician can access the highly detailed original scan online. Or a UAB specialist can consult with a referring physician before the patient arrives, both

viewing the scan at the same time. It's an innovation that could speed up treatment, improve safety, and save up to \$45 million in health care costs.

It's also a strategy that the School of Medicine intends to follow in research, capitalizing on the "what-if" ideas of UAB scientists. "We will invest in our researchers to accelerate the pace of discovery," Watts says. "Then we will invest more to bring these advances to Alabama patients as quickly as possible."

Setting Priorities

When the strategic planning process began in 2010, Watts asked faculty steering committees to identify UAB's strengths—and the greatest

growth opportunities. They chose six—cancer; cardiovascular biology and diseases; diabetes, obesity, and metabolism; immunology, auto-immunity, and transplantation; neuroscience; and infectious disease, global health, and vaccines—to serve as the pillars of UAB research. “These diseases are the biggest threats, but we also have a strong track record with them,” Watts says. “We have a chance to lead nationally and globally.” Six other “cross-cutting platforms”—imaging, genomics and proteomics, informatics, biorepositories, the Center for Clinical and Translational Science, and outcomes and health-care effectiveness research—will support the research pillars and all other UAB specialties. (Steering committee co-chairs describe the priorities and platforms on pages 8-9.)

“By focusing on these areas, we will attract faculty, students, patients, research funding, and community support that will help us fulfill our mission, raise UAB’s national profile, and benefit every research department in the school,” Watts says.

The interdisciplinary approach that powers UAB’s comprehensive centers will be applied to all six pillars. Scientists and clinicians will “work together, meet together, plan together, and recruit together,” Watts says. Some collaborations will link medical faculty with colleagues in other UAB schools, including engineering, nursing, and public health.

Faculty Focus

“One person can only do so much,” Watts says. “To compete for large, multimillion-dollar research grants, we need a team of the best and brightest to build a critical mass.” UAB aims to recruit at least 30 to 50 additional National Institutes of Health-funded investigators over five years—with an additional 50 to come afterward. These scientists will have specialized expertise to help bridge gaps between specialties, Watts says, and they will also bring new perspectives and ideas that invigorate the entire research team.

For current faculty, Congressional budget cuts and the end of stimulus funding have created the tightest, most competitive environment for NIH funding in history. “We want to help them be as successful as possible,” Watts explains. “If they’ve got one grant, how can they get two? If they’ve got two, how can they get three?” A new multimillion-dollar

“bridge-funding” program will help investigators needing extensions to continue their research while they pursue additional federal grants.

Seeding New Discoveries

Additional support comes from investments designed to accelerate research and drug discovery in each priority area. Steering committees are identifying the most promising—and most innovative—projects and helping to move them forward with these funds, priming them to earn NIH grants and proceed through the scientific pipeline. The funds also provide resources for senior faculty who want to explore new avenues of research as well as teams of investigators preparing to pursue large NIH grants.

“We will invest in our researchers to bring advances to Alabama patients as quickly as possible.”

—Ray Watts

At the same time, UAB is building a phase 1 clinical trials unit, centralizing studies previously conducted at other institutions and providing another link in the chain from basic science discoveries to experimental therapeutics. “We want to offer our patients access to the best global research and the most exciting treatment options,” Watts says. “That’s what makes us unique.”

UAB has already set up partnerships to ease the development of those new treatments. The Alabama Drug Discovery Alliance (ADDA), a collaboration between the School of Medicine and Birmingham’s Southern Research Institute, offers funding and resources for screening and testing potential therapeutics.

Economic Development

Biomedical discoveries have the potential to produce more than new drugs, Watts notes. “In surgery, for example, we could develop a new instrument, a new suture, or a new technique, and we want to invest in those opportunities as well.”

In essence, the School of Medicine will take on the role of venture capitalist, working with the UAB Research Foundation and its new entrepreneur-in-residence, as well as the Birmingham Business Alliance’s vice president for innovation and technology, to identify research that could form the basis of new high-tech spin-off companies. “We want to develop this revenue stream so that we can reinvest in our mission,” Watts says, “but more important, we want to keep these companies in Birmingham and Alabama.”

As for Guthrie’s health image exchange, additional investment could link it with every hospital in Alabama—and turn his “what-if” idea into a unique conduit for laboratory data and other health records. “No other state in the country has this yet,” Watts says. “We have made it better and faster than I could have dreamed.

“This is exactly the type of work that we need to be doing,” he adds. “We can change the future of medicine.”



Strong Points: UAB's Research Pillars



Cancer: Already a national leader in discovering and developing novel cancer treatments, UAB will investigate the continuum of disease from its smallest scale—the genetic and molecular basis—to the largest—affected populations and their environments. “Building scientific teams in each area

who communicate with each other will help us understand cancer in its broader context and have a bigger impact on prevention and treatment,” says UAB Comprehensive Cancer Center director Edward Partridge, M.D. “We can measure so much and end up with a billion data points,” adds Mary-Ann Bjornsti, Ph.D., chair of the Department of Pharmacology and the Newman H. Waters Endowed Chair of Clinical Pharmacology. “This approach provides a framework for refining and analyzing that information so that it’s meaningful.” Energetics, the relationship among physical activity, diet, and cancer development, also will be a focus. UAB researchers “are beginning to understand the molecular basis of obesity, but there’s room for tremendous growth and activity,” Partridge says. The center also will strengthen its translational therapeutics, investing in the phase 1 clinical trials facility and experts in imaging and stem cell- and T cell-based therapeutics. “On average, we get two or three new discoveries into clinical trials each year,” Partridge says. “We want to double that.”



Cardiovascular Biology and Diseases:

The first item on UAB’s cardiovascular to-do list—the recruitment of Sumanth D. Prabhu, M.D., to direct the Division of Cardiovascular Disease—has been completed.

Now work is under way to create a comprehensive cardiovascular center that will unite clinicians and researchers across campus. Additional faculty recruitment will target the “rising stars” poised to lead the field. “We want their ideas and innovations in our fertile collaborative environment so that we stay on the cutting edge for research and care,” says Steven Pogwizd, M.D., director of the Center for Cardiovascular Biology and the Featheringill Endowed Chair in Cardiac Arrhythmia Research. UAB will build on its existing programs in electrophysiology, heart failure, cardiometabolics, vascular biology, and imaging, while exploring new areas such as stem cell biology and novel approaches to drug development, device therapy, and interventional cardiology. “This approach will enable us to focus on

high-risk, innovative projects and make us more competitive for large-scale grants,” says John Chatham, D.Phil., director of the Division of Molecular and Cellular Pathology. “We have the expertise and the patient population. There’s no doubt we can be a national leader in developing new approaches to heart disease.”



Diabetes, Obesity, and Metabolism:

UAB’s location at the epicenter of the diabetes and obesity epidemic means discoveries here can have a major impact, says Anath Shalev, M.D., Comprehensive Diabetes Center director and the Nancy R. and Eugene C. Gwaltney Family

Endowed Chair in Juvenile Diabetes Research. A top priority is preventing the loss of insulin-producing beta cells, the key to any diabetes cure, Shalev says. Beta cell research will be strengthened and expanded to include investigators in other specialties, increasing the number of scientists pursuing innovative ideas. Metabolic signaling, crucial to obesity and diabetes development, will be another focus, with studies aimed at defining potential novel therapeutic targets. New research relationships with UAB’s centers in neuroscience, nephrology, ophthalmology, cardiovascular care, and other specialties will address the major diabetes complications, which take a very high human—and an increasing financial—toll. “Diabetes is such a complex disease that an interdisciplinary approach is critical to any chance of making a significant advance,” Shalev says.



Immunology, Autoimmunity, and Transplantation:

As Americans live longer and face health problems that are more chronic than acute, understanding the immune system is essential, notes Robert Kimberly, M.D., director of the Comprehensive Arthritis, Musculoskeletal, and Autoimmunity Center and the Howard L. Holley Research Chair in Rheumatology. “Immune mechanisms—defense against microbes as well as tissue repair and inflammation—are central to human health,” influencing conditions ranging from rheumatoid arthritis and inflammatory bowel disease to atherosclerosis, multiple sclerosis, and cancer. New scientific and clinical collaborations—supported by research and drug discovery funds—will explore the genetic basis of immune response. One model will apply human genomic knowledge to ani-



“We will be able to focus on high-risk, innovative projects and be more competitive for large-scale grants.”

—John Chatham

mal models to study variations in response, which could “change the way we specialize therapies to individual patients,” says Casey Weaver, M.D., pathology professor and the Wyatt and Susan Haskell Endowed Professor for Medical Excellence. “In the future, we may be able to preemptively retune their immune response, preventing them from ever expressing a particular disease.” UAB also will expand investment in its gnotobiotic facility, which studies how gastrointestinal bacteria shape the immune system; findings could point to new avenues for treating disease. In addition, the new Comprehensive Transplant Institute will coordinate services for multiple organs, reflecting its important clinical role at UAB.



Infectious Diseases, Global Health, and Vaccines: UAB’s pioneering research and clinical care helped change the course of HIV treatment, and today it faces the same opportunities with several other emerging diseases, says Michael Saag, M.D., director

of the Center for AIDS Research. Against hepatitis C, UAB will become a clinical-trial and treatment center, adapting its successful approach to HIV. Both diseases have similar treatment roadmaps—and hepatitis C is curable, Saag says. For tuberculosis (TB), a growing global health threat, UAB will build a research program with international reach, aimed at developing new therapeutics to cure the infection and fight drug-resistant strains. “A new TB drug with a new mechanism for action hasn’t been created since 1970,” Saag says. A host response program will focus on developing new vaccines for viral, bacterial, and fungal infections—which will become more important as more patients undergo lifesaving transplants or other procedures that suppress their immune systems and increase their vulnerability to infections. In HIV, UAB will strengthen its efforts to develop a cure and vaccine while investigating protocols to better identify infected patients, link them to care, and retain them in care.

Neuroscience: There’s a simple reason why UAB will direct more of its efforts toward neurodegenerative diseases—such as Alzheimer’s and Parkinson’s disease—and cognitive/memory disorders. “They’re closely related to aging,” says David Standaert, M.D., Ph.D., Comprehensive

Neuroscience Center director and Department of Neurology chair. “As the population ages, we’re going to see more of these diseases.” These specialties, along with glial biology/neuro-oncology, are also particular strengths for UAB, he says. Twenty-one new faculty members will be recruited to conduct research and clinical care in the three focus areas; at the same time, the center will provide seed support for interdisciplinary multi-investigator research projects with the potential to earn NIH grants and develop into breakthrough patient therapies. Other initiatives will build up UAB’s programs in pain research and epilepsy. “The neurosciences are an exciting and rapidly expanding area of biomedicine,” says David Sweatt, Ph.D., chair of the Department of Neurobiology and the Evelyn F. McKnight Endowed Chair for Learning and Memory in Aging. “There are immense opportunities for developing novel treatments and expanding our basic understanding of how the brain makes the mind.”

Cross-Cutting Platforms

IMAGING A new advanced imaging facility will add powerful technologies for research and clinical care and develop imaging-analysis expertise among faculty and students.

GENOMICS AND PROTEOMICS A Personalized Medicine Task Force will lead UAB’s integration of genomic and proteomic research and education into clinical care.

INFORMATICS An upgraded electronic medical records system will be able to add genomic data for personalized medicine.

BIOREPOSITORIES UAB’s DNA and tissue banks, crucial to biomedical research and translational breakthroughs, will be linked and expanded.

CENTER FOR CLINICAL AND TRANSLATIONAL SCIENCE (CCTS) UAB’s NIH-funded CCTS, which links the laboratory bench with the patient’s bedside, will develop the phase 1 clinical trials facility and match basic and clinical investigators to advance their research.

OUTCOMES AND HEALTH CARE EFFECTIVENESS RESEARCH Data collection, research, and training programs will expand, promoting evidence-based practice of innovative care.

Clinical Care: Enhancing the Patient Experience

Everybody has notions about the best ways to improve health care. Now UAB has a process to test new ideas through its Innovation Board. It works like this: Any employee can submit any non-research idea, and if the board likes what it sees, it will fund up to \$5,000 for a pilot project that can show results within 60 to 90 days. “If it’s promising, the board can help shepherd the idea across the UAB Health System,” says David Randall, senior vice president of strategic planning and business development. “You see this kind of thing at high-tech Silicon Valley companies; it’s rare for health care.”

Ideas have included a text/e-mail system informing patients of appointment delays, pictograms in patient rooms to improve communication, and “e-consults” between primary care physicians and specialists, among others. “These small, scalable changes can have a big impact,” says S. Louis Bridges Jr., M.D., Ph.D., an Innovation Board member and director of the Division of Clinical Immunology and Rheumatology. “We can quickly capitalize on new opportunities and continually upgrade the patient experience.”

