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Dear Colleagues:

On July 17, 1990, President George H. W. Bush declared the 1990s to be the “decade of the brain.” It was indeed a time of remarkable advances in our understanding of brain function, both in humans and in experimental animals. Advanced imaging technologies, using magnetic resonance and positron emission tomography, extended previous studies of brain anatomy to analysis of brain function. The development of excellent animal models of Alzheimer’s disease and Parkinson’s disease substantially improved our understanding of these diseases and opened new approaches to treatment. These have included, for example, the development of deep brain stimulation, a remarkable new therapy for severe Parkinson’s disease pioneered by UAB neurologists and neurosurgeons. And at the “gee whiz” level, we enjoyed the demonstration by a Duke University investigator of the control of a robotic arm by the electrical activity of a monkey’s brain.

The discoveries of the 1990s were important, but the current decade promises more. Particularly dramatic advances are anticipated in understanding the cellular and molecular basis of the functions of the mind—indeed some have termed these first years of the 21st century as the “decade of the mind.” As is apparent in this issue of UAB Medicine, UAB physicians and scientists will surely be at the frontiers of this work. To name but a few, they will study the molecular basis of memory (and its decline in aging or disease), molecular abnormalities in mind function in patients with schizophrenia, cognitive disorders in children, and degenerative and demyelinating diseases of the brain and nervous system that promise novel approaches to therapy. They will also explore new treatments for brain tumors and the often disabling problem of chronic pain. This is indeed an exciting time for the neurosciences at UAB—and we can expect patients around the globe to be the beneficiaries of the work of our faculty members. They’ll make you proud!

My best to you,

Bob Rich

Hospital Named One of America’s Best

Once again, U.S. News & World Report has ranked UAB among America’s best hospitals. The annual survey placed five specialty programs in the nation’s top 25: rheumatology, 6th; heart surgery, 14th; gynecology, 15th; kidney disease, 17th; and cancer, 23rd. Two other specialties placed in the top 50: orthopedics, 47th; and respiratory disorders, 48th. UAB was the only hospital in Alabama or Mississippi to earn a spot on the impressive list, which is based on reputation, mortality, and care-related factors such as nursing.

215 Listed As Top Doctors

Only about 3 to 5 percent of all specialists ever make the prestigious “Best Doctors in America” list—but according to the latest edition, 215 of them are UAB faculty physicians. That’s 85 percent of all the medical specialists (253) in the Birmingham metropolitan area included on the list. Peer physicians help compile the directory through confidential surveys in which they name doctors they would choose for themselves or their loved ones.

School’s Enrollment Sets Record

The School of Medicine’s enrollment has increased by 10 percent, with 176 new students entering this academic year. The record high also puts UAB in good company; it is one of only nine medical schools in the United States to post an enrollment increase of 10 percent or more, according to the Association of American Medical Colleges. UAB senior vice president and medical school dean Robert Rich, M.D., says the increase from 160 students helps address an anticipated shortage of physicians nationwide and the current shortage of doctors in rural Alabama. Of the 16 new students, five will go to the Huntsville campus, five to Tuscaloosa, and six to Birmingham.

A Man for All Time

For 25 years, Wayne Finley, Ph.D., M.D., has helped bring the rich history of medicine to life as chair of the Reynolds Library Associates Steering Committee. The University of Alabama System Board of Trustees recently marked the occasion with a resolution honoring Finley, and Michael Flannery, Lister Hill Library’s
In Memoriam: William Bridgers

William Bridgers, M.D., founding dean of UAB's School of Public Health and a pioneer in identifying needs and trends in the public health field, passed away in August 2006. Bridgers began his tenure at UAB in 1968 when he joined the School of Medicine to develop a neuroscience program, but his appointment as chair of the Department of Public Health in 1976 had the greatest effect on UAB and his career. As chair, he helped shape the department into an accredited school in only three years. Also known as an author and advocate for the medically underserved, Bridgers became president of the U.S. Association of Schools of Public Health.

Research and Clinical News

Expanding Treatment and AIDS Survival in Zambia

A recent expansion of free HIV/AIDS treatment clinics in Zambia is dramatically increasing patient survival rates, reported a team headed by Jeffrey S.A. Stringer, M.D., UAB associate professor of obstetrics and gynecology. The study was published in the Journal of the American Medical Association, highlighted on the front page of the New York Times, and presented at the International AIDS Conference in Toronto. It examined a UAB-led effort to support the Zambian government’s program to distribute free antiretroviral drugs to patients with HIV infection, and reported on the outcomes of some 16,000 patients enrolled at 18 urban facilities in Lusaka, the country’s capital.

"At the time the pilot program began, we were uncertain that complex, long-term HIV care could be delivered in a setting with so few physicians and so little physical and technical resources," says Stringer, who directs the UAB-affiliated Centre for Infectious Disease Research, a research and prevention site in Lusaka. "However, treatment and survival rates have turned out to be very good despite these obstacles," with patient survival rates becoming comparable to those in the developed world three months after beginning therapy.

UAB Leads National AIDS Clinical Research Network

UAB will become the hub of a comprehensive information-sharing network designed to help researchers pinpoint optimal HIV/AIDS therapies. A grant from the National Institute of Allergy and Infectious Diseases and the National Heart, Lung, and Blood Institute will help UAB’s Center for AIDS Research connect with six others around the country, providing $2.45 million per year for five years.

The purpose of the network is to merge and analyze electronic clinical data from the seven centers. "Long-term outcomes research is necessary to provide clinicians with up-to-date information on the best strategies to treat patients," says Michael Saag, M.D., the project’s principal investigator and director of the UAB center. "This type of network is the future of HIV/AIDS clinical research."

National Recognition for New MS Center

Created just last fall, UAB’s Center for Pediatric-Onset Demyelinating Disease has been recognized by the National Multiple Sclerosis Society (NMSS) as one of only six Pediatric Multiple Sclerosis Centers of Excellence in the country. The new center will conduct research as well as provide care and support for children and families living with MS and other diseases of the central nervous system. "The establishment of this center, coupled with the NMSS recognition, places UAB at the forefront of efforts to better understand these diseases," says Jayne M. Ness, M.D., Ph.D., assistant professor of pediatric neurology and the center’s director.

Less Cost, More Donation?

Robert Gaston, M.D., and a team of medical, legal, economics, and ethics specialists have a fresh idea to ease the nation’s organ shortage: offer live donors a package of government benefits, including insurance, reimbursements, and tax deductions, worth up to $32,800.

Gaston, director of medical evaluation and patient treatment for UAB’s kidney transplant program, was lead author on the proposal, published in the American Journal of Transplantation. “While offering a financial incentive may be unacceptable, at least we can limit financial disincentives that inhibit many people’s altruistic tendencies to help a friend or relative by donating a kidney,” he says. “Our proposal preserves the essence of kidney donation as a gift—and would be implementable in the United States without altering current legal statutes.” He predicts that the middle-ground proposal will spark much needed discussion between people who support and oppose paying for organs.
Fantastic Voyage

Exploring the Mysteries of the Mind

Neuroscience may be the most metaphysical specialty in modern medicine. After all, when the scientific mind turns inward, it ends up matching wits with itself, pitting neural matter against neurons. The result is a fascinating dialogue where the brain becomes subject, object, and verb all at once. Heady stuff . . . yet this is no mere exercise in philosophy. Hidden within the folds are the answers to some of our most devastating diseases, including schizophrenia and autism, Parkinson’s and Alzheimer’s. It’s the job of the neuroscientist to make the journey of discovery to seek them out.

As French anthropologist Claude Lévi-Strauss once said, “The scientific mind does not so much provide the right answers as ask the right questions.” In other words, there is often a great deal of art in neuroscience.

By Matt Windsor
UAB psychiatry chair James Meador-Woodruff, M.D., is eavesdropping on the brain's chemical communication system, listening for clues to the garbled messages responsible for schizophrenia. Nearby, neurology chair Ray Watts, M.D., is testing a dozen new treatments for Parkinson's disease, including a novel form of neural gardening that transplants healthy dopamine-producing cells from the retina into the fallow ground of the striatum. Just down the street, David Sweatt, Ph.D., chair of neurobiology, is using Lego bricks to tease the secrets of memory loss from the minds of mice. Elsewhere on the UAB campus, David Standaert, M.D., Ph.D., is taking the measure of a toxic protein implicated in both Parkinson's and Alzheimer's. A giant scorpion is helping Harald Sontheimer, Ph.D., defend the brain from invading tumors. And Kevin Roth, M.D., Ph.D., is testing the delicate balance between life and death in neural cells.

These researchers are some of the leading actors in an all-star cast that is launching UAB neuroscience onto the world stage. Studies in their departments could provide revolutionary treatments for diseases that affect one in three Americans. "I feel fortunate to be at this point in history," says Sweatt. "The next 50 years are going to be the golden era of neuroscience." Sweatt and his colleagues have all made their own pioneering contributions to the field, but along the way they have learned that neuroscience is a lot like show business: Talent and hard work are crucial, but the secret to success is in who you know.

Neural Networking
Enter the new UAB Comprehensive Neuroscience Center. Its mission is to assemble a talented cast of clinician-scientists, give them space to work, attract funding for cutting-edge equipment, then scoop up pieces of brilliant research from across campus and send them speeding from laboratory bench to clinical trial to hospital bedside. "UAB is the first institution in the country to put together a truly comprehensive approach to the neurosciences," says Sweatt. "The whole thing sounds like an administrative geek's dream, but it's really working."

Kevin Roth's job is to keep it working. Roth is the prototypical neuroscientist, an M.D./Ph.D. whose studies of neural cell death could lead to new drug therapies for a host of neurological conditions, including brain tumors, Parkinson's, and Alzheimer's.

In addition to his duties as the neuropathology division director, he has assumed a larger role as founding director of the Comprehensive Neuroscience Center. That makes him the university's resident scientific matchmaker, charged with connecting the dots among neuroscience research teams spread across seven of UAB's 12 schools. "There's neuroscience going on in almost every building on campus," says Roth, "and we want vision scientists, psychologists, biomedical engineers—everybody at UAB who considers themselves neuroscientists—to join us."

"Kevin is Dr. Neuroscience," says Meador-Woodruff. "Whenever I hire new researchers, I bring them to see him, and he always says, 'There's somebody you don't know yet that you need to meet,' and sure enough it's a great fit."

Solving the Mind-Body Problem
Meador-Woodruff has hired quite a few new researchers lately. He has created a major schizophrenia research program in the psychiatry department, and he plans to expand research in mood disorders, substance abuse, disorders of childhood, and disorders of the elderly. That will require more high-level recruiting, and Meador-Woodruff says he is encouraged by the support he's found in the Comprehensive Neuroscience Center.

"Each month, the department and center chairs meet to catch up on each other's research and find out whom we're trying to recruit," he says. "We're all looking for synergies and ways to share resources to make those synergies happen."

President Carol Z. Garrison, Ph.D., and School of Medicine dean Robert R. Rich, M.D., have made it clear that UAB will continue investing heavily in the resources necessary to transform UAB into a regional neuroscience hub. Hundreds of thousands of square feet of
new and revamped laboratory space have opened in recent years, and aggressive recruitment efforts are building a dream team of researchers. "This has become an exciting place to do neuroscience," Roth says. "Almost every week I hear about another world-class investigator coming to UAB."

Many of these investigators bring along substantial federal funding, and the National Institutes of Health (NIH) also has contributed directly, awarding UAB one of its highly competitive Blueprint for Neuroscience Research grants. "I knew this was an area of major opportunity for UAB, both for scientific advancement and NIH funding," says Dean Rich. "So I was quite determined to make neuroscience a priority from the day I arrived."

The Comprehensive Neuroscience Center concept was born out of the schoolwide strategic planning initiative that Rich began soon after coming to UAB from Emory University in 2004. Based on the Comprehensive Cancer Center's successful model, it will bring together practicing physicians and basic scientists to blaze a path from molecular studies to usable treatments. Indeed, a few minutes in the labs and clinics of UAB's top neuroscientists reveals how far along that path they have come—along with tantalizing glimpses of the future of medical care.

Circuits to Clinics

While Watts and Standaert open new fronts in the war on Parkinson's, James Meador-Woodruff is building his forces for a major assault on schizophrenia. The new chair of the Department of Psychiatry and Behavioral Neurobiology gained international recognition at the University of Michigan for his research on signaling mechanisms in the healthy brain and the ways those signals go awry in schizophrenia patients. He is expanding this work at UAB and delving into new areas with a recruiting blitz that added seven faculty and two postdoctoral schizophreni

In order to keep the pipeline stocked with potential new treatments, Watts actively recruited David Standaert from Harvard University to direct UAB's Division of Movement Disorders and the new Center for Neurodegeneration and Experimental Therapeutics. While he wasn't looking to leave Harvard, Standaert quickly realized that he "had the opportunity to do something really extraordinary here," he says. "Neuroscience at UAB offers an expanding universe of science and clinical care, and there are so many things you can do in an expanding universe that you can't do in a static environment."

His mission in that expanding universe is to recruit a team of basic-science investigators who can "synergize with the clinical work," Standaert says. "We're building a group that is really focused on delivering therapies to the clinic that can be used to treat patients relatively quickly."

Standaert's lab focuses primarily on synuclein, a protein whose overexpression in the brain is strongly linked to the onset of Parkinson's disease. "We're trying to understand more about why synuclein is toxic and how we might modify that toxicity," he says. That could lead to new compounds aimed at preventing overexpression of the protein or speeding up the mechanisms by which it is removed from the brain.