The Innovation Board, like other aspects of UAB’s clinical strategic plan, “leverages what’s in UAB’s DNA for doing things better and differently,” Randall says. The result will be a more nimble, proactive, and interactive medical center that can thrive in a rapidly changing health-care environment.

All Together Now

Aligning goals, measuring outcomes, and creating a system of accountability are key to the plan. These will take multiple forms in UAB’s hospitals and clinics—frequent rounds to gauge the experience of patients and physicians/staff, follow-up calls, and care teams designed to listen to and address the needs of patients and families, for example. “We want to create common goals, communication, and collaboration,” Randall explains.

Other alignment and integration initiatives will improve physician, staff, and patient dialogue and strengthen UAB’s care offerings. “The patient must be at the center of all we do,” says UAB Health System CEO Will Ferniany, Ph.D. “By expanding the concept of our comprehensive centers and creating integrated practice units, we will bring multiple disciplines together to focus on a patient or disease in a more collaborative way.”

Likewise, a health-care reform task force has brought together a wide range of UAB experts to

share multiple perspectives on the legislation’s implementation and consequences. “This allows us to think more creatively and be more responsive,” Randall explains.

Enhancing Access

Referring physicians will see some changes. “We recently surveyed about 1,000 Alabama physicians and formed a task force to respond specifically to their concerns,” Randall says. Better communication is one priority. The Ambassador program, a Web-based tool enabling referring physicians to electronically view their patients’ UAB records, will become more interactive, adding proactive notices to physicians when their patients have been admitted. UAB also is exploring new relationships with providers; the new Cancer Care Network, with affiliated community medical centers in three states, offers one example.

“We can quickly capitalize on new opportunities and continually upgrade the patient experience.”

—S. Louis Bridges Jr.

“These physicians can access our protocols, clinical trials, quality metrics, educational opportunities, and other tools—all aimed at helping them provide care locally,” Randall says.

Ultimately, these upgrades will boost the quality and efficiency of care as well as patient satisfaction. “We want to be the place where patients choose to come for care,” Ferniany says. “Medical centers like Harvard and Johns Hopkins may always be the most prestigious, but we are positioning UAB to become the nation’s most preferred.”

To create a more service-oriented culture for accessible, timely, and coordinated care, UAB has appointed quality officers and a director for patient access. “Patients will eventually see improvements in access,” Randall notes. “We are streamlining appointment scheduling so that if there’s a cancellation, we can get the next patient in. Long term, we’d like to see greater Web-based interaction so that patients can communicate with physicians and perhaps schedule appointments.”

Implementation of the clinical plan is proceeding quickly, in part because of the excitement it has generated among the leadership and staff, Bridges says. “It encourages a creative spirit. People are eager to find different ways to be part of the solution.”



Primary Care: Meeting Needs with New Opportunities

Even subspecialists should worry about the growing shortage of primary care physicians, says William Curry, M.D., FACP, associate dean of rural programs and primary care. Population trends indicate that the current drought of physicians—a major problem in Alabama—will worsen drastically in the next 20 years, creating complications for everyone. “Good, effective primary care is the foundation of all medical care and required for good coordination of care,” he explains. “It’s essential for our patients’ health and safety.”

For that reason, every Alabama physician has a stake in UAB’s primary care strategic plan, the first in the school’s history, Curry says. The aim is to provide students with more—and earlier—exposure to community medical practice, giving them a clearer picture as they begin mapping out their careers. “It’s a satisfying life,” says Curry, who practiced primary care himself. “It can be done so that hours and coverage are reasonable, and the reimbursement is adequate for the work.”

Curricular Changes

All students will begin learning about primary care “on the first day of the first year,” Curry says. Primary care physicians also will play a greater role in teaching the Introduction to Clinical Medicine course, which will expose students to primary care practice settings.

The size of the first-year class will rise by 10 to 186, making room for students who may want to focus on primary care. Some may be members of the newly established Primary Care Scholars program, a four-year pathway, patterned after the rural scholars programs and the M.D./Ph.D. program, with an enriched curriculum covering topics such as population-based care, quality measurement and management, and health economics, law, and policy. Service-learning activities, leadership training, and a scholarly research activity focused on primary care will prepare these students for a variety of challenges, from the responsibilities of rural practice to the transitions of health-care reform, and train them to become health-care advocates.

The plan also calls for increasing the number of slots in the school’s Tuscaloosa- and Huntsville-based rural scholars programs and expanding the available primary care residency positions. Already, the Huntsville campus is adding an internal medicine program with a primary care slant, and a third branch campus in Montgomery will multiply the opportunities for students and residents to experience community medicine.

Scholarships and Leadership

The cost of medical school can be a barrier to primary care as a career choice, Curry says. “If that burden is not there, it removes the strong incentive to pursue additional subspecialty training and higher reimbursement.” The school, which has added a full-time major gifts officer for scholarships, will work with potential donors and partners to increase the pool of scholarships available, both from UAB and through the Alabama medical scholarship program. The school already is matching gifts from alumni for scholarships through the 2011-2012 academic year.

For faculty, a Primary Care Leadership Academy will help cultivate “teaching and leadership skills and a better understanding of the health-care system and public policy,” Curry says. The goal is to turn UAB primary care clinician-educators into role models for students and other physicians.

A Network for Alabama

Through an Area Health Education Center (AHEC) network, UAB will encourage communication and collaboration with physicians and other health professionals statewide. “It’s part of what’s been missing here for primary care,” Curry says, noting that Alabama is one of the few states without such a system. Launched with a federal grant, the network eventually will include four or five AHECs, run by medical centers and educational institutions around the state, linked to a UAB coordinating center. “Everyone is welcome—and needed,” Curry says.

The setup promotes a mutual flow of information and services. “Communities around the state can access our resources, and our educational programs will improve because we will understand the health-care needs of those communities,” Curry says. “It’s an infrastructure on which we can lay all kinds of networks for better education and training, recruitment, referrals, and research, and give back to the hundreds of physicians in community practice who help us teach and train,” he says. AHECs also enable young people to explore health careers, linking them to educational opportunities and helping to place students and residents in community rotations.

Curry says that most of the plan’s initiatives will be under way in the next 12 to 18 months, and he is eager to see the results. “We want students to see good models of care, and we want to be part of creating the new model for primary care,” he says.



Education: Training for Tomorrow's Challenges



Harvey the robot may help UAB medical students and residents become better doctors. The high-fidelity mannequin, programmed with different heartbeats to mimic a multitude of heart conditions, is the newest inhabitant of the School of Medicine's simulation training program. Now Harvey, his mechanical counterparts, and their flesh-and-blood colleagues will play a greater role in clinical skills training—a major focus of the school's education strategic plan.

Leveraging Learning

"Our goal is to help students learn more effectively," says H. Hughes Evans, M.D., Ph.D., senior associate dean for medical education. Innovative teaching methods such as simulation training involve "learning by doing, and all students will tell you that they learn better in that kind of environment." In addition to the interactive mannequins, UAB uses standardized patients—people acting as patients—to simulate real-world clinical experiences. Expanding the training offers a good way to gauge skills, especially those that require more of a thought process, including the interpretation of findings, Evans says. A faculty-student debriefing follows each session with a robot or standardized patient, and that's where simulation has its greatest impact, she adds. "We make the situation real, and the debriefing helps them learn from the situation."

Interprofessional education will be another emphasis. Increasingly, the quality of patient care "isn't just about whether a doctor's doing a good

matriculation programs that expose middle- and high-school students to health careers and educational enrichment. These can help pave the way for academic success for students who get into medical school, Evans says. They also can help remove obstacles for students from underrepresented groups, including minority and rural populations, facing a growing need for physicians. "Students who come from these groups are more likely to return to those groups as doctors," Evans explains. "We want to help them feel motivated and inspired to keep working toward health-care careers."

Faculty also will explore new avenues of learning. The new Department of Medical Education will help meet the academic needs of faculty, enabling them to become better teachers and mentors. "We want to do some programmatic development and research in medical education," says Evans, who has been named chair of the department. "As our expertise grows, we could develop master's or fellowship programs in areas such as medical simulation. We could teach people here instead of sending them out of state to learn it."

"We must make sure our students are prepared to be the kind of doctors we respect and need."

—H. Hughes Evans

job," Evans says. "Medicine is teamwork," requiring nurses, therapists, and other professionals to work together and communicate effectively. UAB geriatricians have already begun crossing academic boundaries with training exercises that team medical, nursing, and health professions students to create a care plan for a case-study patient. Evans envisions similar training that could emphasize patient safety, quality of care, and clinical skills. "We need to start interprofessional education earlier so that students have a better appreciation of what the team can do for the patient," she says.

Pipelines and Avenues

Along with promoting innovative teaching, the School of Medicine will provide additional academic support services to encourage and assist students as they progress through the curriculum. Some initiatives, however, will reach back, expanding UAB's successful "pipeline" and pre-



New Jobs, New Revenue

The strategic roadmap will have a major economic impact on the community and state.

Hiring 50 additional research faculty will generate

- more than 300 high-tech jobs—a \$20 million estimated annual payroll;
- more than \$30 million of direct additional NIH funding, resulting in a \$75 million indirect economic impact; and
- the need for a new research building—a \$100-million construction project.



Estimates provided by UAB Office of the Vice President of Research and Economic Development



Costs and Choices

One issue affecting all medical students is the cost of education, which can influence decisions ranging from school choice to career choice.

“Our ability to help students has eroded with tuition increases,” Evans says. Now the school is beginning a campaign to increase the number of scholarships for students with financial need—and to lobby the Alabama Legislature to expand its loan repayment program for students who commit to practice primary care in rural areas.

“Supporting these efforts will help us have better doctors in the future,” she adds. “Alabama requires more doctors. We must make sure that our students are prepared to be the kind of doctors we respect and need.”



What's Next

Strategic planning has already become strategic progress.

The School of Medicine has made initial investments in each area, and faculty recruitment, research funding, and other new projects are well under way. Watts says the school will measure its progress each month and year, fine-tuning the “living, evolving, dynamic” plans to take advantage of new opportunities. Additional investments from the school and a philanthropic initiative will follow over the next decade. “We want to keep going,” Watts says. “This is only the beginning.”

Meeting of the Minds

Each of the six pillars will host two major symposia a year, drawing experts from around the nation and world to present breakthrough research. “We want them to work alongside our own leaders and possibly establish collaborations. We want to expose our students to them,” Watts explains. UAB and Birmingham can also shine. “We want the best people, many of whom have probably never been to Alabama, to learn about the innovative things we’re accomplishing,” he says. See the back cover for a list of upcoming symposia.

Read more about the School of Medicine, UAB Health System, and UAB strategic plans at

Medicine.uab.edu/about/plan.



Help make UAB the preferred academic medical center—and the preferred medical school—for the 21st century.

Learn how at

Medicine.uab.edu/giving.



Proof of Progress

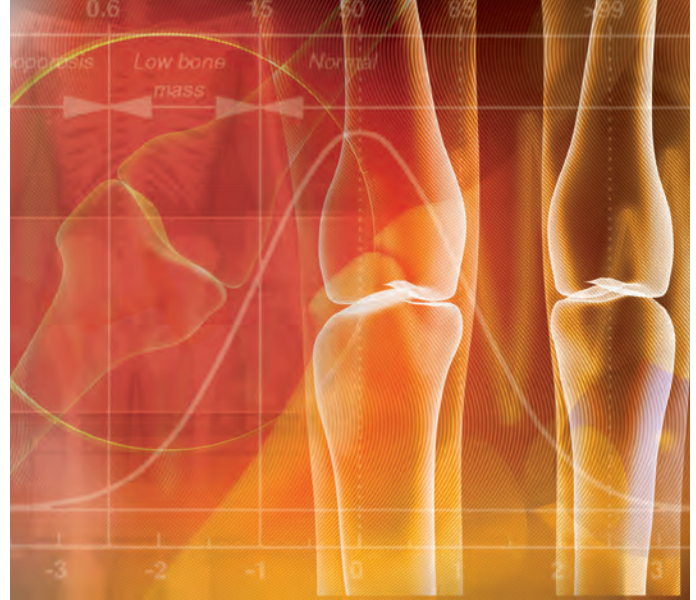
Testing the Impact of Treatment

By Cary Estes

Across the United States, health-care research involves millions of people and billions of dollars in an effort to develop the newest advances for prevention and treatment. At UAB, a group of scientists is investigating just how far those advances actually go in changing patients' lives.

“Our job is to find out what works in the real world,” says Kenneth Saag, M.D., M.Sc., the Jane Knight Lowe Endowed Chair of Medicine in Rheumatology. He also directs the UAB Center for Outcomes and Effectiveness Research and Education (COERE), which studies the impact of treatments in everyday practice and develops parameters that can make them more useful.

“It’s a great thing to do research and clinical trials to generate the evidence needed to make advances in science,” he explains. “But if



physicians in the community and other health-care providers don’t practice based on the evidence that exists, then none of it makes a whole lot of difference.”

Innovative Interventions

COERE brings together UAB clinical, biomedical, quantitative, and behavioral and social sciences researchers to collaborate with groups throughout and beyond the health-care field on a variety of projects. One recent study with the UAB Health System focused on increasing the numbers of women who receive the DXA bone-density screening, which can help identify patients at risk for fracture,

Medicine That Moves You



Marcas Bamman, Ph.D.

A Prescription for Exercise

By Jo Lynn Orr

Most everyone, from public officials to personal trainers, agrees that exercise promotes health and fitness. But if queried, very few exercise enthusiasts would know exactly how much exertion is necessary to prevent disease. The same is true for their health-care providers.

Last spring, UAB established the Center for Exercise Medicine (UCEM) to determine the best “prescriptions” for physical activity. More than 40 scientists, representing at least 13 departments in the School of Medicine and other areas of UAB, will investigate the specific amounts of exercise—and the most advantageous types of activity—needed to

prevent and counteract different chronic diseases, including heart disease, diabetes, and even asthma. Some collaborative studies will explore the interaction of exercise and prescription drugs in treating different diseases, and others will focus on injury prevention and rehabilitation.

Raising the Bar

“The UCEM is one of a handful of interdisciplinary exercise medicine centers nationwide that’s attached to a school of medicine,” says Marcas Bamman, Ph.D., director of the center and professor in physiology and biophysics. This point was reiterated by officials of the American College of Sports Medicine (ACSM) at a recent exercise conference Bamman attended in Denver. The ACSM, in conjunction with the American Medical Association, has introduced a national initiative, Exercise is Medicine, to spotlight the relationship between health prevention and exercise and encourage health providers to raise the exercise bar for their patients.

“The ACSM leaders I met with voiced excitement about the research being conducted at the UAB center,” he says. “And since the ACSM is actively involved in providing public-health information on exercise recommendations, I took the opportunity to point out that it’s time to

by allowing some women to schedule their own tests. According to Ryan Outman, COERE deputy director, DXA testing rates were 12 percent higher for women who could self-schedule than for those who relied on staff referrals. Based on that finding, COERE implemented a similar intervention with Kaiser Permanente in two regions of the country, with comparable outcomes. “The results from three different health systems indicate that providing eligible women with the opportunity to self-schedule a DXA scan may be an effective, low-cost strategy to increase rates of osteoporosis screening and ultimately reduce disease,” Outman says.

A current project matches COERE with Medco, a mail-order pharmacy company, to determine if an online educational video can help improve rates of testing and treatment among patients at risk for prednisone-induced osteoporosis. “This innovative approach allows for an intervention at a highly teachable moment when patients refill their prescriptions,” Outman explains.

Much of UAB’s outcomes research focuses on medication safety. Saag says the center uses large databases, such as electronic health records and claims databases, to better understand the safety issues involved with new drugs, including those used to treat rheumatoid arthritis and osteoporosis. Surveys help the scientists gain a better understanding of quality-of-life issues among patients.

“We’ve had quite a bit of success in this area,” and UAB has

earned a national reputation for its work, Saag says. “It has led to some large grants and contracts from different organizations.”

Follow the Evidence

COERE also has been at the forefront of developing evidence-based guidelines for physicians and other health professionals, Saag says. For example, UAB rheumatologists Jasvinder Singh, M.B.B.S., and Timothy Beukelman, M.D., recently developed the American College of Rheumatology (ACR) guidelines for the use of drugs and biologics to treat rheumatoid arthritis, following a systematic review of scientific literature. Beukelman also developed ACR recommendations for the appropriate treatment of juvenile idiopathic arthritis.

The need for outcomes research should increase with the growing emphasis on preventive health care, Saag says. Putting good medical information and improved strategies in the hands of doctors and patients will enable them to make decisions that will improve the level of care and, ultimately, the quality of health, he explains.

“We need to generate the best evidence we can to ultimately allow physicians to practice as well as they can,” Saag says. “By generating that kind of evidence through studies using large databases, and then by synthesizing the evidence through guidelines and developing evidence-based quality measures, we can guide physicians and other health-care providers in making the right decisions.”

define exercise-medicine dosages. Health-care providers at this point don’t have much to go on when it comes to prescribing exercise for disease prevention.”

The Right Moves

Movement disorders are a core concern of the UCEM, which includes a team of multidisciplinary researchers who are collaborating on Parkinson’s disease. “This is important work,” Bamman says, “because we don’t yet know the best form—much less the amount—of exercise for those patients.”

Another project will determine which of two different exercise doses will work best to optimize insulin sensitivity for individuals who are insulin-resistant and for diabetic patients who want to improve insulin action and glucose homeostasis.

Some of the UCEM’s most important findings, however, may benefit older adults.

Research on strength training in particular could have a profound impact, says Bamman, who has spent more than 15 years

studying exercise and its effects on aging. One current UCEM study is investigating strength training as an avenue to restore mobility, muscle mass, and metabolic function in older adults. “We’re doing this with a dose-response treatment project involving four different exercise prescriptions,” he explains. A separate, recently completed study is the first to suggest that older adults need more frequent weekly doses of exercise to maintain muscle size than younger people.

Exercise-medicine research is just warming up, and Bamman anticipates new studies, discoveries, and solutions. For example, “we don’t know how much resistance training is required

or is optimal to increase bone density in the hip and spine and prevent osteoporosis,” he says. “That study has not yet been done.

“Our goal is to determine how to use exercise so that we have the greatest impact on quality of life,” he says.



Bamman (center) works with trainers and patients to understand the effects of exercise on the prevention and treatment of health conditions.



Research Without Limits

Biomedical Training Takes an Interdisciplinary Approach

By Gail Short

In the 20th century, the image of the solitary scientist—such as Galileo Galilei, George Washington Carver, or Albert Einstein, began to shift. The world’s problems seemed more complex, and scientists realized that collaboration was key to solving them. The Manhattan Project and the Apollo space program are two of the most successful examples of the team approach to research. More recent efforts include the 1990s Human Genome Project to identify 20,000 to 25,000 genes in human DNA.

Today, team research is flourishing, and the National Institutes of Health has launched initiatives to encourage collaboration. Scientist training has evolved as well—most recently at UAB, which has a history of interdisciplinary research.

“Any successful biomedical scientist crosses many traditional discipline boundaries to solve problems or discover knowledge,” says Susan Rich, Ph.D., director of UAB Graduate Biomedical Sciences and senior associate dean of the life sciences in the UAB Graduate School. “Someone working on new therapies related to brain tumors, for example, would be working in areas of neurobiology, genetics, immunology, or pathology. To be successful, students

should be trained to think and to approach their research in a fashion that similarly crosses boundaries and is truly interdisciplinary.”

Themes and Tailoring

The development of a more integrated approach to training scientists began with the School of Medicine’s 2006 Research Strategic Plan, which called for restructuring the graduate programs affiliated with Joint Health Sciences. The new

Graduate Biomedical Sciences launched in fall 2010 with a first-year class of 64 doctoral students.

Instead of enrolling in a program tied to a single academic department, students now choose among eight thematic, interdisciplinary programs: Biochemistry and Structural Biology; Cancer Biology; Cell, Molecular, and Developmental Biology; Genetics and Genomic Sciences; Immunology; Microbiology; Neuroscience; and Pathobiology and Molecular Medicine. Students in each program can take classes and conduct research experiments under the direction of faculty from a variety of UAB departments, essentially tailoring the program to fit their research interests.

“Students find this attractive,” Rich says. “We’ve seen an increase in our applicants, and they are more defined in their interests. We anticipate that students will get through their training more efficiently because they won’t spend the first year trying to figure out what they want to do.”

Students in all of the programs begin their curriculum with biostatistics, bioethics, and a core course that gives them a foundation in biochemistry, genetics, molecular biology, metabolism, and biological organization. Afterward, students select classes that focus on their chosen theme. Most students will complete their programs in four to six years.

Network of Knowledge

The first-year students also completed three research laboratory rotations, each lasting 10 weeks. Following each rotation, they presented their research projects at poster sessions.

Some students have already received national recognition for their studies, says Rich. Jessica Winek, in the Cell, Molecular & Developmental Biology program, recently won a fellowship from the National Science Foundation. David Scott, in Pathobiology and Molecular Medicine, won an American Heart Association fellowship.

Rich says the integrated approach makes it easier for students in different disciplines to study together and share lecture notes and ideas. “It has created a broader network among the students,” she says. “The theme affiliation doesn’t subdivide them socially.”

UAB Graduate Biomedical Sciences has expanded its own team as well, working with Southern Research Institute in Birmingham and HudsonAlpha Institute for Biotechnology in Huntsville to add student research opportunities. Their scientists have participated as course directors and presented lectures.

Rich notes that the interdisciplinary approach to scientist training will make UAB’s biomedical graduates more competitive professional researchers. “Some will work in industry, go into government research, or become educators,” she says, “but they will be stronger in terms of their preparation to develop knowledge.”

Scientific Circle

Fighting TB at Home and Abroad

By Nicole Wyatt

Growing up in Cape Town, South Africa, Adrie Steyn never understood the epidemic his country faced. It wasn't until he came to the United States to complete his Ph.D. in 1994 that he realized the magnitude of the danger from tuberculosis (TB) back home.



Adrie Steyn, Ph.D.

"I had to travel 8,000 miles to figure out that the country I came from had a problem," he says. "I never was aware of it."

Steyn, a UAB associate professor of microbiology, has devoted his career to solving that problem, focusing on the bacterium that causes TB (*Mycobacterium tuberculosis*) and its ability to go dormant inside its host's cells and evade attacks by the immune system. Now Steyn's journey of discovery has taken him back to South Africa. In June 2011, he became the first

scientist recruited to work at the new KwaZulu-Natal Research Institute for Tuberculosis and HIV (K-RITH), a collaboration between the Howard Hughes Medical Institute (HHMI) and the University of KwaZulu-Natal. HHMI has committed \$60 million to the initiative.

Information Exchange

"We plan to study the mechanisms of mycobacterial persistence, or dormancy. How does TB escape drug therapy? How do we develop new vaccines? We will make full use of the resources at K-RITH," Steyn says. "It's an incredible, once-in-a-lifetime opportunity for me."

Even though he has moved to the city of Durban, where K-RITH is located, Steyn retains his UAB faculty position and laboratory. "K-RITH said it was fantastic that I wanted to maintain my lab," Steyn says. "My lab at UAB will function as a gateway to K-RITH, providing all sorts of research, educational, and training opportunities." One outcome may be an educational exchange for students, postdoctoral research fellows, and faculty from both campuses, he adds. "Many of us in the United States who work on infectious diseases have no real-life experience seeing how those diseases affect people. Sending students or postdocs overseas is a unique experience in training and changing perceptions of disease."

Filling the Gap

Steyn initially focused his research on molecular yeast microbiology but switched to studying TB while pursuing his Ph.D. at Albert Einstein College of Medicine in New York. His mentor there was Barry Bloom, one of the world's foremost TB researchers, and Steyn worked with him for several years at Harvard before joining the UAB faculty in 2003.

"There are a lot of incredible collaborators at UAB who are quite stimulating to work with," Steyn says. "The interaction with the clinical side here is very beneficial. We're filling the big gap between basic research and clinical research; it's key."

Together with other UAB researchers, Steyn evolved a model paradigm to understand how host gases like nitric oxide, carbon monoxide, and oxygen react with TB proteins to activate virulence. That group also was the first to implicate carbon monoxide in bacterial pathogenesis.

A Cigarette Connection?

Today, as Steyn begins work at K-RITH, his UAB research teams are studying TB patients to pinpoint the connection between smoking and TB exacerbation. "Meta-analysis and epidemiological studies show a clear link between cigarette smoke and TB, but there's no true genetic evidence," he says.

Steyn's team also is looking at whether cigarette smoke can contribute to drug resistance in TB. The first extensively drug-resistant case of TB was found in Durban a few years ago, and by 2010, cases had been identified in 58 countries, according to the World Health Organization.

Some TB strains are now completely drug resistant, Steyn says. His team wants to learn if the free radicals and mutagens inhaled with cigarette smoke have an effect on TB in the lungs.