In each patient's case, Meador-Woodruff discusses how the molecular signals in healthy brains differ from those in brains that have schizophrenia. "It's the UAB philosophy in a nutshell," Meador-Woodruff says. "She has her magnet, and my people have their test tubes; this opportunity came up for us to partner, we brought in people from other departments, and now we have a campuswide collaboration."
The Magic Memory Pill

As new investigative teams descend on Birmingham with precious research in tow, each faces the challenge of integrating itself into the spinning engine of UAB’s neuroscience machine. That’s a particular problem for a senior researcher such as David Sweatt, who left Baylor University last spring to become chair of the Department of Neurobiology and director of UAB’s Evelyn F. McKnight Brain Institute. “It’s something every scientist worries about,” he says. “But I think we’ve probably made the most important discoveries of my entire career in the few months we’ve been at UAB.”

Sweatt’s research team studies how the brain stores long-term memories, then applies that knowledge to conditions such as learning disorders and aging-related memory dysfunction. Lately, they have spent a lot of time pondering the field of epigenetics. Epigenetic mechanisms are critical in the body’s development—they give embryonic stem cells their marching orders, directing some to become liver cells, others to become brain cells, and so on. The cells are able to “remember” their new role for life, and Sweatt’s team has been hoping they might offer insights into adult learning and memory.

At UAB it all came together. “We’ve found that, just as with epigenetic mechanisms, adult learning causes changes in the physical and chemical structure of DNA,” says Sweatt. “We’ve discovered that a component of the mechanisms that allow you to learn a piece of information and put it in long-term memory represents a change in the actual three-dimensional structure of DNA in the brain. That’s fascinating: it would really have sounded like science fiction five years ago.”

These learning mechanisms may be disrupted in patients with memory disorders, so Sweatt’s group set about developing compounds with the potential to reverse the damage. Early tests in mice have shown a “pronounced increase in memory robustness,” he says. “This might allow us to design new therapies for aging-related dysfunction, Alzheimer’s disease, and mental retardation syndromes.” Indeed, he says, future tests could produce a drug that not only restores memory levels to normal but actually improves them as well.

Secrets of a Sleeper Cell

Basic scientists don’t often get the chance to take their research from molecule to medication, but Sweatt’s fellow neurobiologist Harald Sontheimer has done it twice, in colorful fashion. Sontheimer, the director of UAB’s Civitan International Research Center, also leads the university’s new Center for Glial Biology in Medicine, the first research enterprise dedicated to the glial cell, a long unappreciated neural cell whose name is derived from the Greek word for glue.

“About half of our brains are filled with glial cells, but they were thought to be just connective tissue; for the longest time we really had very little knowledge about what they do,” Sontheimer says. Over the past 20 years, he has taken part in most of the research pinpointing a leading role for glial cells in the development of brain tumors, as well as multiple sclerosis, epilepsy, Parkinson’s disease, and chronic back pain.

“Primary brain tumors are almost always derived from glial cells, and that is a mainstay of study in our laboratory,” says Sontheimer. His research team discovered a weakness on the surface of glial tumor cells, then extracted a drug from scorpion venom that exploits this weakness and stops the cells from invading the brain. Sontheimer recently found another way to control glial-derived brain tumors in a similarly unlikely source: an FDA-approved medication for Crohn’s disease called sulfasalazine. A controlled clinical study could soon make this a primary treatment for patients with glial tumors.

World Without Walls

Even outside the world of glial biology, Sontheimer knows a thing or two about connective tissue. He is excited about the Civitan International Research Center’s role in supporting UAB’s broad neuroscience efforts, which includes opening its new fMRI machine to researchers across campus. He also notes that the center’s long track record of bringing together like-minded investigators offers valuable lessons on the best ways to encourage meaningful collaboration. “One of the strategies we have used is to put people with similar disease interests in proximity, even if they’re not in the same specialty,” he explains. “Once you do that, a lot of interaction happens naturally.”

Natural interaction has been a frequent topic on Kevin Roth’s mind. He is confident that the Comprehensive Neuroscience Center can succeed by convincing researchers to look up from their own work and see the possibilities in collaboration. “That way people will understand that what’s good for Alzheimer’s research isn’t bad for psychiatric research, for example,” he says. “These diseases all interact, and by generating a culture where the scientists know and talk to each other, we will more rapidly develop cures or preventions.”

Dean Rich emphasizes that neuroscience research will remain a top priority for the School of Medicine. “Our understanding of how the brain and mind work is on the threshold of major advance, with implications for many of the most important neurological and psychiatric diseases,” he says. “I want UAB to participate in those advances.”

And as the Comprehensive Neuroscience Center blossoms, Roth says, the entire community will share in the fruits. “We hope to add 50 new faculty in the next five years, and they will bring grants with them and hire support staff,” he explains. “There will be interest in forming biotech companies based on their research, as well as interest from drug companies on collaboration for new therapies. I think we can become a real powerhouse in the Southeast.”

UAB and other institutions can’t afford not to invest in fighting neurological and psychiatric diseases, adds Roth: Treatment costs currently run to $500 billion per year in the United States alone. “It’s just like the days of the polio epidemic,” he says. “They had a choice: Buy more iron lungs or invest in a cure to prevent polio in the first place. We’re in the same position. Neuroscience research has gained momentum, the door has opened a crack, and we’re trying to bust it down the rest of the way.”

“We’ve probably made the most important discoveries of my entire career in the few months we’ve been at UAB.” — David Sweatt

Follow Harald Sontheimer deep into the mysteries of the glia.
At most institutions, it’s not hard to tell the researchers from the clinicians. The former are testing reagents in the lab, while the latter are treating patients in the hospital. At UAB, however, scientists and physicians are often one and the same, with their roles shifting depending on the day of the week.

David Standaert, M.D., Ph.D., makes the transition every Friday. That’s when he steps out of his lab, dons a white coat, and treats patients with Parkinson’s disease and related conditions. It’s a routine he developed two decades ago at Harvard University and continued after he came to UAB last summer, even though he’s now an internationally recognized Parkinson’s researcher with serious constraints on his time.

“I have always been active both on the clinical side and in basic science research,” explains Standaert, who occupies what he says is a unique role. He directs the Center for Neurodegenerative and Experimental Therapeutics, a research group, and the clinical Division of Movement Disorders, which sees more than 4,000 patient visits annually, making it one of the busiest programs of its type in the country. “That gives me the view all the way from basic laboratory molecules to actually testing a drug in a human population,” he explains.

This long-range view is a fundamental part of UAB’s approach to making headway in navigating the bewildering currents of the mind. James Meador-Woodruff, M.D., chair of the Department of Psychiatry and Behavioral Neurobiology and an international expert on schizophrenia, has a reputation as a very “biological” psychiatrist. But his clinical side isn’t far below the surface. During a residency at the University of Michigan, Meador-Woodruff combined biological research with training in psychotherapy, another area of strength at UAB, he notes. “I’m a huge fan of talking therapies,” he says. “I have a big vision of neuroscience, and I try to make the department big enough for many approaches.”

Therapies for the Future

A clinician at a major research university must be a skilled linguist, able to translate the arcane dialects of basic science into language patients can understand. Turning experimental therapies into doctor’s orders is a delicate process, especially when families are parsing every sentence for one magic word: hope. Hope is the reason patients travel thousands of miles to visit UAB’s physician-scientists, eager to take part in research that may someday cure some of the world’s most dreaded neurological and psychiatric diseases.

“Today in our translational clinical trials, we’re working on the therapies that other neurologists will use in the next five to 10 years,” says Ray L. Watts, M.D., chair of UAB’s Department of Neurology and director of clinical research in the Parkinson’s Disease and Movement Disorder Research Program. “We have specialized clinical research programs in all of the major categories of neurological disease, including stroke, brain tumors, multiple sclerosis, muscle and nerve disorders, Parkinson’s, Alzheimer’s, and sleep disorders.”

Watts’s philosophy of aggressively seeking new, groundbreaking treatments for Parkinson’s and other diseases has paid rich dividends. In the past 15 years, his research group has helped develop more than a dozen medicines and several innovative surgical therapies. “We have focused on translating discoveries into clinical research and then into clinical treatments,” he says.

Watts and other Parkinson’s researchers at UAB are currently involved in a dozen clinical trials of astonishing variety. “We’ve been working on medicines to treat the symptoms of Parkinson’s disease, to change the side-effect profile of therapies we have, and to modify the disease progression,” Watts says. “And we’re now on the threshold of neuro-protective therapies,” which may be able to reverse the damage of Parkinson’s and even prevent it from attacking the brain in the first place.

The Parkinson’s program is a microcosm of UAB’s efforts to translate its extensive research studies into comprehensive clinical care. “There are a tremendous number of interesting questions to answer, but we’re trying to ask the questions that will lead to a change in treatment in the short term,” says Standaert. “And I think that those questions develop when you interact with patients and try to understand what their problems really are.”

Those patients, despite the level of severity of their individual cases, have access to potentially life-changing therapies. “We have taken the approach of working on every stage of Parkinson’s: early, with therapies that will hopefully change the natural history of the disease; midlevel, with patients who need more powerful symptomatic medications to reverse disability and improve quality of life; and advanced cases, where we may use surgical techniques such as deep brain stimulation or a combination of medicines.”
“The treatments we have now in psychiatry are better than they were when I was in medical school, but they still have a long way to go. The end goal is to use this translational approach to come up with new treatments that are more effective for our patients.” — James Meador-Woodruff
Ever since he was a kid, James Parker, M.D., wanted to become a pediatrician. But like many medical students, his career plans changed abruptly once third-year clinical rotations began. “Psychiatry was my first clinical rotation, and I loved it,” says Parker, a 1985 graduate of the School of Medicine at UAB. “It was much more scientific than I had imagined. There was tons of research going on, especially with mood disorders and major depression, and a lot of work was starting to be done with schizophrenia—scientific studies, rather than trying to figure out who to blame for the illness.”

After a residency at Duke University, Parker seemed headed for a clinical research career—until he got an intriguing call from back home. “One thing I didn’t like about psychiatry is that I was stuck in an office all day long,” he says. “I’m just too hyperkinetic for that kind of lifestyle.” So when the Jefferson, Blount, St. Clair Mental Health/Mental Retardation Authority (JBS) came looking for a medical director in 1993, Parker jumped at the chance. Now his office is the size of three counties, and he’s rarely in one place for long. “We’re an outreach agency,” he explains. “Instead of the consumers coming to us, we go to them.”

Medicine on the Move

As medical director for JBS, Parker leads several innovative programs in Birmingham and the surrounding communities. He and a team of registered nurses, therapists, social workers, and case managers pay regular visits to individuals on the verge of being committed to state mental hospitals, seeking to avoid that step by stabilizing them in the community. Parker also runs the authority’s Program for Assertive Community Treatment (Pro-ACT), which provides supervised and subsidized housing for homeless or institutionalized “consumers” [that word is used to avoid the term “mental patients”], along with medical care and lessons in grocery shopping and other community living skills.

“They may have spent a lot of time in group homes where they had staff to prepare their meals and do a lot of the cleaning, so they really need to be taught some of the things we take for granted,” says Parker. “They have been robbed of that opportunity by being institutionalized.”

To reach the most vulnerable population, the homeless and mentally ill, “we have a weekly clinic at the First Light shelter,” says Parker. “But some homeless folks just can’t sit in a waiting room full of people. There are people who need a monthly injection—people with schizophrenia, for example—to stay stable and out of the hospital. But they’re too paranoid or their lifestyle is too chaotic to keep an appointment in a clinic. So we go out to wherever they

In 13 years of homeless outreach, James Parker has learned that simple gestures can be profound. “Sometimes all it takes is a handshake,” he says.
are—whether it’s in a shelter or under a bridge.” Parker’s average workweek is far from typical. One day you can find him holding office hours in a cramped room at a downtown shelter. The next he may be at an apartment complex, trying to convince a hesitant manager to accept some of his stable consumers as tenants. Or he could be strolling through the Southside, discussing medications and life with a homeless man suffering from severe schizophrenia.

**New Diagnoses**

Parker says the demographics of Birmingham’s homeless population have changed, and that has brought a subsequent shift in the patterns of illness he encounters. “When i first came here, i would say that only 20 percent of the homeless were females, but now it’s more like 50-50,” he says. “Thirteen years ago, the most common diagnosis among the homeless would be schizophrenia—a male with schizophrenia. Now it’s major depression, and it’s more likely to be a female than a male. The homeless people with schizophrenia are still out there, but it’s just that their numbers have been overtaken by the numbers of people with major depression and anxiety disorders.”

While the advent of new medications to treat these conditions is “revolutionary,” says Parker, his arsenal goes beyond pharmaceuticals to include supportive psychotherapy and social interventions. “And you have to be willing to take time,” he notes. “Our new staff just want to go out and make something happen, but sometimes it takes two or three encounters with someone before they’ll even trust you enough to give you their full history, much less listen to your recommended treatment.” That patience often brings success, Parker explains, and it is especially gratifying when he can share that success with the potential next generation of his profession.

“We may have been working on a person for months, and then we take a medical student along with us under the bridge and the person takes their meds for the first time, and the next week they’re in the clinic, and then they’re in a shelter. We’ve had some medical students decide to go into psychiatry after they saw that you could actually go out on the streets and provide treatment,” Parker recalls. “They said, ‘i had no idea it could be this much fun.’”

**By Doug Gillett**

“By having more of these small-group sessions where the students present a scenario, they have to go away, think about it, come back, and do a presentation,” Lester says. “We’re not just interested in how to treat this person; we really want to know, based on the symptoms and other data, what is the fundamental problem here? Why would, say, a lesion in that part of the brain cause what’s happening? We’re really trying to get them to think.”

The new curriculum also integrates aspects such as behavioral science and pharmacology that traditionally have been taught separately. Lester says the designers of the curriculum had to take care not to integrate too much lest they overload the students, but so far, he adds, the workload appears to be manageable and balanced. “I don’t think it’s a huge amount of new material; it’s just that the material’s organized differently.”

The underlying idea, he says, is to “get away from passive learning” and rote memorization designed mainly to prepare students for their board exams. The new methods ready students for real-world practice in ways they might not have been privy to before.

“The board exams are important, but this is more about making better doctors,” Lester explains. “When we don’t stress the importance of this basic-science knowledge, or the students don’t see the relevance of it, they tend to use it only for the tests and then just move on to the next stage. The idea of a more integrated curriculum, with themes that flow from one end of the course to the other, is that you can’t forget this stuff—it’s cumulative knowledge that you need.”
It may not look that way to people standing in its imposing shadow, but UAB Hospital isn’t designed to do everything. So when the UAB Health System went looking for a new venue for several of its specialties, it was fortunate to find the answer literally in its own backyard.

The former HealthSouth medical center on 11th Avenue South, just a block from the Alys Stephens Center, was already designed for exactly the kind of orthopedic and musculoskeletal treatment UAB wanted to expand. Now called UAB Highlands, the facility has transformed quickly into a “destination hospital” where adult patients with noncritical health problems receive treatment in an intimate, community-hospital environment.

Amie Jackson, M.D., chair of the Department of Physical Medicine and Rehabilitation and chief of staff at UAB Highlands, says UAB already was exploring ways to bring specialties such as rheumatology, bone and joint health, orthopedics, and exercise physiology together in one program. When the HealthSouth facility became available, it was a perfect fit. “It was something the university and the Health System could not afford to miss out on,” she says. “We couldn’t have designed it any better.”

Jackson explains that the Highlands facility will allow UAB to focus more intensely on “the type of medicine where somebody has an injury but they’re basically healthy. . . . This was an opportunity to be a leader in that type of medicine and surgery, and it also allows us to separate ourselves from the complexities of the other hospital so that we can put in certain efficiencies and different ways of practicing.”

Advanced Care with a Community Feel

“We’ve also made sure we keep the mission to do research and teaching,” Jackson adds. “That’s what makes us different from any other group in town—we still have that mission, and we can blend it all together.”

Don Lilly was the CEO of UAB Highlands during the transition period and has since become an associate vice president at UAB Hospital. He says the first few months, from April to October 2006, were spent updating the hospital’s information infrastructure. “During that time we also did a lot of work transitioning physician coverages from community doctors to university doctors for certain services like cardiology, pulmonology, radiology, pathology, and other subspecialties,” he says. “We still have community doctors covering us for some things and university doctors covering us for others; it’s a lot of work to transition coverages and make sure you don’t have gaps.”

Maintaining the feel of a community hospital with high levels of service, however, was a major priority, and Lilly says officials conducted extensive focus group sessions to learn what their target market was seeking. “Birmingham has a higher-than-average percentage of baby boomers, and they’re different from the previous generation in terms of the amount of control and influence they exert over their medical care,” he explains. At Highlands, those patients will notice greater effort by the staff to educate and involve them in their care relative to other hospitals, Lilly says. “And down the road we may offer some services that have a little bit more of a boutique feel to them. But without going overboard; we’re still a general acute-care hospital.”

Providing those higher levels of service, Jackson says, is easier thanks to the existing staff and their willingness to become part of the UAB team. “The staff there have been wonderful; I can’t tell you how great the people at Highlands are,” she says. “They truly love the practice of that community hospital and are dedicated to it; we became interested in this initiative because it is a community model, and the experience that we have here would take years for us to try to build from scratch.”

By Doug Gillett
“It does something important for us almost every day.” That’s how Dean Robert Rich, M.D., describes the impact of the University of Alabama Health Services Foundation General Endowment Fund (GEF), which has benefited UAB and the community with more than $34.8 million in grants over the past decade. He calls the GEF a cornerstone of faculty recruitment, development, and innovative strategies for the School of Medicine’s research, education, and patient care programs. “Our future would be far less bright without it,” he says.

The Health Services Foundation (HSF) board established the GEF and other endowments in 1996 with proceeds from the sale of its holdings in Complete Health HMO. The first grants, totaling $860,000, supported programs and facilities. In 2006, the GEF provided seed money for research projects, medical education, and clinical initiatives totaling about $3.5 million—plus an additional $700,000 for Scholar Awards, a program added in 2002 to provide supplemental funds for faculty recruitment and retention.

“The GEF grant program is one of the most significant ways the HSF—the school’s faculty multispecialty practice plan—supports UAB’s academic mission,” says HSF president and neurology chair Ray Watts, M.D. Reid Jones, executive vice president of the foundation, adds that the “GEF continues to gain recognition and appreciation among the UAB faculty as a valued recruitment and retention tool and a valued fund for the support of important program initiatives.”

UAB faculty members, sponsored by their department chairs, complete grant applications that GEF committee members review each December. For 2006 the committee awarded investigators in biochemistry, genetics, medicine, microbiology, neurobiology, nutrition sciences, obstetrics/gynecology, pathology, pharmacology, radiology, and surgery.

Improving Clinical Care

For those GEF awards funding patient-care advances, the “best results are often realized years after the expiration of a grant,” notes H. Hughes Evans, M.D., chair of the Clinical Care Initiatives Review Group. She offers the interdisciplinary International Adoption Clinic as one example. Providing pediatric care, occupational therapy, and family therapy to serve the medical, developmental, and emotional needs of adoptive parents and their children, the clinic has served more than 1,000 children from around the world in the past four years. It received an initial award of $100,000 in 2002; today it is financially self-sufficient.

The GEF has also supported development of the UAB integrated coagulation service and the multidisciplinary gastrointestinal oncology center. In addition, the endowment has funded the Multispecialty UAB-Zambia Field Office $20 million in external awards.

Advancing Cutting-Edge Research

“Leveraging GEF support to obtain extramural and matching funds has been particularly successful in laboratory research,” reports Robert Kimberly, M.D., chair of the review committee. For instance, an initial $450,000 grant for the Laboratory for Multimodality Imaging Assessment allowed Kurt Zinn, D.V.M., Ph.D., to win a competitive supplement of $170,000 from the National Cancer Institute. And an initial grant of about $200,000 to the Microarray Data Analysis Clearinghouse project, directed by David Allison, Ph.D., led to approximately $20 million in external awards.

The Multipurpose UAB-Zambia Field Office for Clinical Research, coordinated by Dwight Rouse, M.D., has yielded the largest amount of external funding to date. Established with an initial GEF grant of $224,050 in 2002, the program has attracted more than $25 million in grants from other organizations for HIV prevention, treatment, and research. “Because of the nature of clinical studies, results from patient-oriented clinical research grants often take longer to achieve, but the rewards can be extraordinary,” notes Larry Moreland, M.D., chair of the review group. Dean Rich adds that this “program is surely among the most successful academic partnerships ever established between a U.S. academic institution and a foreign government.”

Educating Health-Care Professionals

GEF funds also enable UAB to improve medical education through state-of-the-art teaching and technologies. For example, Peter Anderson, Ph.D., has developed Online Interdisciplinary Cases for Medical Education, a nationally recognized initiative to customize the learning process for students. A specialized research program led by Michael Kilby, M.D., helps prepare future scientists and clinicians, and Alice Goepfert, M.D., offers simulation technologies to help medical students and residents learn clinical procedures that are difficult to teach and practice. Thomas K. Houston II, M.D., also teaches medicine and pediatrics residents to measure and improve the quality of patient care through a practice-based learning initiative.

Ensuring a Bright Future

Watts says the HSF board has approved a GEF funding increase to $5 million for 2007, 2008, and 2009. “We believe this is a great investment in the future of UAB as well as our city and state.”
Angela Clifton’s back porch offers an impressive panorama of Marshall County, Alabama: dramatic mountains, towering trees, expansive skies. It’s a fitting environment for a busy young physician whose career has been on the rise since graduating from the UAB School of Medicine in 2001.

“I feel very fortunate to come from such a beautiful area,” says Clifton, who operates a solo practice, Southern Family Medicine, in Albertville. She also serves as medical director for an imaging center, sees patients in hospitals and nursing homes, and assists in the local emergency room; on weekends she works in a rapid-care clinic between Albertville and Guntersville.

Though she grew up in Etowah County’s Walnut Grove community, Clifton says it was her education in Birmingham and Tuscaloosa that opened her eyes to small-town medicine. Clifton belongs to the first graduating class of the Rural Medical Scholars Program, which encourages SOM students to practice in underserved areas of the state while preparing them for the unique challenges of rural health care. (See sidebar for more information on the program.) Clifton spent three years training in Tuscaloosa as part of the program, which she says introduced her to agricultural and rural issues that help her identify with her patients today. After completing a residency in New Orleans, she returned to Marshall County, working in a family practice clinic in Boaz until she opened Southern Family Medicine the following year.

Clifton says “the combination of art and science” drew her to medicine, but the chance to truly get to know her patients brought her back home. “I get to make them feel better, and that is a great feeling,” she says. Supported by a nurse practitioner and an office staff so tight-knit that they sometimes take vacations together, she treats patients ranging in age from 1 to 103.

“My patient population is very representative of this area,” says Clifton. “Most are blue-collar, hardworking people who work in agriculture or local industry or who have retired from those jobs.” Those occupations—the economic lifeblood of Marshall County—make particular health issues more prevalent in the area. “We have more respiratory complaints than I expected,” Clifton explains. “A lot of my patients are involved in the poultry business, a thriving industry here. They are exposed to high concentrations of ammonia every day and do a lot of manual labor.” In addition, “hay always creates problems in the harvesting times of year.”

Another problem local doctors face is the spread of drug addiction from bigger cities to smaller towns. “We have a terrible problem with methamphetamine in this area,” Clifton says. She must also remain aware of the income pressures her patients face. “At times I have to adjust the ways I practice to make it amenable to patients’ financial abilities,” prescribing more generic medicines and offering samples when they are available. “Also, there are a lot of uninsured patients here, and it is often difficult to convince them to seek the care that they need.”

Parts of rural Alabama offer the prospect of an easier, simpler life—except for patients searching for a primary-care physician. In 1996, spurred by the growing need for small-town doctors, the SOM launched the Rural Medical Scholars Program, opening a route for rural students to succeed in medical school and ultimately practice in the state’s underserved areas.

A collaboration between the SOM and the University of Alabama’s College of Community Health Sciences, the program came to life under the leadership of professor John Wheat, M.D. So far two classes have graduated and three more are currently in training, but the program has already made a statewide impact, says William Curry, M.D., SOM associate dean for primary care and rural health. “These students choose primary care—and specifically family medicine—much more often than other SOM students or national averages—and the same is true for choosing rural practice.” Wheat and medical director John Brandon, M.D., a practicing physician in nearby Gordo, oversee the program’s Tuscaloosa component.

The program admits only students from rural areas of Alabama, and as a result they share certain characteristics,
she says. That situation becomes more challenging since patients must travel to larger cities for subspecialty care; Marshall County has no specialists in infectious disease, nephrology, neurosurgery, and pulmonology, among other areas.

But the rewards for all the hard work are “amazing,” says Clifton. “I have patients who truly value the care that you give them. Also, these women cook some of the best homemade food you can ever imagine.” In addition, she relishes her opportunities to contribute to the community, providing free sports physicals for students and assisting with the athletic programs at her high school.

Plus she has that stunning back porch view to look forward to at the end of every day. “My husband and I plan to live the rest of our lives here,” she says. “I can’t imagine practicing anywhere else.”

Curry says. Applicants tend to be older or pursuing medicine as a second career; they also identify strongly with family, home, and the land.

The 10 rural medical scholars selected annually spend a “pre-matriculation” year on the Tuscaloosa campus, taking courses and seminars on population-based health, biostatistics, and the rural dimensions of current health-care issues. After two years in Birmingham, they return to Tuscaloosa for two more, where they complete their clinical rotations. Throughout their training, the students meet with practicing rural physicians and visit communities, farms, and worksites in underserved areas. “One of the differences we hope to see in these students is a broader view of health care and the physician’s role and responsibility,” Curry says. “We hope they will take the opportunity to become leaders in their communities as well as becoming medical leaders statewide.” Many rural medical scholars get an early chance to demonstrate those leadership skills, Curry notes; they are in demand by family-medicine residency programs across Alabama, and several have attained the post of chief resident.

The success of the nationally known program has inspired a similar initiative on the Huntsville campus—with one key difference: Students spend their pre-matriculation year at Auburn University, forming an educational alliance that “doesn’t often get to happen,” Curry adds. The six students who launched the program in fall 2006 will come to Birmingham for two years of basic sciences, followed by two years of clinical studies in Huntsville. William Coleman, M.D., directs the program at the Huntsville campus while Lawrence Wit, Ph.D., associate dean of Auburn’s School of Science and Mathematics, coordinates the pre-matriculation year; Keith Bufford, M.D., an Auburn physician and alumnus of the SOM’s Tuscaloosa family-medicine residency program, serves as medical director.