"We believe this work will have huge public health and socioeconomic implications because it would be the first genetic evidence that cigarette smoke can cause drug resistance," Steyn explains. He hopes it will be the first of many studies that could impact patients from Alabama to South Africa and around the world.

- One third of the world's population is infected with TB.
- Each year more than 9 million people become infected worldwide.
- Each year, there are almost 2 million TB-related deaths worldwide.



Source: Centers for Disease Control and Prevention

A Diagnosis for Medicaid

Answers from Alabama's Medicaid Director

By Jo Lynn Orr

When Governor Robert Bentley appointed a new director of the Alabama Medicaid Agency in January 2011, he chose someone who had decades of experience with the program—from the provider side. **R. Bob Mullins Jr., M.D.**, a 1968 School of Medicine graduate and Bentley's classmate from high school through medical school, was a family medicine physician in Valley, Ala. For 37 years, Mullins "delivered babies, performed minor surgery—the whole nine yards," he says. Here Mullins shares his unique perspective on the program he oversees.

Dr. Mullins, how did your education and practice prepare you for your current position?

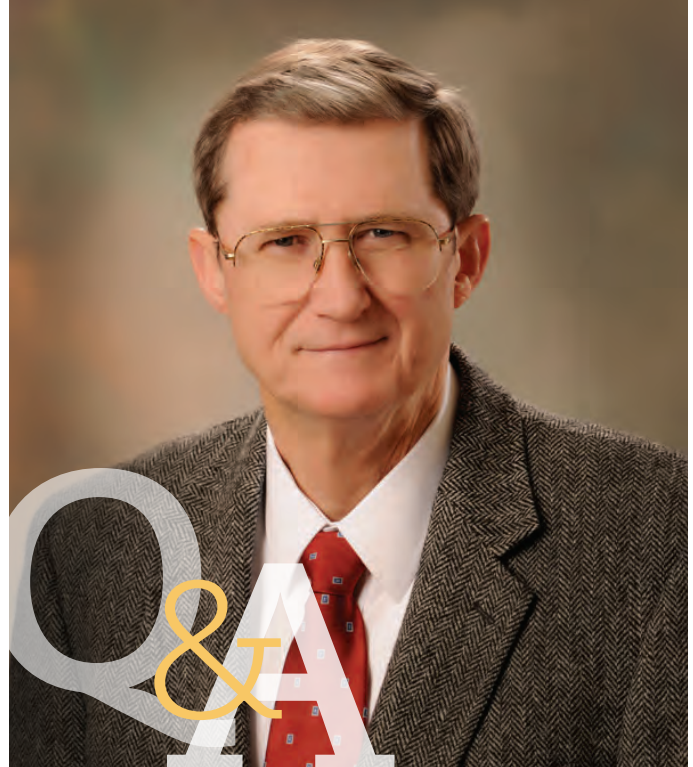
When I was a medical student, Dr. Tinsley Harrison always quoted William Osler, who said that if you listen, the patient will always tell you what's wrong. So I would say that the ability to take a history and do a physical has been the best preparation for this job. If I ask the right questions and listen closely, I will learn what needs to be dealt with and how to do it.

What are you dealing with now? We have three major projects: One is the Medicaid agency itself, which provides benefits for low-income people. Then there is a health-information network —Alabama's One Health Record. Within the next two years, you will have the ability to connect to a hub that will make health records available electronically to medical professionals across the state.

What surprised me the most is the depth of the agency's involvement with the health-insurance exchange (HIE), part of the federal Affordable Care Act (ACA). It's centered on the ability to determine eligibility for Medicaid and the Children's Health Insurance Program, and we want to see how that will play into the development of the HIE in order to enroll people in insurance programs.

What are your plans for the Alabama Medicaid Agency? We need to maintain our primary goal of providing health care for low-income people. I also want to develop the infrastructure for the HIE and the health information network so they can ultimately become independent of Medicaid.

We also know that a large number of people don't apply for



Medicaid simply because they consider it welfare, and a lot of people move in and out depending on their income status. My intention is to make Medicaid a meaningful service, not a demeaning experience for recipients or providers.

How will health-care reform impact Alabama Medicaid and Alabama physicians? According to UAB studies, if the ACA remains intact, and Alabama's economy continues as projected, Medicaid will enroll an additional 500,000 people during 2014. We already enroll up to a million people, and with normal expected growth, we estimate that we may care for as much as 40 percent of the state population. We will need an additional 1,000 primary-care physicians in Medicaid alone to take care of the increased demand. With full ACA implementation, our administration costs will increase by more than \$300 million, which won't be matched by federal funds. A recent report from Auburn University at Montgomery indicates that Medicaid will require 92 percent of the General Fund budget by 2020—which is not going to happen.

A more interesting perspective is the impact of ACA on private-practice medicine. A mandated program requiring 100 percent enrollment in some form of insurance obviously will increase the demand for care. If there's only a modest increase in the number of providers, then real pressure is exerted on private practice. We will see a trend toward hospital-employed physicians to man vertically integrated health-care systems.

What's the solution? If we change the U.S. tax code so that everyone buys their health insurance with pre-tax dollars, the employers could give the money they pay for health-insurance plans to workers to buy their own insurance. Insurance companies wouldn't be able to go out and sell a thousand policies to one company representative; instead, they would have to sell one policy to a thousand employees. It would be painful. But eventually we would get back to true, honest free-market forces that would have an effect on the cost of health care. People would have to think about what they're spending to get care.

Novel Therapy | Medicine Meets Literature

By Susannah Felts

Fourth-year School of Medicine student Valerie Gribben knows that therapy isn't always found in pill form. Instead, it can come in the simple act of reading a book to a patient. An engrossing story, whether fiction or nonfiction, can offer a soothing diversion from discomfort, boredom, and isolation—and the act of reading aloud can build a bridge between patient and reader. “Close bonds can form over a book,” Gribben says. It's on this principle that the Montgomery, Ala., native founded Healing Words, an organization that sends UAB college students to read to patients in Birmingham-area hospitals, nursing homes, and hospices.

Gribben says her love of books came first—her father got her hooked on fairy tales and Sherlock Holmes at an early age. While volunteering in a hospital during high school, she saw firsthand the effect that sharing stories could have on patients, especially those who lacked a strong support network.

Then, a few years later, she read some of her own writing to her mother, who was receiving treatment for breast cancer. “That was the first time I'd seen her liven up since she had started the chemo infusions,” Gribben recalls. “I could see her spark come back.”

Reading and Revelation

Those experiences nudged Gribben toward a career in medicine. “Since then I've looked for ways to put literature and medicine together,” she says. “It's so important for patients to talk about something other than their illnesses.”

Now in its fifth year, Healing Words trains its volunteer readers through the Literacy Council, which has also provided more than 500 free books to the organization. Volunteers read to patients of all ages, in English and Spanish. Gribben handed over the presidency in 2008, when she finished her undergraduate work at UAB; she continued as a volunteer reader through two years of medical school. “The program is strong enough to keep going without me, and that's tremendous,” says Gribben. “Students I've never met are continuing that arc, having their own moments of revelation.” She says that Healing Words has been especially popular in the UAB Hospital burn unit, where long stays are common.

Pages for Physicians

But if literature proves therapeutic for patients, it can do the same for physicians, whose work frequently brings them face to face with trauma. “Narrative medicine,” which involves reading and writing stories and essays about medicine, “helps students reflect and avoid burnout that's so prevalent,” Gribben says. Inspired by UAB's narrative medicine interest group for doctors, she formed a student version, which now has about 70 members. The students



Valerie Gribben meets with UAB's student narrative medicine interest group. In addition to writing about their own medical experiences, members read works by physician authors including Danielle Ofri, M.D., Ph.D., founder of the Bellevue Literary Review, and Rita Charon, M.D., Ph.D., director and founder of Columbia University's narrative medicine program. Gribben says she plans to follow their example.

share their own experiences and read works by physician authors, whom Gribben calls “a real inspiration.”

She already has turned some of that inspiration into publication. At 16, Gribben sold the first book in *The Fairytale Trilogy*, her young-adult fantasy that puts a modern twist on the Brothers Grimm tales, to NewSouth Books. She wrote the second and third books as an undergraduate and first-year medical student.

Last summer, she published an op-ed piece in *The New York Times* in which she reflected on the resonance of fairy tales and medicine: “Fairy tales are, at their core, heightened portrayals of human nature, revealing, as the glare of injury and illness does, the underbelly of mankind. Both fairy tales and medical charts chronicle the bizarre, the unfair, the tragic. And the terrifying things that go bump in the night are what doctors treat at 3:00 a.m. in emergency rooms.” But in both, she noted, “happy endings are possible.”

Today, Gribben keeps a Kindle, stocked with both tales and textbooks, in the pocket of her white coat. And she knows that her English major is more useful in her medical training than many of her fellow students might assume. “Literature,” she says, “introduces you to the human condition on the page.”

Student Rounds

By Charles Buchanan

DISTANCE LEARNING

Award-Winning Students Conduct Research Around the World



Eva Clark, Bolivia

Itinerary: Last year, Clark (above), an M.D./Ph.D. student in UAB's Medical Scientist Training Program (MSTP) from Huntsville, Ala., was selected for the coveted NIH-sponsored Fogarty International Clinical Research Scholars Program, enabling her to help run an initiative on Chagas disease in six poor indigenous villages in Bolivia. "Chagas is a parasitic disease that eventually causes severe heart and/or

digestive problems," Clark explains. "It is uncommon in the rest of the world, but in the Gran Chaco region of South America, more than 40 percent of individuals are infected in some areas." Clark evaluated differences in immune response between people with Chagas and those with both Chagas and intestinal helminths. "We hope that our work will help improve diagnostics for Chagas and contribute to knowledge that could lead to a vaccine or improved treatments," she says.

Knowledge Base: "I have been surprised by the lack of education about Chagas in a region where the disease is so prevalent," Clark says. "People here know that it causes life-threatening problems, but they don't know much about how to prevent it, or anything else about it." She adds that her experience conducting clinical research in the field will help her define her post-residency career.

Sleepless in South America: Clark and her team did not sleep for several days in order to deliver the first set of findings to the community doctor. The grueling experience brought a great reward, however. "Apparently, past groups have never delivered results, and the people were suspicious that we wouldn't either," Clark says. "But we did it!"



Ryan Wells, Botswana

Itinerary: Also selected as a Fogarty scholar, Wells (first row, second from left, with Botswana colleagues) is spending 10 months conducting tuberculosis research at the Botswana Harvard AIDS Institute Partnership. "TB is an increasing problem globally, in particular due to the HIV/AIDS pandemic, resulting in a large incidence of HIV-TB coinfection," which is prevalent in sub-Saharan Africa, he says. The UAB MSTP student is immunologically characterizing proteins that are essential for the survival of *Mycobacterium tuberculosis* (Mtb), the bacteria causing TB, in the host. The resulting data could



Kathy Jo Carstarphen, Peru

Itinerary: Carstarphen (above, at left, with Peruvian nurses) won a Carolyn L. Kuckein Student Research Fellowship award from the Alpha Omega Alpha Honor Medical Society, which will take her to Lima, Peru, to conduct a hospital-based HIV education project.

Return Trip: This is not Carstarphen's first trip to the South American country. The research "is based on a pilot study for my SOM Scholarly Activity," says the fourth-year student and Selma, Ala., native. "That data revealed that these Peruvian HIV-positive patients wait up to two hours to receive their medicine and see their physicians. Patients also expressed that they would have gotten into treatment earlier if they had been educated about HIV. My current project will show an educational video on HIV to patients during their wait time and assess how it affects their knowledge of HIV and safe sexual practices."

Lessons in Latitude: Carstarphen, who also visited Uganda and Zambia while in medical school, says travel trains her to become a better physician by "making me more adaptable and open-minded. By becoming flexible, I am more open to patients and their differences."



DAY OF DISCOVERY

STUDENTS attending Girls in Science and Engineering Day saw everything from sheep hearts to water rockets, but Farah Khan (center photo, at left) hopes they also caught a glimpse of a future career. The third-year School of Medicine student worked with a friend, Alison Barnard, a UAB doctoral student in physical therapy, to develop and organize the free event, which drew more than 70 girls from 18 middle schools to UAB last May.

“Today women are still heavily outnumbered by men in science and engineering,” says Khan, of Vestavia Hills, Ala. “Many young girls do not realize the opportunities that exist and are often discouraged from pursuing these career paths. Gaining an interest in science and engineering at a young age will ensure that they have the chance to consider these fields.”