The new program is exciting, Curry says, because it taps into an additional pool of students interested in small-town medicine, eventually doubling the number of designated rural scholars in each medical class to 20. In addition, both programs provide concrete evidence that the SOM is “very much involved in primary care and committed to changing outcomes” in rural Alabama, Curry says. Parts of the state “have some of the lowest health indices in the nation. . . . Access to a primary-care physician has been shown to make a significant difference in health outcomes, and we have specific examples of how that’s happened in Alabama.”
When the human immune system encounters a pathogen, T cells come to the rescue, recognizing and responding to “foreign” antigens on the cell surface of the infectious agent. The rescue squad has turned out to be bigger than scientists realized, however, with the recent discovery of a third type of T cell.

Until recently, researchers had proposed that T cells derive from one of two distinct developmental pathways, the Th1 and Th2 lineages, based on their production of cytokines when activated by various pathogens. However, Casey Weaver, M.D., SOM professor of pathology, medicine, and microbiology, along with graduate student Paul Mangan, Ph.D., and postdoctoral fellow Laurie Harrington, Ph.D., recently discovered the existence of a distinct third developmental lineage, named Th17 for its production of the cytokine interleukin-17 (IL-17).

The breakthrough is reshaping how scientists think about immunology, offering new explanations for the numerous inconsistencies in the Th1-Th2 system—and new avenues for treatment. T cells are the master regulators of the immune response, whether they are protecting the body or reacting in a way characteristic of autoimmune and chronic inflammatory diseases, Weaver says. “Understanding the biology of these cells will allow us to gain control of the adaptive immune system, which can facilitate the development of new treatments for autoimmunity and new vaccines.”

Thanks to the discovery of Th17, “We now have a ‘unified hypothesis of immunology’—a unifying model of how evolution has combated pathogens, and how the system can go awry in autoimmunity,” he notes.

UAB investigators are now exploring the possible clinical applications of this landmark
features

Cardiac Artist
Christopher Knott-Craig Brings a Breakthrough to UAB
By Danielle McClure

Recognized for a signature heart procedure and his subtle South African lift, Christopher Knott-Craig, M.D., is an accomplished surgeon who has made medical history by repairing tiny, fragile hearts with masterful precision. Today, UAB’s newly appointed chief of the Section of Pediatric Cardiac Surgery continues to keep his hands busy and save lives in the Division of Cardiothoracic Surgery, which has added fresh faculty members under its new leader, James Kirklin, M.D. Knott-Craig hopes his presence at UAB will help reestablish the university as the world’s premier pediatric cardiac center. “Sharing with others, teaching young surgeons to be better than myself, and finding simpler, less complicated ways to accomplish difficult surgeries is very gratifying,” he notes.

With Modified Danielson’s Repair, his groundbreaking operation to treat a rare, often fatal congenital heart defect known as Ebstein’s Anomaly, Knott-Craig successfully cured multiple cases of the condition in infants who were just days old—and helped change the course of neonatal cardiology. The procedure reduces the size of the patient’s oversized heart, repairs the defective right valve, and strengthens muscle tissue to ensure proper blood flow. The risky operation, paired with the survival rate of Knott-Craig’s small patients, is unprecedented. “Everyone believed Ebstein’s Anomaly was inoperable,” he says. “When I successfully repaired the condition, initially I had no idea the impact would be widespread.” Despite his successes, Knott-Craig remains modest and driven by his passion for problem-solving. “My personal philosophy has always been to forget the obstacle and concentrate on overcoming it,” he says. “The ultimate reward is seeing the babies and their parents at the end of a long ordeal and knowing you’ve gone the extra mile to give them the best chance to lead a normal, productive life.”

Knott-Craig received his medical degree from the University of Cape Town, interning under heart-transplant pioneer Christiaan Barnard; in 1987 he joined the faculty at the University of Stellenbosch, where he was appointed chief of pediatric cardiac surgery. Later, he trained at the Mayo Clinic and Boston’s Children’s Hospital before moving to Oklahoma City, where he was a tenured professor of surgery and chief of pediatric cardiac surgery at the University of Oklahoma. Adjusting to life in Birmingham has been smooth, he says. “My family loves Birmingham, and they don’t want to move again. I love the rolling hills, the tall trees. I love Oak Mountain State Park where I can lose myself.”

When saving lives is your day job, it’s difficult to imagine the possibility of boredom, but Knott-Craig is always seeking new, exciting challenges. “I believe one grows old through boredom; therefore, I always leave something new for a different phase of my life,” he says. When he turned 50, Knott-Craig started painting. His abstract acrylic works are, naturally, heart-themed and kid-friendly. One painting was even selected as the cover art for an album by classical cellist Tess Remy-Schumacher. In addition, Knott-Craig is a seasoned marathoner and poet. “I often write poetry between surgeries or later at night when I’m tired,” he admits. He doesn’t foresee a slowdown in 2007, either. In January he successfully summited Africa’s Mount Kilimanjaro, the highest freestanding mountain in the world.

The discovery of a third type of T-helper lymphocyte—Th17—by UAB scientists is having a major impact on the field of immunology. Finding a signature heart procedure and his subtle South African lift, Christopher Knott-Craig, M.D., is an accomplished surgeon who has made medical history by repairing tiny, fragile hearts with masterful precision. Today, UAB’s newly appointed chief of the Section of Pediatric Cardiac Surgery continues to keep his hands busy and save lives in the Division of Cardiothoracic Surgery, which has added fresh faculty members under its new leader, James Kirklin, M.D. Knott-Craig hopes his presence at UAB will help reestablish the university as the world’s premier pediatric cardiac center.

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The discovery of a third type of T-helper lymphocyte—Th17—by UAB scientists is having a major impact on the field of immunology.
When scientists began deciphering the human genome, their discoveries opened new doors for research. Today, many investigators are following the links and pathways that connect groups of genes, learning how they perform collective functions that could lead to disease.

Genetic studies under way at UAB also travel another avenue of research—the translation of new discoveries into innovative diagnostic tests and ultimately prevention and treatment protocols. At both ends of the process, School of Medicine graduates are making critical contributions. John Hartman, M.D. (class of 1995), assistant professor of medicine in the UAB Department of Genetics and a recent recipient of a Physician-Scientist Early Career Award from the Howard Hughes Medical Institute (see story on page 25), is identifying genetic pathways that could lead to new insights on cancer and other diseases. Meanwhile, Helen Krontiras, M.D. (class of 1994), assistant professor in surgical oncology, is applying what researchers have already learned, using genetic testing to assess a woman’s risk for breast or ovarian cancer.

How does genetic testing figure in your work?

Helen Krontiras: My research involves breast cancer prevention and risk assessment. As a breast surgeon, I see patients with both benign and malignant tumors at UAB’s Breast Health Center. I frequently see patients who think they are at risk for breast cancer based on previous breast problems or a history of breast or ovarian cancers in their families. I sit down with these patients to evaluate exactly what their risk might be, which includes charting a thorough history of breast health and family history. This allows me to give patients an objective assessment of their risk.

John Hartman: My research focuses on genetic pathways that are involved in human disease but which have an evolutionary basis in yeast. Yeast is a powerful biological tool for genetic analysis because it shares all of the fundamental characteristics of most human cells. Therefore, complex genetic analysis that is not possible in human cells can be performed in yeast, and the information gleaned can be used to formulate and test new theories about human disease.

The cool thing about yeast, and the reason it is used in much genetic research instead of some other type of cell, is that researchers have joined forces and knocked out all the genes in yeast, providing a unique resource. There’s no other organism where all of the genes have been individually knocked out. [Note: “Knocking out,” or inhibiting, particular genes and studying the effects allows researchers to understand the functions of those genes in a model organism.]

We primarily focus on disease pathways known to be relevant to human disease. A genetic pathway means that genes are working together to perform some process in a cell.
In what other ways do you use genetic testing?

Krontiras: If a patient has a strong history of breast cancer in her family, then a genetic counselor sits in on the initial visit and charts the patient’s family history. The counselor then discusses genetic testing with the patient and whether or not it’s indicated, based on the patient’s probability for a genetic mutation for breast cancer. Most breast cancer is not specifically related to an inherited gene, but there is a small subset—5 to 10 percent—that is associated with an inherited susceptibility. The most common susceptibility is a deleterious mutation for the genes BRCA 1 or BRCA 2, which predisposes someone to developing breast or ovarian cancer. For these patients we prefer to test one of their close relatives, who is more likely to have the gene. For example, if a daughter has a mother with breast cancer, we would want to test the mother; if she has the gene, then we could test the daughter for that specific mutation. If the mother doesn’t have the gene, then it would be unlikely that her daughter would have inherited a genetic mutation from her.

Hartman: In our lab, we don’t conduct genetic testing in the traditional sense. When we create networks in yeast cells—and people are doing it now by finding connections between pathways—that gives us a more specific place to look. For instance, we know about traditional human quantitative genetics, such as the breast cancer BRCA gene. So if we find some mutation that’s associated with a particular disease, such as breast cancer, it may be that there are genes interacting with the BRCA gene—all occurring on the same pathway. The genes that interact with BRCA, if we knew what they were, might account for a lot of the other forms of breast cancer. Those different genes may be shutting off the same function in a cell or deregulating the same function in a cell.

How does genetic research at the cellular level affect decisions made at the clinical level?

Hartman: Humans are obviously very different from yeast, and when you examine human cells, you find they are all different—cells in the eyes differ from cells in the kidneys—but they also have characteristics in common. For instance, any cell can become cancerous, because cancer is a disease that creates genetic deregulation of cell growth and division. However, all cells, regardless of species, utilize energy, and all cells utilize carbon, nitrogen, and lipids. So any human metabolic action involving cells can be studied in yeast—if the pathways are intact, and most times they are for really fundamental processes. Of course yeast is not a good model for studying complicated physiologic processes such as the endocrine system, where one cell type signals another cell type to stimulate a hormone that’s made in the kidney, which then stimulates the bone marrow to make blood. But for some types of research, yeast is a very powerful system. By studying yeast, researchers hope to discover the functions that each gene controls and how those genes may be connected to human diseases such as cancer.

Krontiras: Genetic testing involves a simple blood test. However, it’s important to keep in mind that even though cellular research has made testing relatively easy, the results can have enormous impact on people’s lives. Testing is a proactive thing that people must decide for themselves, based on their family history. But it should be done in the setting of counseling; if not, then interpreting the tests can prove difficult because sometimes they are not very straightforward. It’s also important to discuss potential management options afterward. For instance, patients diagnosed with breast cancer who have a gene for the disease must face the increased risk of developing a second breast cancer later on. So those patients may choose to have a mastectomy on the cancer side and have prophylactic mastectomy on the other side. Sometimes that knowledge is important to have at the time of diagnosis; if they know they have a gene that might mean a slightly higher risk of developing a second breast cancer than the average breast-cancer patient, then they may choose to be a bit more aggressive with their therapy or surveillance.
For a glimpse of the future of neuroscience, look no further than UAB’s Medical Scientist Training Program. A National Institutes of Health-funded collaboration of the SOM and the UAB Graduate School, the combined M.D./Ph.D. program prepares students for academic medicine careers spanning laboratory research, clinical practice, and teaching.

The program’s curriculum calls for students to spend three and a half to four and a half years working closely with a mentor to complete their dissertation research. For five M.D./Ph.D. students—Rizwan Akhtar, George Atkinson, Sotirios (Sam) Keros, Nola Ernest, and Mark Stonecypher—those years have offered increasingly complex challenges and opportunities to unlock the secrets of the brain and nervous system.

What drew you to medicine and neurological research?

Rizwan Akhtar: I’ve been interested in medicine since I was a hospital volunteer in middle school. As I studied, I became intrigued by stem cells and the molecular, cellular, and behavioral aspects of diseases. I wanted to know how neural diseases happen and how we can stop them.

George Atkinson: The brain has always been fascinating to me. I have close relatives who are doctors of neurology and neurosurgery, so I’ve been interested in the field for quite a while.

Sotirios (Sam) Keros: I enjoy analytical things, and medical research gives me a wonderful opportunity to figure out how diseases happen. I also like teaching, and in tutoring other students, I became interested in the brain and how it works.

Nola Ernest: I’ve always been interested in diseases that have a dramatic effect on people, like tumors and strokes. When I had a lab job as an undergraduate at LSU, my mentor trained me in research, and I fell in love with it.

Mark Stonecypher: When I was an undergraduate, I studied learning and memory and wanted to learn more about the brain. I became interested in nerve growth factors and synaptic function and how tumors and other cancers develop.

What is the focus of your research?

Akhtar: I’m looking at the downstream genes that regulate DNA-damage-induced cell death in neural stem cells. We’ve shown both Noxa and Puma proteins are able to regulate this process. We’ve also shown for the first time that P53 has a transcription-independent role in neural stem cells.

Atkinson: I study an aberrant signaling pathway within brain tumor cells. All cells in our bodies communicate and influence each other using a number of interconnected pathways, which take signals from outside the cell into the nucleus to promote the transcription of particular gene products.

Keros: My research involved inhibitory mechanisms in the brain and seizure disorders. One of my projects focused on protein transporters that regulate GABA levels. It was previously thought that GAT-1 was the primary transporter, and other subtypes played limited roles. One of my main findings was that GAT-3 actually does play a large role in regulating GABA levels, and thus overall inhibition in the brain.

Ernest: I’m researching the role of chloride in maintaining the volume of human glioma cells. To divide and migrate, the cells have to shrink. They release chloride to do that. What’s exciting is that we’ve found that the ability of a glioma to move chloride out is dependent on how much chloride is inside it. Working with transporters to prevent the buildup of chloride could give us a strategy for inhibiting the ability of these cells to reproduce.

Stonecypher: I’m working to define molecules that promote proliferation of peripheral nerve cell tumors like neurofibromas and schwannomas. In studying growth factors, I’m seeing data supporting the hypothesis that NRG-1 and/or NRG-2 play a role in tumor development by acting through erbB receptors.
How do you see your work ultimately helping patients or other researchers?