Khan worked to recruit corporate sponsors as well as instructors for the day’s

workshop on medicine. “[Cell biologist] Laura Cotlin, Ph.D., and [gross anatomy lab director] Carrie Elzie, Ph.D., taught the girls about the human circulatory system,” Khan explains. “They reviewed histology and basic anatomy, and then the girls dissected sheep hearts for a hands-on experience.” Other UAB faculty—in engineering, education, biology, physical therapy, and human studies—introduced students to the water rockets, metal casting, neuroscience, and more.

“We had such positive feedback, and several girls are interested in returning for future events,” says Khan, who also found inspiration that day. “I want to continue motivating young girls to pursue careers in science and engineering, and to continue to impress the importance of future education at a young age.”

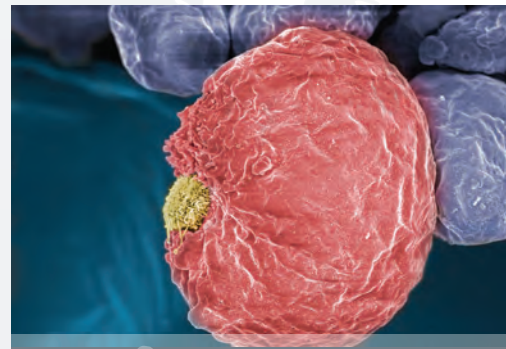
shed light on the Mtb immune response in the setting of HIV infection and could provide insight into the development of a TB vaccine that is effective in HIV-positive patients.

Research Before Research: Finding information on living and working in Botswana was difficult, Wells says, because most of the information available in the United States is geared to tourists. Instead, he searched out blogs written by Peace Corps volunteers, physicians, and previous Fogarty scholars for a more accurate picture.

Home Cooking: Wells, a native of Mountain Home, Idaho, has

enjoyed learning about Botswana’s culture. He attended a braai—a feast where a cow is slaughtered and steaks are carved and grilled. “In many ways it is similar to an old-fashioned Southern barbecue, but with traditional music, dance, and festivities,” he says.

Out of Africa: The Botswana experience has extended his education, but Wells couldn’t pass up the opportunity. “This year of international clinical research is an appropriate capstone to my training and serves as a solid foundation for my future career in academic medicine and global health,” he says.



Art & Sciences

“Last Supper,” a microphotograph by fourth-year student Gina Byekova, appeared on the cover of the journal *Academic Medicine* in October. She stumbled upon the image—an amoeba absorbing a ball of fungus—while using scanning electron microscopy to study the molecular basis of the pathogenicity of *Entamoeba histolytica*, a human intestinal parasite. “I used a computerized pseudo-coloring technique to bring out the dynamic nature of the interaction between the two microscopic creatures,” says Byekova, who finds inspiration in microscopic landscapes. “I consider myself a scientist who enjoys highlighting the artistic side of micro-imaging. This has helped me get through many tedious hours in the dark microscopy room.” Byekova created “Last Supper” as a Clemson University graduate student; more recently, the Ukraine native has conducted research on brain and skin cancers with UAB scientists and chosen to specialize in dermatology. “I am excited to utilize my visual skills of pattern recognition in working with patients with skin diseases,” she says.

Gina Byekova

Commencement 2011

The 168 members of the class of 2011 received their academic hoods and signed their names as physicians for the first time at the highly anticipated Commencement ceremony, held May 15 at the Birmingham Jefferson Convention Complex. Catherine D. DeAngelis, M.D., M.P.H., editor-in-chief of the *Journal of the American Medical Association*, editor-in-chief of scientific publications and multimedia applications, and professor of pediatrics at Johns Hopkins University School of Medicine, gave the commencement address.

SCHOOLWIDE AWARDS

Hugh J. Dempsey Memorial Award for Highest Academic Achievement
Adam Larry Edwards

Proassurance Indemnity Award for Excellence in Patient Communications
Patricia Bowman Aiken
Jacob Don Kelley

Leonard Tow Humanism in Medicine Awards
Presented by the Arnold P. Gold Foundation to a student and faculty member
Rodney O. Tucker, M.D.
Rozalyn Grace Farmer Love

Medical Alumni Association Award for Outstanding Community Service
Katherine Jackson Donnithorne

Glasgow-Rubin Citation for Academic Achievement
Presented by the American Medical Women's Association to female class members graduating in the top 10 percent of their class

Lisa Nowoslawski Akhtar
Lindsay Elizabeth Brown
Jennifer Phillips Eldredge
Miriam Hadj-Moussa
Laura Hays Nye

William Boyd Medal in Pathology
Presented by the Alabama Association of Pathologists and the UAB Department of Pathology
James Gilbert Timpson deKay

American Academy of Neurology Award for Excellence in Neurology
Meena Ramaswami Kannan

BIRMINGHAM CAMPUS AWARDS

The Dean's Award
For superior performance in the clinical curriculum
Lindsay Elizabeth Brown

Achievement Awards
For excellence in the clinical curriculum

Lindsay Elizabeth Brown
Adam Larry Edwards
Jennifer Phillips Eldredge
Nicole Margaret Falls
Miriam Hadj-Moussa
Eddie Hyatt
Zachary David Reardon
Daniel Schuster
Allen Michael Seibert
Brian Patrick Sullivan
Sharon Virginia Tsay

Battle S. Searcy Memorial Award in Psychiatry
Adam Larry Edwards

Bruce A. Harris Jr. Award in Obstetrics and Gynecology
Nicole Margaret Falls

Samuel Clements Little Award in Neurology
Tiffany Danielle Cossey

Garber Galbraith Medical Student Award in Surgery
Russell Gregory Day

G. Gayle Stephens Award in Family Medicine
Jeremy Alan Hawkins

Paul A. Palmisano Award in Pediatrics
Katherine Jackson Donnithorne

Tinsley R. Harrison Award in Internal Medicine
Adam Larry Edwards

Robert Goodloe McGahey Award in Anesthesiology
Jennifer Phillips Eldredge

Emergency Medicine Award
Jonathan David Miller

Robert J. Stanley Award in Radiology
Eddie Hyatt

Emily F. Omura Award in Dermatology
Jennifer Whitney Turnham

HUNTSVILLE CAMPUS AWARDS

Dean's Award for Academic Excellence
For superior performance in the clinical curriculum
William Purvis Lancaster

Exemplary Academic Performance
For excellence in the clinical curriculum
Kyle Joseph Rudemiller

Dean's Leadership Award
Michael Stephen Bobo

G. Gayle Stephens Award in Family Medicine
Robert Joseph Edwards



Senior vice president of medicine and dean Ray Watts honored high achievers in the graduating class at the Dean's Awards Luncheon.

J. Ellis Sparks Award in Internal Medicine
 Juanita Titrud Heersink

John Di Placido Award in Obstetrics and Gynecology
 Eric Andrew Sparks

John R. Montgomery Award in Pediatrics
 Letisha Renee Brazile

Charles Selah Award in Surgery
 William Purvis Lancaster

Award in Psychiatry
 Seth Ryan Knight

Award in Neurology
 Rodney Tyler Harney

TUSCALOOSA CAMPUS AWARDS

Scholastic Achievement Award
For superior performance in the clinical curriculum
 John Mark Chestnut

William R. Willard Dean's Award
For outstanding contributions to the goals and missions of the College of Community Health Sciences
 Mark Hansen Christensen

James H. Akers Memorial Award
For the senior(s) who best personifies both the art and the science of the practice of medicine as chosen by their peers
 John Mark Chestnut
 Sean Richard McBrearty

Robert F. Gloor Award in Community and Rural Medicine
 Mark Hansen Christensen

Family Medicine Award
 Maury Paul Minton

William W. Winternitz Award in Internal Medicine
 John Mark Chestnut

Finney/Akers Memorial Award in Obstetrics and Gynecology
 Merri Maddox Paden

Pediatric Award
 Aleia Kay Crim

Peter Bryce Award in Psychiatry
 Mark Hansen Christensen

William R. Shamblin Award in Surgery
 Peter Leslie Jernigan

Neurology Award
 John Mark Chestnut

Student Research Award
 Sarah Elizabeth Boutwell
 Donald Blake Perry



The new graduates celebrated with family and friends at a reception following the Commencement ceremony.



Pre-Med

Learning Begins Early for the Class of 2015 | By Charles Buchanan



The highly anticipated White Coat Ceremony marked the traditional beginning of medical training on August 14. The Medical Alumni Association presented the class with their coats, a symbol of professional competence and human compassion, as their families and friends watched. The Arnold P. Gold Foundation also presented each student with a pin emphasizing humanism in medicine.



John M. "Shaun" Packard Jr., M.D. '73; Richard D. deShazo, M.D. '71; and T. Riley Lumpkin, M.D. '58 (with plaques, left to right), received the Martha Myers Role Model Awards at the ceremony. Presented by the Medical Alumni Association to physicians who have devoted their careers to community service, the awards are named for a 1971 alumna who spent 25 years caring for the people of Yemen. Dean Ray L. Watts, M.D. (at left), and R. Bob Mullins Jr., M.D. '68 (at right), presented the awards.



During the ceremony, the students recited an oath of dedication that they wrote during their first class—Patient, Doctor, Society. The special course emphasizes a physician's roles and responsibilities, ethics, compassion, professionalism, and the patient relationship.



A month before the fall semester began, the 176 members of the class of 2015 got to work, learning about everything from student services and medical licensing to constructive feedback and personal finances. They also had plenty of opportunities to get to know the faculty, staff, and each other.

First-Year Voices:

Elizabeth Varnell,
Birmingham, Ala.



"Volunteering in Guatemala taught me a lot about myself and health care and reaffirmed my decision to be in that kind of environment helping people."
—After college, Elizabeth Varner volunteered for six months in the pharmacy of a Guatemalan clinic, where she became fluent in Spanish. Now she looks forward to putting those skills to use as she interacts with patients in medical school. Eventually, she would like to specialize in internal medicine.

First-Year Voices:

Benjamin Persons,
Sebastopol, Calif.



"I would like to teach. I also want to help the disadvantaged here and abroad, possibly combining these goals as an instructor overseas."

—Benjamin Persons taught junior high school in Japan, and the experience is benefiting him in medical school. He says his interactions with people there have given him a sense of ease in talking with patients.



First-year students celebrate the beginning of medical school at a festive welcome reception sponsored by the Medical Alumni Association.



Divided into four teams, students competed in field-day sports—and a relay involving the Operation board game—during an "Olympics" on the Campus Green and at the Campus Recreation Center. The afternoon event, which promoted team-building and collaboration among students, culminated in a cookout.



Students began giving back to their new community during their first week. Working with Equal Access Birmingham, the students helped rebuild houses and aid recovery efforts in areas devastated by the April 27 tornadoes.

2015 Class Profile

- 94 men, 82 women
- 23.6 average age
- 30.2 average MCAT score
- 10 states represented
- 53 undergraduate institutions represented
- Top majors: biology, biomedical sciences, chemistry
- 18 students with multiple majors
- 8 M.D./Ph.D. students; 4 M.D./M.P.H. students
- 20 students entering rural medicine programs



First-Year Voices: Ashley Spann, Douglasville, Ga.

"I'm most interested in learning about the underlying science and pathology of disease. I've always wanted to understand what's going on behind the scenes and to be able to fix or manage it appropriately."

—Ashley Spann conducted research in Merck's automated biotechnology department, analyzing PARP inhibitors and their potential to kill specific tumor cells. She hopes to continue with research when she becomes a practicing physician, translating her discoveries into the clinical setting.

Telepsychiatry Brings Mental-Health Care to Rural Patients

By Leslie Zganjar

In Alabama, 42 percent of the population lives in a federally designated mental-health professional shortage area. In the state's rural communities, mental-health services are in even shorter supply.

Thaddeus Ulzen, M.D., a psychiatrist and interim dean of the College of Community Health Sciences, knows these statistics all too well. Not only is there tremendous need for mental-health services in rural areas, he says, but mental-health challenges there are often greater because, with less access to care, patients may present later with more complications.

Ulzen explains that for rural populations that are geographically isolated or financially unable to travel to urban areas for care, providing mental-health services through telepsychiatry is invaluable to improving access.

The college, which is the Tuscaloosa branch campus of the School of Medicine, began work on a telepsychiatry program in 2007 when it partnered with the Alabama Department of Mental Health, the West Alabama Mental Health Center, and others on a \$1.2-million grant awarded by the Bristol-Meyers Squibb Foundation to improve mental-health services in Alabama's rural and impoverished Black Belt region. The grant enabled the college to provide telepsychiatry services to assist the Demopolis-based West Alabama Mental Health Center and its facilities in the surrounding rural counties of Choctaw, Greene, Hale, Marengo, and Sumter.