Akhtar: Understanding neural stem cells could help us learn more about the origin of brain tumors so we can design interventions. There are also exciting possibilities for using neural stem cells to replace damaged nerve tissue. We might also be able to reduce cell death in transplants to improve outcomes.

Atkinson: One feature of cancer cells is that signaling pathways are altered in ways that benefit the tumor. Our goal is to understand the changes in these signaling pathways so that one day we can use this knowledge to develop new cancer therapies.

Keros: My work implies that drugs acting specifically on GAT-3 may be useful as therapeutic tools to control seizures. Since different GATs are expressed in differing amounts in specific areas of the brain, the exciting possibility is that we could tailor a combination of GAT-acting drugs to the specific seizure type, increasing efficacy and minimizing side effects.

Ernest: When we saw that preventing chloride accumulation could inhibit glioma cells, we noticed similarities to kidney disease and realized drugs were already available that might be able to slow regrowth after resection. Gliomas can be so deadly so quickly; in many cases, there’s little we can offer patients. More months of life could mean a lot.

Stonecypher: Since we’ve learned that these growth factors can promote the development of peripheral nerve sheath tumors, we have a target for treatment and research. We could possibly use kinase inhibitors already on the market to decrease proliferation of malignant cells in these aggressive tumors.

What are the advantages of being able to prepare for both a clinical and research career through the M.D./Ph.D. program?

Akhtar: We get good training in both medicine and research, so we have more flexibility in choosing the career we want to pursue. As our interests become more focused and specific, we can be ready to work in those areas.

Atkinson: I’m very interested in medicine and treating disease, but I’ve also been drawn to the discovery and creativity of science. The M.D./Ph.D. program here at UAB allows me to do both.

Keros: When I saw my first two-year-old with a seizure in the emergency room and how frightening it was for the parents, it helped me see my goal much more clearly. I want to work in pediatric neurology and in research to find better answers. On the clinical side, seeing how this child is different gives me clues on how to adjust my research. What I learn in the lab also gives me information that’s often useful in treating patients.

Ernest: You get the best training in research and basic science on the Ph.D. side and a good understanding of medicine and treatment on the M.D. side. When I came here, I was looking for just this type of program, and UAB had the best collaborative environment I saw.

Stonecypher: Clinical experience, where you see patients and how medications are given, helps you understand how to make your research practical and easy to use. Having a research background also makes it easier to apply research in practice.

What are some of the most useful things you’ve learned during your time at UAB?

Akhtar: It’s important to be persistent and keep working, even when things are difficult. Staying focused and committed will usually get you through.

Atkinson: Diligence. In biomedical research, there are so many small things that can go wrong that can cost you days of effort. The key is to focus on your work and be prepared to try again.

Keros: You don’t always get the results you anticipate. You have to be flexible and let the research take you where it will take you. For example, when I wasn’t getting the results I expected from GAT-1, I found that GAT-3 was masking it, and following that led to some exciting new possibilities for how we approach seizure disorders.

Ernest: Balance is important. My mentor, Harald Sontheimer, Ph.D., is passionate about science and is a wonderful role model. His example has shown me that it’s possible for me to be passionate about both science and my outside interests, such as my family and music and church. I also learned to never procrastinate.

Stonecypher: You need to have good questions and be persistent. Many experiments will fail, so you need to be ready to approach a problem from more than one angle.
How far back does Joseph Cunningham’s connection to the School of Medicine go? He actually got to Birmingham before the school did.

“When I first came here in 1942, there was talk that the medical school was coming [to Birmingham],” says Cunningham in Virginia Fisher’s 1989 book, Building on a Vision. “And there was a battle going on, I think. The first two years I was here, the two-year school was still down in Tuscaloosa. I used to go down in the morning and lecture, and then come back to Jefferson Hospital.”

Cunningham, born in New York City in 1910, is the SOM’s oldest living former professor. In 1953 he earned the rank of professor in the Department of Pathology and spent his career there. One of his early students was George Scofield, M.D., who began working with Cunningham that year as a sophomore at the school. Asked to sum up Cunningham’s persona in a word, Scofield doesn’t hesitate: “Awesome,” he says. “Distinguished. Very verbal. He was quite a fellow and still is. I have lunch with him every few months.”

Of all the things Cunningham taught him about pathology, says Scofield, one piece of advice got the most repetition: “He always said, ‘If you do it right the first time, you won’t have to do it over.’”

National Recognition

“You could say that Joe Cunningham is the father of modern pathology in Birmingham,” says pathology chair Jay McDonald, M.D. “He brought some of the first national recognition to Birmingham, to pathology, and ultimately to UAB. It was quite a different time in the field, and pathologists were at a bridge between research and service. Dr. Cunningham was on many peer review panels, including the American Cancer Society.”

One of McDonald’s favorite Cunningham stories recalls the doctor’s first trip to Birmingham to interview for a job: “He and his wife, Virginia, took the train down from Boston in the middle of summer. He spent 10 days talking to the staff and doing autopsies, while his wife stayed downtown at the Tutwiler Hotel and roasted. Afterward, when he said to his wife, ‘They offered me the job; I’m thinking of taking it,’ he thought she’d have a stroke on the spot.”

Cunningham’s clinical lab, Cunningham Associates, also made a national name for itself, McDonald says. “He built it up and sold it, then bought it again and sold it again. It grew and grew. Today his pathology group covers numerous private hospitals, and does it very efficiently. It must have been the way he set it up.”

Prepared for Success

Jack Strong, M.D., is another former colleague with fond memories; he joined Cunningham’s group in 1967. “He set the example for all of us who practiced with him. . . . And the man still has a lot of wisdom today.” — Jack Strong

The 1989 book records the moment when Cunningham realized the medical center was about to transform the city’s landscape. It was the beginning of an urban renewal project in 1958, at a time when housing was so scarce that some of the doctors lived in a former army barracks next to Jefferson Hospital.

“It was a totally different situation then,” Cunningham says. “When that urban renewal land was condemned, the die was cast. . . . When they developed that concept of a whole area, you knew something was going to happen.”
Imagine a giant jigsaw puzzle the size of the human genome—three billion base pairs with as many as three million differences between one human and the next. For John Hartman, M.D., the challenge is to identify and connect the key genetic pieces.

“For a few diseases, one gene is known to be a primary cause, but in most disorders, a larger number of genes are more likely to be involved,” says the UAB genetics researcher and 1995 SOM graduate. “Identifying many genes, each of which has a small effect in a population, is extremely difficult using standard methods for human genetic analysis. I’m investigating mutations in different genes, which can interact with one another or with environmental factors. Understanding how such interactions are organized will provide new insight into the ways multiple gene mutations can contribute to complex diseases like cancer.”

Early Intervention

Hartman’s promising work recently won him one of 13 inaugural Physician-Scientist Early Career Awards bestowed by the Howard Hughes Medical Institute. The award of $150,000 over three years encourages talented young researchers to continue their innovative work at a time when they may face the economic realities of establishing funding and launching their careers.

“I’m studying the interaction of genes by working with yeast,” Hartman says. “About 40 percent of yeast genes have human counterparts. The structure is simpler and easy to manipulate, so we can study it systematically. We can examine one, two, or even combinations of three genes at a time to see how they interact. All yeast genes have been systematically knocked out and yeast cells divide every two hours. Thus, in just a few days, we can measure, across the entire genome, for even small growth differences due to interactions between genes or environmental conditions. Then we translate knowledge about which yeast genes interact to predict interactions that might be conserved in human biology.”

Hartman’s primary target is cancer, though he hopes his research will also yield information with broader applications to help scientists in other fields develop more effective diagnostic and therapeutic strategies. “Right now, I’m focusing on nucleotide metabolism and the precursors of DNA—which cells use to copy their genome before cell division. The pathways that regulate this process are of central importance to what seems to go wrong in cancer,” he says.

Hartman’s interest in genetics developed while he was a SOM student conducting research with Max Cooper, M.D., and Eric Sorscher, M.D. Later he worked at the National Institutes of Health as a Howard Hughes Medical Institute Student Scholar. After a residency in internal medicine and a hematology fellowship at the University of Washington, Hartman completed postdoctoral work at Seattle’s Fred Hutchinson Cancer Center. He then returned to UAB, joining the the Division of Genetics and Translational Medicine.

Putting the Puzzle Together

Now, in addition to his hours in the lab, the assistant professor shares his passion for genetics with his graduate students. After hours, he heads home to enjoy family time with his wife, an attorney, and their children. He says that going to the ballpark with his two sons and playing with his young daughter gives him time to reflect on what his work could mean for the future of health care in human terms.

“Simple systems like yeast can give us powerful insights. . . . Genes usually work in combination. Seeing how they work in yeast can show us where to look for the problems that cause illness in humans.”

— John Hartman

“Simple systems like yeast can give us powerful insights. . . . Genes usually work in combination. Seeing how they work in yeast can show us where to look for the problems that cause illness in humans.”

— John Hartman
Leisa Chambless and John Holt were bright, energetic young people who dreamed of attending the School of Medicine at UAB and devoting their lives to helping others. Tragedy intervened, but it couldn't stop those dreams from being fulfilled.

After Leisa lost her struggle with spinal cancer, the Chambless family founded the Leisa Chambless Endowed Scholarship to assist first-year female students with financial needs. “We feel that as these young women go out into the world to practice, Leisa can contribute . . . as she wanted to do,” says her mother, Billie Ruth Chambless.

Like Leisa Chambless, John Holt was on the verge of beginning his studies at the School of Medicine. A traffic accident prevented him from becoming a physician, but the John Isaac Samuel Holt Memorial Scholarship Endowment, established by his mother and grandmother, will allow him to treat thousands more patients in spirit than he ever would have in person.

At the moment, the Holt scholarship is an important reason why third-year student Robert McDonald is able to attend the School of Medicine at UAB. McDonald, who is also a recipient of the Wilson Hudson Turner Scholarship, has his own dream: to specialize in infectious diseases and return to his wife’s homeland of Zambia to help in that country’s struggle against AIDS.

McDonald shared that vision and his appreciation for Holt’s legacy at a special scholarship dinner hosted by the School of Medicine on January 18, which brought together donors and recipients to meet and hear the stories behind some of the school’s 228 scholarships. McDonald and first-year student Deidre Downs, recipient of the W. Earle Drennen Endowed Scholarship, expressed their gratitude for the financial support they have received, joining the voices of several more students featured in a film titled “Thank You for My Scholarship.” [To see the film, visit UAB Medicine online at www.uab.edu/uasom.]

Robert Rich, M.D., senior vice president and dean of the School of Medicine, and UAB president Carol Z. Garrison, Ph.D., underscored the importance of scholarships to the school and to the people of Alabama.

“Scholarships are vital in helping UAB continue to attract top-notch faculty and students,” Garrison said. “The growth and development of the School of Medicine, and this university as a whole, is due in large part to the generous support and involvement of this community.”

Dean Rich noted that the scholarships awarded by the School of Medicine for the 2006-2007 academic year provided over $1.5 million in assistance to more than one quarter of the student body, with individual awards ranging from $400 to $37,000. He emphasized that this support becomes increasingly valuable as the cost of medical school continues to rise—more than 300 percent in the past two decades.

“If not for charitable support through scholarships, the rising costs of medical education could have serious implications for the health of our nation and, most importantly, our state by impeding the supply of physicians and diversity within the medical profession,” he explained. “Scholarships help remove barriers so that motivated and deserving students are able to fulfill their potential as future clinicians, physician-scientists, surgeons, and tomorrow’s leaders in health care.”

To learn more about how to support scholarships at the School of Medicine, please contact Erica Hollins at (205) 996-6839.
Holley Jeter with Mannie Corman

Sharman and Darrell Sanders with Karen Samples, Brandon Farmer, Sylvia Yoo, and Xolti Morgan

Jackie Campbell, Mark Rogers, and John Campbell

Ann Clark, Virginia Jones, and Allen Clark

Kay Kelly, William Graham, and Christopher Kelly

Ryan Swain, Tina Simpson, Wanda Gumbs, and Claretha Nichols

Romas Mills and Amanda Barner-Mills

Sungbok Hong and Eugenia Kim

Billie Ruth Chambless and Caitlin Halverson (center) with members of the Chambless family

Verdie Holt, Robert McDonald, and Jerry Holt
Carson Delivers Third Kennamer Distinguished Lecture

Neurosurgeon Speaks on Ethics at UAB Health Center Montgomery

By Matt Windsor

On February 8, 2007, neurosurgeon Benjamin S. Carson, M.D., delivered the third annual S. Rexford Kennamer Distinguished Lecture at the Capital City Club in Montgomery. The director of pediatric neurosurgery at the Johns Hopkins School of Medicine, Carson has performed several high-risk separations of conjoined twins and the first intra-uterine procedure to relieve pressure on the brain of a hydrocephalic fetal twin. He has also served on the Panel on Bioethics convened by President George W. Bush. He drew on those experiences in a review of medical ethics, faith, and morality titled “Bioethics Today” that covered a range of modern scientific dilemmas, including stem cell research and genetic engineering. Carson, who has written several books, including Think Big and Big Hands, also offered a discussion of ways physicians can explore these dilemmas.

Since it was founded in 1978, the Montgomery program’s Distinguished Lecture Series has played a major role in continuing medical education in central Alabama. In 2000, Montgomery native S. Rexford Kennamer, M.D., a California-based cardiologist, established an endowment to ensure that the series would continue to educate future generations of physicians in the region.