Two years later, the college's Institute for Rural Health Research received \$99,800 from the U.S. Department of Agriculture's Distance Learning and Telemedicine Grant Program to purchase cameras, monitors, and other equipment to bring telepsychiatry services to Capstone Rural Health Center in Walker County, Carrollton Primary Care in Pickens County, Cahaba Medical Care in Bibb County, and Monroeville Primary Care in Monroe County.

Last year, the college began providing telepsychiatry services to DeKalb County Youth Services.

A Growing Need

Telepsychiatry allows mental-health providers to deliver services to individuals with limited access to care, including those living in rural or underserved communities. Providers use video conferencing over a broadband network connection to conduct virtual sessions



Thaddeus Ulzen, M.D., provides care to a patient using telepsychiatry.

with patients at remote sites. Though patients and providers are connected through computer cameras and microphones, treatment is up close and personal. "You can talk back and forth in real time," says Lloyd Williamson, M.D., a psychiatrist and assistant professor in the college's Department of Psychiatry and Behavioral Medicine.

The rise in telepsychiatry has come largely out of need. According to the National Institute of Mental Health, one in every four Americans aged 18 and older (58 million people) experiences a mental illness or substance-related disorder each year. The American Academy of Child and Adolescent Psychiatry says between 7 million and 12 million youths suffer from mental, behavioral, or developmental disorders. In rural areas, 60 percent of Americans live in designated professional shortage areas, many in communities with limited or no access to psychiatrists, psychologists, and social workers, according to the U.S. Department of Health and Human Services.

Zelia Baugh, M.S.W., who leads the Alabama Department of Mental Health, says more than half of Alabama's 4.5 million residents are in need of some mental-health services, but ongoing state budget shortfalls are leaving thousands of citizens without access to mental-health services. "There are other challenges, especially in rural Alabama where people, if they are able, have to travel long distances to meet their mental-health needs," she says.

Expanding Service

The college, meanwhile, continues to expand its telepsychiatry program. It plans to serve additional sites in DeKalb County; Etowah and Cherokee counties; Northwest Alabama Mental Health Center with sites in Fayette, Lamar, Marion, Walker, and Winston counties; and other mental-health centers, county jails, and youth-services facilities that have requested adult and child telepsychiatry for their clients.

With fewer medical students choosing psychiatry as a specialty, and with the recognized need for mental-health care, particularly in rural communities, "we are going to have to think outside the box," Williamson says. "Telepsychiatry is one way to do this."

National Interest

Family Medicine Group Wins Award of Excellence

By Ralph C. Samlowski, M.D., Associate Professor of Family Medicine

The Huntsville Campus Family Medicine Interest Group (FMIG) was honored by the American Academy of Family Physicians with a 2011 Program of Excellence Award. Huntsville's FMIG received the Award for First-Time Applicant at a July 29 ceremony at the annual AAFP National Conference for Family Medicine Residents and Medical Students in Kansas City. According to the AAFP, "the Program of Excellence Award recognizes FMIGs for their outstanding performance in FMIG operation, community service, promoting the value of primary care, exposure to family medicine and family physicians, professional development, and measures of success."

Perry Pugno, M.D., M.P.H., AAFP vice president of education, reported that the 2011 AAFP Program of Excellence Awards were the most competitive, with more interest groups submitting applications than ever. The Huntsville FMIG was one of only 16 such groups in the country to receive an award.

Community and Conferences

Because third-year medical students are the majority of the student body at the Huntsville Regional Medical Campus (HRMC), the FMIG faces the challenge of supporting exceptional interest in primary care during a very busy time in medical education. HRMC students who are considering family medicine as a career engage in community involvement, continued scholarship, and participation in organized medicine at the local, regional, and national levels.

The AAFP notes that "FMIGs are medical school-sponsored organizations that give students a chance to learn more about family medicine through regular meetings, workshops, leadership development opportunities, and community and clinical experiences." In Huntsville, the FMIG is currently the only student interest group on campus, and students interested in any of the primary-care fields in medicine are invited to join. The group involves students through monthly business meetings and community outreach events, and it encourages participation in local, state, and national AAFP conferences. Huntsville students regularly attend the AAFP National Congress for Student Members. At the 2011 meeting, Huntsville students submitted Resolution No. S2-209, "Credentialing of Family Physicians for Colon Cancer Screening." This resolution was accepted and was heard by the AAFP National Congress of Delegates last September.

Service Learning

Current FMIG participants include James Norman (president), Kim Westhoven (vice president), Jeremy Thompson (AAFP FMIG regional coordinator), Andy Parker, B.J. Patel, Casey Hicks, David Johnson, Gwen Weatherspoon, Helen Hammond, Jeni O'Malley, Jessica Nelson, Lynn Johnson Greene, Matt Caldwell, Robin Bishop, Swati Bansal, Ty Ashley, Tyler Sharpe, Ginny Fuller, and Natalie Roebuck. These medical students have participated in a series of community service projects. They sent student representatives to area elementary schools to teach the AAFP's "Tar Wars" tobacco avoidance program, and they worked with the Health Occupation Students of America to speak with high school students



(Left to right) Faculty advisor Bill Coleman, M.D., with medical students Andy Parker, Jeremy Thompson, James Norman, Matt Caldwell, Kim Westhoven, Jeni O'Malley, and Ty Ashley



(Left to right) Medical students Jeremy Thompson, James Norman, and Gwen Weatherspoon; faculty advisor Ralph Samlowski, M.D.; and medical students Ty Ashley, Kim Westhoven, and David Johnson

interested in health-care professions. Together with Bill English, M.D., the first family-medicine residency graduate from the Huntsville campus, they conducted pre-participation physicals for young athletes in the small rural community of Eva, Alabama.

Under the supervision of Huntsville campus faculty and house staff, the FMIG students volunteered at the Community Free Clinic, an established local free clinic that delivers high-quality health care and free medications to uninsured or underinsured patients. They also connected with the North Alabama Medical Reserve Corps, mobilizing with them to help in the aftermath of last spring's tornado disaster.

Mood Lift

Understanding Depression and Other Disorders

By Jo Lynn Orr

The impetus for the UAB Department of Psychiatry's new Mood Disorders Program is clear: Alabamians experience high rates of depression and bipolar disorder, as well as a high incidence of suicide. Supported by a \$10-million fund-raising initiative, the program will provide patients with the latest clinical treatments while building a robust research component focused on prevention.

UAB already has strengths in mood disorders research and care, says James Meador-Woodruff, M.D., chair of the Department of Psychiatry. Now the goal is a comprehensive approach modeled on UAB's multidisciplinary centers. "We will conduct state-of-the-art translational research, offer expert diagnostics and treatment, maintain a teaching role, and establish local and international outreach," Meador-Woodruff says.

Richard Shelton, M.D., has been named program director and vice chair for research. He comes from Vanderbilt, where he served as vice chair for research and chief of the mood disorders program. Meador-Woodruff calls Shelton an "international leader" who has contributed to innovative treatment approaches for depression and other mood disorders. He says Shelton will study ways "to better diagnose, treat, and have more favorable outcomes for people with depression and bipolar disorder, and prevent suicide."

"I want a program that helps us identify mood disorders earlier—to intervene as early as possible, preferably to prevent onset," Shelton says. For patients with mood disorders, "we want to treat them more effectively and reach a point where we can really relieve suffering."

Only about one in three people with depression or bipolar disorder responds to initial treatment, Shelton says. About 50 percent of them will experience a relapse within the next year. "UAB has an opportunity to have a primary treatment focus, where we're going to develop new approaches."

To that end, Shelton wants to build a cadre of researchers from different fields to develop an improved understanding of mood disorders. Some scientists will be new; Meador-Woodruff anticipates adding a half-dozen new specialists to the faculty. The group will work synergistically to develop novel therapies, "bridging psychiatry and psychology, for example, but also the basic lab sciences," Shelton explains. The collaborations will enable UAB to grow and develop patient-based research initiatives in experimental therapeutics, neuromodulation treatments, translational preclinical investigations, brain imaging, pharmacogenomics, and mood disorders in children, adolescents, and older patients. Outreach programs will help address education about depression and bipolar symptoms in Alabama communities.

A generous \$2.5-million gift, coupled with other gifts, has given the Mood Disorders Program a strong start, and additional support is essential to its success, notes Meador-Woodruff. "The program will distinguish us quickly," he says. "Our goal is to become a national leader."

More information: [Eve Rhea](mailto:erhea@uab.edu) • 205-975-7298 • erhea@uab.edu

Friend Forever | Cancer Center to Honor Hayes with Chair

By Jo Lynn Orr

While Jim Hayes was fighting colon cancer, his enthusiasm for living and concern for others remained untouched by the disease. Instead, it intensified his desire to give back to the UAB Comprehensive Cancer Center so that other colon cancer patients could benefit from the same skilled, compassionate care that he received there.

Hayes, who passed away in 2008, was both a patient and longtime supporter of the Cancer Center. "He was also a well-known, well-respected, and well-liked businessman," says Edward Partridge, M.D., Cancer Center director. "Because of his amazing, dedicated support, we wanted to find a way to recognize him. An endowed chair will be a great way to honor Jim's legacy."

Marty Heslin, M.D., director of the division of surgical oncology, who was Hayes's physician and friend, has been nominated

as the first recipient of the endowed chair when it is completed. "Dr. Heslin is well respected nationally, and we want to keep him at UAB for the duration of his career," Partridge explains. "He took excellent care of Jim and was beloved by him and his family and friends."

Establishing the James P. Hayes Jr. Endowed Chair in Gastrointestinal Oncology is the first phase of a \$5-million initiative to boost gastrointestinal (GI) cancer research at the Cancer Center. "We have a SPORE (a prestigious Specialized Program of Research



Jim Hayes

Excellence designated by the National Cancer Institute) to study pancreatic cancer, one of the GI cancers," Partridge explains, "and we have a large-volume clinic program for treating colon-rectal cancer and other GI tract cancers. But we need the same type of critical mass in colon-cancer research. Our goal is to establish enough research projects to be competitive for a SPORE in GI cancer." By expanding its team of scientific experts—and its scientific efforts—the Cancer Center will have the ability to increase the pace of discoveries that could lead to innovative new treatments and detection methods, he says.

More information: [Virginia Gilbert Loftin](mailto:vgloftin@uab.edu) • 205-975-5602 • vgloftin@uab.edu

Opening Doors for Transplant Patients

Kidney and Pancreas Clinic Coming Soon

By Lisa C. Bailey

In winter 2012, UAB kidney and pancreas transplant patients will have a new home for care—one designed specifically to meet their needs. Located on 6th Avenue South between 19th and 20th streets, the new Kidney and Pancreas Transplant Clinic will rejuvenate UAB Hospital's former emergency room, offering pre- and post-transplant care in a convenient, comfortable space.



The clinic will feature a drive-through, drop-off entrance with a landscaped garden area, plus four examination suites and 14 examination rooms, two private-consultation rooms, a space for patient education and clinical conferences, and two treatment rooms ready for on-site biopsies and other procedures.

“The new clinic is attractive and welcoming, but it also is more efficient for patients as well as for physicians and nurses,” says Devin Eckhoff, M.D., professor and director of the Division of Transplant Surgery. “We will have the ability to perform on-site blood draws, which will be more convenient, and there are significantly more exam rooms, which should reduce waiting times. The new facility also will house a spacious work area for physicians, nurses, and other staff.”

A naming campaign for the clinic has already earned generous initial gifts. “Robert M. Becnel and Diane K. Zink of New

Orleans made a gift to name the reception area on the 20th anniversary of his kidney transplant,” says Robert S. Gaston, M.D., professor of nephrology and medical director of kidney and pancreas transplantation. “Lisa Lockett, a social worker on our team, also has made a generous gift to name the consultation room.”

Many spaces are still available for naming, Gaston adds, noting that these gifts allow patients and family members to express gratitude for the care they have received and to honor or memorialize a loved one. Each space will be marked with a plaque bearing the names of the honoree and donor. Funds raised through the naming campaign will support the UAB Kidney and Pancreas Transplant Program's efforts by providing resources to accelerate research, enhance teaching, and ensure the best possible clinical care for patients and families.



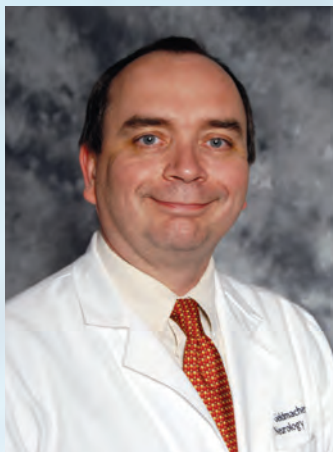
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Artist renderings offer a preview of the spacious new Kidney and Pancreas Transplant Clinic, which includes a convenient drive-through, drop-off entrance.