Young Donor Profile

Sara and John L. McDonald

By Norma Butterworth-McKittrick

Sara and John McDonald want to do all they can to help find better treatments and ultimately a cure for all forms of cancer. “I lost both of my parents to cancer, and it is a cause close to my and Sara’s hearts,” John explains. “My father passed away in 1993 from pleural cancer, and my mother in 1996 from breast cancer. We hope to spare others the pain of losing a loved one to this terrible disease.”

The couple met on a blind date in Atlanta in 1999 and married in 2002. “We were still living in Atlanta when we learned we were pregnant with our son, Jay,” recalls John. That’s when they decided Atlanta was too big, and they moved to Birmingham, where John grew up. “It’s a great place to raise a family,” he notes.

“Sara and I have always discussed giving something back to the community that has been so generous to us,” John adds. When the UAB Comprehensive Cancer Center (CCC) formed the Young Supporters Board in 2005, they became active members. In fact, John is serving as the board’s founding president. “I am privileged to be associated with such a talented and energetic group,” he says.

“It is composed of young adults whose lives have been touched by cancer either directly or through a family member. I have been inspired by the courage of my fellow board members.”

These up-and-coming professionals are working to help their peers understand the importance of research and increase awareness of cancer as well as raise funds for the CCC. For the past two years, the board has hosted a festive New Year’s Eve gala, a tradition they hope will grow to be an annual major fund-raising event. “We are working on another project that I feel will really make a positive difference in the lives of those being treated at the CCC,” says John. “I cannot say what it is yet, but I am excited!”

John and Sara are also excited about the birth of their second child, a little girl named Sterling. Looking toward the future, John notes that he and his wife hope to instill in their children the value of giving back to the community. “Sara and I believe that is an important part of being a responsible citizen and member of society.”
Family ties helped bring James Meador-Woodruff, M.D., to Birmingham last spring. Not his own family, actually, but a family of longtime friends of the Department of Psychiatry and Behavioral Neurobiology. When UAB senior vice president and medical school dean Robert R. Rich, M.D., was searching for a research-minded psychiatry chair, the support of Glenn and Mallie Ireland and Bill and Faye Ireland was instrumental in recruiting Meador-Woodruff from the University of Michigan. Their investment has in turn allowed Meador-Woodruff to build on his own research and attract other top scientists to the department’s ambitious Schizophrenia Research Program.

Those investigators are collaborating with colleagues across campus to make new strides in research and treatment for schizophrenia. They are also taking advantage of new technologies, such as the recently installed functional magnetic resonance imaging machine at the Civitan International Research Center, to gain new perspectives on the schizophrenic brain (for more information, see “Fantastic Voyage,” page 6).

The department’s new research efforts are not confined to schizophrenia, however. “I have a vision I share with the dean of several areas for growth,” says Meador-Woodruff, “including depression, suicide prevention, and autism.” Meador-Woodruff notes that these are diseases that are prevalent and costly, taking a heavy toll on the local community and society at large.

Community support is crucial to the new research work under way in the department, explains Meador-Woodruff, and he is encouraged by the response he has seen so far in Birmingham. “Stigma is a big problem in psychiatry,” he says. “One of the amazing things here, though, is that we have some families who have been very good to the department, even though there are people who might find the illnesses that have occurred in those families stigmatizing. To have families come forward and say, ‘We want to help,’ is important.”

External funding is also helping Meador-Woodruff actively pursue top recruits in all growth categories. “It’s really a part of what makes this an exciting opportunity and part of how the dean and I can leverage resources,” he says. As an example, he notes that a generous gift from John Russell Thomas helped the department complete funding for the Tate Jordan Thomas Professorship in Psychiatric Medicine, which will be instrumental in developing a world-class program in mood disorders.

“This is kind of like a football draft,” Meador-Woodruff says. “I just want to find the best half-dozen people in mood disorders to help bring grants and prestige and new talent to UAB. The goal is for some of these people to be laboratory scientists and some to be clinician-investigators with the expertise to help people with difficult depression. That’s been our strategy, and it has worked well so far.”

For more information on supporting the Department of Psychiatry and Behavioral Neurobiology, contact Jennifer Philpot at (205) 975-7298 or jphilpot@uab.edu.
Battling Diabetes With a Crystal Ball
Inaugural Event Raises Funds for Comprehensive Center

On February 10, friends and supporters of the new Comprehensive Diabetes Center at UAB gathered at the Birmingham Museum of Art for the inaugural Crystal Ball. The gala event, which raised about $300,000 to support research and patient care, also honored and thanked the Nancy R. and Eugene C. Gwaltney family and the Diabetes Trust Foundation, two founding partners of the center.
Dean Hosts Basketball Rally

Robert R. Rich, M.D., senior vice president and dean of the School of Medicine, hosted the school’s pregame party in the lobby of Volker Hall for the basketball matchup between the UAB Blazers and the Tulane Green Wave on Saturday, March 3.
The 34th annual Medical Alumni Weekend was held February 2-3 at the Renaissance Ross Bridge Golf Resort and Spa. It featured the traditional activities: the Reynolds Historical Lecture, the Medical Alumni Association Board of Directors meeting, the luncheon for board members and class reunion chairs, the Scientific Program, the annual luncheon and Alumni Association meeting, the Constance and James A. Pittman Lecture, and the class reunion dinners.

Reynolds Lecture

The 28th annual Reynolds Historical Lecture on Friday evening featured Basil Hirschowitz, M.D., discussing “Fifty Years of Flexible Endoscopy.” The lecture was presented in the Reynolds Historical Library’s Ireland Room, located in Lister Hill Library. It was followed by a reception sponsored by the Reynolds Library and The Caduceus Club.

Scientific Program

On Saturday morning, Alumni Association president Albert J. Tully Jr., M.D., welcomed everyone to the Scientific Program, which was titled “Medical Ethics.” He then turned the program over to William D. Hardin Jr., M.D., professor of surgery in the Division of Pediatric Surgery, who served as moderator.

The program started with a talk called “Reflections on 30 Years as a Bioethicist” by Gregory E. Pence, Ph.D., School of Medicine professor of art and humanities. Next on the program was Crayton A. Fargason Jr., M.D., professor of pediatrics, medical director, and vice president of clinical affairs at Children’s Hospital, with a presentation titled “Ethics Committees: Who Needs Them?” Douglas C. Barnhart, M.D., associate professor of surgery and pediatrics, followed with “Teaching Ethics in a Surgical Residency.” After a short break, William Hardin returned to the podium with two case studies: “The Ethics of Twin-Twin Transplantation” and “Boundaries—Issues for Health-Care Providers.”

Many thanks to Alan R. Dimick (class of ’58), who organized the scientific program. An effort is made each year to find topics that will appeal to all specialties.

Tinsley R. Harrison Chair Approaches Goal

President Tully presided over the annual luncheon, also held at the Renaissance Ross Bridge Resort. He announced that the campaign to fund the Tinsley R. Harrison Endowed Chair in Medical Education is progressing very well. Only 14 months into the effort, more than $1.3 million has been secured in gifts and pledges. Medical alumni, friends, and supporters of the Alumni Association and the School of Medicine are closing in on the goal of $1.5 million in honor of the renowned Dr. Harrison, widely recognized as America’s most famous internist. For more information, please contact the Medical Alumni Office at (205) 934-4463 or visit www.alabamamedicalalumni.org.

Also announced at the luncheon was the charitable unitrust established by Aubrey (class of ’55) and Hettie Terry that will endow a scholarship through their estate. The planned gift of $235,000 to the University of Alabama Medical Alumni Association will fund the Aubrey E. Terry Medical Student Scholarship each year. “While we hope it will be many years before we’ll be awarding this scholarship, we deeply appreciate the generous spirit that makes it possible,” said Alan R. Dimick (class of ’58), Alumni Association treasurer.

The business meeting featured the election of new officers for the Alumni Association: Betty Ruth Speir (class of ’63), president; Theodis Buggs (class of ’80), president-elect; and Jim Alford (class of ’63), Scott Grumley (class of ’96), Rufus Partlow (class of ’62), John Rochester (class of ’59), Norman McSwain (class of ’63), and Norman McGowin (class of ’80), vice presidents. For more information, and to see more photographs from the weekend’s events, visit www.alabamamedicalalumni.org.

The following traditional awards also were presented at the luncheon:

2007 Alumni Weekend Report

2007 Distinguished Alumnus

In recognition of outstanding contributions in the field of medicine and demonstration of the high principles of the medical profession

F. CARDEN JOHNSTON JR., M.D.

Carden Johnston (class of ’61), past president of the American Academy of Pediatrics, established the pediatric emergency medicine program at The Children’s Hospital of Alabama. He is professor emeritus in the UAB Department of Pediatrics and a member of the Alabama Healthcare Hall of Fame. He has received several honors, including the Hettie Butler Terry Award for Community Service, the Howard L. Holley Award, the Wallace Alexander Clyde Award, and the Department of Pediatrics Chairman’s Award.

Johnston was awarded a fellowship in the Royal College of Physicians in London and an honorary membership in the Society of Pediatric Radiology. He is a member of the College of Counselors of the Medical Association of the State of Alabama and has been a member of the board, vice president, and president of the Jefferson County Medical Society. His professional education experiences include serving as clerkship director and departmental outreach coordinator for the Department of Pediatrics. He has a longstanding interest in continuing medical education for professionals treating children in Alabama; he coordinated the Practical Day of Pediatrics for 10 years and developed a mini-residency program in pediatric emergency medicine. He was instrumental in the development of the Advanced Pediatric Life Support Course, which emphasizes treatment of the acutely ill and severely injured child.
Johnston’s experiences in lay education include the creation of health information videos for television news programs, called KidCheck, which ran weekly for 10 years. They have been distributed nationwide. These 600 short videos emphasize prevention but also help parents recognize serious disease early, recognize and manage common problems at home, and make appropriate decisions about when to call their physician.

Johnston has served the Alabama Chapter of the American Academy of Pediatrics as program coordinator, alternate chairman, and chairman. He has held numerous offices in the American Academy of Pediatrics, including serving as chair of the Chapter Chairman’s Committee, alternate chairman and chairman of District VII, and as a member of the board of directors for six years. Johnston and his wife, Susie, have three children, five grandchildren, and have been foster parents for 18 babies awaiting adoption.

2007 Hettie Butler Terry Community Service Award
For outstanding commitment to community service

MICHAEL S. SAAG, M.D.

Saag received a bachelor’s degree in chemistry with honors in 1977 from Tulane University and earned his medical degree from the University of Louisville. During medical school, he served for three years on the admissions committee and received the Presley Martin Memorial Award for Excellence in Clinical Medicine. He completed his residency and infectious disease and molecular virology fellowship training at UAB. During that time, Saag made seminal discoveries in the genetic evolution of HIV in vivo. He evaluated isolates of virus obtained from individual patients at different periods in time and cloned and molecularly characterized these isolates to determine the degree of diversity of coexisting viral variants and to describe their evolution over time (published in Nature, 1988). While working with William Dismukes, M.D., Saag designed and led a multicenter national AIDS clinical trial on the management of cryptococcal meningitis. This study included 194 patients and demonstrated the role of oral azole therapy in the treatment of this disorder in HIV-infected patients (published in the New England Journal of Medicine, 1992). During the last six months of his fellowship, Saag conceived the concept of a comprehensive HIV outpatient clinic dedicated to the provision of comprehensive patient care in conjunction with the conduct of high-quality clinical trials, basic science, and clinical outcomes research.

Within the clinic structure, he established a clinical trials unit, a data management center, and a Clinical Specimen Repository designed to support the activities of the newly established Center for AIDS Research at UAB. In essence, the clinic became a “hub” for the clinical, basic science, and behavioral science investigators within the center by creating a dynamic interface between the patients and the investigators. Since the establishment of the clinic, Saag has participated in many studies of antiretroviral therapy as well as novel treatments for opportunistic infections. He has published more than 200 articles in peer-reviewed journals, including the first description of the use of viral load in clinical practice (published in Science, 1993), the first description of the rapid dynamics of viral replication (published in Nature, 1995), the first guidelines for use of viral load in practice (published in Nature Medicine, 1996), the first proof of the concept of fusion inhibition as a therapeutic option (published in Nature Medicine, 1998). Saag also directed the “first-in-patient” studies of eight of the 20 antiretroviral drugs currently on the market (including indinavir, efavirenz, abacavir, and enfuvirtide).

He has contributed more than 50 chapters to medical textbooks, has served on the editorial board of AIDS Research and Human Retroviruses (where he is currently senior editor), and co-edited a textbook titled AIDS Therapy (Churchill Livingston), now in its second edition. He currently is on the board of directors of the American Board of Internal Medicine (and is chair of the Infectious Disease Subspecialty Board), the Infectious Disease Society of America, the HIV Medical Association, and the International AIDS Society-USA. He has twice served as a member of the HIV Disease Committee of the Medical Knowledge Self-Assessment Program for the American College of Physicians. He also serves on the NIH Office of AIDS Research Advisory Council, the HHS Guidelines Panel on Antiretroviral Therapy, and on numerous state, local, and national committees. He was elected into the American Society of Clinical Investigation in 1997.

Among his other awards, Saag has received the Myrtle Wreath Award from Hadassah, was listed as one of the top 10 cited HIV researchers by Science (1996), and has been listed as one of the “Best Doctors in America” since 1994. He received the Outstanding Medical Research Achievement Award from the AIDS Task Force of Alabama, an Excellence in Teaching Award from the Medical Association of the State of Alabama, was named a “Health Care Hero” by the Birmingham Business Journal (2003), received a Service Award from the AIDS Survival Project in Atlanta (2003), was a 2004 honoree of the Birmingham Chapter of the National Conference on Community and Justice (NCCJ), and a recipient of the Birmingham Chamber of Commerce Spirit of Birmingham Award (2005).