A New Approach to Alzheimer's

Collat Gift Helps Recruit Research Leader

By Lisa C. Bailey



David Geldmacher, M.D., FACP

David S. Geldmacher, M.D., FACP, focuses on discovering new treatments for age-related memory disorders, and thanks to a Birmingham business leader, he may find them at UAB. Charles A. Collat Sr., chairman emeritus of Mayer Electric Supply Company, recently made a significant contribution to the Department of Neurology to help recruit Geldmacher to direct the Division of Memory Disorders and Behavioral Neurology. A portion of the funds will be used to create the Patsy W. and Charles A. Collat Endowed Professorship in Neuroscience, which will support UAB's ongoing research into age-related memory disorders.

"We are deeply grateful to Charles Collat and the Collat family for the investment they have made in the UAB Memory Disorders Program," says David Standaert, M.D., Ph.D., chair of the Department of Neurology. "Dr. Geldmacher will take our Alzheimer's

Disease Research Program to the next level. Mr. Collat's generous gift also allows us to expand research on Alzheimer's disease and other age-related memory disorders, bringing us closer to new treatments and potential cures."

Prior to joining UAB, Geldmacher held a Harrison Distinguished Teaching appointment as an associate professor of neurology at the University of Virginia. "I was initially drawn to UAB by the strength of the research programs in neurodegenerative diseases and cognition," he says. "The rich interdisciplinary collaborative environment for research was the clincher for me."

Geldmacher's research centers on drug development for dementia, and he has received funding from the National Institutes of Health and the pharmaceutical industry for investigator-initiated clinical trials in Alzheimer's disease. "My primary research effort," he says, "is in developing and testing new treatments for Alzheimer's disease. The Collat endowment allows me to pursue high-risk/high-yield opportunities and the long-term view toward curing Alzheimer's disease. Without the Collat support, I would need to follow a more conservative, and therefore less creative, approach to the problem."

Geldmacher serves as course director for MemoryCommons, a Web site providing interdisciplinary dementia educational resources for health-care providers. He also was the founding chairman of the annual Dementia Congress, the country's largest dementia-specific educational conference. A fellow of the American College of Physicians, Geldmacher is frequently sought as a lecturer and consultant in the fields of dementia diagnosis and management.

"By enabling us to recruit a world-class director, Dr. Geldmacher, the Collat family's generosity has made a tremendous impact on our ability to attract additional recruitments," says Kate Tully, major gifts officer for the Department of Neurology. "This gift advances both patient care and translational research in Alzheimer's disease, which stands to directly benefit patients in Alabama, the Southeast, and potentially across the globe."

More information: Kate Tully • 205-934-0792 • ktully@uab.edu

Development Digest

Brain Trust: R. Tyler Frizzell, M.D., a neurosurgeon in Boise, Idaho, has made a gift to support UAB neurosurgery resident education. He completed a neurological surgery residency here in 1996 and later served as an assistant professor at UAB. James M. Markert, M.D., the James Garber Galbraith Professor of Neurological Surgery and division director, says it's gratifying to see former residents give back to UAB. "To foster our growth, retain our remarkable faculty, sustain our excellence in patient care, further develop our comprehensive educational paradigm, and support our clinical and laboratory research efforts, we need a village," Markert says. "We need community leadership, insight, support, and financial resources."

Eyes on the Future: The Department of Ophthalmology recently launched a campaign to establish the Chairman's Discovery Fund in Ophthalmology in honor of retiring chair Lanning B. Kline, M.D., with the ultimate goal of creating an endowed professorship named for Kline. The fund, which already has received generous support from Mr. and Mrs. Herman Bolden, will help recruit and retain junior faculty and provide crucial research funding for senior faculty. More information: Lindsay Knox • 205-325-8526 • lknox@uab.edu

New Endowed Positions:

- Robert C. Bourge, M.D., vice chair of clinical affairs and development for the Department of Medicine, has been appointed to the E.A. and Abbie Drummond Endowed Professorship in Cardiovascular Medicine.

- Kevin L. Kirk, Ph.D., professor of physiology and biophysics, has been named to the University of Alabama Health Services Foundation Endowed Chair in Biomedical Research.

- Paul W. Sanders, M.D., director of the UAB Nephrology Research and Training Center, now holds the Thomas E. Andreoli Professorship in Nephrology.

Growth Opportunities | New Staff Supports Clinical Breakthroughs

By Lisa C. Bailey



David Allen, Ed.D., has plenty of responsibilities in his new role as director of development and community relations for the Department of Medicine—and he's excited about all of them, he says. His primary areas of responsibility include the divisions of Pulmonary, Allergy, and Critical Care Medicine; Clinical Immunology and Rheumatology; Gerontology, Geriatrics, and Palliative Care; Gastroenterology and Hepatology; and areas within Infectious Diseases. Allen, an Atlanta native who came to UAB from the University of Georgia, where he raised major gifts for the Division of Student Affairs, says that he looks forward to helping UAB clinicians and researchers expand their capacity to fight disease.



As the major gifts officer for medical student scholarships, **Mandi Alexander** is focusing on the annual scholarship dinner, which brings together donors and recipients, and on increasing scholarship money for medical students. Before join-

ing UAB, she was associate director for development in the University of South Florida College of Engineering. The Mississippi native also has served as assistant director of regional development at the University of South Carolina and coordinator of telefunding programs at Mississippi State University.



Birmingham native **Kate Tully** received her undergraduate degree in communication management from UAB in 2009. Now a major gifts officer in the Department of Neurology, Tully worked at Altec Industries before joining the UAB development staff. She's continuing her UAB education by pursuing a master's degree in public administration. Tully says her neurology efforts focus on "working on faculty growth and accelerating laboratory and clinical research through philanthropic support of named faculty positions, post- and predoctoral research fellows and scholars, and research acceleration funds to advance novel and ongoing research projects with an aim of developing new, improved treatments and potential cures for neurological conditions."

Faculty Philanthropist | Kirklin Invests in Cardiothoracic Surgery

By Lisa C. Bailey

As director of the UAB Division of Cardiothoracic Surgery, James K. Kirklin, M.D., knows the lifesaving power of philanthropy. He has seen how community support for programs, research, and technology benefits patient care. So it's only natural that Kirklin is a philanthropist himself. His most recent gifts will establish the James K. Kirklin Heart Transplant Fund at UAB for research in surgical solutions for advanced heart failure, create a Visiting Professorship in Cardiothoracic Surgery, and invest in the UAB Congenital Heart Disease Program at the new Benjamin Russell Children's Hospital. He has also established an International Society for Heart and Lung Transplantation endowment for publishing a yearly monograph about the science of thoracic transplantation and mechanical circulatory support. Existing funds within the Division of Cardiothoracic Surgery have been realigned to establish the James K. Kirklin Endowed Chair in Cardiothoracic Surgery, complementing the division's four other endowed chairs.

"Philanthropy has always been very important to my family," says Kirklin, the John W. Kirklin Endowed Chair of Cardiovascular Surgery. "Over the years, I have interacted with many individuals who are moved to invest in some mission that allows them to make a meaningful contribution to its success. I have also viewed philanthropy



James K. Kirklin, M.D.

as an opportunity to invest in missions that have captivated my professional life, which have required financial planning like any other investment, and have yielded important personal satisfaction for my family and myself."

Naming the endowed chair and fund for Kirklin honors his contributions to UAB and cardiothoracic medicine, says Ray L. Watts, M.D., senior vice president and School of Medicine dean. "Dr. Kirklin is widely known for his surgical expertise and for spearheading the UAB Heart and Lung Transplant Program, one of the nation's leaders," he says. "Dr. Kirklin also has represented UAB on the world stage as president of the International Society for Heart and Lung Transplantation, as editor of the *Journal of Heart and Lung Transplantation*, and as author of the premier textbook on heart transplantation."

"In its totality, philanthropic contributions to a professional mission can add to your sense of commitment, often requiring a degree of sacrifice that may complement the dedication that successful academic physicians require to receive a major grant, successfully operate on critically ill patients, or achieve leadership positions," Kirklin says. "This philosophy has motivated my family to invest personally in important endeavors. We hope to inspire other physician stakeholders to think similarly."

School of Medicine Development Staff

Thomas I. Brannan, *Interim Associate Vice President for Development*
Virginia Gilbert Loftin, *Executive Director of Development and Strategic Planning*

Comprehensive Diabetes Initiative
Erica L. Hollins, *Director of Development and Community Relations*

Department of Medicine
Virginia Gilbert Loftin, *Executive Director of Development and Strategic Planning*

David I. Allen, *Director of Development and Community Relations*

**Department of Neurology/
Neurosciences**

Thomas I. Brannan, *Interim Associate Vice President for Development*
Kate G. Tully, *Major Gifts Officer*

**Department of Ophthalmology/
Callahan Eye Hospital**

Lindsay M. Knox, *Director of Development and Community Relations*

**Departments of Anesthesiology and
Obstetrics and Gynecology**

Kristen Farmer Hall, *Director of Development and Community Relations*

**Departments of Genetics and
Psychiatry and Behavioral
Neurobiology**

M. Eve Rhea, *Director of Development and Community Relations*

Department of Surgery

Christopher N. Thomason, *Senior Director of Development and Community Relations*

Friends and Family Program

Ivy Watson Cardwell, *Director of Development and Community Relations*

Medical Student Scholarships

Mandi D. Alexander, *Major Gifts Officer*

**Minority Health and Health
Disparities Research Center**

Evelyn S. Jones, *Development and Community Relations Officer*

Grateful Patient Program

Melinda M. Craven, *Director*

Prospect Research

Sabrina M. Latham, *Manager*

Planned Giving

Elizabeth Ponder, *Director*

Connecting Alumni



Gifts of Knowledge

Goal Reached for Tinsley Harrison Chair

By Charles Buchanan and Lisa C. Bailey

The legendary Tinsley Harrison possessed a passion for teaching and mentoring students that launched countless careers in research and clinical care. Now his legacy will benefit new generations of physicians through the Tinsley R. Harrison, M.D., Endowed Chair in Medical Resident Education.

The call to honor one of Alabama's most famous physicians brought support from across the country—including many of Harrison's former students and others inspired by his work. Contributions from the DeBakey Medical Foundation and Swaid N. Swaid, M.D., a UAB clinical professor of neurosurgery and 1976 graduate, helped the Medical Alumni Association and School of Medicine complete a six-year joint campaign to fund the chair.

"An endowed chair is a fitting tribute to a pioneer in academic medicine who was integral to UAB's success," says Albert J. Tully Jr., M.D., MAA past president and chair of a committee that helped raise funds for an endowed position. "Harrison's contributions to the advancement of medical education have enhanced countless lives of students, faculty, and patients around the nation and the globe."

Harrison, a native of Talladega, is best known for *Principles of Internal Medicine* and its innovative approach to medical education. Today it remains one of the world's leading textbooks for internal medicine students and residents. Harrison also helped organize and was the first president of the American Heart Association. He served 15 years on the School of Medicine faculty as professor and chair of the Department of Medicine, as acting dean, and as director of the Division of Cardiology, helping the Birmingham medical center rise to national prominence. Harrison died in 1978.

"The MAA is grateful to Dr. Swaid, the DeBakey Medical Foundation, and all of our supporters for their important contributions," says MAA President Gerhard A. W. Boehm, M.D. "Dr. Harrison was an inspirational doctor and teacher whose love of learning and ability to inspire his students is carried on by generations of physicians who were touched by his compassion and enthusiasm."

The chair is held by Gustavo Heudebert, M.D., vice chair for education and faculty development in the Department of Medicine and director of the housestaff program.

Residency Program Honors Harrison

Tinsley Harrison's name is synonymous with internal medicine education at UAB and around the world. Now the School of Medicine is honoring Harrison's contributions by naming its internal medicine residency program for the teacher, mentor, clinician, and pioneer. The three-year program, which currently includes 135 resident physicians, is one of the few residency programs in the country named for an individual.

The new name will help imbue future generations of physicians with the core values that Harrison espoused, says Lisa Laycock Willet, M.D., co-director of the UAB Tinsley Harrison Internal Medicine Residency Program. "In today's world of changing requirements for graduate medical education, we are committed to preserving that which Dr. Harrison valued most: the patient-doctor relationship, clinical reasoning, and professionalism."