2007 Garber Galbraith Medical-Political Service Award
For outstanding service to the medical profession

W. JEFFERSON TERRY, M.D.

Jeff Terry (class of ’79) is a board-certified urologist in Mobile who has specialized in pediatric urology for the past 22 years. He completed his residency at UAB and a pediatric urology fellowship at Texas Children’s Hospital in Houston. Terry has been married to Elizabeth Morrow of Birmingham for 31 years and has three sons. His oldest, William, is a third-year medical student at the University of South Alabama College of Medicine. Terry’s political life started with the cofounding of Alabama’s Young Physician Section of the AMA. He was chair of MAS’s health access task force, president of the Alabama Urology Society, chair of the Alabama Independent Physician’s Association, chair of USA Children’s and Women’s Hospital, and vice president of MAS. He has been a part of Alabama’s AMA delegation for the past 11 years and is now vice-chairman. He is also presently serving on the AMA’s Council on Medical Service.
This year the Alumni Association also presented the Distinguished Service Award, which has been given only four times previously.

2007 DISTINGUISHED SERVICE AWARD
For superior accomplishments and contributions to the University of Alabama School of Medicine

CHARLES A. MCCALLUM JR., D.M.D., M.D.

Charles A. McCallum received his dental degree from Tufts University School of Dental Medicine, Boston, Massachusetts, in 1951 and his medical degree from the Medical College of Alabama in 1957. McCallum, an oral and maxillofacial surgeon, completed four years of residency at University Hospital in Birmingham. He served as vice president for health affairs and director of the medical center at UAB from 1977 until 1988. He served as acting president of UAB in 1986 and was named president of the university in 1987. When he relinquished his duties as president on October 1, 1993, he was named distinguished professor and currently holds the rank of distinguished professor emeritus. McCallum also served as professor of dentistry in the Department of Oral and Maxillofacial Surgery at the University of Alabama School of Dentistry and professor in the Department of Surgery. He was dean of the dental school from 1962 to 1977 and also holds the title of dean emeritus.

McCallum has served the academic community as president of the American Association of Dental Schools, a member of the board and executive committee of the Council on Postsecondary Education, chairman of the Board of the Association of Academic Health Centers, and a member of the American Dental Association’s Council on Dental Education and Commission on Accreditation.

Additionally, he served as a commissioner of the Joint Commission on Accreditation of Health Care Organizations from 1979 to 1991 and chairman of the Board of Commissioners from 1986 to 1988. He has served as president of both the National Specialty Association as well as the National Certifying Board for oral and maxillofacial surgery. His specialty has accorded him numerous other honors and awards. He is a member of the Institute of Medicine of the National Academy of Sciences, and he has received honorary degrees from six universities.

In 1993, McCallum was recruited by Elton B. Stephens to assist in the revival of the Alabama Symphony Orchestra (ASO). McCallum served as president and CEO of the ASO for three years, and working with Stephens and other members of the Board of Directors, he played a significant part in building a sound financial base for the symphony, developing contracts with the players, and hiring a conductor so the orchestra could again take the stage.

He continues to be involved in many other community activities, including the Metropolitan Development Board (past chairman), Leadership Alabama (past chairman), and the Freshwater Land Trust. He also served as general chairman of the United Way Campaign in 1992 and co-chair of the Birmingham Festival of Arts Salute to Korea in 1996. Currently, he is serving his second term as mayor of Vestavia Hills, Alabama.

15th Annual Constance S. and James A. Pittman Lecture

JOE E. ACKER III

Joe Acker is executive director of the Birmingham Regional Emergency Medical Services System (BREMSS), a six-county EMS region that encompasses a population of more than one million in 48 municipalities and generates 200,000 emergency medical responses a year. The region is served by 181 BLS/ALS provider organizations. BREMSS is responsible for the coordination and improvement of the EMS system, which includes technical assistance; physician, nurse, and EMT continuing education; communications; quality assurance improvement; standard of care/performance design; regional mass casualty incident; equipment grants; public information and education; data collection; administration and operation of the Trauma System and Stroke System; all EMT credentialing, dispatch of Air Ambulances, and the continuous operation of a regional communications system, including hospital divert and bio-terror-ism monitoring and response. Also, BREMSS is responsible for operations of the Trauma Communications Center.

Acker has been executive director of BREMSS since December 1990. Previously, he was director of emergency medical services for the City of Portland/Multnomah County, and prior to that he was director of emergency medical services for the Tennessee Department of Public Health. He has received many state and national awards, as has BREMSS under his leadership. His special schooling and instruction credentials include Forty-Hour Emergency Care—St. Mary’s Hospital, Knoxville, Tennessee; American Red Cross First Aid Instructor; Basic Emergency Medical Technician (Tennessee); Advanced (Paramedic) Emergency Medical Technician (Tennessee); Faculty Instructor CPR American Heart Association (later ACLS Instructor); Vehicle Rescue Instructor (Tennessee); Emergency Mountain Rescue Instructor (Tennessee); Instructor Trainer Pre-Hospital Trauma Life Support; Emergency Medical Dispatch Instructor (APCO); Basic Trauma Life Support Instructor; Pediatric Advanced Life Support Instructor; Pediatric Basic Trauma Life Support Instructor; and Master Train the Trainer Traumatic Brain Injuries.

Saturday Evening Reunions


The class reunions are a highlight of the Alumni Weekend each year. If you have a reunion coming up in 2008 (if your class year ends in a “3” or an “8”) and would like to help, please call Elaine Chambliss in the Medical Alumni Office at (205) 934-4463 or sign up at www.alabamamedicalalumni.org.
Alumni Profile

Robert M. Cosby, M.D.

By Tara Hulen

Since graduating from the SOM in 1971, Robert (Bob) Cosby, M.D., has pursued a winding career path around the world—from movie sets and circuses to cruise ships and Christian missions.

But Cosby went far beyond the call of duty last year when he sought out a 90-day tour as a National Guard physician in Iraq, then volunteered for two more. Cosby, 61, didn't have to go to the Middle East at all. Instead, he made a special request to serve past the usual mandatory National Guard retirement age of 60. He also transferred from a Birmingham-area unit to one in Utah to get deployed to Iraq. Because Cosby is single with no children and no office of his own to manage (he does have an office at the M-POWER Health Clinic, an indigent-care facility in Avondale), he felt he lacked the encumbrances others might have.

Battle Tested

“I joined the National Guard in 1985 for the purpose of going to war—not just to go to drills, but to go to war,” Cosby says. He is no stranger to combat zones; among other deployments, he had been in Iraq twice before—in 1991 during the first Gulf War and again in 2005.

When he departed in January 2006, his mother was suffering from a serious long-term illness. “I had a job I knew she would have supported,” he says. She died near the end of his first 90-day tour. Soon after he came home for the funeral, he began a second tour at Camp Scania, about 100 miles south of Baghdad. He agreed to the second, and later a third, tour of duty to give the camp continuity, but staying also provided him with meaningful work and personal support following his mother's death. He says he benefited from a unique form of therapy suggested by the camp chaplain: answering about 1,000 letters addressed “To Any Soldier.”

Cosby's military service is inspired by his father, who died in 1979. Though his dad served in the Marines just two years, it shaped his character forever, Cosby says. “He said his sons weren't going to be men unless they were in the military.”

In 1985 Cosby joined the Birmingham-based 20th Special Forces Group (Airborne). He closed his 18-year-old private practice in Tarrant when he was called up for the Gulf War in 1991. After returning home, he worked as an emergency room doctor at various hospitals, which he says helped prepare him for the fast pace and stripped-down medical facilities and equipment in military camps and on missionary trips.

Cosby has had 19 international assignments with the military and with Christian missions. He says that working in Iraq wasn't drastically different from practicing medicine back in the United States, though there were limitations. “We couldn't do cultures, tissue samples; we couldn't do complete blood counts.”

He's had even sparser assignments, such as a trip to the African nation of Mali in 1992. “I saw 3,000 patients in 10 days,” he says.

Adventures in Medicine

But military life is just part of Cosby's story. "I used medicine as a ticket to be somewhat of an adventurer, by working several times as a movie set doctor, circus doctor, Hawaiian cruise ship doctor, and overseas missions doctor," he says. Intrigued by the idea of life on the road, he even played with the notion of traveling with the circus.

When he heard about circuses and movie productions coming to the area, he simply called and offered to be their physician. He cared for the crew of The River with Mel Gibson (whom he doesn't recall seeing). “Medicine, to me, is so flexible. You can get to go and do and see so much,” Cosby says.

He has also volunteered at a local health clinic for the indigent, is active with his church, and has headed the Meadow Brook Run for 12 years. Then there is the not-so-little matter of using his own money to fund the Jesus Video Project, which sent a video about Jesus to all 1.7 million households in Alabama in 1998. That landed him in the pages of People magazine. “I believe in setting a goal as high as you can possibly set it,” Cosby says.

“I used medicine as a ticket to be somewhat of an adventurer, by working several times as a movie set doctor, circus doctor, Hawaiian cruise ship doctor, and overseas mission doctor.” — Robert Cosby
1967
John R. Denton Jr. received the annual Saint Luke Medal from the Catholic Medical Centers of Queens in 2006. He has chaired the Department of Orthopedic Surgery at Catholic Medical Centers for 20 years. He lives in New Rochelle, New York.

1970 GRADUATE/1971 RESIDENT
Thomas Durward Dubose Jr. was named Tinsley R. Harrison Professor and Chair of Internal Medicine at Wake Forest University School of Medicine in 2006. Last year he also became president of the American Society of Nephrology. Dubose lives in Winston-Salem, North Carolina, and specializes in nephrology.

1978 GRADUATE/1985 RESIDENT
Melinda Grace Rowe is the commissioner of the Lexington-Fayette County Health Department in Lexington, Kentucky. She played a part in the smoking ordinance that was passed in 2003 and upheld by the Supreme Court in 2004. Fine particle pollution has gone down more than 90 percent, and asthma is down at least 33 percent since it has been in effect. Rowe lives in Lexington and specializes in pediatrics.

1980
Melissa L. Barton has relocated to her hometown of Dyersburg, Tennessee, to be closer to family and begin a solo practice in hand surgery. She was a partner at Metropolitan Hand Surgery in St. Paul, Minnesota, for almost 18 years.

1981
David Michael Reardon reports that his son Zachary has just begun his first year at the UAB School of Medicine. Reardon lives in Fort Myers, Florida, and specializes in pathology.

1981 RESIDENT
Barbara H. Wade has been awarded the Watanakunakorn Clinician Award for 2006. This award is given annually to a member of the Infectious Disease Society of America in recognition of outstanding achievement in the clinical practice of infectious disease. Wade lives in Pensacola, Florida.

1981 GRADUATE/1984 RESIDENT
John Webb Ward is the editor (along with Christian Warren) of Silent Victories: The History and Practice of Public Health in Twentieth Century America, published by Oxford University Press in 2007. Ward lives in Atlanta and specializes in internal medicine and epidemiology.

1982
William Davis McLaughlin has been approved for the 2008-2009 presidency of Wiregrass Rehabilitation Center in Dothan. He specializes in gastroenterology and internal medicine.

1985 GRADUATE/1990 RESIDENT
F. Cleveland Kinney is the director of the Division of Geriatric Psychiatry at the UAB School of Medicine and now serves as the senior associate dean for clinical affairs.

1985 GRADUATE/1990 FELLOW
Rebecca R. Pauly serves as chief of the Division of Internal Medicine and associate chair of medicine for medical student education at the University of Florida. She has presented her research on medical education in Canada, Spain, and the U.S. Two recent publications utilize innovative online teaching tools she and her colleagues at the University of Florida developed. Pauly lives in Gainesville, Florida, and specializes in internal medicine.

1987
William A. Thompson III has been chair of the Department of Surgery at Trinity Medical Center in Birmingham since 2005. In 2006, he received the department’s teaching award. Thompson specializes in surgical oncology and general surgery.

1990 GRADUATE/1994 RESIDENT
John O. Mason III has received the American Academy of Ophthalmology Achievement Award for 2006. Mason lives in Vestavia Hills, Alabama, and specializes in ophthalmology.

1990
Daniel Frank Pauly received the 2004 Heart Disease Researcher of the Year Award from the Florida chapter of the American College of Cardiology. He also has a publication in the American Journal of Transplantation, titled “Non-invasive Discrimination of Rejection in Cardiac Allograft Recipients Using Gene Expression Profiling.” It appears in the 2006 volume 6, pages 150-160. Pauly lives in Gainesville, Florida, and specializes in cardiovascular disease.

2006
William Joseph Jenkins and his wife, Shannon, had a baby girl, Anna Katherine, on October 10, 2006. Jenkins lives in Birmingham and specializes in radiology.

Sidney N. Miller, 1936 graduate of the two-year medical school, died July 11, 2006. He lived in Bloomfield Hills, Michigan, and specialized in ophthalmology.

John Walter Webb Jr., class of 1951, resident 1954, died October 23, 2006. He graduated from The Citadel in Charleston, South Carolina, with a degree in engineering, and served in the South Pacific during World War II. Webb did a fellowship in hematology at Duke University in 1954 and then set up practice in Montgomery in 1955. He was a member of the American College of Physicians and the Alabama State Medical Association and served as president of the Jackson Hospital Medical Staff. Webb lived in Montgomery and specialized in internal medicine.