Connect with the Medical Alumni Association at alabamamedicalalumni.org

“A Burden Lifted”

New Scholarship Helps a Student and the Community

By Lisa C. Bailey

“Following my experiences in public health, I felt it was very important to choose a medical school with a heart for the underserved,” says second-year student Marielle Baldwin. “I found that in Equal Access Birmingham, a UAB organization that allows us as students to care for our neighbors, to advocate for their needs, and to provide them with medical services that they would ordinarily go without.”

Baldwin’s drive to help the underserved while completing her medical education helped her earn one of the first awards from the new Medical Alumni Association/Dean of Medicine Scholarship Fund. In this unique partnership between the MAA and the School of Medicine, Dean Ray Watts, M.D., has offered to provide matching support for alumni gifts designated for scholarships, including gifts made to the MAA. The annual scholarships reward students demonstrating solid academic promise.

Before coming to medical school, Baldwin spent a year working in Denver, Colorado, as an AmeriCorps volunteer health educator in a small primary-care clinic for medically underserved children and adults. “Through

this experience, I learned about the social and economic contributors to health disparities, primarily in the form of low health literacy, homelessness, substance abuse, and mental illness,” she says.

“With my background in public health, my interest in chronic disease management and behavior change, and the growing need for primary care physicians, primary care medicine is the best fit for me,” Baldwin continues. “It is in large part because of this incredible scholarship offer that I am able to practice whatever I feel called to, without the fear that I won’t be able to pay back my loans. It is a burden lifted.”

MAA president Gerhard A. W. Boehm, M.D., is enthusiastic about the potential of the scholarships. “With this fund, we can maximize our investment in the future of medicine

through bright, promising students such as Marielle Baldwin,” he says. “There is no better way to show our support for the next generation of physicians than by helping them to achieve their educational and career goals.” He encourages all alumni and friends to contribute to the fund and is grateful to University of Alabama System trustee Angus Cooper for providing a generous gift to launch it, along with the match from Dean Watts.

Learn more about contributing to the MAA/Dean of Medicine Scholarship Fund and other MAA scholarships by contacting the MAA office at (205) 934-4463.



Student Marielle Baldwin (right) assists underserved patients through Equal Access Birmingham.

Growth Factor | *Alumni Dues Support Student Success*

By Charles Buchanan

What can \$100 do these days? For School of Medicine students, it can pave the way to success in research, education, and clinical care. “Alumni dues play a role in the accomplishments of every medical student at UAB,” says Gerhard A. W. Boehm, M.D., president of the Medical Alumni Association. “They are proof of our strong support.”

Dues help fund the white coats presented to each new class, student transcripts, and the Argus Awards, which enable students to highlight the best examples of medical education at UAB. Students also benefit from dues through

the Medical Student Enrichment Program (MSEP), which provides opportunities for international research and patient interactions. Designed to promote humanitarian attitudes and cross-cultural understanding among future physicians, the MSEP sends students overseas for four weeks each summer for a first-hand experience with global medicine. MAA Executive Director Meredith Burns says the program is very popular, with more than 200 students traveling to more than 35 countries since 1995.

Alumni donations also make a difference

for students in need through the MAA Medical Student Assistance Fund. “Any student facing a hardship can request financial help from the fund,” Burns says. “After the April 27 tornadoes that devastated Alabama, we were able to help medical students who had sustained major losses to get back on their feet.”

“Today’s students are following in our footsteps, and they will be the ones who uphold the high standards of our profession,” Boehm says. “Our support can help ensure that they receive the best education and career preparation for a bright future.”

Face to Face | *Watts Greets Alumni Close to Home*

By Charles Buchanan

Alumni recently welcomed senior vice president and dean Ray L. Watts, M.D., at receptions in Birmingham, Tuscaloosa, Dothan, Point Clear, and Atlanta. The events gave alumni an opportunity to meet the dean and hear about the School of Medicine's strategic plans. Watts encouraged alumni at each reception to offer their feedback and do their part to help implement the plans, which will ultimately benefit patients across the region through new research initiatives and new treatments.

Atlanta



Birmingham



Dothan



Tuscaloosa



Point Clear



Alumni Profile | Stancel Riley Jr.

By Tara Hulén

As a sickly, asthmatic child in Concord, Ala., Stancel M. Riley Jr., M.D., never imagined he would make medical history. Today, however, the 1972 School of Medicine alumnus serves as executive director of the Massachusetts Board of Registration in Medicine—the first physician to head the agency that licenses and regulates more than 38,000 physicians and acupuncturists. He's also a board-certified cardiothoracic surgeon who performed the first open heart surgery in Huntsville, Ala.—a bypass—in 1981.

Fortunate timing has helped him throughout his career, Riley says. He enrolled in the School of Medicine in 1968, two years after renowned heart surgeon John W. Kirklin came to the Birmingham medical center. It was a golden age for a wannabe cardiac surgeon, Riley explains, with Robert Karp, Nicholas Kouchoukos, and Albert Pacifico on Kirklin's team. Though Riley had planned to become a pediatrician, working nights in the intensive-care unit changed his mind. "I saw babies when they were blue, before they were operated on, and when they came back from the operating room and were pink," he recalls. "I wanted to make that happen."

By the Book

After two rotations at Massachusetts General Hospital and a post as a senior registrar in thoracic surgery at Guy's Hospital in London, Riley joined colleagues planning a cardiac surgery program in Huntsville. There he broke new ground by using the methods listed in Kirklin's famous and often duplicated "Blue Book," a detailed, systematic approach for the operating room that calls for even the most experienced surgeons to follow checklists for every procedure. "It is exactly what everybody is talking about right now," Riley says. "It's a standardized way of treating cardiac disease."

After 22 years, Riley had to leave the OR when a cervical spine injury caused numbness in his fingers. But experience

outside the OR helped him forge a new career path in medical leadership. Over the years, Riley had served as president of the American Heart Association Alabama chapter and was on the Blue Cross and Blue Shield of Alabama board of directors and medical review committee. He also served on the American Red Cross board of directors.

Soon after leaving his practice, Riley received an American Association of Thoracic Surgery scholarship to the John F. Kennedy School of Government at Harvard University, where he obtained a Master in Public Administration in 2004. He went on to receive a Master in Public Health from Harvard's School of Public Health in 2005.

Much like his UAB experience, his timing at Harvard "was really serendipitous," Riley says. There he worked with Lucian Leape, known as the father of patient safety. That relationship connected Riley with the Massachusetts Board of Registration in Medicine, where he became director of a patient safety division in 2006. He was named executive director in 2009.

A Physician's Insight

Beyond its role as a regulatory body, the board focuses on patient safety and quality of care, says Riley, who brings a physician's insight to a group that once consisted of mostly lawyers. A key goal is to get hospitals and surgeons to accept Kirklin-style standardization methods and checklists. "We're making sure that we provide adequate education for physicians. As part of that, patient quality of care and safety will get better for everybody," Riley explains. One of his first tasks as executive director was to create a strategic plan. "We must have a direction and know where we want to go," he says. "That kind of organization comes from John Kirklin. He was one of the most organized human beings I've been around in my entire life."



Riley also teaches a class at Harvard University Medical School on how to deliver bad news to patients. Just being at Harvard continues to amaze the former kid from Concord. "I've been incredibly lucky," he says. "This is better than I've ever dreamed."

Alumni Weekend 2012

The 39th Annual Medical Alumni Weekend takes a look through time—from the medical history of an American tragedy to UAB research advances that will change the future of treatment. Here's the schedule at a glance:

FEBRUARY 3

- 33rd Annual Reynolds Historical Lecture and Reception: "The Assassination of Abraham Lincoln," Carl R. Boyd, M.D., FACS, Professor of Surgery, Mercer University School of Medicine
- Registration, Exhibits, and Hospitality Area Open

FEBRUARY 4

- Scientific Program and Exhibits
- Annual Awards Luncheon: Distinguished Service Award, Young Alumni Award, Hettie Butler Terry Community Service Award, Garber Galbraith Medical-Political Award, Distinguished Alumnus Awards
- 20th Annual Constance S. and James A. Pittman Lecture: Ray L. Watts, M.D., Senior Vice President and Dean, School of Medicine at UAB
- Alumni Reception Sponsored by ProAssurance
- Class Reunion and Alumni Dinners: 1947, 1952, 1957, 1958, 1962, 1967, 1972, 1977, 1982, 1987, 1992, 1997, 2002, and 2007

Most activities are scheduled for the Birmingham Marriott.

Learn more about Alumni Weekend at alabamamedicalalumni.org.

Political Landscape

Governors and the UAB Medical Center

By Tim L. Pennycuff • Images courtesy of UAB Archives

When Robert J. Bentley, M.D., was sworn in as the 53rd governor of the state of Alabama in January 2011, he became the only alumnus of the School of Medicine to hold the office. Bentley graduated from the school in 1968 and later completed a dermatology residency at UAB in 1974.

While Bentley may have the strongest connection, all of Alabama's governors have been supporters of or frequent visitors to the Birmingham medical center since it was established in 1944. Several buildings on the campus are named for former governors:

Chauncey Sparks (1884-1968), governor from 1943 until 1947, supported the establishment of a four-year medical school in Alabama and was chairman of the Building Commission on the Four-Year Medical College, which selected Birmingham as the home of the school. Sparks was guest speaker at the October 1946 commencement ceremony, the first of several such events held in Birmingham following the move of the school from Tuscaloosa. The Sparks Center for Learning and Development Disorders at UAB is named in his honor.

George C. Wallace (1919-1998) completed four terms as governor, and his 16 years in office make him the longest serving of the state's governors. He was a longtime supporter of the School of Medicine and UAB, but his connection to the academic health center was more personal than most. Wallace recuperated in Spain Rehabilitation Center once he was able to return to Alabama following the attempt on his life in 1972. UAB's Wallace Physical Education and Recreation Building was named for him.



Governor Lurleen Wallace, circa 1967

Lurleen Burns Wallace (1926-1968), the only woman elected as the state's chief executive, served from 1967 until her death in 1968. She had been a popular first lady while her husband, George, was governor, and her run for office was initiated chiefly by him when he was restricted by the state's constitution from running for a consecutive term. When she was diagnosed with a recurrence of cancer, Wallace

had to seek treatment in Texas because Alabama lacked the necessary medical facilities to treat her properly. Following her death, a statewide campaign raised funds in her memory, and the Lurleen B. Wallace Memorial Hospital and Tumor Institute, a two-building facility, was constructed at UAB.



Robert J. Bentley, M.D.



Governor Bentley is the third physician to serve as Alabama's chief executive. The first was William Wyatt Bibb (1781-1820), a Virginia native who graduated from the medical school of the University of Pennsylvania in 1801. Bibb was appointed territorial governor of Alabama in 1817. Two years later, he won the state's first gubernatorial election. He died in office in 1820.

The second physician governor was Russell M. Cunningham (1855-1921), a native of Lawrence County who graduated from New York's Bellevue Hospital medical school in 1879. As lieutenant governor, he served as acting governor from April 1904 until March 1905 while Governor William Jelks was out of the state recuperating from illness. Cunningham also was a professor of clinical medicine at the Birmingham Medical College between 1894 and 1915.



Top: Governor George C. Wallace and George H. Traugh, M.D., associate professor of rehabilitation medicine, at Spain Rehabilitation Center, 1972.

Middle: Robert J. Bentley as a junior medical student in the 1967 *Progress Notes* yearbook.

Bottom: Attending the first commencement ceremony held in Birmingham for the medical school are (left to right) Tuscaloosa medical dean Stuart Graves, M.D.; Birmingham medical dean Roy R. Kracke, M.D.; Raymond R. Paty, president of the University of Alabama; and Governor Chauncey Sparks, October 25, 1946.



Drama Treatment

By Charles Buchanan and Tyler Greer

AGING TAKES CENTER STAGE in a new play written by UAB geriatrician Andrew Duxbury, M.D. In *Night Call Nurses*, or *What the Health?!?!*, three aging radio soap opera actresses reunite for a show “and must face their own health issues, their place in society, and the attitude of the baby boomer running the station,” Duxbury explains. “My goal as a playwright and a geriatrician is to help people—young, old, and in between—understand that age brings knowledge, experience, and value. I want seniors to know they are valuable and have something to say. And I want the rest of us to realize that we ought to be listening to them.” Brought to life by the Seasoned Performers, a senior adult theatre troupe based in Birmingham, the play has toured through senior centers, libraries, schools, and churches.





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New Insights Into Allograft Injury: The Role of Innate Immunity in Solid Organ Transplant

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Humanized Mouse Models in Immunology

Pain Symposia

April:

Diabetes and Mitochondria

Health Disparities Research: From Discovery to Delivery

Spring:

Heart Failure

Imaging Advancement