Harold L. Blanton, class of 1952, died July 31, 2006. He was a member of the U.S. Army during World War II. Blanton interned and did his surgical residency at Carraway Methodist Medical Center in Birmingham, then began his practice in Hartselle, Alabama, in 1956. He practiced in Waverly, Tennessee, from 1970 to 1975, and in Lawrence County, Alabama, from 1975 to 2005. Blanton was a certified emergency room physician; he was also a fellow in the Southeastern Surgical Congress and in the American Academy of Family Practice. He lived in Cullman and specialized in family practice and emergency medicine.

Russell Scott Findley, resident 1952, died November 22, 2006, from a glioblastoma multiforme. He lived in Jacksonville, Florida, and specialized in psychiatry.

Kenneth Moore Hannon, class of 1952, resident 1953, died November 9, 2006. He served in the U.S. Navy during World War II. Hannon interned at Jefferson Hillman Hospital in Birmingham and completed his residency in orthopedics at Hermann Hospital in Houston, Texas. He then returned home to practice medicine with his father, William C. Hannon, and continued his career-long love of children’s orthopedics. Hannon was a member of the American Academy of Orthopedic Surgeons, the Clinical Orthopedic Society, and the Scoliosis Research Society. Hannon lived in Mobile and specialized in pediatric surgery.

William Ralph Pitts, class of 1952, resident 1954, died October 10, 2006. Pitts served in the U.S. Army and was critically wounded in France;
Ermin E. Coleman Jr., class of 1953, died August 21, 2006. He served in the 8th Army Air Corps in World War II. Coleman served his internship at Mobile General Hospital and his general practice residency in Pineville, Louisiana. He practiced medicine for nearly 50 years in Pritchard and Saraland, Alabama. Coleman lived in Columbus, Mississippi, and specialized in general practice.

James M. Lee, class of 1967, resident 1973, died November 21, 2006. He interned at Baptist Medical Center Princeton, then served as captain in the U.S. Army Medical Corps in Vietnam from 1968 until 1969. He then began three years of residency in psychiatry at UAB. Lee practiced at Baptist Medical Center Princeton, where he was the medical director at the Horizon Geriatric Unit, and Bessemer Carraway. He was also instrumental in the establishment of the Shelby County Historical Society. Lee lived in Vestavia Hills, Alabama, and specialized in psychiatry.

Robert Edward Barr, class of 1962, 1965 resident, died October 3, 2006. He served as a flight surgeon in the Navy for two and a half years. He practiced as a family practitioner in Cordele, Georgia, from 1967 to 1984 and in emergency medicine until 1989. Barr served as Crisp County medical officer for several years, then moved to Birmingham. He was a longtime member of the American Academy of Family Practice, Rotary International, and Asbury United Methodist Church, and he was a founder of Pi Kappa Alpha fraternity. Barr lived in Birmingham and specialized in family practice and emergency medicine.

Edward Tyler Nichols, class of 1962, resident 1963, died December 17, 2006. He practiced general surgery in Mobile and Baldwin counties from 1969 to 2001. Nichols was a member of Alpha Omega Alpha and the Phi Chi medical fraternity. He was also a Life Loyal member of Sigma Chi fraternity. He did a two-year internship at Seward Air Force Base in Smyrna, Tennessee, as a captain in the Air Force, then served as chief of surgery and medical chief of staff at South Baldwin Hospital from 1977 to 1995. Nichols was instrumental in the development of the first emergency medical service in Orange Beach and Gulf Shores. He was the first emergency medical director for Orange Beach and was primary physician advisor to the paramedic units of both cities for several years. Nichols lived in Orange Beach and specialized in general surgery.

Robert Lee Green Jr., resident 1966, died November 29, 2006. He earned an associate degree from Hahnemann Medical College in 1946, a bachelor of science degree from the University of Alabama in 1943, and a medical degree from Hahnemann Medical College in 1946. He served for three years as a flight surgeon in the U.S. Army Air Force, then practiced psychiatry in Durham, North Carolina, for 47 years. Green served as president of the Southeastern Psychiatric Association, the Southern EEG Society, and the Southern Psychiatric Association, and he was a fellow of the American Psychiatric Association, the Academy of Psychosomatic Medicine, and the American Electroencephalographic Society. After retiring from the VA Hospital in 1980, he was named medical director of Holly Hill Hospital in Raleigh, North Carolina. Green lived in Birmingham and specialized in psychiatry.

Donald L. LeQuire, resident 1978, died May 3, 2006. He lived in Scottsboro, Alabama, and specialized in radiology.

Clay Steven Wayman, resident 1989, died of brain cancer in January 2005. He practiced gastroenterology in San Antonio. He lived in Los Angeles and specialized in both gastroenterology and internal medicine.
When the SOM classes of 1957 and 1982 gathered to mark milestone anniversaries, UAB Medicine checked up on some familiar faces. Read on to find out where they are and what they’ve accomplished 25 and 50 years after graduation.

Whatever Happened to . . . George Lundberg?

“The M.D. was the ticket to everything that followed,” says 1957 alumnus George Lundberg, M.D. And what a ride it has been, from Hawaii to Harvard, from Sweden to southern California, from Central America to cyberspace. Along the way he became editor of the *Journal of the American Medical Association* and oversaw the AMA’s 38 other medical journals and *American Medical News*—a role he held for 17 years. Beginning in 1999, he joined the Web site Medscape as editor in chief, helping it grow into a leading online information source for health professionals. Today he is “still working 60-hour weeks at 73” as editor in chief of *MedGenMed*, the first open-access, peer-reviewed, primary-source general medical journal, and of *eMedicine*, the first open-access medical textbook. A member of the Institute of Medicine of the National Academy of Sciences and former president of the American Society of Clinical Pathologists, Lundberg also is a professor at Harvard, Stanford, and Northwestern universities.

Whatever Happened to . . . Scotty McCallum?

Today he’s known as Mayor McCallum of Vestavia Hills, Alabama, but 1957 graduate Charles “Scotty” McCallum, D.M.D., M.D., has never forgotten the lessons of medical school. “You learn the necessity of being very personal with your patients, learning from them and listening to them so that you can establish not only a good relationship but also a friendship between patient and doctor that is very important,” he says. Those learning and listening skills served him well at UAB, where he connected with patients, students, faculty, alumni, and many others as teacher and clinician in oral and maxillofacial surgery, dean of the School of Dentistry, vice president for health affairs, and university president. McCallum’s commitment to “pay back to the community” continued after his retirement, and in 2000 he was elected mayor of Vestavia Hills, which has more than 31,000 residents.

Hot Topics in ’57: The diet-atherosclerosis link, pediatric open-heart surgery, surgical solutions for heart disease, cancer as a medical issue, the prevalence of polio and other infectious diseases

Work Ethic: Things didn’t get easier for Lundberg after being accepted to medical school on his third attempt. He recalls “sharing Bill Dobbins’s ‘beater’ to get to work at the Continental Gin Company to earn enough money to finish the second year.” McCallum also remembers many people working extra jobs on top of long hours in the clinic and classroom.

Building Boom: Back then, McCallum says, “everything was located within the basic sciences building and University Hospital.” Today, UAB’s campus covers more than 80 blocks, and a research building is named for McCallum.
Teachers and Leaders: Lundberg and McCallum both remember “beautiful dialogue” in the Harrison-Lyons debates and specialty conferences. “Dr. Harrison taught that you needed to listen to the patient,” says McCallum. Without today’s technology, “diagnosis was made by listening to and examining the patient. The prescription for treatment resulted from the doctor’s knowledge and the doctor’s relationship with the patient.”

Whatever Happened to . . .
Bill Johnson?
As an OB/GYN specialist for mothers-to-be, Bill Johnson, M.D., fulfills great expectations every day. However, that’s nothing new for the 1982 graduate, who completed his residency at Birmingham’s Carraway Methodist Medical Center before moving to Decatur, Alabama, for two years. In 1988, Johnson returned to Birmingham, where he raised four daughters while rising through the ranks to become chair of the OB/GYN department at Trinity Medical Center; he also is a physician with OB/GYN Associates of Alabama. One of his proudest moments, however, has to do with the spiritual health of the city. “My family is among the founding members of Mountain Brook Community Church,” Johnson says. “We started with 20 members in 1992, and today we have more than 1,000.”

Whatever Happened to . . .
Michael Clinton?
Michael Clinton, M.D., says he’s never felt ill-prepared since graduating from the SOM. That’s a good thing, since his postgraduate training took him to “many institutions with international reputations,” including Duke University, where he began specializing in plastic surgery. When he came back to Birmingham, he opened Clinton Plastic Surgery, focusing on trauma and reconstruction of the hand and face; for eight years he treated more than 100 major complex facial fractures annually. Now, he says, the practice has evolved, with “85 to 90 percent of our work in cosmetic surgery of the face, body, and breast.” In the early 1990s, he performed Alabama’s first facial laser skin resurfacing, and “we are still considered a regional expert in surgical and medical laser applications and often are the first place developers approach with new technologies.”

Hot Topics in ’82: Tort reform, the medical malpractice crisis, the rise of managed care, team treatment for trauma patients, advances in microsurgery and immune system regulation to enable widespread organ and tissue transplantation

Memorable Moments: Clinton recalls the creepy feeling of being alone in the cadaver lab late at night, beating professor George Hand in racquetball just hours after a microanatomy exam, and the birth of his first child the day before National Boards Part I. He and Johnson also made some noise with their duet, “We’re in Med School,” sung to the tune of the Village People’s “In the Navy” at a class party.

Share Your Memories
Got a fond or funny recollection from medical school? Write to us via e-mail at charlesb@uab.edu, fax at (205) 975-4416, or mail at AB 340, 1530 3RD AVE S, BIRMINGHAM AL 35294-0103. Please include your class year in your correspondence.
From the Archives
Targeting Diabetes at UAB
By Tim L. Pennycuff • Photos courtesy of UAB Archives

Groundbreaking for the diabetes hospital, July 1, 1970. At the ceremony for the first public diabetes hospital in the United States are members of the board of the Diabetes Trust Fund (left to right) Mrs. Edward Norton, Sidney Smyer Sr., and Ruth Lawson Hanson.

Diabetes Building, circa 1970s. A symposium held March 7-8, 1973, marked the completion of the five-story Diabetes Research and Education Building, which was more commonly known as the “Diabetes Hospital” on 7th Avenue South. The facility opened for patients on July 8, 1973, and was officially dedicated in December. A 40-bed hospital for diabetes patients occupied the fifth floor.


William J. Reddy, M.D., circa 1970s. Reddy joined UAB in 1970 as a professor of medicine and director of diabetes research. When the Diabetes Research and Training Center was established at UAB in 1973, Reddy was named its first director.

In the 1980s, three additional floors were added to the diabetes building. On November 13, 1985, the facility was renamed the Boshell Diabetes Research and Education Building in honor of the founder and president of the Diabetes Trust Fund.
A Tax-Wise Alternative to Investments with Low Rates of Return

The School of Medicine Charitable Gift Annuity Program

Charitable gift annuities enable persons 60 and older to make gifts to the School of Medicine and receive favorable rates of return on their investments in the school’s scholarship, research, and other important programs. Typically funded with cash or appreciated securities, charitable gift annuities also result in significant tax savings.

A 70-year-old donor creating a $50,000 gift annuity with cash would receive the following benefits:

- Rate of return: 6.5%
- Guaranteed annual income for life: $3,250
  (For the first 16 years, 60% of the income would be tax-free.)
- Federal income tax deductions: $18,877

Sample Rates of Return
Single Life
(Two life gift annuities are available at slightly lower rates.)

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The UAB Torchlighters Society
Honoring Those Who Have Included UAB in Their Estate Plans

For additional gift information, please contact Elaine Eberhart, Director of Planned Giving, AB 1270, 1530 3RD AVE S, BIRMINGHAM AL 35294-0112
205.934.0759 • eberhart@uab.edu

Always consult your tax or legal advisor when considering a planned gift.
CONTINUING MEDICAL EDUCATION

This is a sampling of the dozens of live and online CME courses available from the SOM Division of Continuing Medical Education. For a complete listing of all courses, contact the Division of Continuing Medical Education at (205) 934-2687 or (800) UAB-MIST, or visit its Web site at www-cme.erep.uab.edu/home.asp.

Live Courses

July 8-10, 2007
“Parathyroid Hormone Related Proteins International Meeting”; Sandestin, Florida; sponsored by the UAB Department of Pathology; 20 AMA credits.

August 29-September 1, 2007
“Pediatrics at Home and Beyond—Embracing New Challenges”; Sandestin, Florida; sponsored by the Division of Continuing Medical Education; 14.5 AMA credits.

Online Courses

“Alzheimer’s Disease & Senile Dementia”; co-sponsored by the Division of Continuing Medical Education and the Alabama Quality Assurance Foundation; 1 AMA credit.

“Brighter Outlook for Neurofibromatosis Patients”; sponsored by the Division of Continuing Medical Education; 0.25 AMA credit.

“Migraine Therapy”; co-sponsored by the Division of Continuing Medical Education and the Alabama Quality Assurance Foundation; 1 AMA credit.

“Patient Compliance”; co-sponsored by the Division of Continuing Medical Education and the Alabama Quality Assurance Foundation; 1 AMA credit.

“Skin and Soft Tissue Infections”; co-sponsored by the Division of Continuing Medical Education and the Alabama Quality Assurance Foundation; 1 AMA credit.

“The Metabolic Syndrome”; co-sponsored by the Division of Continuing Medical Education and the Alabama Quality Assurance Foundation; 1 AMA credit.